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R A K S T I

S O C I O L O Ģ I J A

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MIDDLE CLASS IN THE BALTIC COUNTRIES SINCE 1991

The article presents the analysis of social identifications of Baltic countries (Estonia, Latvia and Lithuania) population with middle class position between 1991 and 2012. The forms of social identification in different periodsof formation of the Baltic countries are analyzed in the context of the dominant ideologies or theories and national self-identification complexity is investigated. The class structure in all Baltic countries is changing. The analysis of social structure in different countries moves mainly in parallel to each other but the data is not strictly comparable neither by themes, nor by sample for each country. Sociologists are no longer surprised of the efforts of researchers in various countries undergoing rapid transitions or transformations to provide new meanings to the concepts of the middle class taking into account peculiarities and history of their respective countries. This article also aims at analyzing social identity of the people of the Baltic countries at the beginning of their formation and further as well. Different surveys are discussed in this article. Since 1991, until now, after the restoration of the independence of the Baltic countries, a number of sociological studies has been carried out to analyze the emerging post-Soviet social structure of society. In practice, every research carried out differed both in methodological and method's approaches. The aim of this article is to analyze the existing social stratification in the Baltic countries on the basis of sociological studies of the middle class, emphasizing the middle class as the main guarantor of creating a modern society. The novelty of the article is that it makes an attempt to use the data of different, multi-dimensional researches to discover commonalities or peculiarities of the middle class formation and self-identification with middle class position in the Baltic countries. The analysis has also shown that the identity of the middle class remains the strongest on all stages of formation of the Baltic countries, while only the content and the understanding of the middle class differ. Dominant tendencies of the middle class formation in the Baltic countries are connected with transformations and changes taking place within working class and intelligence. It has been revealed that the Baltic countries middle class is far from being homogeneous.

Key words: social stratification, social class, middle class, Baltic countries.

Vidusšķira Baltijas valstīs kopš 1991. gada

Rakstā tiek analizētas Baltijas valstu (Igaunijas, Latvijas un Lietuvas) iedzīvotāju sociālā identifikācija ar vidusšķiru laika posmā no 1991. līdz 2012. gadam. Sociālās identifikācijas formas, raksturīgas dažādiem Baltijas valstu veidošanās periodiem, tiek analizētas dominējošo ideoloģiju vai teoriju kontekstā. Šķiriskā struktūra visās valstīs mainās. Sociālās struktūras

analīze dažādās valstīs tiek realizēta paralēli, bet dati nav precīzi salīdzināmi, ne pēc pētījumu tēmām, ne pēc izlases apjoma. Sociologi vairs nav pārsteigti par dažādu valstu, kuras piedzīvo straujas pārejas vai transformācijas, pētnieku centieniem piedāvāt jaunas interpretācijas vidusšķiras jēdzienam, ņemot vērā pētāmo valstu īpatnības un vēsturi. Šī raksta mērķis ir analizēt sociālo identitāti gan Baltijas valstu neatkarības atjaunošanas laikposmā, gan mūsdienās. Tiek apspriesti dažādu pētījumu rezultāti. Kopš 1991. gada, līdz ar Baltijas valstu neatkarības atjaunošanu, līdz šim laikam ir veikti vairāki socioloģiskie pētījumi, lai noskaidrotu jauno postpadomju sabiedrības sociālo struktūru. Praksē katrs veiktais pētījums atšķīrās gan ar metodoloģisko, gan metodisko pieeju attiecīgajai problēmai. Raksta mērķis – balstoties uz veiktajiem socioloģiskajiem pētījumiem, analizēt šķirisko situāciju Baltijas valstīs, uzsverot vidusšķiru kā galveno garantiju mūsdienu sabiedrības attīstībai. Raksta novitāti veido autoru mēģinājums atklāt vidusšķiras veidošanās un iedzīvotāju pašidentifikācijas ar to kopīgās pazīmes un īpatnības Baltijas valstīm, izmantojot dažādu daudzdimensiju pētījumu datus. Empīrisko datu analīze atklāja, ka identificēšanās ar vidusšķiru ir visspēcīgākā visos Baltijas valstu veidošanās posmos, atšķiras tikai vidusšķiras saturs un izpratne. Baltijas valstu vidusšķiras veidošanas tendences ir saistītas ar transformācijām un izmaiņām, kuras notiek strādnieku un inteliģences šķirā. Tas izpaužas Baltijas valstu vidusšķiras sastāva neviendabīguma.

Atslēgas vārdi: sociālā stratifikācija, sociālā šķira, vidusšķira, Baltijas valstis.

Средний класс в странах Балтии после 1991 года

В представленной статье авторы исследуют социальную идентификацию населения стран Балтии (Эстонии, Латвии и Литвы) со средним классом в период с 1991 по 2012 год. Авторами проанализированы различные формы социальной идентификации со средним классом на разных этапах формирования стран Балтии в контексте доминирующих идеологий или теорий. Классовая структура меняется во всех странах Балтии. Анализ социальной структуры различных стран проводился параллельно, но данные достаточно трудно сопоставимы как по своей тематике, так и по объёму выборки. Социологов больше не удивляют усилия исследователей различных стран раскрыть новое значение и содержание понятия среднего класса с учетом трансформаций, особенностей и истории изучаемых стран. Данная статья также анализирует социальную идентификацию населения Балтийских стран как сразу после восстановления их государственности, так и в более позднее время. В данной статье обсуждаются результаты различных исследований. Начиная с 1991 года, после восстановления независимости стран Балтии, был проведен ряд социологических исследований, анализирующих возникающую постсоветскую социальную структуру общества. На практике каждое проведенное исследование отличалось как методологическими, так и методическими подходами к рассматриваемой проблеме. Целью статьи является анализ существующей социальной стратификции в странах Балтии на основе проведённых социологических исследований среднего класса, акцентируя роль среднего класса как основного гаранта создания современного общества. Новизна статьи заключается в попытке использовать данные разных многомерных исследований для того, чтобы выявить общие черты или особенности формирования среднего класса и самоидентификации с ним населения в странах Балтии. Анализ эмпирических данных показал, что идентификация со средним классом доминирует на всех стадиях формирования Балтийских стран, но контекст и содержание понятия среднего класса различается. Преобладающие тенденции формирования среднего класса в странах Балтии связаны с переходом и изменениями, происходящими в классе рабочих или интеллигенции. Это выражается в том, что средний класс в странах Балтии на данный момент далёк от гомогенности.

Ключевые слова: социальная стратификация, социальный класс, средний класс, страны Балтии.

Introduction

Almost every one of us thinks he knows what "middle class" means or even identifies himself with it, or right away denies the existence of such class by saying that "there is no middle class at all". However, it is obvious that a number of important social science concepts addressing middle class often turn to be misleading or are very vague. Therefore, the first question to ask is "What do we really know about the middle class"?

If we are the middle class, what are our duties towards other classes and the entire state / society? If we are not, how should we identify the other being the middle class, and what is the way to establish good relations with them (in the case we deem it desirable or necessary)?

An interesting question that is relevant for nowadays Baltic countries would be when and how working class and intelligentsia representatives become the middle class members? We will try to grope these transformation or formation trends at this stage. How does the working class transform into the middle class (if any)? Are there any other criteria except for average income? How important in this context are the national, cultural, religious or other differences? Are there any marginal classes and how many of them?

Description of the middle class in modern societies is usually sought through defining its position in social stratification, typically by using classical doctrines of classes developed by Erik Olin Wright (1997) and John Goldthorpe et al. (1980), as well as criteria for distinguishing (or dividing) them.

Different definitions and surveys of the middle class

The concept of a "social class" encompasses numerous theoretical and methodological approaches. Social transformations which have occurred in Eastern Europe over the past decades push boundaries and demand new traditional and alternative perspectives describing social stratification (Marxian, Weberian, race- / class- / sex-based, postmodernist, etc.). Therefore, sociologists today discuss both the structure of classes and the impact social classes have, for instance, on policy, identity or lifestyle. Issues under consideration include distribution of classes, stratification, labour movement, other organisations based on the class principle, participation of classes in elections, relationship between classes and consumption, economic outlook for classes. The concept of social classes calls for discussing their interaction with other social groups based on racial, gender or educational characteristics. Most of the latter are affiliated as non-class movements, for instance, for women's rights, the Green movement or advocates of consumers' rights.

On the other hand, a social class is a sociological concept which defines the position of an individual or a social group (in terms of ownership of the means of production and control over work of others) and in that context the middle class cannot be considered a social class at all.

Three main "attributes" of a social position – power, privilege and prestige – quite often are incongruous, existing in different systems of stratification in parallel. However, there are two things – occupation and class – which form the basis for sociological studies of social stratification: inequality, power and different perception of this by individuals. When merged into a whole, they form the frame, the invisible skeleton of society, covering many areas of our social lives. It is very important that the analysis of the structure of social classes and changes thereof is not limited to the national level but viewed in the context of other countries.

Sociologists, therefore, are no longer surprised at the efforts of researchers in various countries undergoing rapid transitions or transformations to provide *new meanings to the concepts of the middle class* taking into account peculiarities and history of their respective countries. "There are different quantitative data on the biggest social groups in the society; various estimations on both the presence and the absence of the middle layer in the society are given. There are different opinions considering the legitimacy to apply the notion "middle class" in conformity with the present Latvia. The authors use different methods to find out the most appropriate analysis methodology in appliance to the formation of social stratification under the new conditions. The authors draw a conclusion that, for the time being, it is too early to consider the middle layer the main biggest unit in the social stratification of the present Latvia (Menshikov 2016; Mensikovs, Lavrinovica 2011) and Lithuania (Matulionis 2014). There are several "historical" and well-established socioeconomic definitions of the middle class referring to it as a group of people who fall somewhere in between the groups of people with the weakest and strongest social status in society (in social, economic and cultural terms; those who more or less have middle social status, middle income and education level, middle taste, etc.). On the other hand, this class is traditionally located somewhere between elite (or aristocracy) and working class.

General principles to define the middle class in various countries obviously differ from country to country. Criteria to describe the middle class in the United States probably would not suit for former USSR countries and many eastern European countries or even western European countries. Notwithstanding this, citizens of different countries have all grounds to identify themselves with the middle class: many of them have permanent jobs, decent cars, access to appropriate holidays, appropriate housing and property (also, frequently, access to health care services and education of an appropriate level).

Data from a wide range of social research and middle class studies conducted by researchers in different countries or regions (Eastern Europe, USA, Latin America, China or Middle East) reveal one common trend: the emergence of two different groups of people. The first one is distinguished on the basis of economic criteria (income level adequate to educational attainment, apartment, retirement, etc.). The second one refers to the groups of people who self-identify themselves as the middle class. For instance, a middle-class standard of living in the United States has come to mean having "a secure job, a safe and stable home, access to health care, retirement security, benefits for vacation, illness and the birth or care of a child, opportunities to save for the future and the ability to provide a good education (including a college education) for at least one child" (Tarkhnishvili A., Tarkhnishvili L. 2013). At the

same time, in accordance with the results of the study conducted by the National Opinion Research Center (NORC) at the University of Chicago (Tarkhnishvili A., Tarkhnishvili L. 2013), this standard of living belongs no more to the middle class of the American population. More and more families of the country think they still are the middle class but in fact, they are a "paycheque-to-paycheque group of people" that has to save on almost everything in almost all areas, from toll calls to shopping. And that's the economists' conclusion. Both sociologists and economists in the United States agree that there is no more American middle class in the usual sense. Although economists are still estimating income levels and sociologists are still analysing labour market and the focus-group survey data, they all provide quite different numbers and distinguished paradigms / parameters (ibid.).

One of the first attempts of this sort was Social Changes in Baltic and Nordic Countries, an international project launched in 1993. Coordinated by the University of Tampere (Finland), the project brought together Finnish, Swedish, Lithuanian, Latvian and Estonian research centres. In 1998, Bulgarian sociologists organised an international conference called "The Middle Class as a Precondition of a Sustainable Society (supported by the Open Society Foundation, East-East Program, and the Konrad Adenauer Foundation*)* (Tilkidjiev 1998) which addressed the issues of becoming the middle class. Likewise, in 2014, Ukrainian sociologists raised the issue of actualisation of the concept of the middle class in their project "Middle Class in Ukraine: Life Values, Readiness for Association, and Promotion of Democratic Standards" implemented by the Razumkov Centre (Friedrich Naumann Foundation for Freedom in Ukraine – Kyiv 2014) and sponsored by the Government of Canada through the Department of Foreign Affairs, Trade and Development (DFATD). Great attention has been paid to Russia: the middle class developing under conditions of new social reality in Russia has been researched both by Russian sociologists (The Russian Middle Class: Dynamics of Changes, a project implemented by the Complex Social Research Institute in 2003, sponsored by the Friedrich Ebert Foundation) and Finnish researchers (Tekes team (Finaland) 2013). The latter are interested in the post-Soviet middle class in order to highlight the trends of this class which should be considered by Finnish industries and businessmen in the light of the Russian middle class as a growing consumer: "Booming consumption expenditure of the Russian middle class stipulating overall economic growth; the largest consumption market in Europe; higher needs for intangible products – leisure, entertainment, service, etc." (Tekes team (Finaland) 2013). Therefore, papers and publications analysing and studying the middle class in the worldwide or global context are no longer surprising. "According to economists, the existence of the middle class indicates the level of development of a country, and this is what Lithuania cannot boast of. On the contrary, when asked to define the boundaries of the middle class, many experts shrug their shoulders and claim that there is actually no middle class left in Lithuania" (Povilaityte 2012).

Where reasons for respondents' self-identification with the middle class in one or another study are rather stereotypic, efforts to find out the arguments of those who do not identify themselves with the middle class have been anticipated to reveal new aspects. However, everything seems similar here, too (Balakirieva 2014): low income is mentioned first, owning no expensive or luxury property is mentioned second, and

holding no managerial position – third. The access to means and resources is quite an important criterion in that case. Responses like "my relatives / parents have never belonged to the middle class" or "I do not have higher education" are mentioned less frequently.

Middle class in global perspective

After the onset of the global economic crisis in 2008, almost half of the world's population now belongs to the middle class, as a result of rapid growth in emerging countries. The middle class as having a reasonable amount of discretionary income, so that they have roughly a third of their income left for discretionary spending after paying for basic food and shelter. This allows people to buy consumer goods, take care of their health, and provide for their children's education. Basing on those indicators, Asian countries had considerably more representatives of the middle class in 2007 and 2008 compared with Western countries.

Economists are mainly focused on the financial position of the middle class (consumption standards / peculiarities of economic behaviour and economic awareness) (Pezzini 2014). The increase in average incomes and the fall in levels of absolute poverty in the world suggest that an increasing proportion of the world's population is neither rich nor poor by well-established national standards but finds itself in the middle of the income distribution. According to Pezzini (2014), in 2009, the middle class included 1.8 billion people, with Europe having 664 million, Asia – 525 million and North America – 338 million, accounting for the highest number of people belonging to this group. Pezzini (2014) argues that even in Africa, where middle class' growth has not been very robust, it has nonetheless been noticeable and contributed to increased domestic consumption in many countries: sales of refrigerators, television sets, mobile phones, motors and automobiles have surged in different African countries in recent years. Possession of cars and motor cycles in Ghana, for example, has increased by 81% since 2006. As the expansion continues, the size of the "global middle class" is forecast to increase from 1.8 billion in 2009 to 3.2 billion by 2020 and 4.9 billion by 2030 (ibid.). The bulk of this growth will come from Asia where the middle class will represent 66% of the global middle-class population by 2030 (see Figure 1). This expansion continues.

Lithuanian researchers note that "low wages represent a very high job insecurity risk factor in Lithuania. Employed people can save little from their salaries. Losing a job affects their standard of living to a great degree. This could be to a certain extent compensated by social guarantees. That's why atypical forms of employment are not widespread in Lithuania (in particular, fixed term and part-time employment contracts. In 2016, individuals employed under fixed-term contracts and part-time accounted for as few as 1.9% and 8.0% of the total employed respectively). This risk is encountered by many self-employed individuals (especially in agriculture), seasonal workers and undeclared workers. In 2016, there were 155.4 thousand self-employed individuals in Lithuania, and this figure has been steadily growing since 2011" (Gruzevskis, Braziene 2017).

Figure 1

Global middle class consumption, by % of global total, 2000–2030

Legend:
- North America
- Europe
- Central and South America
- Asia Pacific Region
- Sub-Sacharan Africa
- MENA
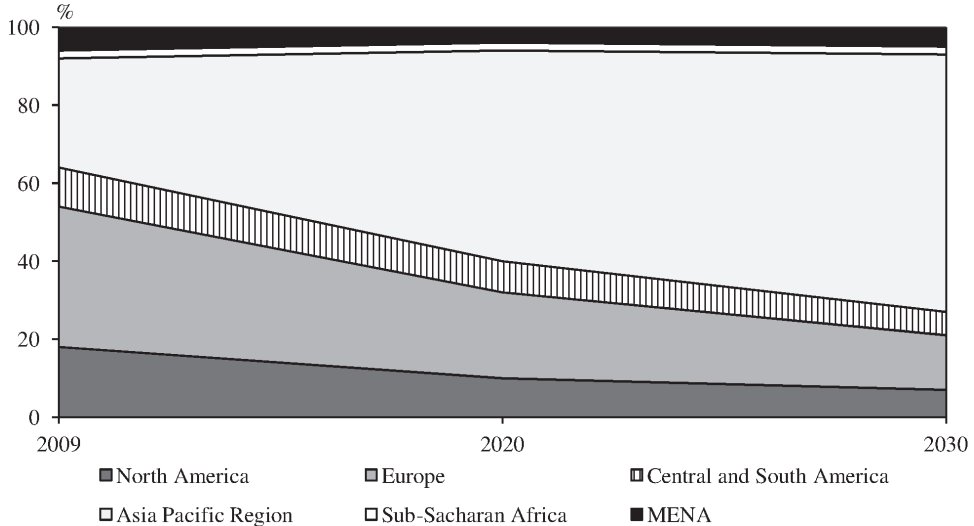
Source: Kharas 2010.

Many economic research studies point to a direct link between income inequality and a decrease in social groups with average income, thus highlighting the need to measure and record the limits of inequality in order to understand what is going on with the "middle class".

In 2017, an economist from Danske Bank, relying upon findings of Rokas Grajauskas' research, argued that 36% of total households (458 thousand) could fall within a middle-income group in Lithuania; lower income group accounts for 38% of total households (488 thousand) and 19% of total households (243 thousand) are living in poverty. The rest 86 thousand accounting for 7% of total households in Lithuania fall within a higher income group (Savickas 2017). According to the economist, Lithuania's middle class is one of the smallest in Europe. Accounting for 36%, it is the third from the bottom after Romania and Bulgaria (ibid.). European countries with the largest middle classes are Scandinavian countries which are not only rich countries, but also have evenly distributed incomes.

The European Household Survey 2011 (International Labour Organization, Vaughan-Whitehead (ed.) 2016) showed that Lithuania was ranked just ahead of Latvia by the number of households with median income (24% and 23% respectively) and fell almost twice behind Denmark (40%).

This study is aimed at understanding why the middle class could or should become the centre of interests or attention of any political party (or all of them?) rather than focusing on the middle class / participation in policy, public administration or civic society.

Figure 2

Size of income classes based on net household income, selected EU countries, 2011
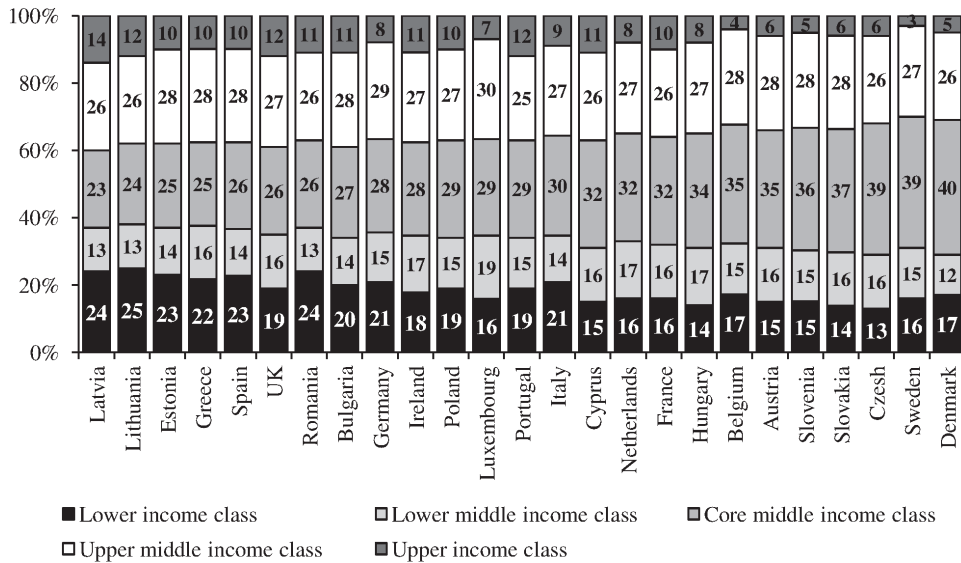
Source: EU Statistics on Income and Living Conditions 2011 (EU-SILC).

We are not sure whether it would be possible in today's Baltic countries to analyse only hypothetical, potential types of middle-class policy or real policy. It is difficult to explain a diversity of real middle-class policy both within parties and movements, merely because the drawing of boundaries of the middle class is problematic and unstable. The analysis of political attitudes, however, is necessary, as the governments will sooner or later encounter competing groups of interests within the middle class itself manifesting in various relations with the state. And such interests will require balancing. Developed countries believe that small middle classes determine, inter alia, election results, because they support a mood of frustration and protest.

There are some arguments that the term "middle class", although useful for social sciences, is more political or journalistic than sociological. Namely policy representatives are supposed to be the most interested in how the middles class is living or feeling, what their satisfaction levels are and what ratings the middle class give to political figures. It has become a stereotype to assume that better assessment of a financial or material situation a priori means greater support for the government (whatever it is), greater support for the market economy and also greater support for democratic norms and values. All this relates namely to the middle class. Countries attempting to define the middle class anew have first of all to do with the criteria of distinguishing it. As a result, they sometimes arrive at the question whether the middle class exists in reality or whether it is a theoretical construct or an imaginary community. Stable or more or less shaped social communities are considered to be those that could be statis-

tically defined in a certain way. This requires a particular view as to what or who should be considered middle class or its representatives: whether it depends on a certain level of income, possession of a house or a car, etc. Is subjective self-identification within the framework of those criteria enough?

The existence (or formation) of middle class as a certain social community undoubtedly requires old, well-established and clear criteria for distinguishing the middle class and identification thereof in the public opinion. We believe this could be the focus of further studies in the Baltic countries.

The reproduction of the middle class can be characterised by significant differences in income levels (by 1.5–2 times) compared with other salaried groups, level of education and motivation, and unemployment experiences and consequences. Therefore, sociological theories consider the following criteria as well-established, or rather classical criteria for the identification of the middle class:

- College or higher level of education;
- Above-median income (closely associated with the economic approach to the middle class);
- Managerial positions;
- Autonomy at work to the extent it is necessary to organise one's own work and perform it independently. *Types of autonomy at work* are defined by the content of work rather than by the professional title or job title. Therefore, qualitative methods are also used for this purpose.

Criteria for measuring the middle class: problem of objectivity and subjectivity (or self-identification)

Many researchers agree with the existence and importance of the problem of self-identification with the middle class, as well as with the importance of definition and justification of self-identification criteria. In the case at issue, researchers tend not to confine themselves to the criteria of financial or material standing; rather, they extend the criteria to cover lifestyle characteristics, not just a summer holiday, entrepreneurial activity, values or attitudes.

A study carried out in Ukraine (Paniotto 2014) singled out the following criteria of self-identification with the middle class:

- Respondents identify themselves as representatives of the middle class;
- State that their standard of living is adequate or higher (*above the indicator of "overall, it is enough for a living"*);
- Mention or describe their level of education as higher than vocational or secondary education;
- Express common interests with middle-class representatives;
- Mention that representatives of the middle class are dominant in their immediate social environment.

Some researchers (Paniotto 2014) argue that the division between the objective and subjective is not a dichotomy, since the subjective criteria we use are not exclusively subjective. Likewise, we cannot always claim that data provided by statistics depart-

ments represent purely objective data. The statistics are often based on sample method of data collection. Thus, in addition to objective and subjective data, he introduces the term "subjective facts". Researchers often have to decide which data to rely upon: statistics or specific sociological survey. Paniotto (2014) suggests that the latter should be regarded as subjective facts rather than purely subjective data.

Combinations of objective criteria and criteria of self-identification with the middle class reveal the following criteria pattern (probably even without a definite theoretical approach, because it cannot be asserted that understanding or opinions of the researcher and the informant coincide):

- Stability of self-identification with the middle class;
- Adequate level of education (higher than secondary and/or vocational);
- Relatively higher level of wellbeing.

Sociologists have almost reached a consensus that criteria like income or social wellbeing alone are not accurate enough unless accompanied by more a detailed specification as to the sources of income, the social situation regarding the structure of income and expenditure. With no clarification of this aspect, it would be a mistake to define the concept of middle class, especially for those countries that are still at the stage of market formation.

We have chosen this scheme for linking and singling the main indicators of the middle class out of a variety of its definitions, moreover that the concept of the middle class started developing in the Baltic countries just a few decades ago. Usually, there are three main criteria of the middle class:

- Financial / material situation;
- Social and occupational status;
- Self-identification with the middle class. Building a theory of the new middle classes some authors are "somewhat sceptical of the theories which conceptualize the new middle classes primarily on the basis of their consciousness" (Kivinen 1989).

We are trying to contextualize different definitions in some right (see Figure 3).

Figure 3

Contextualization of different definitions of middle class
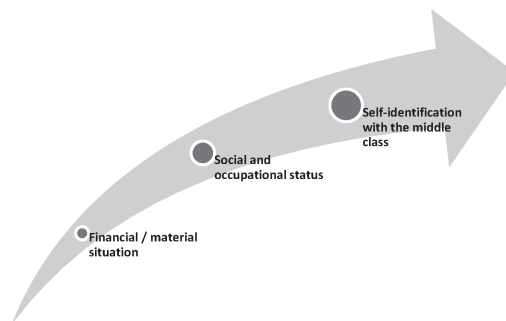
Source: elaborated by the authors.

The key problem when analysing the social class structure in post-Soviet Baltic States is the (un)ability to compare social structure studies, as well as studies addressing social stratification issues along with other research problems. Actually all the study sources analysed 1991, 1993, 2001 etc. (Taljunaite, Sviklas 2018) were based on different methodological and methodical assumptions. The study aimed at answering the question whether bringing people from highest and lowest classes together into a common society as a certain organisation of citizens is an exclusive prerogative of the middle class. It reveals the origins of the shaping of the middle class in the Baltic countries and of its sociological surveys, current situation and future perspectives.

The social class structure of the Baltic countries in 1991–2012

The structure of social classes was first analysed in more detail after the re-establishment of Baltic countries (Estonia, Latvia and Lithuania) independence.

There are some (sometimes common) studies, where was analysed social structure:
- "Consolidation of Democracy in Central and East Europe 1990–2001" (Wave I – 1990–1992, Estonia and Lithuania participated in the study, II wave – 1997–2001, Estonia, Latvia and Lithuania participated in the study);
- "Social Change in the Baltic and Nordic Countries" (1993, Estonia, Latvia and Lithuania participated in the study);
- European Social Survey (ESS) (Round 4 – 2008), Estonia, Latvia and Lithuania participated in the study);
- European Social Survey (ESS) (Round 6 – 2012), Estonia and Lithuania participated in the study).

Main results of the survey *"Consolidation of Democracy in Central and East Europe 1990 – 2001" in 1991.* At this stage, the study identified 4 major classes:
- Upper class – high society, elite;
- Upper middle class – representatives of the upper group of the middle class;
- Lower middle class – representatives of the lowest group of the middle class falling between the middle class and working class;
- Working class – people employed for wages, especially for industrial work. The working class by jobs includes blue-collar jobs, some of white-collar jobs and most of service jobs.

To analyse the study of 1991, we took for comparison the Europe's average and data of the neighbouring countries which participated in the study. In fact, Lithuania and its neighbours Poland and Estonia have similar class structures with minor differences. However, the differences are rather significant in the lower middle class and working class compared with the European average. The upper class is omitted from the analysis due to a very small number of respondents (see Figure 4).

Figure 4

Distribution of respondents into classes in 1991 study, by %*
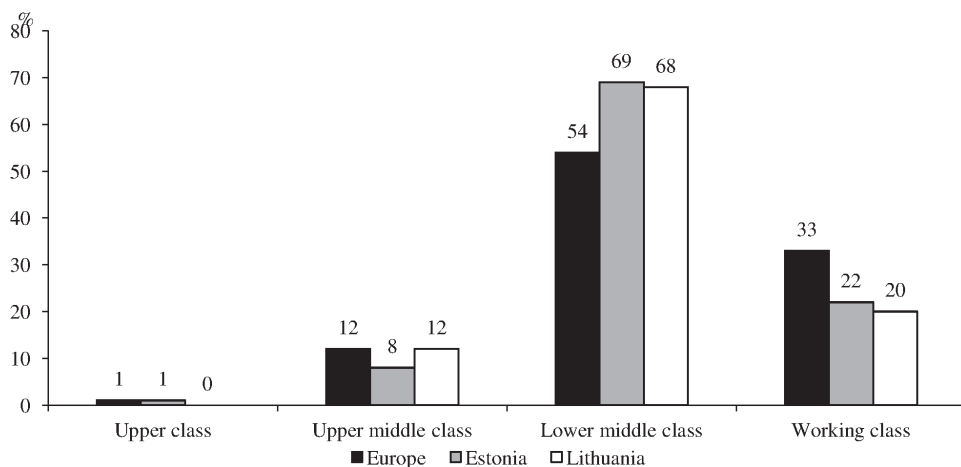
* Europe: n = 12365, Estonia: n = 943, Lithuania: n = 918.
Source: elaborated by the authors.

The analysis of the respondents' current social status and their parents' class status reveals a certain relationship between the respondents' social status and their class origin: the lower is the class the respondent belongs to, the more it is dependent on the parents' social status. In Europe, 45% of respondents in the upper middle class belong to the same class as their parents; in the lower middle class, respondents in the same class as their parents account for 66% and in the working class – even for 82%. The situation is similar in Lithuania and in other countries, although the latter (except for Estonia) demonstrate greater differences compared with the average in Europe (see Table 1).

Table 1

Respondent's social class and social origin, by % in each social class, 1991*

Country	Respondent's social class	Parental social class		
		Upper middle class	Lower middle class	Working class
Europe	Upper middle class	**45**	**38**	**13**
Lithuania		58	38	3
Estonia		44	43	10
Europe	Lower middle class	**9**	**66**	**24**
Lithuania		12	74	14
Estonia		7	71	22
Europe	Working class	**3**	**14**	**82**
Lithuania		8	33	58
Estonia		3	24	72

* Europe: n = 12365, Estonia: n = 943, Lithuania: n = 918.
Source: elaborated by the authors.

Main results of the survey *"Social Change in the Baltic and Nordic Countries"* **in 1993.** The comparative six-country project "Social Change in the Baltic and Nordic Countries" (involving Estonia, Finland, Latvia, Lithuania, Norway and Sweden) (carried in 1993) was an attempt to describe the characteristic features and determinants of social transition. The quantitative survey data (1500 respondents in each country) provided comprehensive background information on the economic, political and social conditions in the countries concerned. Sociological class theories mainly described advanced capitalist countries. In the Baltic countries capitalist social relations were still more or less non-existent in that period. They had large numbers of wage labourers, but the majority of them were state employees. There were only few real private employers who hire more than a couple of employees, not to mentioned major employers with hundreds of employees. The majority of the new private enterprises in the Baltic countries were small, typically one-man companies. The wage-labouring middle class was also lacking from the Baltic States. Although there were engineers, doctors and teachers who occupy a middle class position, they do not constitute a social class proper. The Baltic countries were described as class societies in their making.

The Project analysis drew on Erik Olin Wright's class theory to highlight the structural cleavages that could be found in the Baltic countries. Wright defines the new middle classes on the basis of control over three types of capital: financial capital, physical capital, and labour (the labouring activity of wage workers (see Kivinen 1989).

What did the Baltic countries look like in the light of Wright's typology (see Table 2).

Table 2

Classes in the Baltic countries, by %, 1993

Classes	Estonia	Latvia	Lithuania
Petty bourgeoisie	6	8	9
Managers	11	14	11
Middle management	12	14	12
Supervisors	5	5	4
Working class	62	60	64
Total	100	100	100
n	724	791	944

Note: Operationalization of Wright typology was made by Raimo Blom (1992, p. 46): *Petty bourgeoisie*: under 10 hired employees, control over (minor) investments and physical capital and worker's labour power. *Managers:* wage earners with decision-making authority in matters concerning the whole organization (including authority to suggest approval of matters). *Middle management:* authority to give advice in matters concerning the whole organization, or decision-making authority in matters concerning the whole organization but no control over other people's labour. *Supervisors:* no decision-making authority but influence on the pay, promotions and discipline of other workers. *Working class:* excluded from control over investments, use of physical capital and other people's labour power.

Source: Blom 1992; Blom et al. 1996.

The following conclusions were drew:

- The Baltic countries were wage labour societies. They had a very small petty bourgeoisie. This feature was reflected in the formation of the middle class(es). Baltic societies were working class societies; the working class was the biggest social class group in every country. The new middle classes were also quite large in comparison with the Nordic countries, for instance.
- There were also some important differences between the countries. In Lithuania, the share of petty bourgeoisie was bigger than in Estonia or in Latvia. In Latvia there were more people in managerial positions than in the other Baltic countries. In Estonia there are more people in autonomous/professional positions than in the other two countries.

Finally, researchers agree that this class typology represented abstract empiricism. In that period classes in the Baltic countries could be defined on the level of "classes as such", but it was hard to speak about "classes for themselves". Classes were not actors, there were hardly any class organizations, and class consciousness was virtual non-existent in the Baltic countries.

Main results of the survey *"Consolidation of Democracy in Central and East Europe 1990–2001"* **in 2001.** In 2001, at the second stage of the study, one more class was added to the classes identified in 1991. It was called the peasants class consisting of small landowners and agricultural workers. This, to a certain extent, reflected the specifics of the post-Soviet epoch involving large-scale restitution of private property expropriated by the Soviet system in the agricultural sector.

Figure 5

Distribution of respondents into classes in 2001 study, by %*
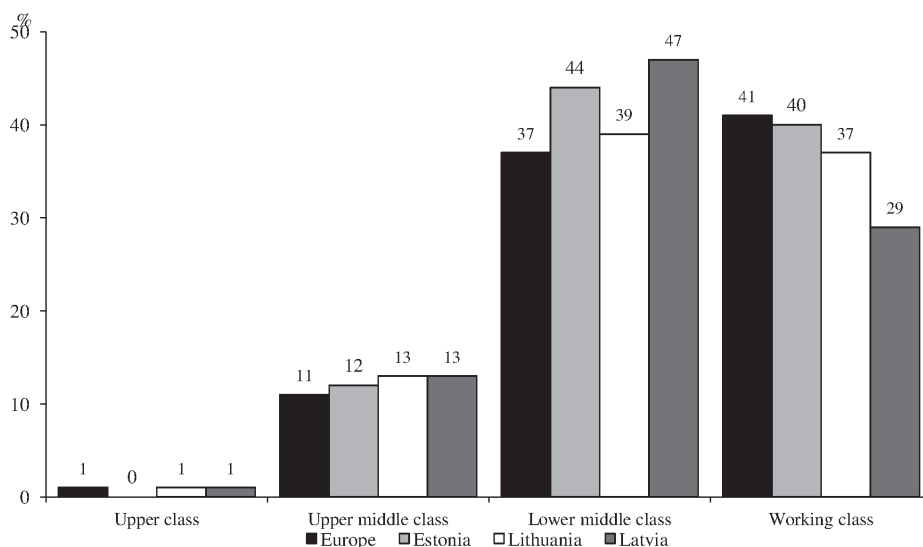
* Europe: n = 16561, Estonia: n = 1000, Latvia: n = 1099, Lithuania: n = 1005.
Source: elaborated by the authors.

In 2001, the Lithuanian class structure was basically in line with the European average, except for insignificantly higher portions of the upper middle class and lower middle class (by 2%) and a lower portion of the working class (by 4%). Differences in individual classes were considerably higher in some other Lithuania's neighbouring countries (see Figure 5).

Figure 5 demonstrates the class status of the respondents and the social status of their parents in Lithuania and in the neighbouring countries.

With regard to social mobility, the analysis shows that Lithuanian indicators, as compared with the European average in 2001, were more or less consistent with the European indicators with some minor exceptions. The situation was similar in other neighbouring countries. Differences in intergenerational mobility were more significant in the lower middle class and lower classes.

In order to analyse intergenerational mobility and to compare surveys representing different periods and methods, we could single out two classes for the analysis and comparison purposes, in particular, the upper middle class and the lower middle class. One trend is clear right away: the higher is the social status of respondents, the smaller is the difference between their social status and that of their parents. Almost all respondents positing themselves in the upper middle class have the same or higher social status compared with their parents. Both in 1991 and 2001, as few as 3% of respondents on average in Europe reported having a lower social status than their parents; every second of them indicated having a higher social status than their parents. Naturally, this indicator varies from country to country within the limits of few percentage points. Table 3 and Table 4 present relevant indicators for Lithuania's neighbouring countries. The situation is similar with regard to the lower middle class, except that respondents who thought their social position was lower than that of their parents account for 10% or even more in some individual countries. This particularly refers to the 2001 survey.

Table 3

Intergenerational social mobility in 1991, by %

Country*	Respondent's social class	Respondent's social position is		
		...higher than parent	...practically the same	...lower than parent
Europe	Upper middle class	51	45	3
Lithuania		41	58	1
Estonia		53	44	2
Europe	Lower middle class	24	66	10
Lithuania		14	74	12
Estonia		22	71	7

* Europe: n = 12365, Estonia: n = 943, Lithuania: n = 918.

Source: elaborated by the authors.

Table 4

Intergenerational social mobility in 2001, by %

Country*	Respondent's social class	Respondent's social position is		
		...higher than parent	...practically the same	...lower than parent
Europe	Upper middle class	**54**	**43**	**3**
Lithuania		59	39	2
Estonia		61	36	3
Latvia		50	45	5
Europe	Lower middle class	**46**	**43**	**11**
Lithuania		50	33	17
Estonia		47	39	14
Latvia		48	40	12

  * Europe: n = 16561, Estonia: n = 1000, Latvia: n = 1099, Lithuania: n = 1005.
 Source: elaborated by the authors.

Analysis of the situation in Lithuania shows a rapid increase in the relative weigh-ting of respondents in the upper middle class believing their social status is higher compared with their parents. In 1991, such respondents accounted for 41% and increased up to 3/4 in 2012. At the same time, just a small portion of respondents in this group assessed their social position below that of their parents (only 1 or 2 %). The situation is slightly different for the lower middle class. The number of respondents who think their social status is lower than that of their parents is growing over time. This could be explained to a certain extent by the economic situation existing in Lithu-ania. One of indicators in this context could be respondents' employment in the labour market. Although the level of unemployment was not measured in Lithuania in 1990, statistical data suggest that over 90% of Lithuanian people were employed with state-owned enterprises. The year 2001 saw a considerable improvement in the labour market. The level of unemployment that year was the lowest in Lithuania compared with the neighbouring Baltic countries – Latvia and Estonia. According to Statistics Lithuania, the rate of unemployment stood at 4.3% in Lithuania, 4.7% in Estonia and 6.0% in Latvia (Savickas 2017).

Main results of the survey "European Social Survey (ESS)" (Round 4) in 2008

Analysis of the results from the European Social Survey Round 4 (2008) (Mauritti et al. 2016) presents an analogous picture. Although the model of the class structure is different, the situation remains the same as in 2001. The lower is the social status, the higher are indices for Lithuania vis-à-vis the European average. This is indicative of certain backwardness in the formation of the middle and upper classes.

Table 5

**The class structure of the countries participating in the ESS 4,
Class 5 scheme, 2008**

Country*	Class position				
	White collar	Small bourgeoisie	Skilled workers	Unskilled workers	Peasants
Estonia	48.8	3.7	16.6	25.4	5.5
Latvia	44.1	3.1	16.2	27.1	9.5
Lithuania	43.1	3.3	17.1	28.2	8.2
Europe	**50.8**	**7.3**	**12.8**	**23.5**	**5.6**

 * Europe: n = 61004, Estonia: n = 1661, Latvia: n = 1980, Lithuania: n = 2002.
Source: Mauritti et al. 2016.

Compared to the European average, we can see that Estonia is in the most favorable situation among the Baltic countries. It is closest to the European average of these countries, while Lithuania and Latvia occupy roughly the same positions.

Main results of the survey "European Social Survey (ESS)"
(Round 6) in 2012

Analysis of the results from the ESS Round 6 (2012) (Mauritti et al. 2016) which, again, used a different model of class structure also demonstrates that Lithuania has a different situation which is actually the same as in the ESS Round 4 (2008) (Mauritti et al. 2016), i.e. the problem of middle-class formation still exists.

Table 6

**The class structure of the countries that participated
in the ESS 6 survey, 2012**

Country**	Class position*				
	EE	PM	SE	RE	IW
Estonia	17.1	30.7	2.8	21.1	28.3
Lithuania	7.8	22.2	3.4	28.8	37.8
Europe	**13.5**	**31.1**	**5.7**	**28.1**	**21.6**

 * EE – Entrepreneurs and executives, PM – Professionals and managers, SE – Self-employed, RE – Routine employees, IW – Industrial workers.
 ** Europe: n = 54673, Estonia: n = 2380, Lithuania: n = 2109.
Source: Mauritti et al. 2016.

Because the ESS databases are organized by country, the nationality variable was operationalized directly. Anyone who was 25 to 64 years old and had valid responses to ESS 2012 from the selected countries was included in the analysis. The operationalization of the social class variable was performed using the ACM typology.

This typology of class locations, which was proposed by the Portuguese sociologists Joćo Ferreira de Almeida, António Firmino da Costa and Fernando Luís Machado, was used in several European analyses (Costa et al. 2002, 2009; Carmo, Nunes 2013; Nunes 2013). The operationalization of this typology uses occupation (ISCO 08) and employment status as primary variables, combining them in a matrix of class locations. The ACM typology incorporates the analytical dimensions and classification criteria of several noteworthy contemporary sociologists, such as Bourdieu (1979), Goldthorpe et al. (1980) and Wright (1997), for class analysis. It is well known that the theoretical connections and operationalization proposals of these authors differ greatly in many ways. However, they also converge in several aspects, particularly in the relational and structural features that are attributed to social classes. As far as analytical dimensions are concerned, this convergence only occurs up to a point. All of the authors emphasize socio-occupational relations, although Goldthorpe et al. (1980) and Wright (Wright 2015) formalize employment status or location in production relations to a greater extent than the others. Bourdieu's theoretical framework is highly multi-dimensional, particularly in the integration of culture, education, and lifestyles in his analysis of classes. Some of these dimensions, specifically qualifications, are explicitly included in Wright's analytical framework (Wright 2015) and are implicit in Goldthorpe classificatory scheme (Goldthorpe et al. 1980). Similar consideration can be given to more recent typologies of classes – whether they are the classifications of a micro-occupational character developed by Grusky and Sørensen (1998), the socio-economic categories proposed by Rose and Harrison (2007), which is essentially a new version of Goldthorpe's scheme (Goldthorpe et al. 1980), or the class typology developed by Savage et al. (2013), which was strongly inspired by Bourdieu but updated to reflect new social circumstances (Mauritti et al. 2016).

Conclusions

To reach a deeper understanding of the structures of the Baltic societies, we need to take further analytical and theoretical steps. We understand middle class analysis as a research field involving multiple levels. Middle class analysis can be understood as a series of steps, with analysis of class structure representing the first step, from which we proceed to the next, higher steps of analysis (class situation, collective interest organizations, classes and the state).

The class structure in all countries is changing. The changes can however not be set in relation to another. The analysis of social structure in different countries moves mainly in parallel but is not strictly comparative nor by themes, nor by a large numbers for each country.

The greatest problems for the professions in the middle and higher categories (specialists and managers) are disproportion between their professional skills and the tasks they are given.

A recently observed trend is that a significant portion of people living in poverty tend to elevate their status rather than to lower it. According to the researchers, it's gradually becoming a shame to recognise publicly that you are poor.

Where the first studies (around the 1990s) addressed the issue of "discovering" the middle class, it has become obvious in recent studies that there are many social groups in society which way of living or lifestyle is close to, or approximates, the well-established standards of the middle class. The share of such people by self-identification with the middle class is also increasing in studies and surveys. The issues relevant for the Baltic countries today are those relating to the transformation of the working class or intelligentsia into the middle class and the trends of such transformation or formation.

It has been revealed that the Baltic countries middle class is far from being homogeneous. This group of people is greatly socially differentiated by age generations, urban / rural divisions and occupational groups. The middle class has many public-sector employees and grows on account of professionals, officers and highly-skilled workers. However, representatives of private business (newly established private business undertakings) are not much contributing to the growth of the middle class. Therefore, the current middle class in the Baltic countries represents the groups of people capable of having adapted to the new social reality. A social portrait of the middle class becomes more and more diverse, with people from different social strata and growing diversity of their occupational affiliation. This is blurring the line between representatives from the private and public sectors.

Thinking about future changes in middle class structure in the Baltic countries and considering middle class as a group of people with common social and economic features (level of income, education and professional status), we suppose (and agree with other authors in different countries (Tekes team (Finland) 2013) that in the future two subgroups will differentiate:

1. *Those that currently belong to the middle class i.e. the maturing middle class*. For this group, investments will become priority rather than consumption: investing in future, in extra sources of income and development of next generation. Most desired services will be education abroad, leisure for teenagers and family entertainment. As soon as the representatives of this segment have already purchased real estate, they will be primarily interested in home improvement, furniture, indoor design, and countryside real estate and apartments for their growing children.

2. The 'wanna-be' middle class or *new entrants*. Those who currently cannot qualify for the middle class due to early phase of career which is limiting income today but who have good educational background combined with ambition. Within soon they would need to solve the same challenges and tasks as the "current middle class": finding a balance between work and family leisure, lack of free time, allocating a part of family income for investing in real estate and future of the family, finding products and services of best quality for themselves and for children.

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Daiva Skuciene

INCOME INEQUALITY EVALUATION
IN THE BALTIC COUNTRIES:
PUBLIC OPINION, PREFERENCES AND VALUES

Upon regaining their independence, the Baltic countries (Estonia, Latvia and Lithuania) chose the neoliberal welfare development path, which served as an impetus for the increase in income inequality and poverty in the Baltic countries. The welfare policy is generally based on public opinion and support, hence analyses of the public opinion on income inequality that results from the neoliberal welfare policy and societal values related with redistribution of income can serve as one of the factors explaining why the neoliberal welfare policy has been viable in the region. Commonly the relation between the welfare regime and population attitudes and values is defined as a two-way process. Theories of culture proposed by Inglehart, Hofstede G., Hofstede G.J. and Minkov provide insights into how the cultures of the Baltic countries have been shaping preferences for equality. The main goal of this paper is to analyze the public opinion, viewson income inequality and values of the people in the Baltic countries in relation to redistribution of income. To achieve the main goal, the current study uses secondary Eurostat data of 2006–2016, primary Eurobarometer data of 2006–2017 as well as data from the representative survey (face-to-face interviews) in the Baltic countries of 2016 realized by the company "Spinter research". The targeted group in the Baltic countries was the population of age 18 and over drawn through probability sampling (the study included 1000 people from Estonia, 1063 from Latvia and 1011 from Lithuania). The study also uses the European Value Study 2008 data. Evaluation of differences in opinions and values was carried out by means of relevant statistical analyses which suggest that the values of equality/solidarity and individual responsibility were in line with the main principles of the neoliberal welfare policy because equality and solidarity are not important values in asociety characterized by a preference for freedom and invidual efforts. However, the evaluation of income inequality resulting from the neoliberal welfare policy revealed a dissatisfaction of inhabitants in the region and their preference for a more equal or an absolutely equal society.

Key words: income inequality, Baltic countries, preferences, values, equality, individual responsibility.

Ienākumu nevienlīdzība Baltijas valstīs: sabiedriskā doma, prioritātes un vērtības

Baltijas valstis (Igaunija, Latvija un Lietuva) pēc neatkarības atgūšanas izvēlējās neoliberālu labklājības attīstību. Rezultātā Baltijas valstīs palielinājās ienākumu nevienlīdzība un nabadzība. Labklājības politikas pamatā ir sabiedriskā doma un sabiedrības atbalsts. Tāpēc, analizējot sabiedrisko domu par neoliberālas labklājības politikas izraisīto ienākumu nevienlīdzību un sabiedrības ar ienākumu pārdali saistītās vērtības, iespējams gūt skaidrāku izpratni par neoliberālās labklājības politikas dzīvotspēju reģionā. Akadēmiskajā literatūrā saistība starp labklājības režīmu un sabiedrības attieksmi un vērtībām definēts kā divvirzienu process. Kultūras teorijas, tostarp Inglhārta, Hofstedes G., Hofstedes G.J. un Minkova izstrādātās, piedāvā ieskatu tajā, kā Baltijas valstu kultūras veido to vienlīdzības preferences. Šī darba galvenais mērķis ir analizēt sabiedrisko domu, ar ienākumu nevienlīdzību saistītās prioritātes un Baltijas valstu iedzīvotāju ar ienākumu pārdali saistītās vērtības. Šī darba galvenā mērķa sasniegšanai izmantoti Eurostat 2006.–2016. gada sekundārie dati, "Eirobarometra" 2006.–2017. gada primārie dati, reprezentatīva Baltijas valstu iedzīvotāju aptauja 2016. gadā, ko īstenoja kompānija *"Spinter*

research" (tika veiktas personiskas intervijas; mērķa grupa bija Baltijas valstu iedzīvotāji vecumā virs 18 gadiem un tika izmantota varbūtības izlase, aptaujā piedalījās 1000 cilvēki no Igaunijas, 1063 no Latvijas un 1011 – no Lietuvas) un 2008. gada Eiropas vērtību pētījums. Viedokļu un vērtību atšķirību novērtēšanai tika veikts statistiskais tests. Pētījums liecina, ka vienlīdzības/ solidaritātes un indivīda atbildības vērtības ir bijušas neoliberālas labklājības politikas galvenajiem principiem labvēlīgas, jo sabiedrībai tādas vērtības kā vienlīdzība un solidaritāte nav svarīgas; priekšroka tiek dota brīvībai un indivīda centieniem. Tomēr neoliberālas labklājības politikas izraisītās ienākumu nevienlīdzības vērtējums atklāja iedzīvotāju neapmierinātību reģionā un viņu vēlmi pēc vienlīdzīgākas vai pilnīgi vienlīdzīgas sabiedrības.

Atslēgas vārdi: ienākumu nevienlīdzība, Baltijas valstis, vērtības, vienlīdzība, indivīda atbildība.

Оценка неравенства доходов в странах Балтии: общественное мнение, приоритеты и ценности

Страны Балтии (Эстония, Латвия и Литва) после обретения независимости выбрали неолиберальное направление развития политики благосостояния. В результате этого возросло неравенство доходов и уровень бедности населения. На политику благосостояния всегда влияет общественное мнение и поддержка. Таким образом, анализ общественного мнения о неравенстве доходов, возникшем в результате проведения неолиберальной политики благосостояния, а также анализ ценностей, связанных с перераспределением, может обеспечить более четкое понимание жизнеспособности неолиберальной политики благосостояния в регионе. Академическая литература определяет взаимосвязь между режимом благосостояния, общественным мнением и ценностями населения как двусторонний процесс. Теории культур, представленные в работах Инглхарта, Хофстеде Г., Хофстеде Г.Й. и Минкова, показывают, как культуры стран Балтии формируют определенные предпочтения в отношении материального равенства. Главная цель этой статьи — проанализировать общественное мнение, приоритеты населения стран Балтии в отношении неравенства доходов и его ценности, связанные с перераспределением. Для реализации основной цели статьи были использовыи: данные Евростата за 2006—2016 годы, данные Евробарометра за 2006—2017 годы, данные репрезентативного опроса в странах Балтии в 2016 году, проведённого компанией *"Spinter research"* (использовался метод непосредственного интервью, целевой группой в странах Балтии являлось население в возрасте от 18 лет и старше, была использована вероятностная выборка, в опросе приняли участие 1000 жителей Эстонии, 1063 — Латвии и 1011 — Литвы) и Европейского исследования ценностей за 2008 год. Для оценки различий во мнениях и ценностях использовалась статистическая проверка значимости различий. Исследование показало, что ценности в отношении равенства/солидарности и индивидуальной ответственности благоприятствуют основным принципам неолиберальной политики благосостояния, поскольку равенство и солидарность не являются важными ценностями для общества в странах Балтии; наблюдаются более выраженные предпочтения в отношении свободы и индивидуальных усилий. Однако оценка неравенства доходов в результате неолиберальной политики благосостояния выявила неудовлетворенность населения в регионе и его предпочтения в пользу общества с бо́льшим либо абсолютным равенством.

Ключевые слова: неравенство доходов, страны Балтии, ценности, равенство, индивидуальная ответственность.

Introduction

The Baltic countries opted for the neoliberal welfare policy after regaining independence (Bohle, Greskovitz 2007; Aidukaite 2009). This type of welfare policy presupposesa lowerredistribution of incomeand, hence,a higher income inequality. The development of the welfare policy rests on the agreement among various actors: interest groups, society, decision makers, etc. Support from the society for a particular welfare policy can only be garneredif the society is satisfied with the results of the welfare policy and if its principles are a match to the values of the society. In view of all this, the goal of this research is to analyze the public opinion, viewson income inequality as an outcome of the current welfare policy and values of the people in the Baltic countries as they relate toredistribution of income. The research object is the public opinion, views on income inequality and values related to redistribution of income.

For the implementation of the main goal of this paper, the following objectives were set: 1) to analyze the main principles of neoliberalism and welfare regime or, vice versa, their influence on the society's opinion, values, and value theories; 2) to explore the society's opinion and preferencesrelated to income inequality; 3) to investigate the main values such as equality, solidarity and individual responsibility in relation with redistribution of income.

Theoretical background

The type and development of the welfare state in the Baltics are defined in the welfare regime theory. Bohle and Greskovits (2007) state that in the Baltic countries a reincarnation of economic liberalism as neo-liberalism has been pursued. The Baltic region is one of the most socially exclusive regions plagued by inequality. According to Fenger (2007), the Baltic countries compose the former USSR welfare type where the social situation was defined by such variables as inequality, the GDP growth, and inflation. Potucek (2008) notes that the liberal welfare state approach was dominant in all the three Baltic countries and that inequalities in this region were rising more rapidly. As proposed by Aidukaite (2009), the welfare state in Eastern Europe is falling within the liberal or residual regimes in which welfare is based on partial privatization of social policy.

Admittedly, the neoliberal development rests on the main traditional classic concepts of neoliberalism: free market, individual responsibility, and limited state intervention. The residual role of the welfare state and its reduced redistribution of income in neoliberalism are defined by Bonoli et al. (2000), Licha (2000), and Erickson and Laycock (2002). Thus, as a consequence of such processes, the level of social solidarity has decreased. Erickson and Laycock (2002), Goldstein and Daniel (2005), and Brown (2015) pointed out that neoliberal reforms resulted in the increase in economic inequality and a dramatic decrease in the standard of living.

Individual responsibility and "self-help" are the main values of neoliberalism as defined by Goldstein (2005), Deeming (2014), and Wrenn (2016). Neoliberalismsees equality solely as competition in the world (Brown 2015). According to Wrenn (2016),

neo-liberalism is also dependent upon the anti-welfare rhetoric that shapes public beliefs about the merits of individual responsibility. In addition, the welfare state supports the myths of neoliberalism, especially in regard to individual responsibility.

The impact of the welfare state regime on values was proven by Gijsberts (2002), who stated that ideological differences have an impact on the socialization of values. As stated by Mau (2004), the people's sense of justice is influenced by the norms of justice conveyed by institutions. Heise (2008) contends that the "liberal culture" allows for the acceptance of high income inequality because in liberal regimes the stress is placed on freedom over inequality. According to Dallinger (2010), regimes have an effect on citizen preferences because they embody specific ideas which promote different ways of valuing market distribution. Importantly, as stated by Nam (2011), values are the most lasting ideas of what is desirable, while perceptions are about how people actually observe reality and policy. Meanwhile, attitudes are applications of values to concrete situations and policies. Nam (2011) notes that the basic values appear to be strongly dependent upon the economic dimension. According to Vrooman (2013), living under a specific regime may cause people to adhere to a particular understanding of principles of equality, equity, solidarity, and justice.

According to Jaime-Castillo (2013), the principles of solidarity reflect value systems that are deeply rooted in history and tradition because of the existing interplay between welfare state institutions and people's basic set of values. Welfare regimes are inspired by different distributive justice criteria and produce different patterns of solidarity (Jaime-Castillo 2013). Jaime-Castillo (2013) points out that the welfare regime influences the value system of people and vice versa – the value system of the population may support the welfare policy. This means that politics is constructed within the social context, which also shapes politics. Alckok and Craig (2001) as well as Hofstede G. and Minkov (2013) suggest that the Baltic countries are individualistic societies, and in individualistic societies people look after themselves and their direct family. The more individualistic the country is, the more it emphasizes freedom above equality, whereasthe role of the state is restricted. On the other hand, Allik and Realo (2004) state, that individualism and collectivism are not opposites. According to Allik and Realo (2004), individualism does not necessarily jeopardize organic unity and social solidarity because individualism is related to higher self-esteem and optimism.

In Schwartz's (2006) theory, values associated with egalitarian societies include social justice and caring for the weaker members of the society, as well as equality and social responsibility. Inglehart (1981) states that in the society which is based on scarcity, prioritiesof individuals reflect the socio-economic environment. Minkov and Blagoev (2009) found a relationship between cultural norms and economic dynamism, whereas according to Dallinger (2010), the cross-national variation in citizens' demand for redistribution of incomecan be explained by the economic situation. Barcena et al. (2010) contend that people's perception of inequality of income is related to the economic situation and the level of safety and inequality that can be seen in their environment.

In view of all this it can be stated that the neoliberal welfare regime is characterized by high income inequalities, a failure to recognize free market constraints, and an emphasis on individual responsibility, self-help, freedom, equality, reduced welfare state, etc. Welfare policies shape the values of a given society through norms of what

is right. Meanwhile, social values and culture support the welfare policies, whereas attitudes towards well-being and redistribution of income depend not only on the values but on the economic context, too.

Method and data collection

Income inequality was selected as the main indicator of redistributive policy in the Baltic countries. Public opinion on income inequality was evaluated on the basis of calculations from primary Eurobarometer data (74.1 and 81.5) of 2010–2014 and preferences established from the data of the representative survey in the Baltic countries in 2016 (the survey included face-to-face interviews and was conducted in all the Baltic countries in February 2016; the targeted group in the Baltic countries was the population of age 18 and over drawn through probability sampling, 1000 people from Estonia, 1063 from Latvia and 1011 from Lithuania) (Company "Spinter research" 2016). The questions in the survey were formulated in the format of the experiment design as defined by Amiel and Cowell (1999), where by participants were given a possibility to select from different options.

The following values were selected for the analyses of redistribution of income-related values of society: solidarity, equality, equality/justice and individual responsibility. The solidarity and equality values were analyzed using the 2006–2017 primary Eurobarometer data (66.1 – 87.3). The value of "individual responsibility" was examined by exploring opinions about reasons for inequality. To meet this objective, the study used data from the2016 survey of the population in the Baltic countries. For the evaluation of preferences for freedom vs. equality and equality vs. individual initiatives, the study utilized data of the European Value Study (European Commission 2008b).

In addition, the dynamics of indicators was analyzed in order to examine the change or stability of the opinions and values. Relevant statistical comparisons were performed by means of ANOVA and chi-square tests. The research hypothesis was formulated as follows: the values of the Baltic populations are in line with the neoliberal policy of redistribution of income.

The opinions and values were examined by the correlation with the age, occupation and economic status (Eurobarometer: difficulties paying bills-last year; European Value Study: annual household income) of respondent. Data are presented if correlation coefficient is higher than 0.2 and statistically significant. Age also is indicator for the analyses of values socialization from the past.

The selection of international surveys datasets (Eurobarometer 2006–2017, European Value study 2008) and survey of Baltic countries allows implementing the goal of the research: to analyze the opinions, views on income inequality and values related to redistribution of income. The international datasets also allow implementing comparative research. On other hand, the limitation of the research is that the research object is analyzed through the questions, which are introduced in international surveys. The additional deeper information about opinions, values is inaccessible in the mentioned datasets. The selection of different data sources partly solves this problem.

Results

The Gini income inequality index was higher in the Baltic countries than in the EU28 (30.7%): by 6.3% in Lithuania, by 3.8% in Latvia, and by 2% in Estonia in 2016, to compare with EU28 (30.5%) in 2010, +6.5% in Lithuania, +5.4% in Latvia, and +0.8% in Estonia (Eurostat 2018a). The high-income inequality is accompanied by the high at-risk-of-poverty rate. In 2013, the at-risk-of-poverty rate was 16.6% in EU27/28, higher by 2% in Estonia, by 2.8% in Latvia and by 4% in Lithuania. In 2006, the at-risk-of-poverty rate was higher than average of the EU by 1.8% in Estonia, 7% in Latvia and 3.5% in Lithuania, while in EU27 the rate was 16.5% (Eurostat 2018b). Hence, poverty as indicated by the Gini income inequality index is quite a stable phenomenon in the context of the Baltic countries. As concluded Matulionis (2014), a social exclusion is growing and the capacities of governments to reduce it are limited especially in post- socialist countries.

The public opinion on income inequality as an outcome of the neoliberal welfare policy in the Baltic countries was predominantly negative. The part of the population which indicated that income inequality is "too large" remains high – approximately 80–60 percent in 2010–2014 (chi-square test, 2010, p=0.000; 2014, p=0.007, see Figure 1). Compared with 2010, 2014 saw a slight decrease in the agreement with the statement "too large income differences, totally agree" in all the Baltic countries.

Figure 1

Views on income differences ("too large" income differences), %, 2010–2014
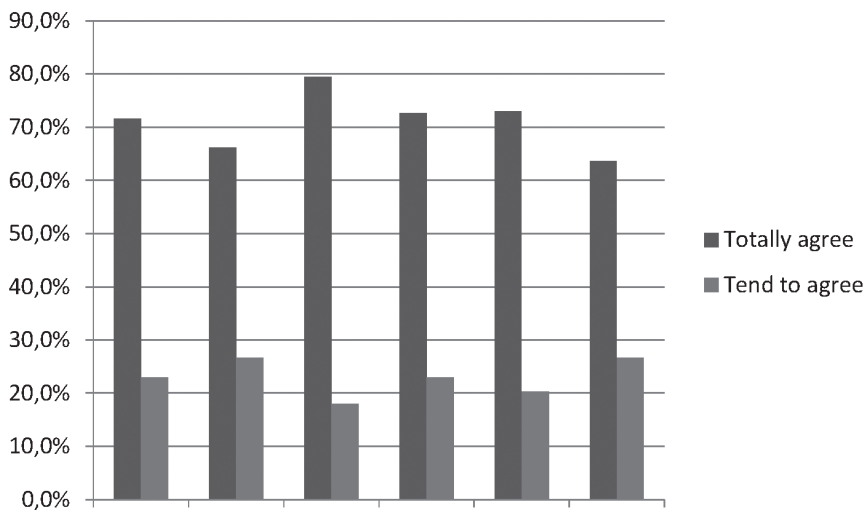
Source: elaborated by the author based on the data of European Commission 2010–2014.

The evaluation of income inequality as high can be related to high poverty and a low level of economic safety, as stated by Barcena et al. (2010).

According to G. Hofstede and G.J. Hofstede (2005), the notion of "desirable" refers to people in general and is worded in terms of right or wrong, whereas "desire" carries the meaning of what people want for themselves. In the Baltic countries, the respondents defined income inequality as an undesirable situation. Therefore, the analysis of relevant preferences would help to reveal their wishes.

Figure 2

Preferences of people in the Baltic countries, "the type of society they would like to live in", 2016
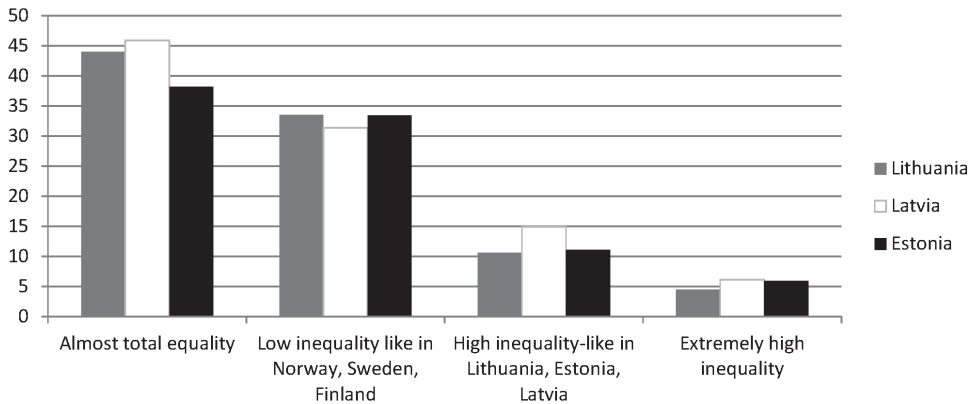
Note: Low inequality like in Norway, Sweden, Finland; High inequality like in Lithuania, Estonia, Latvia.

Source: elaborated by the author based on the data of Company "Spinter research" 2016.

People in the Baltic countries expressed a preference for a society characterized by almost total equality or low inequality, similar to what it is in Norway, Sweden, and Finland (see Figure 2 and note). Almost 44% Lithuanians, 46% Latvians, and 38% Estonians said they would like to live in a society with almost total equality, whereas more than 30 percent of the population of the Baltic countries would like to live in a society with a low inequality, such as Norway, Sweden, and Finland. Only a small portion of the respondents from the Baltic countries mentioned that they would like to live in a society with such a high inequality as in Lithuania, Estonia, and Latvia. Finally, the lowest number (about 5%) of the respondents indicated that they would like to live in a hypothetical society characterized by an extremely high inequality. The differences in opinions among people in the Baltic countries are statistically significant (chi-square, p = 0.00).

The preferences of the populations in the Baltic countries reflect dissatisfaction with the outcomes of income inequality that emerged as a consequence of the neoliberal welfare policy. As defined by Menshikov (2016), the small proportion of population is in middle class in Latvia. The insufficient income to live a lifestyle of the class (Menshikov 2016) or lifestyle of the richer societies can be a reason of negative opinions about income inequality and desire for more equality. On the other hand, preferences

for equality in a given society can be related with values characteristic of that society. According to Hofstede and Minkov (2013), the Baltic societies are "long-term oriented", which means that big social and economic differences are undesirable. Also, as stated by G. Hofstede and Minkov (2013), the "power distance index" demonstrates that people from the Baltic countries prefer small income differentials in their society. Therefore, preferences for equality can be explained by two factors – societal values and the influence of the economic context (high income inequality and the spread of poverty) on the established preferences. Small wonder then that the public response to the economic context marked by inequality was negative and the preferencesof societies in the Baltic countries were towards greater equality. This way, the values such as equality or freedom, solidarity, and the personal/structural reasons for income inequality can signify the match or vice versa with the welfare policy principles in the Baltic countries. On the other hand, the welfare regime has had an impacton the values of given societies during their development after regaining independence.

Evaluation of social equality as a societal value is presented in Figure 3. Indeed, social equality as a concept can have a broader definition than income equality. Hence, it may be assumed that when evaluating social equality, the respondents do not necessarily think about income equality. On the other hand, this statement reflects the monetary dimension, too.

Figure 3

**Societal values: social equality in the Baltic countries,
% endorsed, 2007–2014**
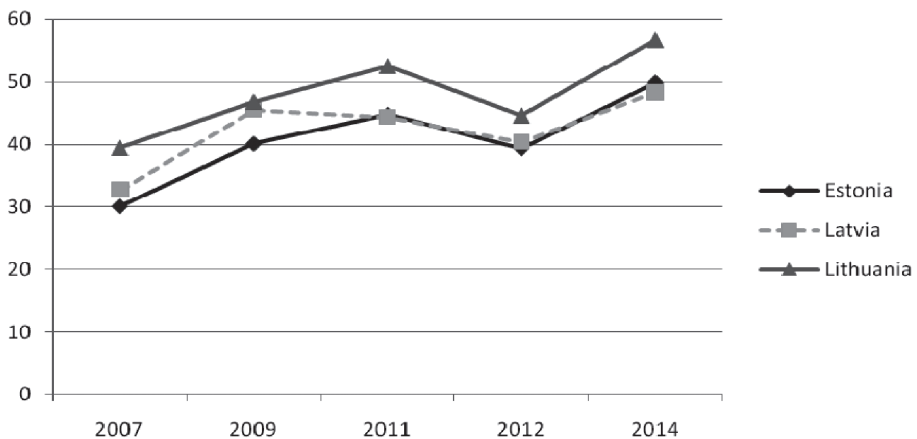
Source: elaborated by the author based on the data of European Commission 2010–2014.

In 2014, about half of the populations of Latvia and Estonia and about 56 percent of Lithuanians endorsed social equality as a societal value. In the Baltic countries, the part of respondents who viewed social equality as a societal value increased from 30 to 40 percent in 2007 to 60 percent in 2014 (chi-square test, p = 0.00, 2007–2014 (see Figure 3). Such a notable increase in the tendency to view social equality as a societal value could be related to persistent income inequality and poverty in the region.

<div align="right">Table 1</div>

Evaluation of statements in the Baltic countries, 2008

Statements	Estonia	Latvia	Lithuania
Freedom above equality (%)	57.6	48.2	57.7
Equalize incomes (1) – incentives for individual effort (10)	5.92	6.61	5.4

Source: elaborated by the author based on the data of European Commision 2008b.

A larger part of the Estonian and Lithuanian populations prefer freedom over equality. Compared with the other Baltic countries, Latvians demonstrate a slightly higher preference for equality. The differences in evaluation among the Baltic countries were statistically significant (ANOVA, p= 0.00). Results also suggest that populations of the Baltic countries give a slight edge to incentives for individual effort over equal incomes. The correlation with age, occupation and income was weak (<0.2).

According to G. Hofstede and G.J. Hofstede (2005), individualistic societies prefer freedom over equality and people tend to look more after themselves and their own family; while egalitarian societies prefer equality and solidarity, as stated by Schwartz (2006). The majority of the populations of the Baltic countries considered equality and solidarity unimportant personally, though the part of the respondents who mentioned solidarity as an important personal value increased during the financial crisis in 2009. In 2009, a quarter of Estonians and less than twenty percent of Latvians and Lithuanians viewed solidarity as an important personal value. Despite the deviation of opinions during the crisis, the evaluation of solidarity remained stable during 2006–2017 (chi-square test, p=0.00, 2006–2017, see Table 2).

<div align="right">Table 2</div>

Values of personal importance: solidarity and equality in the Baltic countries, % endorsed, 2006–2017

	2006			2008			2009			2010			2012		
	EE	LV	LT	EE	LV	LT	EE	LV	LT	EE	LV	LT	EE	LV	LT
S	10.3	9.9	11.9	9.5	15.7	16.7	10.6	18.2	18.7	13.2	11.7	13.1	10.6	10.7	11.5
E	13.7	17.7	19.4	15.5	10	13.1	13.1	9.4	11	16.4	20.2	17.6	13.1	17.3	13.6
	2013			2014			2015			2016			2017		
	EE	LV	LT	EE	LV	LT	EE	LV	LT	EE	LV	LT	EE	LV	LT
S	12.7	12.1	11	8.7	10.7	8.7	10.7	8.7	10.7	8.7	10.7	13.6	8	9.7	9.9
E	17.3	17.4	13.8	13.3	14.4	13.3	14.4	13.3	14.4	13.3	14.4	14	13.3	12.6	13.6

Note: S-Solidarity, E-Equality.

Source: elaborated by the author based on the data of European Commission 2006–2017.

These findings confirm the notion of Inglehart (1990) that "progress toward equality would come not from an emphasis on materialistic class conflict, but through an appeal to the public's sense of justice, social solidarity, and other nonmaterial motivations".

The reasons for income inequality reflect the values related to structural-individual responsibility and, hence, the left-right positions.

Table 3

Reasons for income inequality as indicated by the respondents of the Baltic countries, %

Statements	Income is higher when you work more					
	1	2	3	4	5	DK
Lithuania	29.4	32.5	18.9	11.7	6.8	0.7
Latvia	24.1	25.6	21.6	18.7	8.3	1.8
Estonia	26.9	33.3	18.3	10	3	8.5

Note: 1 – the most supported statement; 5 – the least supported statement.
Source: elaborated by the author based on the data of Company "Spinter research" 2016.

The differences in opinions among the people in the Baltic countries are statistically significant (p= 0.00). The reason for income inequality defined as "income is higher when you work more"was rated first or second in importance by about 50 percent of Lithuanians and 40 percent of Latvians and Estonians. Taxes and social protection systems as reasons for income inequality were rated as the least important. The evaluation of reasons for income inequality demonstrates that half of the populations in the Baltic countries view individual reasons as the main culprits for income inequality.

The present research findings reveal a contradiction between the negative views on income inequality, priorities for egalitarian society and the failure to give creditto the values of equality and solidarity. There may be a number of factors that could explain the link between the Baltic context characterized by specific values and redistribution of income. It is likely that this is related to the transition of the Baltic States to capitalism after the Soviet period. On the one hand, collectivism and social solidarity tend to be attributed to Soviet ideology, meanwhile, the free market ideology to the capitalist system. On the other hand, the change of systems has opened more opportunities to realize individual efforts. The third possible explanation is that the current neoliberal welfare policy that emphasizes the free market and individual responsibility has been shaping the concepts of social justice, redistribution of income, and equality. The weak correlation of opinions and evaluation of values with age, occupation and economic situation was (<0.20) in all cases examined in this research confirms the conclusion of Menshikov (2016) about small unit weight of middle class. Thus, the scarcity of economic resources in the Baltic countries, as defined by Iglehart (1981), reflects the preferences of the populations reflecting the socioeconomic context.

Discussion and conclusions

High income inequality and poverty are accompanied by dissatisfaction of the people in the Baltic countries. The small middle class, insufficient income resources can be the reasons, that the majority of people indicate that income inequality has

been too high in Baltic's during the past few years. The preferences of the population are related to the desire for equality. The people of the Baltic countries want to live in absolutely equal societies or in such low in inequality societies as Scandinavian countries.

Despite the notable dissatisfaction with income inequality, the neoliberal welfare policy has been viable in the Baltic countries after they regained independence. The values of the Baltic societies are favorable for the neoliberal principles of redistribution of income in the region. The Baltic societies are individualistic in culture, wherein the ideology of individual freedom prevails over ideologies of equality. In the Baltic States, people do not value equality and solidarity as personal values. Approximately half of the populations view equality as an unimportant societal value. The Baltic societies exhibit a high preference for freedom over equality and individual effort over income equalization. The belief that individual efforts are among the main reasons for income inequality can be related to the emphasis placed on individual responsibility as the main principle of neoliberalism.

The data on the socioeconomic context in the Baltic countries and preferences expressed by the people who live here confirm Inglehart's notion regarding the decisive role of the economic scarcity in the Baltic countries. On the other hand, as scarcity diminishes, the previously dominant values resume the importance they had before. In the Baltic societies, the neoliberal welfare policy forms the norms of inequality, individual efforts, redistribution of income and taxes through the mass media as a source of information in individualistic societies (Hofstede G., Hofstede G.J. 2005).

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EKONOMIKA

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INTEGRAL SYSTEM OF FRAUDULENT BANKRUPTCY EVALUATION

The research aims at clarifying the opinion of experts to identify factors indicating possible intentional nature of bankruptcy and its assessment. In the article, the authors analysed such concepts as fraudulent bankruptcy, criminal bankruptcy, etc., distinguish division of bankruptcy and defined its distinctive characteristics. On the basis of literature review and expert estimation, the authors searched indicators of fraudulent bankruptcy. The study is based on opinions of the experts related to fraudulent bankruptcy (insolvency administrators, investigators, academics of accountancy and forensic accountants), using the analytic hierarchy process (AHP method). Experts identified the 10 most popular indicators related to fraud bankruptcy cases and evaluated them. The authors tested the possibility of the appearance of these indicators in non-criminal insolvency cases in various conditions of three internal characteristics of the company (quality of management, organisation of accounting and internal control of the company) using the simulation approach. The results of the empirical research can be applied to the construction of models for fraudulent bankruptcy evaluation. The authors summarized also the terminology of fraudulent bankruptcy in different countries' law and identified a common concept – deliberate illegal activity or fraud. At least three forms of fraudulent bankruptcy were identified: fictitious, intentional and hidden. The authors proposed also their own definition – fraudulent bankruptcy is a white-collar crime, which contains any type of offences and detrimental transactions, which result in company's bankruptcy.

Key words: fraudulent bankruptcy, criminology, non-financial indicators, analytic hierarchy process (AHP).

Krāpnieciska bankrota novērtēšanas integrālais modelis

Pētījuma mērķis ir precizēt ekspertu viedokli, lai noteiktu faktorus, kas norāda uz iespējamo bankrotu tīšo raksturu. Rakstā autori analizēja tādus jēdzienus, kā "krāpniecisks bankrots", "krimināli sodāms bankrots", u.c., lai nodalītu bankrota veidus un formas, kā arī noskaidrotu tā atšķirīgās pazīmes. Autori apkopoja literatūru un ekspertu grupas novērtējumus, lai noteiktu 10 visbiežāk sastopamos krāpnieciskos bankrotu indikatorus. Pētījums veikts, pamatojoties uz ekspertu, saistīto ar krāpnieciskiem bankrotiem (maksātnespējas administratori, izmeklētāji, tiesu grāmatveži un akadēmiskie grāmatveži) viedokļiem, izmantojot hierarhiju analīzes metodi (*AHP*). Autores ar simulācijas analīzes metodi pārbaudīja krāpniecisko bankrotu indikatoru iespējamību parādīties nekriminālās maksātnespējas lietās uzņēmuma trīs iekšējo raksturojošo apstākļu (vadības kompetence, grāmatvedības uzskaites organizācija, kompānijas iekšējā kontrole) kontekstā. Pētījuma rezultātus var pielietot krāpniecisku bankrotu novērtēšanas modeļu konstruēšanai. Autori arī ir apkopojuši krāpnieciskā bankrota terminoloģiju dažādu valstu likumdošanā un identificēja kopīgu konceptu – plānotu nelegālu darbību vai krāpniecību. Tika identificētas vismaz trīs krāpnieciskā bankrota formas: fiktīva, slēpta un tīša. Autori piedāvā arī savu definīciju – krāpnieciskais bankrots ir "balto apkaklīšu" noziedzība, kas ietver jebkāda veida nodarījumus un kaitnieciskus darījumus, kā rezultātā iestājas uzņēmuma bankrots.

Atslēgas vārdi: krāpniecisks bankrots, kriminoloģija, nefinanšu rādītāji, hierarhiju analīzes metode.

Интегрированная модель оценки мошеннического банкротства

Цель данного исследования — выявление факторов, указывающих на возможный преднамеренный характер банкротства и его оценка. В статье авторы проанализировали концепции определений «мошенническое банкротство», «уголовно наказуемое банкротство» и др., его виды и формы, установили их отличительные характеристики. Авторы провели также обзор научной литературы и изучили мнения экспертов для определения показателей мошеннического банкротства. Исследование основывалось на оценках экспертов, связанных с мошенническим банкротством (администраторы несостоятельности, следователи, бухгалтера-академики и судебные бухгалтера), используя метод иерархического анализа *(AHP)*. В результате проведённого исследования эксперты идентифицировали 10 наиболее часто встречающихся показателей, связанных с мошенническим банкротством, и оценили эти показатели. Авторы с помощью симуляционного подхода проверили вероятность появления идентифицированных экспертами показателей в случаях некриминальной неплатежеспособности в контексте трёх внутренних характеристик фирмы (компетентности руководства, организации бухгалтерского учета, внутреннего контроля компании). Результаты эмпирического исследования могут быть применены к построению моделей оценки мошеннического банкротства. Авторы также систематизировали терминологию, связанную с мошенническим банкротством и встречающуюся в законодательных актах различных стран, и выявили общий элемент данного понятия — умышленная нелегальная деятельность или мошенничество. Выявлены по крайней мере три формы мошеннического банкротства: фиктивная, преднамеренная и скрытая. Авторы предлагают также своё определение мошеннического банкротства как преступления «белых воротничков», включающего в себя любые нарушения или трансакции, приведшие фирму к банкротству.

Ключевые слова: мошенническое банкротство, криминология, судебная криминалистика, нефинансовые показатели, метод иерархического анализа.

Introduction

An integral part of any activity aimed at making a profit is its risk component. Initially, the institution of insolvency was created to reduce the possible damage from doing business and protect against the behaviour of counterparties. However, the report of the Insolvency Control Service of the Republic of Latvia (2018) shows that only 31% of secured creditors were able to recover their claims in 590 insolvency proceedings notified in 2017. The percentage of recovered claims of unsecured creditors is much less – only 4%. Out of the mentioned persons 61% did not have any assets for debt return, and the bankruptcy would be the intended solution for such proceedings.

While all bankruptcy cases cannot be considered wrong, many aspects may be viewed as morally questionable: abuse of credit; living beyond one's means; failure to manage one's personal finances or business (Wickouski 2007). Dishonest participation in the bankruptcy system undermines its central aims – distribution of debtor's estate to his creditors and debtor's relief to have a fresh start financially. Under modern conditions, the term "bankruptcy" is increasingly associated with such social and negative phenomena as fraud, raider seizures, etc.

Questionnaire organised by the Latvian Chamber of Commerce and Industry highlights that 74% of the surveyed persons have encountered insolvency abuse, 77% of victims of abuse reported that there were no negative legal consequences for the

abusers (Deloitte 2016). Statistics on crime investigation into insolvency are not encouraging in Latvia.

According to statistics released by the Ministry of Interior of the Republic of Latvia,only three criminal proceedings of fraudulent bankruptcy were initiated in 2016 and nine – in 2015. Out of the proceedings, which were initiated in the previous period, thirteen were terminated in 2016 and eighteen proceedings – in 2015. The termination causes of proceedings are the following: no crime was detected in eight proceedings in 2016 and eleven in 2015; the prosecution period expired in six proceedings in 2016 and seven in 2015 (Rozenbergs 2017). Based on the data of the Court Administration, there were no convicted persons for such crimes in the period of 2017–2016 in Latvia, only one person was convicted in 2015, two persons – in 2014, and one person in 2013, etc. (Court Administration 2017).

Investigation of fraudulent bankruptcy and other economic crimes differs from other types of offenses. The gist of economic crime or "white-collar crime", as it was named by Edwin H. Sutherland in 1940, is related to a set of illegal actionsperformed by persons with high social status and position (Kipena, Vilks 2004). In cases of economic crime, a perpetrator is often known, but the investigators must disclose the content of the crime. It is very important to determine the economic beneficiary from fraudulent bankruptcy because this person is usually the perpetrator (Lavikkala 2000).

The aim of the study isto identify the fraudulent bankruptcy indicators and to check the possibility of their appearance in non-criminal insolvency cases. The authors reveal the social and other non-financial characteristics as causes of inducement leading to offenses. The authors use the method of analytic hierarchy process to demonstrate the significance of non-financial components of fraudulent bankruptcy.

The paper is structured as follows: Section 1 provides the definition of fraudulent bankruptcy and distinguishes its main forms; Section 2 demonstrates the architecture of fraudulent bankruptcy mechanism and describes the non-financial indicators that characterise fraudulent bankruptcy based on literature review; Section 3 reports on theresearch methodology to prioritize the indicators of fraudulent bankruptcy and to reveal the possibility of their appearance in the non-criminal insolvency cases; the concluding section presents the results of the research.

1. Definition and forms of fraudulent bankruptcy

According to the Criminal Law of the Republic of Latvia (Section 213, Part 2), intentional driving into insolvency or "fraudulent bankruptcy"/ "bankruptcy fraud" / "criminal bankruptcy", as a crime of this kindcalled in other sources of literature, refers to economic crimes (Saeima 1998).

One of the signs of financial relations is the redistribution of funds, which also takes place in the fraudulent bankruptcy cases (Lvova 2006). It means that fraudulent bankruptcy is substantially related to economic activities, and the main methods for detection of such crime must contain economic approaches.

In turn, economic activities are the tools to perform the commercial activity for the purposes of gaining of profit in legal activity, following the Commercial Law (Saeima 2000). In general, the result of fraudulent bankruptcy is a substantial harm

to other persons' interests (Saeima 1998); the fraudulent bankruptcy initiators' purpose is to gain income by violating the rights of others (Lvova 2006); synonyms of word "intentional" are "purposely", "wilful", "deliberate" (Latvian Academy of Sciences 2018). Thus, fraudulent bankruptcy is an element of the illegal economic, which highlights high social danger of this phenomenon (Lvova 2006).

Fraudulent bankruptcy is classified as a "white-collar crime", in which, as many believe, physical violence is not applied. However, the study of Brody and Kiehl (2010) shows, that being afraid of disclosure of the crime and loss of social status, own reputation and recognition of the family, such fraudsters are even capable of murder, introducing the term "red-collar crime" and emphasising the danger of these offences.

There is no definition "fraudulent bankruptcy" in the Latvian legislation; however, the term "criminal bankruptcy" is defined in the Credit Institution Law. The definition of fraudulent bankruptcy is provided in the Lithuanian legislation.

According to the Latvian legislation, ***criminal bankruptcy*** is "the bringing of a credit institution into insolvency or bankruptcy, if the reason thereof is intentional action or neglect, and if it has caused substantial harm to the rights and interests of another natural or legal person, which are protected by the law, and if it has been established by a judgment of a court" (Saeima 1995).

In the Lithuanian legislation, ***fraudulent bankruptcy*** means "the company's being prosecuted by deliberately poorly managing the company (operation, omission) and / or concluding transactions when it was known or should have been aware that their creation violates the rights and / or legitimate interests of creditors" (Seimas 2001).

According to the Estonian law, ***act with criminal elements*** is one of possible insolvency causes, which must be determined by the interim trustee (Riigikogu 2003).

The term "fraudulent bankruptcy" is mentioned in insolvency legislation of the USA, Italy, France, Austria, Romania and Greece; phrases "bankrupt committing a fraud", "bankrupt has acted fraudulently" are mentioned in Gibraltar's and Malta's laws of insolvency (Government Printing Office 2006; European e-Justice Portal 2017).

In the United States Code, ***bankruptcy fraud*** is "a scheme or artifice to defraud and for the purpose of executing or concealing", related with bankruptcy proceeding (Government Printing Office 2006). The general categories of bankruptcy crimes are as follows (Government Printing Office 2006; Clement 2015):

- *Concealment of assets*, when a debtor seeks to avoid forfeiture of certain assets, and knowingly and fraudulently conceals these from creditors. It also means to prevent the discovery of the asset or to withhold knowledge of the asset.
- *False oath or account* encompasses intentionally filing false or incomplete forms with respect to a material matter in relation to any bankruptcy case.
- *Bribery and extortion*, when a person knowingly and fraudulently gives, offers, receives, or attempts to obtain any money or property, remuneration, reward, or promise thereof for acting or forbearing to act in any bankruptcy case.

In the legislation of the Russian Federation, Republic of Belarus and Ukraine,the fraudulent bankruptcy is divided into forms: fictitious, intentional and hidden(State Duma of the Russian Federation 1996; House of Representatives of the National Assembly of the Republic of Belarus 1999; Verhovna Rada of Ukraine 2001):

- *Fictitious bankruptcy* is determined when the debtor objectively and informally has a real opportunity to satisfy all the claims of creditors, but instead, the debtor himself or another person on behalf of the debtor appeals to the court with an application for declaring the bankrupt. There is no real bankruptcy, it is fictitious.
- *Intentional bankruptcy* is an intentional creation or increase in insolvency committed in the personal interests or in the interests of other persons and caused damage in large amount.
- *Hidden bankruptcy* is a deliberate concealment of the fact of persistent financial insolvency through the submission of false data if it caused material losses.

Despite the fact that bankruptcy is not divided into forms in the USA, there is a lot of literature, which describes the special schemes of fraudulent bankruptcy, which distantly resembles the definitions of hidden and intentional bankruptcy (Cruz 2013):

Bustout schemes – "bust out" of the business by filing for bankruptcy, involve establishing a favourable credit rating by false financial statements vastly overstating the business assets and net worth.

Bleedout schemes, when a company's assets are shifted to insiders; hence, the "bleeding" of failing corporations is caused by the detrimental transactions. They may also be the payments not related to the company.

Literature review shows that there are many different definitions and forms of fraudulent bankruptcy, which the authors combine in one in the article. Thus, in the authors' opinion, *fraudulent bankruptcy* is a white-collar crime, which contains any type of offences and detrimental transactions, which result in company's bankruptcy.

2. The architecture of fraudulent bankruptcy mechanism

In general, all methodologies of fraudulent bankruptcy valuation show a common trait, that there are two stages of this crime detection: the first one is the insolvency valuation based on the financial analysis methods; the second one is the determination of fraud transactions for the purpose to evaluate their relationship with bankruptcy.

According to the studies performed by Lvova (2006) and Nabeeva (2017), the second stage of fraudulent bankruptcy detection consists of three modules: the scheme (mechanism) of intentional activities leading to company's bankruptcy; the financial mechanism of economic activities leading to company's bankruptcy; the scheme of actions related to company's bankruptcy – withdrawal of company's assets. Thus, in economists' opinion, the problem of identification of intentional activities for fraudulent bankruptcy detection is complex and multilevel.

According to the guidelines to investigators by the Latvian Police Academy, successful detection of economic crimes is not possible without examining disclosed schemes and outlines of such offenses (Lavikkala 2000). Such schemes are published in editions of White-Collar Crime, the first of which was published by E.H. Sutherland in 1949 (Salinger 2013); in the Guide to Forensic Accounting Investigation, first published in 2005 (Golden et al. 2006); in the annual Report to the Nations on Occupational Fraud and Abuse, which has been published by the Association of Certified Fraud Examiners (2018) since 1996. The importance of systemic crime investigation, combining the

causes and circumstances, economic and social aspects is demonstrated in the books of criminology (Kipena, Vilks 2004). Thus, the criminalists' and criminologists' opinion about the complex and systemic approaches necessary for fraudulent bankruptcy detection is the same as the economists' opinion.

The problems of fraudulent bankruptcy are characteristic not only of business or crime investigation, but also of science. For example, aspects of scientific fraud and model of its valuation are presented in the research by Leistedt and Linkowski (2016). The Belgium researchers describe the two-dimensional bio-psychosocial integrative model of scientific fraud as follows:

$$M = (F_p, F_n); F_p = (f_1, f_2, f_3,); F_n = (f_4, f_5), \qquad (1)$$

where F_p – the level of personal skills (micro-level):
   f_1 – personality organisation;
   f_2 – social competence;
   F_n – the level of network skills (macro-level):
   f_3 – the triangle of fraud;
   f_4 – social network organisation;
   f_5 – social engineering.

The key to understanding and controlling fraud within this model is to study both the individuals and the environment in which they work.

Multi-component model, interrelated with all the others at three levels(business and industry sector level, the company's level and financial statement level), is presented in the research by Grundiene (2014). The Lithuanian researcher offers to determine fraud in the financial statements, by establishing the relationship of the fraud components and applying the method of SOM neural networks. The general components of the model are as follows:
- object: action (misrepresentation), inaction (inactivity);
- features: key features (influence on the financial statements to deceive), common features (false financial information affecting user's decision);
- fraud elements: fraud in accounting policy, fraud in accounting process, fraud in the corporate management process.

Relationship between the company's finances, management and fraud is demonstrated in Mohamed and Handley-Schachelor's (2014) research, where the group of interviewees (management, forensic accountant, auditor, etc.) recognised, that the effective corporate governance, management's honesty and integrity were the important components for prevention of financial statement fraud risk in Malaysian companies.

The so-called triangle of fraud, which consists of three components – pressure, opportunity and rationalization (Leistedt, Linkowski 2016), is used in many countries in all spheres related to fraud detection, such as forensic accounting, criminology, etc. It is a general model for explaining the factors that cause someone to commit occupational fraud (Association of Certified Fraud Examiners 2018).

The studies disclosed the relationship of fraudsters' personal characteristics in the cases of fraudulent bankruptcy. In criminologists' opinion, in general, such a fraudster is a 36–45-year-old male, who has obtained a degree in natural sciences, has a high social

status, is married and has children (Association of Certified Fraud Examiners 2018; Pivovarova 2009). Some studies link financial crimes even with the nature of an offender, believing that the offender has signs of "narcissism" and the authoritarian nature of management (Leistedt, Linkowski 2016). Therefore, Vousinas (2018) describes the supplemented model of fraud triangle with one more component – the ego of the fraudster.

The complex analysis methodology for forecasting economic bankruptcy is shown in Mackevicius, Shneidere and Tamuleviciene's (2018) research, where Lithuanian and Latvian economists emphasise the great influence of external and internal environmental factors on a company's financial status. Among the internal factors the authors mention a company's organisational management structure, managers' philosophy, leadership style, personnel management policy, accounting and control system (Mackevicius et al. 2018).

Incontestable influence of indicators, which are not recorded in the accounting, such as conflict at management's high level, overly fragmentation of functions or conversely, etc. (Suglobov, Chernov 2015), is a serious problem of forensic accounting.

Empirical verification of correct classification by groups of methods of statistical analysis of bankruptcy (Models of Linear Discriminant Analysis (LDA), Models of Logistic Regression – Logit, Classification and Regression Trees (C&RT)) from the point of view of their effectiveness shows that such methods can be characterised by high quality of bankruptcy forecasting. For example, 28 financial indicators were used in the research conducted by Brozyna et al. (2016).

The studies of Chen (2014), Plat-Chmielewska and Matuszyk (2018) demonstrate the trend to include also non-financial indicators in the group of important factors to predict the companies' bankruptcy. For example, Chen (2014) used 33 financial ratios, 4 non-financial indicators and 1 combined macroeconomic indicator. Many studies reveal that qualitative factors are important for the timely prediction of bankruptcy, especially in the case of small and medium-sized enterprises, which account for 99% in the EU. Therefore, Ptak-Chmielewska and Matuszyk (2018), applying the method of intellectual analysis in an integrated approach, included non-financial indicators along with 16 financial indicators, such as the company's legal form, number of employees, sector, region, and age of the company. The authors used an LDA, Logit and C&RT to investigate the probability of bankruptcy of small and medium-sized Polish enterprises,and the most important financial ratio was capital ratio (equity/total liability). Using an LDA and C&RT, important variables were share of net financial surplus in total liabilities and legal form. Using a decision tree, important non-financial indicators were the age of the company and the number of employees.

Insolvency as a complex economic phenomenon has an internal and external form. The internal form of insolvency of the enterprise is manifested in the inefficiency of business, the external form – in its inability to pay. Any change in the external form is derived from changes in internal content. Lukasonand Hoffman (2014) researched the impact of an individual cause (internal or external nature) and some causes (of any kind) on the probability of bankruptcy. The research was conducted by cases of 70 Estonian manufacturing firms (SMEs) that failed between 2002 and 2009. The authors identified 33 causes of internal natureand 23 causes of external nature. Companies' bankruptcy was valuated, using the two Logit models, developed by Ohlson

(1980) and Grunberg and Lukason (2014), with the lag of the study for 2 years. Essential conclusions of this study: the companies that failed by one cause (which are either internal or external for the company) show a slight change in the bankruptcy estimates for the models during the year before the announcement of bankruptcy. In contrast, companies experiencing multiple internal causeshave significantly greater changes in their assessment of bankruptcy during the year before bankruptcy, and the average score indicates a very high risk of bankruptcy. This study can serve as a basis for experimental research of the presence or absence of fraudulent bankruptcy based on the application of models of bankruptcy valuation over a period *t-3* before submitting material for establishing insolvency / bankruptcy status.

In general, all researchers agree that methods for determining the possibility of bankruptcy and its valuation vary depending on the general company's metrics, which conditionally can be named ***company's external characteristics***: company's industry, its regional location, legal form and company's size comparing with its assets.

The most important ***company's internal characteristics***, which are mentionedas causes of company bankruptcy, are the following:

- Form of business. According to Wilson et al. (2013), the number of bankruptcies is less and levels of debt, if the business is family-owned.
- Company's age and experience. Causes of companies' bankruptcy from one to two yearsare related to incompetent management rather that fraudulent management, comparing with companies that were established more than three years ago (Pervan, Kuvek 2013; Altman et al. 2015 etc.).
- Management competence, which is characterised in different ways – education, experience, etc. (Wilson et al. 2013; Mackevicius et al. 2018 etc.).
- Organisation policy, which can be characterised by payment behaviour, accounting quality, etc. (Rozenbaha 2017 etc.).

There are a lot of studies that reveal a significant difference in the ***reasons*** (features, pressure) of bankruptcy:

- "Extrajudicial debt restructuring" or "company duplication" that is characteristic of small-size companies, which cannot or do not want to go through the legal insolvency proceeding and simply take out assets in another company. Another name of this situation is the Phoenix syndrome (Rotem 2011; 2013).
- Internal conflict between shareholders or board (Suglobov, Chernov 2015). The least number of bankruptcies occur in companies where the founders are not the members of the board (Purves et al. 2015).

There is an opinion that management is not well remunerated, but management's salary is not the main cause of bankruptcy. In turn, Altman et al. (2015) indicate, that frequent change in management is one of the causes of bankruptcy, according to a study conducted by Keasey and Watson (1991).

In general, all ***abnormal rapid changes*** are the main "red flags" for fraud detection, such as illogical payments, reduction of employees, change in the board, auditor, etc.

According to the fraud triangle and forensic theory, one of important components of crime investigation is establishing an ***opportunity***, i.e., the lack of control and / or management incompetence in all financial fraud cases.

Reviewing the main components of fraud triangle and forensic theory, it is worth mentioning ***rationalization***, which in fraud cases is characterised by:

- Fraudster personality, which has already been mentioned above in the present article. The behavioural consistency theory (the concept that individuals demonstrate consistent behaviours across various situations) reveals a robust positive economic relationship between corporate and management personal leverage (Purves et al. 2015).
- Crime income or impunity of crime committing, which is a more important component of Becker model (1974) about the fraudsters' rational (economic) approach to crime.

The last component of the forensic theory is ***fraud action***. Many activities related to fraudulent bankruptcy are mentioned in the legislation, specified in the guidelines and identified in the scientific studies, but each of them is not obligatory a crime:

- Activities aimed at the company's bankruptcy, such as debt cession, etc.
- Activities related to the company's bankruptcy, such as withdrawal of assets, etc. (Zager et al. 2016).

Based on the literature review, the authors present the mechanism of fraudulent bankruptcy (see Figure 1).

Figure 1

The mechanism of fraudulent bankruptcy EGO
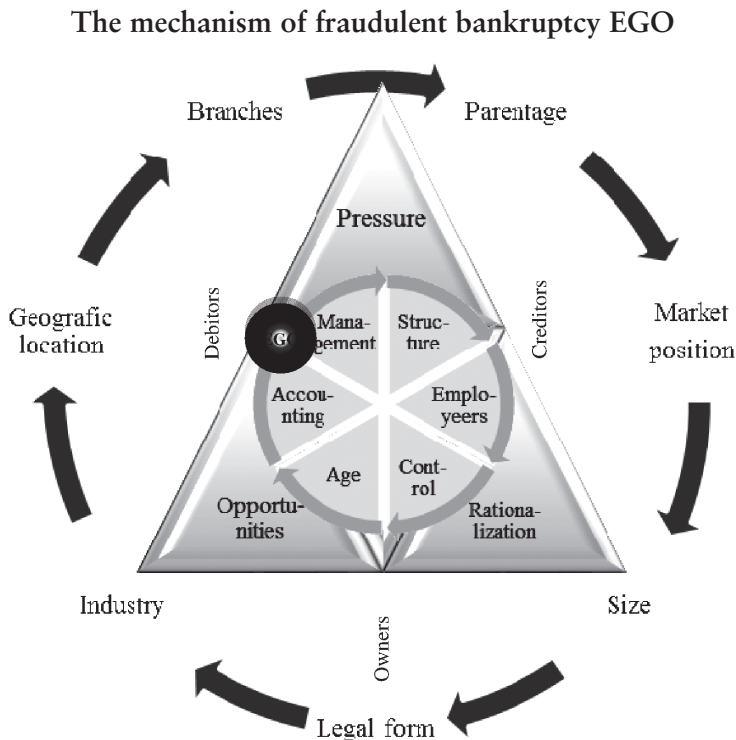
Source: created by the authors.

3. Method of the research

The empirical research was based on the opinions of the experts related to the fraudulent bankruptcy. To collect information on the main factors of fraudulent bankruptcy, a survey of expert group was conducted. To create an expert group, specialists off our types of profession participated in completing the questionnaire: insolvency administrators, investigators, forensic accountants and academics of accountancy.

The size of simple random sampling needs to be clarified by formula (Shulca 2010):

$$\text{n} = \frac{t^2 N \upsilon \,(1 - \upsilon)}{t^2 \upsilon \,(1 - \upsilon) + \Delta_\upsilon^2 N} \,, \tag{2}$$

where n – sampling size;

N – general number of respondents;

t – ratio of likelihood, 1.0 (with likelihood of 0.683);

υ – relative frequency in the sampling, 0.5;

Δ_υ – relative error, 0.317 (with likelihood of 0.683).

The focus group of experts was created by evaluating experts' competence concerning their knowledge level and experience in the case of fraudulent bankruptcy. The respondents marked how often they encountered circumstances indicating fraudulent bankruptcy. The main assessment parameters were their education level (higher education), work experience (not less than 3 years) and experience in the case of fraudulent bankruptcy (no less of one case). Consequently, the first part of the questionnaire consisted of some basic information about the experts.

The second part of the questionnaire consisted of questions about indicators of fraudulent bankruptcy, which experts detected themselves or were known to them from their practice. The experts were asked to select the ten most important indicators from 34 offered by them and evaluate the indicators. Measuring instrument for indicator assessment was a 10-point scale, simplifiedforrespondents' perception. According to the 10-point scale from 1 to 10 (where 1 means low key, and 10 – high key), the expertsvaluated the indicator importance in the assessment of fraudulent bankruptcy.

The average experts' estimation of indicators was calculated and rated. The calculated quantitative differences of ratings were scored from 1 to 9 using the Saaty scale (see Table 1) (Saaty 2008).

At the next stage of empirical research, the weights of each indicator of fraudulent bankruptcy were calculated, using the method of analytic hierarchy process. Accuracy of results is characterized by consistency ratio (CR), which must be less or equal to 0.1 (Saaty 2008; Mu, Carroll 2016). The mathematical calculations were created usingExcel and Online Matrix Calculator "Bluebit" (Bluedit Software 2002) tools.

The fundamental scale of absolute numbers

Intensity of importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the
2	Weak or slight	objective
3	Moderate importance	Experience and judgement slightly favour one
4	Moderate plus	activity over another
5	Strong importance	Experience and judgement strongly favour
6	Strong plus	one activity over another
7	Very strong or demonstrated importance	An activity is favoured very strongly over another;
8	Very, very strong	its dominance is demonstrated in practice
9	Extreme importance	The evidence favouring one activity over another is of the highest possible order of affirmation

Source: Saaty 2008.

The authors' evaluation of the possible appearance of fraudulent bankruptcy indicators in non-criminal insolvency was based on Mu and Carroll's (2016) study about development of a decision model for prioritizing potential fraud cases.

Simulated cases of company's three internal characteristics

Case No	C1	C2	C3	C4	C5	C6	C7	C8	C9
Management incompetence	H 0	H 0	H 0	H 0	M 0.5	M 0.5	L 1	L 1	M 0.5
Accounting incompetence	H 0	M 0.5	L 1	M 0.5	M 0.5	M 0.5	M 0.5	M 0.5	H 0
Insufficient internal control	H 0	L 1	H 0	M 0.5	M 0.5	L 1	M 0.5	L 1	H 0

Source: created by the authors.

The authors simulated nine cases of most popular situations of three aspects, which are mentioned as causes of bankruptcy in all criminal cases: management incompetence, accounting incompetence and insufficient internal control. All aspects are company's internal characteristics; these were evaluated by the authors' created scale (see Table 2):
- 1 – a low level of competence (L);
- 0.5 – a medium level (M);
- 0 – a high level (H).

Using the AHP method, the assessment of preference of these three aspects was conducted by the authors of the article and their colleagues.

The possibility of appearance of the indicated factors in non-criminal insolvency was simulated by the authors and evaluated using the scale created by Mu and Carroll (2016): 1 – very possible, 0.6 – medium possible, 0.2 – unlikely possible (see Table 3).

Table 3

Appearance of fraudulent bankruptcy indicators in non-criminal insolvency

No	Indicators of fraudulent bankruptcy	Management incompetence	Accounting incompetence	Insufficient control
1	Fictitious deals	0.2	0.6	–
2	Owners start a new business	–	0.2	–
3	Inappropriate assets revaluation	0.2	0.2	–
4	Account records not saved	–	1.0	0.2
5	Rapid rise in creditors	0.6	0.2	1.0
6	Sharp decline in long-term funds	0.2	–	–
7	Management or owner loans	0.6	0.2	–
8	Dependence on the key creditor	0.6	–	0.2
9	Bad bargain with related persons	0.6	0.2	–
10	Rapid stock decline	0.2	0.2	1.0

Source: created by the authors, based on Mu, Carroll 2016.

The final results – the verbal possibility of appearance of fraudulent indicators in non-criminal insolvency under influence of three internal aspects – were received using AHP (Saaty 2008; Mu, Carroll 2016). Consistency ratio and other mathematical calculations were performed using Excel and Online Matrix Calculator "Bluebit" (Bluebit Software 2002) tools.

4. Results of the research

During the time of the survey (June – August 2018) 24 questionnaires were completed. The following persons agreed to participate in the survey: 5 insolvency administrators, 7 criminal bankruptcy investigators, 7 forensic accountants and 5 academics of accountancy.

One questionnaire was incomplete because it had identical answers with other questionnaires received from the same group of experts (investigators). Some of the respondents did not meet the criteria of expert's level and their answers could not testify indicators of fraudulent bankruptcy.

Therefore, the final number of processed questionnaires filled by recognised experts was 13.

Representation group evaluation by formula 2 showed that the number of respondents with likelihood of 0.683 was enough. The number of respondents must be increased to gain higher likelihood (see Table 4).

Characteristics of respondent groups

Group of respondents	General number of group	Scientific sampling size	Survey participants	Recognised experts
Insolvency administrators	255	3	5	3
Investigators≤10	2	7	2	
Forensic accountants	9	2	7	6
Academics ofaccountancy	≤10	2	5	2

Source: created by the authors based on Shulca 2010.

On the basis of the recognised experts' opinion, the 10 most often encountered indicators in fraudulent bankruptcy cases were identified. Non-financial indicators were also marked: "account records not saved", "owners start a new business", etc.

Based on the consistency ratio (ŃR) 0.0%, there is consistency in experts' opinions (see Table 5).

Table 5

The experts' indicators of fraudulent bankruptcy and their weights by AHP

No	Experts' selected indicators	Experts' selected indicators, CR=0.0%										Weights %
		1	2	3	4	5	6	7	8	9	10	
1	Fictitious deals	1	2	6	3	5	2	3	7	1	8	**20.4**
2	Owners start a new business	1/2	1	5	2	4	1	2	6	1/2	7	**14.2**
3	Inappropriate assets revaluation	1/6	1/5	1	1/3	1/2	1/4	1/3	2	1/6	3	**3.8**
4	Account records not saved	1/3	1/2	3	1	2	1/2	1/2	4	1/4	5	**7.7**
5	Rapid rise in creditors	1/5	1/4	2	1/2	1	1/3	1/2	2	1/5	2	**4.8**
6	Sharp decline in long-term funds	1/2	1	4	2	3	1	2	6	½	7	**13.5**
7	Management or owner loans	1/3	1/2	3	2	2	1/2	1	4	1/3	6	**9.3**
8	Dependence on the key creditor	1/7	1/6	1/2	1/4	1/2	1/6	1/4	1	1/8	2	**2.7**
9	Bad bargain with related persons	1	2	6	4	5	2	3	8	1	9	**21.5**
10	Rapid stock decline	1/8	1/7	1/3	1/5	1/2	1/7	1/6	1/2	1/9	1	**2.0**

Source: created by the authors.

The assessment of preference of company's three internal characteristics using AHP shows the next priorities: the efficiency of management (47.4% of three components) is the most important component of successful business, which is followed by accounting quality (37.6%) and sufficiency of internal control (14.9%). Consistency ratio 0.0% means the evaluators' consistency in assessment.

Using the experts' estimations of fraudulent bankruptcy indicators as weights, the nine simulated cases were reviewed to determine the possibility of appearance of indicated factors in non-criminal insolvency.

The results of research testify the low probability (less than 2%) of fraudulent bankruptcy indicators appearing in non-criminal insolvency cases, considering the influence of the most important company's internal components: quality of management, accounting and internal control (see Table 6).

Table 6

Priority of fraudulent bankruptcy indicators appearing in non-criminal insolvency

Indicators / Cases	C1	C2	C3	C4	C5	C6	C7	C8	C9
Totals (Priorities)	*0*	*0.006*	*0.011*	*0.006*	*0.012*	*0.012*	*0.018*	*0.019*	*0.006*
Fictitious deals	0	0.010	0.019	0.010	0.033	0.033	0.056	0.056	0.023
Owners star a new business	0	0.007	0.013	0.007	0.007	0.007	0.007	0.007	0.000
Inappropriate assets revaluation	0	0.002	0.004	0.002	0.003	0.003	0.005	0.005	0.001
Account records not saved	0	0.002	0.000	0.001	0.016	0.017	0.030	0.031	0.015
Rapid rise in creditors	0	0.014	0.014	0.010	0.012	0.016	0.014	0.018	0.002
Sharp decline in long-term funds	0	0.006	0.013	0.006	0.006	0.006	0.006	0.006	0.000
Management or owner loans	0	0.013	0.026	0.013	0.017	0.017	0.020	0.020	0.004
Dependence of the key creditor	0	0.005	0.008	0.004	0.004	0.005	0.004	0.005	0.000
Bad bargain with related persons	0	0.010	0.020	0.010	0.018	0.018	0.026	0.026	0.008
Rapid stock decline	0	0.004	0.002	0.002	0.003	0.005	0.004	0.006	0.001

Source: created by the authors.

In addition to the main aim of the research, the authors discovered the partly inverse correlation between the indicators appearing in the non-criminal insolvency cases and experts' estimation of indicators of fraudulent bankruptcy (see Figure 2).

Figure 2

Comparison of indicators in fraudulent and non-criminal bankruptcy cases
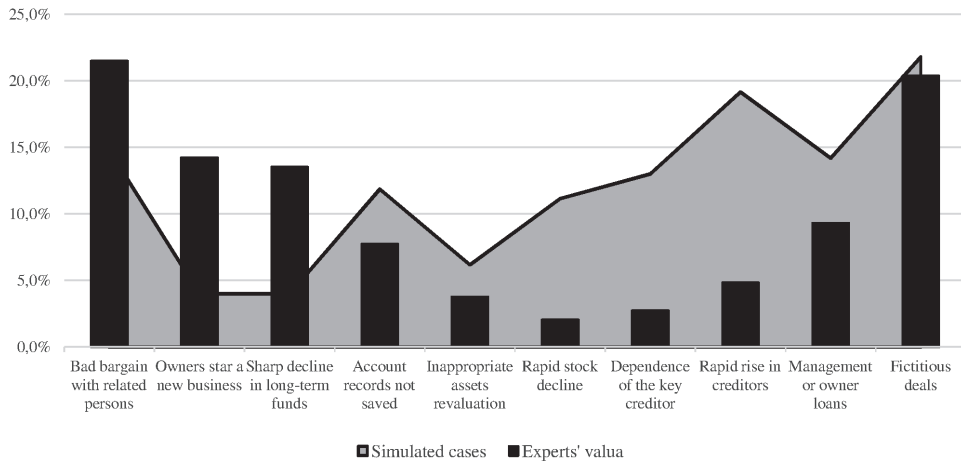
Source: created by the authors.

It means that all insolvency cases are not a crime. There are also some specific indicators, which are more characteristic of fraudulent bankruptcy cases, for example, "bad bargain with related persons", "owners start a new business", and "sharp decline in long-term funds". However, such indicators as a "rapid rise in creditors", "rapid stock decline", etc. are more typical of non-criminal insolvency cases. Such indicators as "account records not saved" and "fictitious deals" are possible in both cases (see Figure 2).

Conclusions

The research contributes to the study of fraudulent bankruptcy from the standpoint of systematization of its essential characteristics generalized on the basis of literature data, and those studied by empirical research.

The authors summarized the terminology of fraudulent bankruptcy in different countries' law and identified a common concept – deliberate illegal activity or fraud. At least three forms of fraudulent bankruptcy were established: fictitious, intentional and hidden. The authors propose own definition – fraudulent bankruptcy is a white-collar crime, which contains any type of offences and detrimental transactions, which result in company's bankruptcy.

According to the researches on the multi-level nature of fraudulent bankruptcy and its connection with personal characteristics of fraudsters, this type of crime has been studied as a system. The concepts of fraudulent bankruptcy as a set of non-financial features, including social-personal andsome criminology aspects, were analysed. The article presented a fraudulent bankruptcy mechanism, including components of the fraud triangle, external and internal characteristics of the company.

An empirical study was conducted by authors, based on 13 expert assessment of the importance of indicators of fraudulent bankruptcy. Experts identified the 10 most popular indicators related to fraud bankruptcy cases and evaluated these indicators using the analytic hierarchy process, i.e. AHP method. The authors tested the possibility of the appearance of these indicators in non-criminal insolvency cases in various conditions of three internal characteristics of the company using the simulation approach.

The conducted research has not revealed a close connection among the influence of quality management, organisation of accounting and internal control of the company. Out of the 10 indicators analysed, the significance assessment between the "fictitious deals", "account records not saved", etc. essentially does not differ both in the evaluation of bankruptcy and in the fraudulent bankruptcy of a company. There are some specific indicators that are more characteristic of fraudulent bankruptcy cases, for example, "bad bargain with related persons", "owners start a new business", and "sharp decline in long-term funds". The priorities of fraudulent indicators of bankruptcy arising from insolvency have a low value of their manifestation. Summing up, the obtained results confirm the influence of personal factors on fraudulent bankruptcy.

The identification of various forms of fraudulent bankruptcy, the influence of social-personal factors on the multi-level architecture of this crime emphasizes gaps in studding of these sections. The results of the empirical research and other findings can be applied to the construction of models for fraudulent bankruptcy evaluation.

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INSTITUCIONĀLĀS VIDES ATTĪSTĪBA UN BANKU STABILITĀTE LATVIJĀ

Institucionālā vide un tās kvalitāte ir nozīmīgi banku stabilitātes veicināšanai. Šajā gadījuma ir būtiski pareizi noteikt tās institucionālās vides jomas, kuras ir vairāk nozīmīgas banku stabilitātei un, lielākoties, prasa uzlabojumus katrā konkrētā gadījumā. Veicot analīzi, uzmanība rakstā tiek veltīta tieši banku sektora institucionālās vides attīstības tendencēm un banku stabilitātei aktuālajiem riskiem Latvijā. Raksta autori pēta banku sektora institucionālās vides izmaiņas Latvijā un nosaka sakarību starp institūcijām, kuras tika ieviestas banku sektorā apskatāmajā laika posmā, un banku stabilitāti. Veiktās analīzes rezultātā autori piedāvā Latvijas banku sektora institucionālās vides attīstības periodizāciju, ņemot vērā institucionālās vides attīstībai un banku stabilitātei zīmīgus notikumus. Autori arī parāda sakarību starp Latvijas banku stabilitātei potenciāli nozīmīgiem institucionālās vides elementiem un banku stabilitāti. Pētījuma novitāte izpaužas autoru pieejā novērtēt banku stabilitāti Latvijā sakarā ar institucionālās vides kvalitāti, kā arī balstīt analīzi uz starptautiski salīdzināmiem datiem no Pasaules konkurētspējas ziņojuma, kuri ļauj noteikt banku stabilitātei nozīmīgākus institucionālās vides elementus Latvijā.

Atslēgas vārdi: banku sektora institucionālā vide, banku stabilitāte, Latvija.

Development of institutional environment and soundness of banks in Latvia

Institutional environment and its quality are significant for the soundness of banks. In this context, it is of high importance to detect correctly those spheres of institutional environment, which are the most important for the soundness of banks and require improvements in each concrete case. During the analysis, the authors of the paper pay attention exactly to the development of institutional environment of bank sector and topical risks for the soundness of banks in Latvia. The authors study changes of the institutional environment of bank sector in Latvia, as well as find the linkage between institutions introduced in to the Latvian bank sector during the time analysed and the soundness of banks. As a result of the analysis, the authors offer periodization of the development of institutional environment of bank sector taking into account significant events for development of institutional environment and soundness of banks. The authors also demonstrate the linkage between the elements of institutional environment that are potentially significant for the soundness of banks and soundness of banks. Novelty of the research appears in the authors' approach to evaluate the soundness of banks in Latvia in context of quality of institutional environment, as well as internationally comparable data of Global Competitiveness Report. These allow detecting the most significant elements of institutional environment for the soundness of banks in Latvia.

Key words: institutional environment of bank sector, soundness of banks, Latvia.

Развитие институциональной среды и стабильность банков в Латвии

Институциональная среда и её качество являются важными факторами стабильности банков. В данном случае важно правильно определить те сферы институциональной среды, которые являются наиболее значимыми для стабильности банков и требующими улучшений в каждом конкретном случае. При проведении анализа в данной статье внимание уделяется тенденциям развития институциональной среды именно банковского сектора и актуальным рискам для стабильности банков Латвии. Авторы исследуют изменения

институциональной среды банковского сектора Латвии и определяют связь между институциями, введёнными в банковском секторе в рассматриваемый период, и стабильностью банков. В результате проведённого анализа авторы предлагают периодизацию развития институциональной среды банковского сектора Латвии, учитывая значимые события для развития институциональной среды и стабильности банков. Авторы также показывают связь между потенциально значимыми для стабильности банков элементами институциональной среды и стабильностью банков. Новизна исследования заключается в подходе авторов к оценке стабильности банков Латвии в контексте качества институциональной среды банковского сектора, а также с помощью международно-сравнимых данных Отчёта о глобальной конкурентоспособности, которые позволяют определить наиболее значимые элементы институциональной среды для стабильности банков в Латвии.

Ключевые слова: институциональная среда банковского сектора, стабильность банков, Латвия.

Ievads

Desmit gadus pēc pasaules finanšu krīzes finanšu sektors joprojām tiek uzskatīts par ievainojamu (Schwab 2017). Arvien aktuālie jautājumi par finanšu sektora stabilitāti gan Eiropā, gan pasaulē (piem., Schwab 2017) liek zinātniekiem meklēt instrumentus, ar kuru palīdzību būtu iespējams veicināt finanšu sektora stabilitāti. Īpaša uzmanība tiek veltīta institucionālajai videi un tās nozīmei banku darbībai (piem., Hou and Wang 2016; Chan *et al.* 2015).

Latvijā banku darbība veido lielāku finanšu sektora īpatsvaru (FKTK 2018a; OECD 2016), savukārt banku sektora institucionālā vide pēdējā laikā tika starptautiski kritizēta attiecībā uz relatīvi augstiem banku reputācijas riskiem (Council of Europe – Moneyval 2018; FinCEN 2018). Šīs tendences noteica raksta mērķi – noteikt Latvijas banku sektora institucionālās vides attīstības nozīmīgus aspektus un aprēķināt sakarību starp apskatāmajā laikā ieviestajām potenciāli nozīmīgākajām institūcijām un banku stabilitāti. Mērķa sasniegšanai autori demonstrē institucionālās vides sakarību ar banku stabilitāti kā globālajā, tā arī lokālajā līmenī, kā arī balsta analīzi uz ilgstošā laika posmā apzinātajām banku sektora institucionālās vides izmaiņām un starptautiski salīdzināmiem datiem no Pasaules konkurētspējas ziņojuma.

Pētījuma rezultātā autori piedāvā Latvijas banku sektora institucionālās vides periodizāciju par divdesmit sešiem gadiem, balstoties uz banku darbību ietekmējošiem pašmāju un ārvalstu notikumiem, kā arī skaitliski izsaka atsevišķu institūtu sakarību ar banku stabilitāti, kas ļauj noteikt tās banku sektora institucionālās vides jomas, kuru pilnveidošana būtu vēlama banku stabilitātes veicināšanai Latvijā.

## Institucionālās vides un banku stabilitātes sakarība empīrisko pētījumu skatījumā

Institucionālā vide pēc būtības ir nozīmīga uzņēmējdarbībai jebkurā saimnieciskās darbības nozarē, jo ietekmē uzņēmumu uzvedību (piem., Korsakiene et al. 2015) un to izdzīvošanas spējas (piem., Che et al. 2017), veicina ilgtspējīgu attīstību (Tvarona-viciene et al. 2009), kā arī var nodrošināt pozitīvo efektu uz stabilitāti (piem., Schwab

2017). Zinātniskā literatūra atsevišķi uzsver, ka institucionālās vides kvalitāte ir nozīmīga arī banku stabilitātei (piem., Hou, Wang 2016), ko demonstrē arī Pasaules konkurētspējas datu apkopojums. 1. attēla dati ilustrē, ka institucionālā vide pasaulē ir nozīmīga banku stabilitātei.

1. attēls

Korelācijas sakarība starp institucionālo vidi un banku stabilitāti pasaulē, n = 137 valstis, 2017. gads
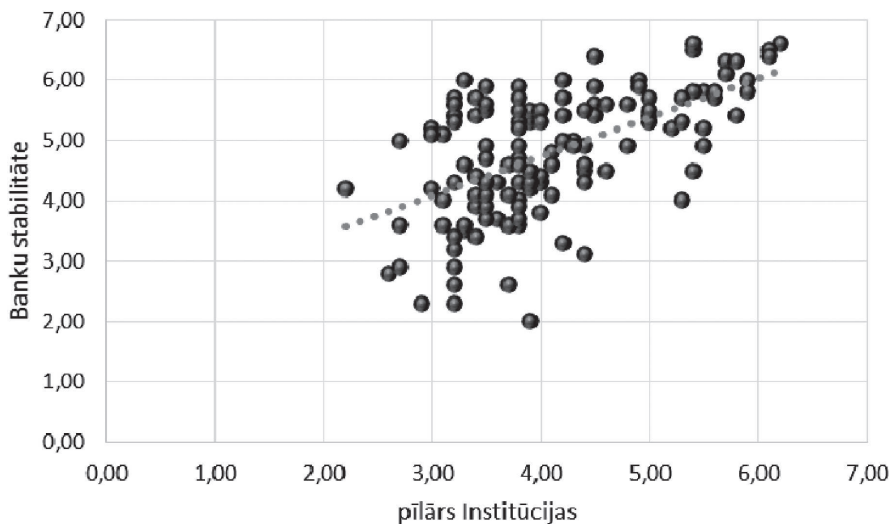
Piezīme: Pasaules konkurētspējas ziņojumā dati par banku stabilitāti atspoguļo atbildes uz jautājumu "Kā Jūs novērtējat banku stabilitāti savā valstī?" (Schwab 2017).

Avots: autoru izveidots, izmantojot datus no Schwab (2017).

Tomēr, dažādās valstu ekonomiskās attīstības stadijās ir vērojama institucionālās vides atšķirīga sakarība ar banku stabilitāti (skat. 1. tabulu).

1. tabulas dati parāda vidēji ciešu un statistiski nozīmīgu sakarību divās no piecām ekonomikas attīstības stadijām – ražošanas faktoru stadijā (r=0.505**) un inovāciju stadijā (r=0.733**). Šādu rezultātu iespējams skaidrot ar atšķirībām kopējā finanšu sektora attīstībā dažādās ekonomikas attīstības stadijās, kas nosaka atšķirības notiekošo finanšu darījumu sarežģītības līmenī un risku pakāpē. Ekonomikas attīstības ražošanas faktoru stadijā finanšu sektora darbība ir relatīvi vienkārša, bet vairāk pakļauta riskiem. Savukārt, ekonomikas attīstības inovāciju stadijā finanšu sektora darbība ir sarežģītākā, bet vienlaicīgi ar augstākā līmeņa spējām pārvaldīt riskus. Pārējās trīs ekonomiskās attīstības stadijās institucionālās vides un banku stabilitātes sakarība ir izteikti vājāka.

Kā norāda, piemēram, Grosse un Trevino (2009), nepietiekamā institucionālās vides kvalitāte attīstības un pārejas etapā esošajās valstīs varētu būt šķērslis finanšu sektora efektīvai darbībai. Turklāt, finanšu sektors vēl nav atgriezies pirmskrīzes līmenī, bet jau parādās jauni riski, kā piemēram, pieaugošais fizisko personu parāds attīstības

valstīs un neregulētie kapitāla tirgi (Schwab 2017), ar kuriem institucionālai videi ir grūtāk tikt galā bez attiecīga pielāgošanās procesa, kas prasa laiku.

1. tabula

Korelācijas sakarība starp institucionālo vidi un banku stabilitāti pasaulē dažādās valstu ekonomiskās attīstības stadijās, Pīrsona korelācijas koeficients, n = 137 valstis, 2017. gads

Pīlārs Institūcijas *(Institutions)* valstīs dažādās ekonomikas attīstības stadijās	Banku stabilitāte *(Soundness of banks)*
Ražošanas faktoru stadija *(Factor-driven stage)* (n = 35 valstis)	0.505**
Pāreja no ražošanas faktoru stadijas uz efektivitātes stadiju *(Transition from factor- to efficiency-driven stage)* (n = 15 valstis)	0.189
Efektivitātes stadija *(Efficiency-driven stage)* (n = 31 valstis)	-0.032
Pāreja no efektivitātes stadijas uz inovāciju stadiju *(Transition from efficiency- to innovation-driven stage)* (n = 20 valstis)	0.347
Inovāciju stadija *(Innovation-driven stage)* (n = 36 valstis)	0.733**

Piezīme: ** Korelācija ir statistiski nozīmīga pie 0.01 (divpusējā).

Avots: autoru aprēķini, izmantojot datus no Schwab 2017.

Viens no iespējamajiem veidiem kā veicināt banku stabilitāti ir nodrošināt atbilstošu sektora regulējumu (piem., Schwab 2017). Chan et al. (2015) secina, ka atbilstoša banku sektora uzraudzība, kura pēc būtības izpaužas caur institucionālo vidi, var nodrošināt visa finanšu sektora stabilitāti. Tā, Chan et al. (2015) raksta, ka stingrāka kapitāla uzraudzība, kā arī uzraugošo institūciju darbība varētu veicināt labāku tirgus uzraudzību, lielāku finanšu plūsmas caurspīdīgumu un rezultātā augstāku banku darbības efektivitāti. Tomēr, vienlaicīgi Chan et al. (2015) uzskata, ka pārmērīgs regulējums vai valsts iesaiste varētu mazināt nozares darbības efektivitāti, jo mazāka darbības brīvība paaugstinātu transakciju izdevumus. Šādi secinājumi saskan ar Jaunās institucionālās ekonomikas pamatnostādnēm (skat. piem., Shirley et al. 2015; Havry-lyshyn, Srzentic 2015; North 1990), ka institucionālās vides galveno uzdevumu izpilde, piemēram, kārtības, uzraudzības nodrošināšana, prasību izstrāde u.c., var rādīt papildus izdevumus saimnieciskās darbības veicējiem, t.sk. bankām. Līdz ar to būtu nepieciešams vērtēt arī institucionālās vides kvalitāti sakarībā ar iespēju uzņēmumiem mazināt transakciju izdevumus.

Saskaņā ar Chan et al. (2015) secinājumiem banku darbības efektivitāti veicinošam regulējumam jāpaaugstina tirgus disciplīna, jāveicina efektīvāks darbības monitorings, kā arī jāpaaugstina finanšu darījumu caurspīdīgums. Papildus samērīgam regulējumam kā nozīmīgus institucionālās vides elementus banku sektora efektīvai funkcionēšanai Chan et al. (2015) min arī politisko stabilitāti un pietiekamo ekonomiskās brīvības līmeni. No otras puses, Berglund un Makinen (2019) uzsver, ka banku stabilitāti iespējams saistīt ar risku pārvaldības kultūras izmaiņām, kas var notikt pēc nopietnām finanšu krīzēm caur "mācīšanās darbojoties" *(learning by doing)* procesu, mācoties no iepriekšējām krīzēm, tādējādi paaugstinot savu stabilitāti, saskaroties ar nākamajām krīzēm.

Banku sektora institucionālās vides īpatnības un attīstība Latvijā, to sakarība ar banku stabilitāti

Banku sektora institucionālās vides īpatnības Latvijā ir saistāmas ar valsts ekonomiskās sistēmas maiņu, virkni iekšējo un ārējo faktoru izraisīto finanšu krīžu, ka arī valsts integrāciju starptautiskā mēroga organizācijās. Banku sektora stabilitātei nozīmīgas institucionālās vides īpatnības un attīstību iespējams periodizēt saskaņā ar banku sektoram būtiskajiem notikumiem – ekonomiskās sistēmas maiņa, 1995. gada banku krīze, 1998. gada finanšu krīze, iestāšanās Eiropas Savienībā 2004. gadā, 2008. gada pasaules finanšu krīze, eiro ieviešana 2014. gadā, iestāšanās OECD 2015. gadā (skat. 2. tabulu).

2. tabula

Latvijas banku sektora institucionālās vides attīstības iezīmes, 1992.–2018. gads

Laika posms un banku sektora institucionālās vides attīstībai zīmīgs notikums	Pozitīvas banku sektora institucionālās vides attīstības iezīmes	Negatīvas banku sektora institucionālās vides attīstības iezīmes
1	2	3
1. posms – Laika posms no 1992. līdz 1998. gadam: 1) ekonomiskās sistēmas maiņa 2) 1995. gada banku krīze, kuru veicināja banku iekšējās darbības nepilnības	• Izmaiņas nozarē un jauno banku izveidošana • Stingrāku banku sistēmas uzraudzības un regulēšanas prasību ieviešana • Latvijas Bankas lomas pastiprināšanās banku sistēmas uzraudzībā • Eiropas Savienības un Bāzeles Komitejas pieredzes izmantošana banku uzraudzībā • Banku klasifikācijas ieviešana – 1) bankas, kurām ir tiesības strādāt ar fizisko personu depozītiem, 2) bankas, kurām nav tiesību strādāt ar fizisko personu depozītiem • Auditoru piesaiste banku darbības analīzei • Kopējās finanšu sistēmas analīzes ieviešana • Prasības veidot uzkrājumus "sliktiem" parādiem •"Stipra" lata kursa uzturēšana	• Transakciju izdevumu palielināšanās • Iekšējās risku pārvaldes sistēmas neesamība bankās • Banku skaita samazināšanās • Nepietiekama Latvijas Bankas iesaiste banku sistēmas uzraudzības procesā • Kļūdas kreditēšanā un biznesa plānu novērtēšanā • Kreditēšanas procesa kontroles neesamība • Nepilnīga "vecās" naudas maiņas sistēma uz "jaunu" naudu

2. tabulas turpinājumu skat. nākamajā lappusē.

1	2	3
2. *posms* – Laika posms no 1998. līdz 2004. gadam: 1) 1998. gada finanšu krīze, kuru veicināja ārējie faktori 2) Latvijas pievienošanās Eiropas Savienībai 2004. gadā	• Likumdošanas bāzes pilnveidošana – likumu pieņemšana, piem., "Finanšu un kapitāla tirgus komisijas likums" (pieņemts 2000. gadā, vēlākā redakcija 2009. gadā) • Jaunās banku darbību uzraugošās valsts institūcijas (Finanšu un kapitāla tirgus komisija) izveide • Kredītiestāžu darbības organizēšanas prasību sakārtošana • Eiropas Savienības prasību ieviešana banku uzraudzības procesā • Latvijas Bankas valūtas politikas virzība uz zema inflācijas līmeņa sasniegšanu un cenu konverģenci	• Transakciju izdevumu palielināšanās • Nepietiekama Latvijas Bankas iesaiste banku sistēmas uzraudzības procesā • Problemātisko kredītu īpatsvara palielinājums • Banku skaita samazināšanās • Nepietiekama investīciju un kredītu risku kontrole
3. *posms* – Laika posms no 2004. līdz 2009. gadam un 2008./2009. gada pasaules finanšu krīze	• Centralizētās banku sistēmas regulēšanas izstrāde Eiropas līmenī, kura ir saistoša arī Latvijai • Fiskālas un monetāras politikas stiprināšana • Stingrāku prasību ieviešana banku likviditātei un pašu kapitāla pietiekamībai • Likumdošanas bāzes pilnveidošana – likumu pieņemšana, piem., "Noziedzīgi iegūtu līdzekļu legalizācijas un terorisma finansēšanas novēršanas likums" (pieņemts 2008. gadā); "Finanšu un kapitāla tirgus komisijas likums" (pieņemts 2000. gadā, vēlākā redakcija 2009. gadā)	• Transakciju izdevumu palielināšanās • Problemātisko kredītu īpatsvara palielinājums • Mājsaimniecību parāda straujāka palielināšanās nekā mājsaimniecību ienākumu palielināšanās • Nekustama īpašuma cenu straujš pieaugums • Nozīmīgs kreditēšanas apjomu samazinājums • Nenoteiktības palielināšanās finanšu tirgos • Nepietiekama investīciju un kredītu risku kontrole • Banku skaita samazināšanās
4. *posms* – Laika posms no 2009. gada līdz 2018. gadam: 1) Latvijas pievienošanās eiro zonai 2014. gadā 2) Latvijas pievienošanās OECD 2015. gadā	• Eiro ieviešana • Banku sektora strauja attīstība un dominance finanšu sektorā • Centralizētās banku sistēmas regulēšanas ieviešana Eiropas līmenī, tostarp arī Latvijā • Kredītrisku samazināšanās • Banku uzraudzības normatīvas vides uzlabošanās, tai skaitā saskaņā ar OECD un Council of Europe – Moneyval prasībām	• Transakciju izdevumu palielināšanās • Nozīmīgs kreditēšanas apjomu samazinājums • Reputācijas risku, starptautiskās ģeopolitiskās situācijas pasliktināšanās risku pieaugums • Ievērojams nerezidentu ieguldījumu īpatsvars un nepietiekama risku vadības

1	2	3
	• Iespējas nodrošināšana uzrau-gošai institūcijai (FKTK) veikt visaptverošas pārbaudes ar trešās puses piesaisti • Prasību paaugstināšana attiecībā uz banku stabilitāti • Maksimāli iespējamā soda palie-lināšana bankām par nepietiekamu cīņu ar nelegāli iegūto līdzekļu "atmazgāšanu" • Likumdošanas bāzes pilnveido-šana – likumu pieņemšana, piem., "Noguldījumu garantiju likums" (pieņemts 2015. gadā)	sistēma ārvalstu valūtas depozītu jomā • Brīdinājums no ASV insti-tūciju puses par problēmām cīņā ar nelegāli iegūto līdzekļu "atmazgāšanu" Lat-vijas banku sistēmā • Atsevišķu banku darbības koncentrēšanās uz komisijas maksas saņemšanu par "tranzīta" naudas plūsmu apkalpošanu

Avots: autoru izveidots, izmantojot Roldugin 2010; Aaslund, Dombrovskis 2011; Caplinska 2011; FKTK 2008, 2012, 2018a, 2018b; OECD 2016, 2017; Basel Institute of Governance 2017; Council of Europe – Moneyval 2018; FinCEN 2018; Latvijas Banka 2018.

Apskatāmajā laika posmā no 1992. līdz 2018. gadam Latvijas banku sektora institucionālā vide attīstījās, galvenokārt, pamatojoties uz trim darbības virzieniem – likumdošanas pilnveidošana, Latvijas uzraugošo institūciju attīstība, kā arī Eiropas un pasaules mēroga prasību un prakses ieviešana. Latvijas banku sektora institucionālās vides attīstības procesi tika novērtēti pozitīvi (piem., Latvijas Banka 2018; FKTK 2018a; OECD 2016; Basel Institute on Governance 2017). Minēto darbību rezultātā bankas un finanšu sektors kopumā demonstrēja lielāku stabilitāti un caurskatāmību, tomēr palielinājās banku transakciju izdevumi. Ņemot vērā Jaunās institucionālās ekonomikas pamatnostādnes, banku sektora institucionālās vides attīstības nākamais posms būtu jāsaista ar transakciju izdevumu mazināšanu, kas iespējams, piemēram, plašāk pielietojot jaunākās tehnoloģijas banku darbībā un uzraudzībā.

Nākamos soļus banku sektora institucionālās vides pilnveidošanā, kuri būtu vērsti uz transakciju izdevumu mazināšanu un starptautiskās kritikas novēršanu, varētu apzināt, izmantojot Pasaules konkurētspējas ziņojuma datus par institucionālo vidi. 3. tabulas dati demonstrē korelācijas sakarību starp pīlāra Institūcijas elementiem, kuri tiek saprasti kā potenciāli nozīmīgie banku sektora stabilitātei četros Latvijas banku sektora institucionālās vides attīstības posmos (skat. 2. un 3. tabulu).

Ciešākā sakarība starp banku stabilitāti un institucionālo vidi izpaužas caur rādī-tāju "Nelikumīgi maksājumi un kukuļi" (r=0.971**) (skat. 3. tabulu). Šis rādītājs atspoguļo gan pozitīvas, gan negatīvas tendences Latvijas banku sektora institucio-nālajā vidē. Kā pozitīvo tendenci iespējams minēt Basel Institute on Governance (2017) sniegto novērtējumu par Latvijas progresu institucionālās vides pilnveidošanā cīņā ar naudas atmazgāšanu un terorisma finansēšanu, kur Latvija ierindojas starp Eiropas Savienības desmit veiksmīgākajām valstīm šajā jomā. Kā negatīvo tendenci iespējams

atzīmēt, ka tieši reputācijas riski veicināja Latvijas banku zināmu nestabilitāti, darbības pārkārtošanos un pat valsts ekonomikas nozīmīgas bankas aiziešanu no tirgus (piem., Council of Europe – Moneyval 2018; FKTK 2018b; FinCEN 2018).

<div align="right">3. tabula</div>

Latvijas banku sektora institucionālās vides attīstības elementi un to korelācijas sakarība ar banku sektora stabilitāti, Pīrsona korelācijas koeficients, n = 7 gadi, 2011.–2017. gads

Pīlāra Institūcijas (*Institutions*) elements	Korelācijas koeficienta vērtība, r
Investoru interešu aizsardzības stiprība (*Strength of investor protection*)	0.125
Tiesiskā regulējuma efektivitāte, strādājot ar strīdīgo jautājumu regulējumu (*Efficiency of legal framework in challenging regulations*)	0.205
Uzņēmumu ētiskā uzvedība (*Ethical behaviour of firms*)	0.647
Audita veikšanas un ziņojumu iesniegšanas standartu stiprība (*Strength of auditing and reporting standards*)	0.675
Korporatīvo padomju darbības efektivitāte (*Efficacy of corporate boards*)	0.800*
Īpašumtiesības (*Property rights*)	0.897**
Nelikumīgi maksājumi un kukuļi (*Irregular payments and bribes*)	0.971**

 Piezīmes: * Korelācija ir statistiski nozīmīga pie 0.05 (divpusējā), ** Korelācija ir statistiski nozīmīga pie 0.01 (divpusējā).
 Institucionālās vides elementi tika atlasīti no Pasaules konkurētspējas ziņojuma pīlāra Institūcijas (Schwab 2011, 2012, 2013, 2014, 2015, 2016, 2017) saskaņā ar Latvijas banku sektora institucionālās vides attīstības svarīgākajām iezīmēm (skat. 2. tabulu).
 Pasaules konkurētspējas ziņojumā dati par banku stabilitāti atspoguļo atbildes uz jautājumu "Kā Jūs novērtējat banku stabilitāti savā valstī?" (Schwab 2017).
 Avots: autoru aprēķini, izmantojot datus no Schwab 2011, 2012, 2013, 2014, 2015, 2016, 2017.

Nākamais rādītājs, kas ir diezgan cieši saistīts ar banku stabilitāti ir "Īpašumtiesības" (r=0.897**) (skat. 3. tabulu). Šī sakarība arī atspoguļo reālo situāciju Latvijas banku darbībā, jo tirgū, kur nekustāmais īpašums tiek atzīts par vienu no galvenajiem uzkrāšanas veidiem, kreditēšanas politikai ir jābūt stiprai, ar akcentu uz potenciālo klientu maksātspēju. Piemēram, kā secina Caplinska (2011), banku kreditēšanas darbībā Latvijā būtiski pietrūkst pilnvērtīgu klientu kredītspējas novērtēšanas metodiku, kuras ņemtu vērā arī potenciālo kredītņēmēju kompetences līmeni. Tomēr, pēdējos gados kreditēšanas apmēri Latvijā ir samazinājušies un to pieaugums ir samērā lēns (piem., Latvijas Banka 2018), ko var skaidrot ar banku piesardzīgāku attieksmi pret kredītņēmēju maksātspēju.

Zināmā mērā tas izriet no nākamā apskatāmā rādītāja "Korporatīvo padomju darbības efektivitāte", kas var noteikt gan tirgu pārzināšanu, gan risku vadības sistēmas, gan kopējo banku vadības kompetenci. "Korporatīvo padomju darbības efektivitāte" demonstrē vidēji ciešu sakarību ar banku stabilitāti (r=0.800*) (skat. 3. tabulu), parādot ka tas ir viens no būtiskākajiem faktoriem, kas nosaka banku stabilitāti. Kā

uzsver Berglund un Makinen (2019) banku mācīšanās no iepriekšējām finanšu krīzēm var veicināt to stabilitāti nākotnē. Nozīmi apliecina arī 2008./2009. gadu pasaules finanšu krīzes ietekmes efekts uz bankām Latvijā. Iepriekš pieļautais risku vadības sistēmu izstrādē un klientu kredītspējas novērtēšanā veicināja krīzes smagāku ietekmi, banku skaita samazināšanos, valsts līdzekļu iesaisti finanšu tirgus stabilizācijā.

Vidēji ciešu sakarību ar banku stabilitāti sasniedz arī tāds rādītājs kā "Audita veikšanas un ziņojumu iesniegšanas standartu stiprība" (r=0.675) (skat. 3. tabulu). Tiešām, apskatāmajā laika posmā Latvijas banku sektora institucionālā vide saskarās ar virkni starptautisko uzraudzības procesa prasību ieviešanu, kur spilgtākie ir saistīti ar Eiropas līmenī vienotā uzraudzības procesa organizēšanu un OECD piedāvāto praksi (piem., Aaslund, Dombrovskis 2011; Council of Europe – Moneyval 2018; FKTK 2018a; OECD 2016, 2017). Tomēr, neskatoties uz plašajām uzraugošo institūciju iespējām veicināt banku stabilitāti, pašu banku, kā arī to klientu darbības, kā piemēram, biznesa-plānu izstrāde, savas kredītspējas korekta novērtēšana, izvairīšanās no naudas atmazgāšanas riskiem, ir neatņemama efektīvas institucionālās vides sastāvdaļa. Tā, rādītājs "Uzņēmumu ētiskā uzvedība" arī demonstrē vidēji ciešu sakarību ar banku stabilitāti (r=0.647) (skat. 3. tabulu).

Jaunu likumu izstrāde un jaunu uzraugošo instrumentu ieviešana saskaņā ar starptautiskajām prasībām (piem., Basel Institute on Governance 2017; OECD 2017; FKTK 2018a), kas Latvijā kļuva īpaši aktuāls pēc 2008./2009. gadu pasaules finanšu krīzes un pēc iestāšanos OECD 2015. gadā, neapšaubāmi ir liels izaicinājums likumdošanas sakārtošanas jomā. Tādēļ, ņemot vērā, ka šie procesi daļēji bija novērtēti pozitīvi (piem., Basel Institute on Governance 2017), daļēji negatīvi (Council of Europe – Moneyval 2018; FinCEN 2018) un daļēji vēl turpinās (FKTK 2018a), aprēķini parāda, ka tāds rādītājs kā "Tiesiskā regulējuma efektivitāte, strādājot ar strīdīgo jautājumu regulējumu" demonstrē vāju sakarību ar banku stabilitāti (r=0.205) (skat. 3. tabulu). Vāja sakarība ar banku stabilitāti apskatāmajā laika posmā ir arī rādītājam "Investoru interešu aizsardzības stiprība" (r=0.125) (skat. 3. tabulu). Šādu korelācijas koeficienta vērtību varētu izskaidrot ar banku darbības specifiku, kuras pamatā bija komisijas maksas saņemšana no "tranzīta" naudas plūsmām (FKTK 2012), kā arī piesardzīga investoru interese dēļ pieaugošiem reputācijas riskiem (piem., FKTK 2018a).

Korelācijas koeficientu aprēķins parāda, ka apzinātās Latvijas banku sektora institucionālās vides pozitīvās un negatīvās iezīmes apstiprinās arī empīriski, par pamatu analīzei izmantojot autoru piedāvāto Latvijas banku sektora institucionālās vides periodizāciju un Pasaules konkurētspējas ziņojuma datus.

Secinājumi

1. Institucionālās vides kvalitāte ir saistīta ar banku stabilitāti, tomēr sakarības ciešums atšķiras dažādās ekonomikas attīstības stadijās, kas norāda uz nepieciešamību pareizi noteikt tās institucionālās vides jomas, kuras ir vairāk nozīmīgas banku stabilitātei un, lielākoties, prasa uzlabojumus katrā konkrētā gadījumā.
2. Latvijas gadījumā banku sektora institucionālo vidi laika posmā no 1992. līdz 2018. gadam iespējams periodizēt, izdalot četrus posmus. Galvenie banku sektora

institucionālās vides pārmaiņas veicinošie notikumi ir attiecināmi uz ekonomiskās sistēmas maiņu, pievienošanos Eiropas Savienībai un OECD, eiro ieviešanu, kā arī trim atšķirīgajām krīzēm – iekšējo faktoru izraisītā banku krīze, ārējo faktoru izraisītā finanšu krīze, kā arī pasaules finanšu krīze.

3. Institucionālās vides pārmaiņas banku sektorā Latvijā notika, galvenokārt, caur trim darbības virzieniem – likumdošanas pilnveidošana, Latvijas uzraugošo institūciju attīstība, kā arī Eiropas un pasaules mēroga prasību un prakses ieviešana. Tas veicināja banku darbības lielāku caurskatāmību un banku stabilitāti. Kā negatīvo iezīmi iespējams minēt banku transakciju izdevumu pieaugumu, jo ievērojami pastiprinājās regulējuma prasības un uzraudzība, kas rada nepieciešamību veikt ieguldījumus risku pārvaldības sistēmās.

4. Banku sektora institucionālās vides uzlabojumi, kuri varētu veicināt banku stabilitāti Latvijā, lielākoties, varētu būt saistāmi ar tādiem banku sektora institucionālās vides elementiem kā "Investoru interešu aizsardzības stiprība" un "Tiesiskā regulējuma efektivitāte, strādājot ar strīdīgo jautājumu regulējumu", jo tie pēc būtības ir nozīmīgi banku stabilitātei, savukārt Latvijā analizējamajā laika posmā tie demonstrē vāju sakarību ar banku stabilitāti.

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ДИФФЕРЕНЦИАЦИЯ УРОВНЯ ЧЕЛОВЕЧЕСКОГО РАЗВИТИЯ В СТРАНАХ МИРА И ИХ РЕГИОНАХ

Основной исследовательский вопрос в рамках данной статьи: что происходит с дифференциацией уровня человеческого развития в странах мира и их регионах за пределами средних показателей и почему происходит именно так, а не иначе? Авторы попытались ответить на этот вопрос с помощью комбинирования диахронного и синхронного анализа роста и дифференцированности Индекса человеческого развития по странам мира за период с 1990 по 2017 год, а также исторического Индекса человеческого развития по странам мира за период с 1870 по 2015 год и субнационального Индекса человеческого развития по внутренним регионам стран ЕС (с акцентом на Латвии) и США (для сравнения) за период с 1990 по 2017 год. Анализ дифференциации уровня человеческого развития в странах мира и их регионах с помощью сразу трёх индексов при использовании единого методологического подхода является новизной данного исследования, позволяющей авторам более системно изучить особенности социально-экономического феномена человеческого развития как в современном мире, так и в 150-летней исторической перспективе. Результаты исследования показали, что: средний уровень человеческого развития в мире неуклонно растёт, и в современном мире он в разы превышает тот средний показатель ИЧР, который был достигнут в мире 150 лет назад; дифференцированность уровня человеческого развития по странам мира в течение последних 150 лет постепенно снижается; распределение ИЧР по странам мира в каждой временной точке изучаемого периода, начиная со второй половины XX века, соответствовало кривой Гаусса; в современном мире уровень человеческого развития имеет нормальное распределение также и на субнациональном уровне (например, между внутренними регионами стран ЕС), и лидерами человеческого развития практически всегда являются столичные регионы; в Латвии, несмотря на постоянный рост уровня человеческого развития в среднем по стране и в каждом регионе по отдельности, само распределение ИЧР по внутренним регионам Латвии неизменно остаётся нормальным, что характерно также и для внутренних регионов США. *Исследование выполнено при финансовой поддержке Российского фонда фундаментальных исследований (РФФИ) в рамках научного проекта № 18-011-00548.*

Ключевые слова: человеческое развитие, дифференциация, дифференцированность, Индекс человеческого развития (ИЧР), нормальное распределение.

Tautas attīstības līmeņa diferenciācija pasaules valstīs un to reģionos

Raksta galvenais pētnieciskais jautājums: kas notiek ar tautas attīstības līmeņa diferenciāciju pasaules valstīs un to reģionos aiz vidējo rādītāju robežām un kāpēc notiek tā, bet ne savādāk? Autori mēģināja atbildēt uz šo jautājumu, kombinējot diahronu un sinhronu analīzi, lai noteiktu Tautas attīstības indeksa pieaugumu un diferencētību pasaules valstīs laika periodā no 1990. līdz 2017. gadam, kā arī vēsturiskā Tautas attīstības indeksa pieaugumu un diferencētību pasaules valstīs laika periodā no 1870. līdz 2015. gadam un subnacionālā Tautas attīstības indeksu pieaugumu un diferencētību ES valstu (akcentējot Latviju) un ASV (salīdzinājumam) iekšējos reģionos laika periodā no 1990. līdz 2017. gadam. Pasaules valstu un to reģionu tautas attīstības līmeņa diferenciācijas analīze, izmantojot vienlaicīgi trīs indeksus vienas metodoloģiskās pieejas ietvaros, ir šī pētījuma novitāte, kas palīdz autoriem sistēmiski izpētīt tautas attīstības sociāli

ekonomisko fenomena īpatnības gan mūsdienu pasaulē, gan 150 gadus garā vēsturiskā perspektīvā. Pētījuma rezultāti liecina, ka: tautas attīstības vidējais līmenis pasaulē nepārtraukti pieaug, un mūsdienās tas daudzreiz pārsniedz to vidējo TAI rādītāju, kurš tika sasniegts pirms 150 gadiem; tautas attīstības līmeņa diferencētība pasaules valstīs pēdējo 150 gadu laikā pakā-peniski samazinās; TAI sadalījums pasaules valstīs katrā pētāmā perioda laika punktā, sākot no XX gadsimta otrās puses, bija atbilstošs Gausa līknei; mūsdienu pasaulē tautas attīstības līmenim ir normāls sadalījums arī subnacionālajā līmenī (piemēram, ES valstu iekšējos reģionos) un tautas attīstības līmeņa līderi praktiski vienmēr ir galvaspilsētu reģioni; Latvijā, neskatoties un nemitīgo tautas attīstības līmeņa pieaugumu vidēji valstī un katrā atsevišķā reģionā, pats TAI sadalījums iekšējos Latvijas reģionos nemainīgi ir normāls, kas tieši tāpat ir raksturīgi arī ASV reģioniem. *Pētījums ir veikts ar Krievijas Fundamentālo pētījumu fonda (KFPF) finansiālo atbalstu zinātniskā projekta Nr. 18-011-00548 ietvaros.*

Atslēgas vārdi: tautas attīstība, diferenciācija, diferencētība, Tautas attīstības indekss (TAI), normālais sadalījums.

Differentiation of the human development level in countries of the world and their regions

The main research issue within the framework of this article is the following: what happens to human development in countries of the world and their regions which are beyond the average indicators, and why it happens this way but not the other? The authors have tried to answer this question with the help of combining the diachronic and synchronic analyses of the Human Development Index's growth and state of differentiation in the world countries in the period 1990–2017, as well as the Historical Index's of Human Development growth and state of differentiation in the world countries in the period 1870–2015, and the Sub-national Human Development Index's growth and state of differentiation in the internal regions of the EU member countries (with the emphasis on Latvia), and the USA (for comparison) in the period 1990–2017. The novelty of the research lies in the analysis of the differentiation of the human development level in countries of the world and their regions with the help of three indices using a common methodological approach. This kind of parallel analysis allows the authors carrying out a more systematic study into peculiarities of a social and economic phenomenon of human development both in the modern world and in the 150-year old historical perspective. The research outcomes showed that: the average human development level is steadily growing, and in the modern world it dramatically exceeds the average HDI which was achieved 150 years ago; the state of differentiation of the human development level in the world is gradually decreasing over the last 150 years; the HDI distribution in the world countries at each time point of the period under study starting from the second half of the 20th century corresponded to the Gauss curve; in the modern world, the level of human development has a normal distri-bution on sub-national level too (for instance, between internal regions of the EU countries), and metropolitan areas are almost always the leaders of human development; in Latvia, despite the constant increase in the human development level on average in the country and in its regions, the distribution of the HDI itself between Latvia's internal regions remains normal, which is also typical for internal regions of the United States. *The reported study was funded by the Russian Foundation for Basic Research (RFBR) according to the research project [1] 18-011-00548.*

Key words: human development, differentiation, state of differentiation, Human Development Index (HDI), normal distribution.

Введение

В ходе работы над темой дифференциации авторы столкнулись с достаточно большим разнообразием терминов, используемых в научной литературе исследователями вышеназванной тематики. Например, Европейский институт профсоюзов (*European Trade Union Institute*) в названии своего исследования использует термин «неравенства» («*inequalities*»), а также термин «несходства» («*disparities*») — в тексте исследования (European Trade Union Institute 2011). Организация экономического сотрудничества и развития (ОЭСР) в своём исследовании регионов мира в 2011 году также использует термин «несходства» («*disparities*») (OECD 2011). Этот же термин, наряду с термином «диспропорции» («*disproportions*»), использует в своей книге о взаимодействии регионов польский учёный Пётр Пачура *(P. Pachura)* (Pachura 2010). Термин «диспропорции» («*disproportions*») применительно к странам и регионам применялся и продолжает применяться также и в других исследованиях (Kuprianov 1976; Fomins 2005; Ryashchenko 2011). Кроме того, в некоторых исследованиях используется термин «различия» («*differences*») (Hua, Gu 2001; Rice, Venables 2004; Boronenko et al. 2014). И, наконец, в научных публикациях встречается также и термин, выбранный авторами в качестве основного в данном исследовании — «дифференциация» («*differentiation*») (Granberg 1999; Mensikovs, Lavrinovica 2011; Lavrinovica et al. 2012; Lavrinovich et al. 2012; Jankowiak 2014).

Все вышеприведённые термины встречаются либо в сочетании с прилагательным «региональный» — например, «региональные неравенства» («*regional inequalities*») (Sumilo 2010; European Trade Union Institute 2011), «региональные несходства» («*regional disparities*») (Pachura 2010; OECD 2011), «региональные диспропорции» («*regional disproportions*») (Kuprianov 1976; Ryashchenko 2011), «регионльные различия» («*regional differences*») (Hua, Gu 2001; Rice, Venables 2004; Cochrane, Perrella 2012; Boronenko et al. 2014), либо в сочетании с существительным «регион» — например, «дифференцция регионов» («*differentiation of regions*») (Granberg 1999; Jankowiak 2014), «различия между регионами» («*differences between regions*») (Kvicalova et al. 2014). Необходимо отметить, что последнее сочетание — с существительным «регион» — используется гораздо реже первого — с прилагательным «региональный». Кроме того, в научной литературе встречается также и «региональный аспект» дифференциации какого-либо показателя — например, доходов населения (Lavrinovica et al. 2012; Lavrinovich et al. 2012).

Такое обилие терминов и их взаимных сочетаний, по мнению авторов, приводит к терминологической и методологической путанице, в которую необходимо внести ясность — это и является задачей, решаемой авторами в первой части данной статьи.

В свою очередь, отправной точкой для изучения дифференциации уровня человеческого развития в странах мира и их регионах за пределами средних показателей послужил, во-первых, заголовок Доклада о человеческом развитии 2016, ежегодно публикуемого Программой Развития Организации Объединённых Наций (ПРООН), — «Человеческое развитие для всех и каждого» (UNDP 2016), а во-вторых, наличие закона нормального распределения случайных величин (1),

определяющего, что равный уровень «развития для всех и каждого» в один момент времени объективно недостижим, и всегда будет существовать «хвост» менее развитых (стран, регионов, людей и т.д.) и более развитых. В Докладе о человеческом развитии 2016 также отмечается: «хотя средние показатели человеческого развития значительно улучшились по всем странам в период с 1990 по 2015 год, каждый третий человек в мире, согласно показателю Индекса человеческого развития (ИЧР), продолжает жить в регионах с низким уровнем человеческого развития» (UNDP 2016).

Директор Бюро Доклада о человеческом развитии Селим Джахан *(S. Jahan)* на презентации Доклада о человеческом развитии 2016 в Стокгольме 21 марта 2017 года сказал: «мы уделяем слишком много внимания средним показателям развития, которые часто маскируют ненормальные различия в жизни людей. Мы должны оценивать более тщательно не только то, чего мы достигли, но и обращать внимание на то, кто и почему оказался далеко в стороне от среднего показателя» (UNDP 2017).

Таким образом, можно считать, что С. Джахан в своём выступлении обозначил основной исследовательский вопрос, попытка решения которого сделана авторами в рамках данной статьи, а именно: что происходит с дифференциацией уровня человеческого развития в странах мира и их регионах за пределами средних показателей и почему происходит именно так, а не иначе?

1. Региоиальная дифференциация уровня человеческого развития или дифференциация стран и регионов по уровню человеческого развития?

Авторам представляется, что дифференциация — это, прежде всего, процесс (с определённым результатом — дифферецированностью). Процесс разделения системы, которая «по умолчанию» состоит из одинаковых элементов, на разные по качеству (и количеству, если оно переходит в качество) части. База академических терминов *AkadTerm* Латвийской Академии наук, ссылаясь на экономический словарь (Grevina 2000), предлагает схожее определение процесса дифференциации: «разделение на группы, составные части по одному или нескольким признакам» (LZA Terminologijas komisija 2018).

Таким образом, целевым объектом, в котором происходит процесс дифференциации, является система определённых элементов: либо система регионов любой изучаемой страны или система стран, либо какой-либо социально-экономический феномен (например, человеческое развитие или доходы населения). В качестве исходного пункта экономического исследования предполагается, что все элементы изучаемого объекта (стран, регионов, доходов населения, человеческого развития и т.д.) — одинаковы, т.е. недифференцированны. В процессе дифференциации, происходящем по определённым причинам и с определёнными закономерностями, изучаемый объект может прийти к одному из результатов, находящихся между двух полюсов — слабой и сильной дифференцированностью (см. Таблицу 1). Любой из этих результатов может быть и частичным — например, несколько регионов одной страны могут слабо дифференцироваться по тому или иному показателю, а остальные — сильно дифференцироваться по этому же показателю.

Таблица 1

Система терминов, обозначающих процесс дифференциации и его результаты

Язык перевода	Процесс	Результат	
Русский язык	дифференциация	слабая дифференцированность	сильная дифференцированность
Латышский язык	diferenciācija	vāja diferencētība	stipra diferencētība
Английский язык	differentiation	weak state of differentiation	strong state of differentiation

Источник: составлена авторами по аналогии с системой терминов, обозначающих процесс развития и его результаты, на основе Lonska 2014.

Методологический подход к отделению процесса дифференциации от его результата — дифференцированности, используемый авторами в данном исследовании, аналогичен различению процесса развития и его результата — развитости, обоснованному и применённому в докторской диссертации Елены Лонской *(J. Lonska)* «Оценка развитости территорий в регионах Латвии», защищённой в Даугавпилсском Университете в 2015 году (Lonska 2014).

В качестве результата процесса дифференциации авторы выделяют четыре возможных крайних варианта, в зависимости от того, что является объектом конкретного социально-экономического исследования — страна или регион как таковой или социально-экономический феномен, измеряемый каким-либо показателем (или несколькими показателями):

- страны или регионы, которые сильно дифференцированы по определённому показателю, — сильная дифференцированность стран или регионов;
- страны или регионы, которые слабо дифференцированы по определённому показателю, — слабая дифференцированность стран или регионов;
- показатели, которые сильно дифференцированы по странам или регионам, — сильная межстрановая или региональная дифференцированность показателей;
- показатели, которые слабо дифференцированы по странам или регионам, — слабая межстрановая или региональная дифференцированность показателей.

О региональной дифференциации показателей, в отличие от дифференциации стран и регионов, мы можем говорить только тогда, когда объектом исследования является какой-либо социально-экономический феномен (например, человеческое развитие или доходы населения), а предметом исследования — его дифференциация по странам и регионам, т.е. процесс региональной дифференциации какого-либо социально-экономического феномена (см., например, Lavrinovica et al. 2012; Lavrinovich et al. 2012).

В качестве иллюстрирующего примера можно взять региональную дифференциацию заработной платы: если объектом исследования является заработная плата, а предметом — процесс её региональной дифференциации, то в результате исследования можно выяснить, например, насколько сильно дифференцируется

заработная плата по регионам изучаемой страны и насколько сильно, к примеру, по отраслям экономики, т.е. имеет ли дифференцированность заработной платы (как результат процесса дифференциации) именно региональный или только отраслевой характер. Если же объектом исследования являются регионы, а предметом — процесс их дифференциация по показателю заработной платы, то в результате исследования можно выяснить, например, насколько сильно регионы изучаемой страны (все или некоторые) дифференцированы по заработной плате и насколько сильно — по другим признакам (например, по тому же отраслевому составу экономики) (подробнее см. Selivanova-Fyodorova, Tutaeva 2019).

Таким образом, выбор терминологии при изучении дифференциации зависит от объекта конкретного исследования. В свою очередь, всё многообразие терминов, представленное в начале данной статьи, — «неравенства», «несходства», «диспропорции», «различия» — указывают на один из результатов процесса дифференциации — дифференцированность — стран, регионов или социально-экономических показателей, а в сочетании с прилагательным «региональный» — на результат процесса региональной дифференциации какого-либо показателя (т.е. на дифференцированность показателя, а не стран и регионов). Следует отметить, что в реальном исследовательском процессе достаточно трудно отделить, например, региоиальную дифференциацию (методологически корректнее — региональную дифференцированность) уровня человеческого развития от дифференциации стран и регионов по тому же показателю. Так, в предыдущей своей публикации, представленной авторами для обсуждения на V Международной научно-практической конференции «Актуальные проблемы развития человеческого потенциала в современном обществе» Пермского Государственного Национального Исследовательского Университета (Россия) в 2018 году, объектом исследования были именно страны мира, а предметом — процесс их дифференциации по уровню человеческого развития (а не наоборот, как в данном исследовании) (Komarova et al. 2018a). В вышеупомянутой публикации авторы представили результаты типологизации стран мира по Индексу человеческого развития, реализованной с помощью кластерного анализа, сравнили полученные кластеры стран с классификацией стран, предложенной ПРООН, — т.е., занимались, в первую очередь, именно странами, а не человеческим развитием как социально-экономическим феноменом с определёнными закономерностями. Хотя нельзя сказать, что последнего авторы совершенно не касались, но это не было «главной партией» (2) предыдущего авторского исследования.

В данном же исследовании объектом изучения являются не страны и регионы как таковые (с их социально-экономическими особенностями, которые обычно интересуют экономистов), а, в первую очередь, процесс человеческого развития и, конкретно, региональная дифференцированность его результата — уровня человеческого развития, измеряемого Индексом человеческого развития (ИЧР).

2. Измерение уровня человеческого развития
в странах мира и их регионах

Если быть методологически корректными и точными, то, как уже было указано выше в предыдущей части статьи, ИЧР измеряет не процесс человеческого развития, а его результат – статический уровень человеческого развития, т.е. развитость (Lonska 2014). В свою очередь, человеческое развитие как процесс измеряется в динамике путём сравнения предыдущего и последующего уровня человеческого развития стран и их регионов.

Инструмент для измерения уровня человеческого развития стран и их регионов – Индекс человеческого развития – был разработан в 1990 году пакистанским экономистом Махбубом уль-Хаком (*Mahbub ul-Haq*) (Mahbub ul Haq 1990) для того, чтобы акцентировать важность состояния человека и его возможностей (а не только экономического роста) как единственно верного критерия для оценки развитости страны и её регионов (см. также Seers 1969; Sen 1983; World Bank 1991; Stiglitz 1994; UN General Assembly 2000; Boronenko, Lonska 2013; Lonska 2014).

Индекс человеческого развития (ИЧР) *(Human Development Index, HDI)* – это совокупный показатель уровня развития человека в той или иной стране, поэтому иногда его используют в качестве синонима таких понятий как «качество жизни» или «уровень жизни». ИЧР измеряет достижения страны с точки зрения состояния здоровья, получения образования и фактического дохода её граждан, по трём основным направлениям, для которых оцениваются свои индексы (UNDP 2018a):

- Индекс ожидаемой продолжительности жизни: здоровье и долголетие, измеряемые показателем средней ожидаемой продолжительности жизни при рождении;
- Индекс образования: доступ к образованию, измеряемый средней ожидаемой продолжительностью обучения детей школьного возраста и средней продолжительностью обучения взрослого населения;
- Индекс валового национального дохода: уровень жизни, измеряемый величиной валового национального дохода (ВНД) на душу населения в долларах США по паритету покупательной способности (ППС).

Эти три измерения стандартизируются в виде числовых значений от 0 до 1, среднее геометрическое которых представляет собой совокупный показатель ИЧР в диапазоне от 0 до 1.

Помимо базы данных ПРООН (UNDP 2018b), содержащей национальные показатели ИЧР за период с 1990 по 2017 год по 189 странам мира (на 2017 год), существует ещё и база показателей исторического Индекса человеческого развития (ИИЧР) *(Historical Index of Human Development, HIHD)*, которую разработал испанский профессор экономической истории Леандро Прадос-де-ла-Эскосура *(L. Prados-de-la-Escosura)* (Prados de la Escosura 2015). Эта база ценна тем, что предоставляет исторически сравнимые данные по человеческому развитию с 1870 по 2015 год в 164 странах мира (такой выборка стала и оставалась неизменной с 1990 года). Хотя среднемировое значение Индекса за период, покрывае-

мый обеими базами — с 1990 по 2015 год, не совпадает, тем не менее, анализ показателей ИИЧР поможет авторам более обоснованно и в более широкой исторической перспективе ответить на основной исследовательский вопрос данной статьи о том, что происходит (и происходило на протяжении почти 150 лет) с дифференциацией уровня человеческого развития в странах мира за пределами средних показателей.

Кроме двух предыдущих баз данных — по Индексу человеческого развития за 1990−2017 годы и по историческому Индексу человеческого развития за 1870−2015 годы, в распоряжении исследователей человеческого развития стран мира и — что особенно ценно — их внутренних регионов, имеется также база субнациональных показателей ИЧР *(Sub-national HDI, SHDI)* — также за период с 1990 по 2017 год, созданная голландской Лабораторией глобальных данных *(The Global Data Lab) Университета* Неймегена имени святого Радбода Утрехтского *(Radboud University)* (The Global Data Lab 2018). Примечательно, что Латвия в вышеупомянутой базе субнациональных показателей ИЧР представлена регионами уровня NUTS 3, т.е. статистическими регионами Латвии, что особенно важно для латвийских исследователей, систематически сталкивающихся с отсутствием данных по латвийским регионам в европейских и, тем более, в мировых базах данных.

3. Методология изучения дифференциации уровня человеческого развития в странах мира и их регионах

Феномен распределения Гаусса, являющегося методологической основой изучения дифференциации уровня человеческого развития в странах мира и их регионов, назван в честь немецкого математика Карла Фридриха Гаусса *(Carl Friedrich Gauss)*, жившего в конце XVIII − середине XIX века. Именно он в 1809 году и вывел закон нормального распределения ошибок (опубликован на латинском языке и переведён на английский после смерти К.Ф. Гаусса — Davis 1857), который гласит: если построить кривую вероятности тех или иных недетерминированных (т.е. случайных) процессов, то наибольшее число результатов будет близко к среднему значению (см. Рисунок 1).

Пространство между кривой Гаусса и асимптотой на Рисунке 1 включает в себя все значения измеряемого показателя *(N)*; пространство между $\mu - \sigma$ и $\mu + \sigma$ включает в себя примерно 2/3 от *N*; пространство между $\mu - 2\sigma$ и $\mu + 2\sigma$ — около 95% всех значений измеряемого показателя. Практически все значения измеряемого показателя укладываются в промежутке трёх дисперсий — т.н. «правило трёх сигм» (Pukelsheim 1994) или общее для всей кривой нормального распределения «правило 68-95-99.7» (Wheeler, Chambers 1992). Форма кривой Гаусса всегда колоколообразна, различаться кривые нормального распределения, характеризующие разные показатели разных групп изучаемых стран (регионов, людей и т.д.) или показатель одной и той же группы изучаемых стран (регионов, людей и т.д.) в разные моменты времени, могут лишь по высоте и по ширине, при этом высота кривой Гаусса — это вероятность каждого из значений измеряемого показателя (наиболее вероятным теоретически является математическое ожидание или сред-

нее значение измеряемого показателя, которое находится на пике кривой Гаусса), а ширина «колокола» — это дисперсия (разброс) значений измеряемого показателя, которая хорошо соотносится с коэффициентом Джини — чем сильнее неравенство по измеряемому показателю, тем шире кривая Гаусса (Lubrano 2017).

Рисунок 1

Графическая модель закона нормального распределения случайных величин — кривая Гаусса
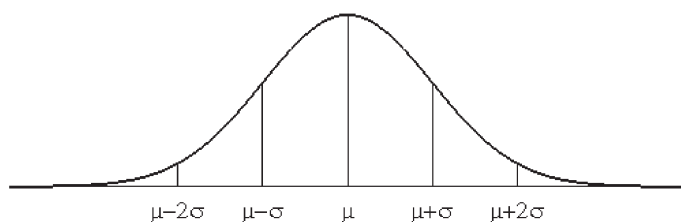
Примечание:
N — все значения измеряемого показателя
μ — среднее значение измеряемого показателя
y — дисперсия измеряемого показателя

Источник: Davis 1857, стр. 47.

Применение закона нормального распределения можно встретить практически во всех сферах современного человеческого знания. В качестве гипотезы данного исследования можно предположить, что и Индекс человеческого развития в странах мира и их внутренних регионах дифференцируется в соответствии с нормальным распределением, т.е. в большинстве стран национальный показатель ИЧР имеет значение, близкое к среднемировому значению, в сравнительно небольшой части стран мира национальный показатель ИЧР значительно ниже или значительно выше среднемирового уровня и лишь в нескольких странах национальный показатель ИЧР выделяется на общем фоне очень высоким или очень низким значением. То же самое можно сказать и применительно к внутренним регионам какой-либо одной страны. Кривая Гаусса, показывающая распределение уровня человеческого развития по странам мира или по регионам одной страны, с течением времени может сдвигаться в ту или иную сторону и представлять уже иное распределение, с другим средним значением ИЧР и с другой дисперсией, но само соответствие дифференцированности ИЧР нормальному распределению по странам мира или по регионам одной страны предположительно остаётся неизменным.

Возникает также почти философский вопрос: почему нормальное распределение является «нормальным», повсеместно встречающимся? Почему невозможно, чтобы уровень человеческого развития был слабо дифференцирован, т.е. одинаково высоким во всех странах мира или во всех регионах каждой из стран?

В поисках ответа на этот вопрос в современной научной литературе авторы встречались с разными подходами к объяснению «нормальности» нормального

распределения — чаще всего учёные пытаются доказать это математически (например, с помощью центральной предельной теоремы), т.е. почему, по каким математическим механизмам или закономерностям случайные величины распределяются нормально (Cramer 1946; Feller 1971; Mlodinow 2008; Gregersen 2010). И лишь немногие (чаще всего это — специалисты в области философии статистики) пытаются ответить именно на сформулированный выше теоретико-методологический вопрос о том, почему именно такой способ распределения случайных величин природа и общество «выбрали для себя» в качестве естественного и нормального.

Философия статистики предлагает следующий ответ, с которым авторы данной статьи вполне согласны: естественный отбор определяет идеальную норму чего бы то ни было (например, роста, веса, доходов или интеллекта людей, уровня человеческого развития стран и регионов и т.д.), но естественный отбор сам по себе тоже не идеален, поэтому он оставляет небольшое поле для вариации вокруг идеала. Такое вариативное поле можно даже считать обязательным условием или требованием процесса естественного отбора, которое необходимо для защиты социальной, экономической или биологической системы от изменений окружающей среды. Таким образом, в процессе естественного отбора строго фиксируется лишь среднее значение (идеальная норма) и крайний предел вариативности показателя (в ту и в другую сторону). В рамках этих границ нет больше никаких ограничителей, и элементы системы (люди, страны, животные, клетки, доходы, рост, вес и т.д.) стремятся к состоянию максимального беспорядка (3), т.е. к состоянию максимальной энтропии. (Данное объяснение апеллирует ко второму закону термодинамики) В свою очередь, именно нормальное распределение позволяет максимизироваться энтропии в пределах безопасности, устанавливаемых процессом естественного отбора, — именно поэтому закон нормального распределения наилучшим образом моделирует общий способ устройства социальных и физических процессов (Cover 2006; Lyon 2014).

Применительно к дифференциации уровня человеческого развития в странах мира и их регионах это означает примерно следующее: мировое сообщество в процессе своего развития пришло к условно «идеальному» уровню человеческого развития (т.е. к «идеальной» человеческой развитости) страны или региона, позволяющему странам мира и их регионам максимально эффективно функционировать в глобальном социально-экономическом пространстве. В большинстве стран и регионов достигнут этот среднемировой уровень человеческого развития, но есть две не очень большие группы стран (или регионов внутри каждой страны) по обе стороны от этого «естественного идеала». И всегда будут. Это необходимо для дальнейшего развития глобальной или национальной социально-экономической системы — страны-лидеры (так же, как и регионы-лидеры внутри каждой страны) апробируют новые формы и способы функционирования в современном социально-экономическом пространстве. Если эти формы жизнеспособны и перспективны, то вся глобальная или национальная социально-экономическая система стремится к ним, передвигая пик кривой Гаусса вправо по оси X — к новому среднему показателю человеческого развития стран и регионов. «Хвост» стран и регионов с низким (в современном понимании) уровнем развития тоже

необходим в случае технологической катастрофы или нежизнеспособности новых форм функционирования территорий в современном социально-экономическом пространстве. Тогда у глобальной или национальной социально-экономической системы есть возможность «отступить шаг назад» на другую сторону своего вариативного поля, чтобы выжить и искать другие пути развития. Таким образом, процесс социально-экономического (технологического, человеческого и т.д.) развития напоминает физический процесс движения волны на водной поверхности и представляется достаточно целесообразным с точки зрения глобальной или национальной социально-экономической системы, но не с точки зрения какой-либо конкретной страны или региона, находящихся на «другой стороне вариативного поля», т.е. в «хвосте» развития.

Тем не менее, достаточно много российских учёных полагают, что идея соотношения социальных показателей с нормальным распределением не имеет содержательного обоснования в социальных науках (Orlov 1991; Davydov 1995; Kryshtanovskii 2006; Velleman, Uilkinson 2011; Il'iasov 2014 и другие), что «нормальное распределение встречается редко» (Davydov 1995; Velleman, Uilkinson 2011). Не вступая в дискуссию об особой природе социального, не допускающего применения статистических методов (в т.ч. закона нормального распределения), авторы утверждают, что в данном исследовнаии дифференциации уровня человеческого развития в странах мира и их регионах статистический подход применен корректно, и имеющиеся в распоряжении авторов эмпирические данные не опровергают гипотезу исследования. Статистика — не в «природе вещей», а в методе исследователя (хорошо или плохо описывает построенную исследователями систему). На взгляд авторов, позиция вышеназванных российских учёных свидетельствует лишь о малом количестве построенных исследователями моделей социальных систем, где успешно использовалось нормальное распределение (4).

Методической основой авторского эмпирического исследования стало комбинирование диахронного (динамика показателей человеческого развития во времени) и синхронного (распределение показателей человеческого развития в конкретные моменты времени) анализа индексов человеческого развития (обычного, исторического и субнационального) на предмет соответствия их дифференцированности в странах мира и их регионах кривой Гаусса, т.е. нормальному распределению. Изучив таким образом процесс дифференциации человеческого развития в странах мира и их внутренних регионах за достаточно длительный период времени (почти 150 лет для стран и 28 лет для их внутренних регионов), авторы надеются получить научно-обоснованный ответ на вопрос о том, каким образом в реальности дифференцируется уровень человеческого развития по странам мира и их внутренним регионам, и доказать таким образом гипотезу данного исследования.

В частности, алгоритм авторского анализа включает в себя следующие этапы:
1) анализ динамики общемирового среднего показателя ИЧР за период с 1990 по 2017 год. Количество стран, взятых для анализа, менялось со 142 стран в 1990 году до 189 стран в 2017 году, в соответствии с базой данных ПРООН (UNDP 2018b). Как правило, в течение изучаемого периода к выборке стран мира добавлялись страны с достаточно низким уровнем человеческого раз-

вития— например, такие как Южный Судан, Кирибати, Туркменистан, Тимор-Лесте, Узбекистан, Соломоновы Острова и т.п. Авторы брали для диахронного анализа то количество стран, данными по которым ПРООН располагала в каждом отдельном году изучаемого периода, а не только те страны, по которым есть информация за все 28 лет. Таким образом, в каждом конкретном году был сделан «снимок человеческого развития в мире», включая вновь появившиеся в базе ПРООН страны. Такой анализ позволит авторам выяснить, что происходит с динамикой среднего значения ИЧР в мире;

2) анализ параметров распределения ИЧР в странах мира за период с 1990 по 2017 год и его соответствия кривой Гаусса, т.е. нормальному распределению. Такой анализ позволит авторам выяснить, соответствовало ли распределение ИЧР в выборке стран мира и насколько соответствовало нормальному распределению, в течение 28 лет изучаемого периода;

3) анализ динамики общемирового среднего показателя исторического ИЧР за период с 1870 по 2015 год. Количество стран, взятых для анализа, менялось со 103 стран в 1870 году до 164 стран в 2015 году (Prados de la Escosura 2015). Анализ исторического ИЧР в странах мира за почти 150 лет позволит авторам проанализировать траекторию человеческого развития в мире в более широкой исторической перспективе;

4) анализ параметров распределения исторического ИЧР в странах мира за период с 1870 по 2015 год и его соответствия нормальному распределению. Такой анализ позволит авторам выяснить, соответствовало ли распределение исторического ИЧР в выборке стран мира и насколько соответствовало нормальному распределению, в течение почти 150 лет изучаемого периода;

5) то же, что указано в первых двух пунктах, но по отношению к внутренним регионам некоторых стран — стран ЕС (с акцентом на Латвии) и США (для сравнения), в соответствии с базой данных субнациональных показателей ИЧР за период с 1990 по 2017 год, созданной голландской Лабораторией глобальных данных *Университета* Неймегена (The Global Data Lab 2018).

4. Результаты эмпирического исследования и дискуссия

Результаты эмпирического анализа показали, что общемировое среднее значение ИЧР за период с 1990 по 2017 год постоянно росло (см. Рисунок 2), даже несмотря на то, что, как указано выше, выборка стран в течение изучаемого периода тоже росла, пополняясь в основном странами с низким уровнем человеческого развития, а также невзирая на региональные и глобальные экономические и политические кризисы, имевшие место в период 1990—2017 годов.

Данные, представленные в Таблице 2, показывают параметры распределения Индекса человеческого развития по странам мира в каждом году с 1990 по 2017 год. Распределение ИЧР по странам мира на протяжении всего изучаемого периода (за исключением периода 2005—2007 годов) соответствовало нормальному распределению (p-коэффициент статистической значимости теста Холмогорова-Смирнова всегда, за исключением 2005—2007 годов, был больше 0.05 — см. Таблицу 2).

Динамика общемирового среднего значения Индекса человеческого развития, стандартизированные значения от 0 до 1, 1990−2017 год
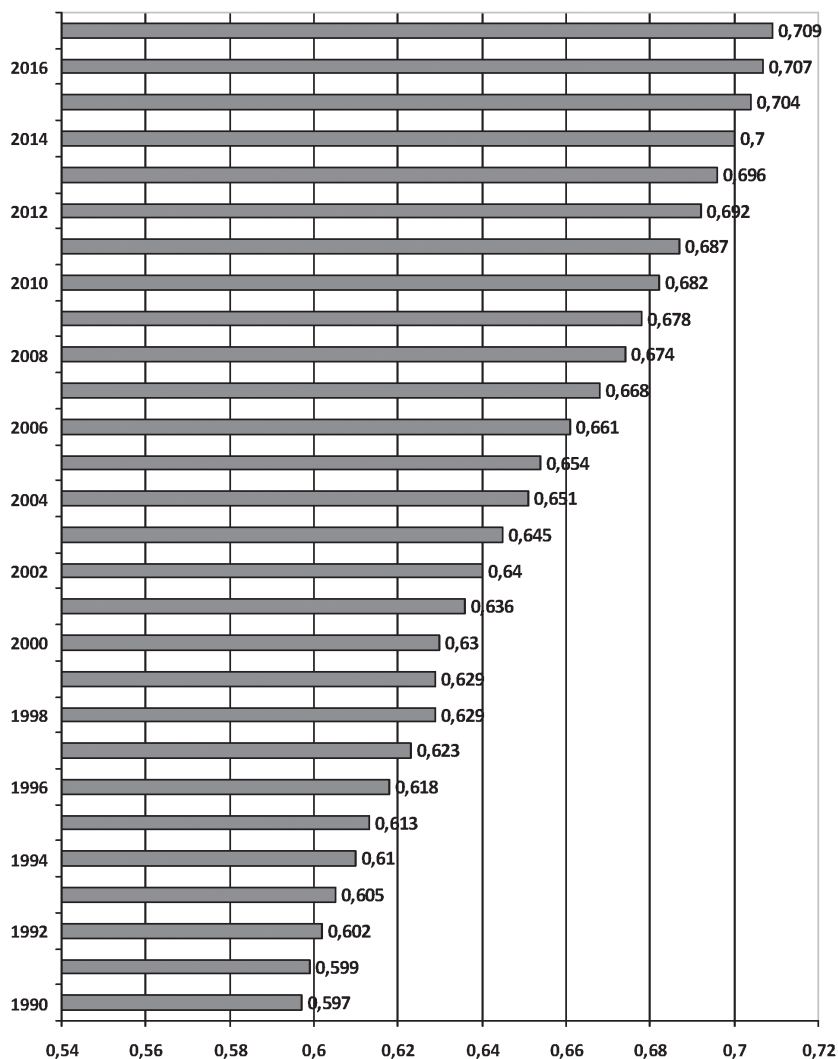
Год	Значение
	0,709
2016	0,707
	0,704
2014	0,7
	0,696
2012	0,692
	0,687
2010	0,682
	0,678
2008	0,674
	0,668
2006	0,661
	0,654
2004	0,651
	0,645
2002	0,64
	0,636
2000	0,63
	0,629
1998	0,629
	0,623
1996	0,618
	0,613
1994	0,61
	0,605
1992	0,602
	0,599
1990	0,597

Примечание: показатели общемирового среднего значения ИЧР рассчитаны авторами как арифметическое среднее ИЧР стран мира в ходе анализа соответствия кривой Гаусса распределения ИЧР по странам мира и немного отличаются от данных, представленных ПРООН, − например, по данным ПРООН, общемировое среднее значение ИЧР в 2017 году было 0.728 (UNDP 2018c); авторы утверждают, что это − только техническое расхождение вследствие разницы в технологии расчётов и оно никак не влияет на результаты исследования.

Источник: создано авторами на основе данных ПРООН по странам мира (UNDP 2018b).

Таблица 2

Параметры распределения Индекса человеческого развития по странам мира, 1990−2017 год

Год	Среднее значение ИЧР	Стандартное отклонение	Количество стран	Коэффициент статистической значимости теста Холмогорова-Смирнова	Решение о соответствии распределения ИЧР нормальному распределению (о нулевой гипотезе)
1990	0.597	0.165	142	0.132	
1991	0,599	0.165	143	0.184	
1992	0.602	0.165	140	0.250	
1993	0.605	0.166	143	0.212	
1994	0.610	0.168	143	0.389	
1995	0.613	0.167	147	0.298	
1996	0.618	0.167	147	0.321	
1997	0.623	0.167	147	0.351	Нулевая гипотеза принята
1998	0.629	0.168	147	0.324	
1999	0.629	0.170	150	0.250	
2000	0.630	0.169	172	0.114	
2001	0.636	0.168	172	0.099	
2002	0.640	0.168	174	0.068	
2003	0.645	0.169	176	0.067	
2004	0.651	0.166	179	0.077	
2005	0.654	0.165	186	0.034	
2006	0.661	0.164	186	0.025	Нулевая гипотеза отклонена
2007	0.668	0.162	186	0.033	
2008	0.674	0.161	186	0.058	
2009	0.678	0.158	186	0.055	
2010	0.682	0.157	188	0.064	
2011	0.687	0.156	188	0.075	
2012	0.692	0.154	188	0.064	Нулевая гипотеза принята
2013	0.696	0.154	188	0.133	
2014	0.700	0.154	188	0.177	
2015	0.704	0.154	188	0.187	
2016	0.707	0.154	188	0.157	
2017	0.709	0.153	189	0.159	

Примечание: показатели общемирового среднего значения ИЧР рассчитаны авторами как арифметическое среднее ИЧР стран мира в ходе анализа соответствия кривой Гаусса распределения ИЧР по странам мира и немного отличаются от данных, представленных ПРООН, — например, по данным ПРООН, общемировое среднее значение ИЧР в 2017 году было 0.728 (UNDP 2018c); авторы утверждают, что это — только техническое расхождение вследствие разницы в технологии расчётов и оно никак не влияет на результаты исследования.

Источник: рассчитано авторами на основе данных ПРООН (UNDP 2018b).

Следует отметить, что в XXI веке соответствие дифференцированности ИЧР по странам мира нормальному распределению стало постепенно ослабевать (*p*-коэффициент статистической значимости теста Холмогорова-Смирнова стал значительно ближе к пороговому значению 0.05 по сравнению с 1990-ми годами — см. Таблицу 2). В связи с этим авторы предположили (и проанализировали с помощью кластерного анализа в своих предыдущих публикациях — см. Komarova et al. 2018a; Komarova et al. 2018b), что современный мир всё явственнее дифференцируется на группы стран — «миры» (Vallerstain 2001), в каждом из которых — свой средний уровень человеческого развития и своё распределение ИЧР (также соответствующее нормальному распределению — см. Komarova et al. 2018a; Komarova et al. 2018b).

В соответствии с алгоритмом анализа, представленном в предыдущем разделе статьи, авторы провели также анализ динамики общемирового среднего показателя исторического ИЧР за период с 1870 по 2015 год, чтобы изучить процесс человеческого развития в странах мира в более долгосрочной исторической перспективе.

Таблица 3

Параметры распределения исторического Индекса человеческого развития по странам мира, 1870−2015 год

Год	Среднее значение историчес-кого ИЧР	Стандартное отклонение	Количество стран	Коэффициент статистической значимости теста Холмогорова-Смирнова	Решение о соответствии распределения ИЧР нормальному распределению (о нулевой гипотезе)
1	2	3	4	5	6
1870	0.067	0.067	103	0.000	
1880	0.078	0.076	96	0.000	
1890	0.088	0.084	96	0.000	
1900	0.098	0.093	96	0.000	
1913	0.106	0.099	113	0.000	
1925	0.129	0.111	105	0.001	
1929	0.139	0.116	105	0.002	Нулевая гипотеза отклонена
1933	0.145	0.117	105	0.001	
1938	0.160	0.124	105	0.003	
1950	0.191	0.129	138	0.005	
1955	0.214	0.135	138	0.003	
1960	0.235	0.141	138	0.003	
1965	0.258	0.143	138	0.015	
1970	0.282	0.147	138	0.047	

Продолжение таблицы 3

1	2	3	4	5	6
1975	0.300	0.149	138	0.163	
1980	0.338	0.149	155	0.248	
1985	0.356	0.151	155	0.294	
1990	0.378	0.155	164	0.195	
1995	0.392	0.162	164	0.368	Нулевая гипотеза
2000	0.418	0.174	164	0.230	принята
2005	0.450	0.187	164	0.134	
2007	0.464	0.190	164	0.184	
2010	0.480	0.193	164	0.138	
2015	0.508	0.198	164	0.207	

Примечание: показатели общемирового среднего значения исторического ИЧР за период 1990−2015 года не совпадают с данными, представленными ПРООН (см. Рисунок 2 и Таблицу 2); авторы утверждают, что это − непринципиальное техническое расхождение вследствие разницы в технологии расчётов и оно никак не влияет на результаты исследования.

Источник: рассчитано авторами на основе базы данных исторического ИЧР (Prados de la Escosura 2015).

Данные, представленные в Таблице 3, показывают, что распределение ИЧР по странам мира стало нормальным относительно недавно − лишь во второй половине XX века. До этого времени абсолютное большинство стран мира имело очень низкие показатели человеческого развития и лишь небольшая группа стран приближалась к тому уровню человеческого развития − 0.250 (см. Рисунок 3), который в современном мире достигнут и превышен самыми малоразвитыми странами (даже принимая во внимание техническое расхождение между показателями общемирового среднего значения исторического ИЧР и современными данными по ИЧР, представленными ПРООН) (UNDP 2018b). Дифференцированность ИЧР в мире 150 лет назад и вплоть до 1975 года не соответствовала нормальному распределению (см. Таблицу 3).

По мнению авторов, изменения в распределении ИЧР с 1975 года могут быть объяснены влиянием модернизации и глобализации (Eisenstadt 1966; Rostow 1971; Bell 1973, 1989; Wallerstein 1974; Inglehart 1977, 1990 и др.), превращающих мир в относительно единую или, по крайней мере, сильно взаимосвязанную политическую, социально-экономическую и культурную систему (хотя само понятие «система» уже включает в себя единство и взаимосвязанность), в которой и проявилось действие закона нормального распределения. Результаты анализа обеих баз ИЧР − обычного и исторического − показывают, что вышеназванный процесс объединения мира в глобальную систему достиг своего апогея в 1994−1995 годах, когда распределение ИЧР по странам мира наиболее соответствовало кривой Гаусса (см. Таблицы 2 и 3). Авторы предполагают также, что «двигателем» приближения распределения ИЧР к нормальному во второй половине XX века был компонент продолжительности жизни, который в связи с эпидемиологическим переходом, вызванным открытием и широким применением антибиотиков,

стал одним из самых «глобализирующихся» компонентов ИЧР, нормализующих распределение среднемирового Индекса человеческого развития.

Рисунок 3

Сравнение распределения исторического Индекса человеческого развития по странам мира, 1870 год (*n* = 103 страны) и 1975 год (*n* = 138 стран)
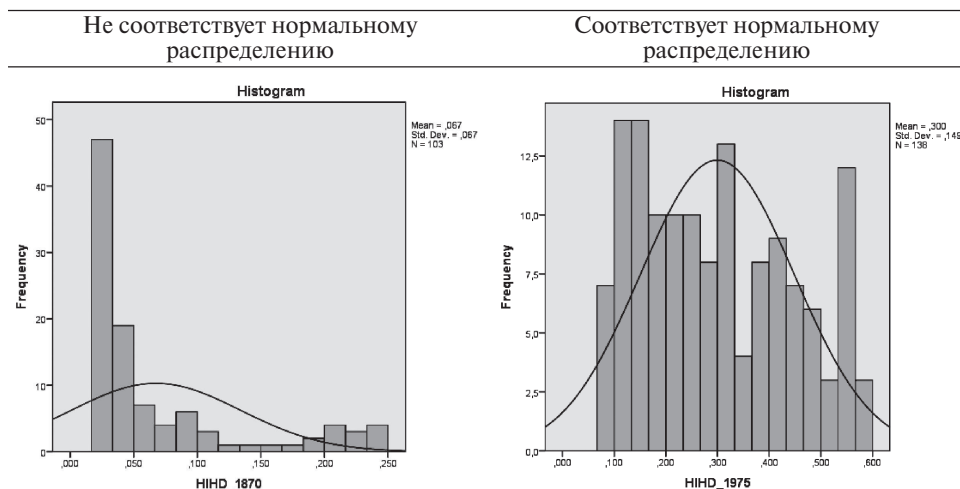
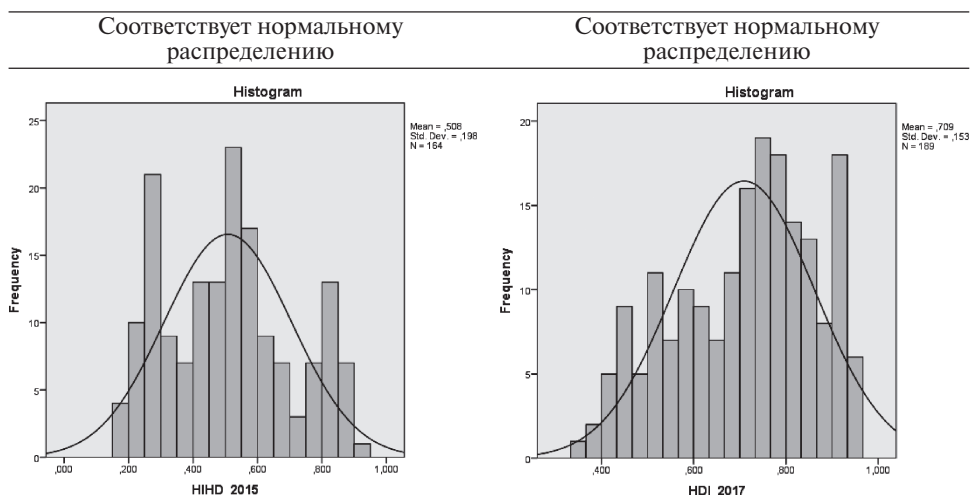| Не соответствует нормальному распределению	Соответствует нормальному распределению

Источник: создано авторами на основе базы данных исторического ИЧР (Prados de la Escosura 2015).

Результаты анализа обеих баз ИЧР показывают также, что именно в XXI веке тенденция объединения мира в глобальную систему стала снова ослабевать, и мир стал делиться на части – об этом свидетельствует как уменьшение после 2000 года коэффициента статистической значимости теста Холмогорова-Смирнова, показывающего уровень соответствия распределения ИЧР по странам мира кривой Гаусса (см. Таблицы 2 и 3), так и наличие нескольких экстремумов в общей картине распределения ИЧР в современном мире (здесь также результаты анализа обеих баз ИЧР – обычного и исторического – свидетельствуют об одном и том же) (см. Рисунок 4).

Из сравнения данных, представленных в Таблицах 2 и 3, следует также, что результаты анализа обеих баз ИЧР – обычного и исторического – расходятся лишь в одном, а именно, в данных по 2005–2007 году. Несмотря на то, что распределение исторического ИЧР (в отличие от обычного) по странам мира в эти годы соответствовало кривой Гаусса, *p*-коэффициент статистической значимости теста Холмогорова-Смирнова по историческому ИЧР всё-таки также снизился в 2005 году и был ближе к пороговому значению 0.05, чем в предыдущие и в последующие годы (см. Таблицу 3).

Рисунок 4

Сравнение распределения средних значений исторического Индекса человеческого развития (*n* = 164 страны, 2015 год) и Индекса человеческого развития (*n* = 189 стран, 2017 год)

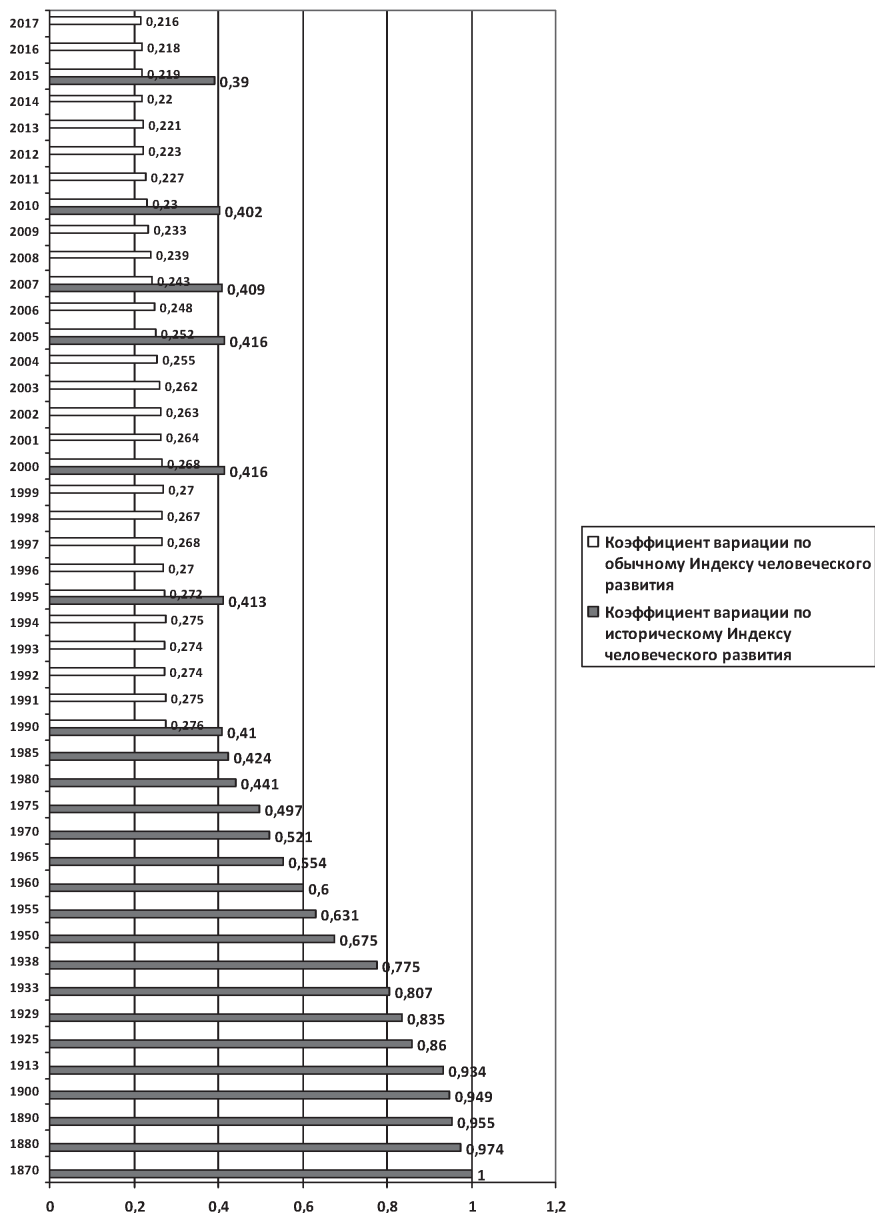| Соответствует нормальному распределению	Соответствует нормальному распределению

Источник: создано авторами на основе базы данных исторического ИЧР (Prados de la Escosura 2015) и базы данных ИЧР (UNDP 2018b).

Таким образом, результаты анализа как обычного, так и исторического ИЧР указывают на то, что со второй половины ХХ века, в результате действия факторов, определение которых выходит за рамки данного исследования (но у авторов есть предположения по этому поводу, изложенные выше), дифференцированность уровня человеческого развития, измеренная ИЧР и историческим ИЧР, по странам мира стала соответствовать нормальному распределению, при этом среднемировой уровень человеческого развития неуклонно растёт, по крайней мере, на протяжении последних 150 лет (см. Рисунок 2, Таблицы 2 и 3), а уровень дифференциации человеческого развития по странам мира — снижается (см. Рисунок 5).

Постепенное снижение уровня глобальной дифференцированности человеческого развития за последние 28 лет (с 1990 по 2017 год) визуально можно увидеть и на Рисунке 6, где нижние траектории малоразвитых стран имеют более крутой подъём кверху, чем верхние траектории высокоразвитых стран.

Рисунок 5

**Коэффициент вариации человеческого развития* в странах мира
по обычному и историческому ИЧР, 1870–2017 год**

Год	Коэффициент вариации по обычному ИЧР	Коэффициент вариации по историческому ИЧР
2017	0,216	
2016	0,218	
2015	0,219	0,39
2014	0,22	
2013	0,221	
2012	0,223	
2011	0,227	
2010	0,23	0,402
2009	0,233	
2008	0,239	
2007	0,243	0,409
2006	0,248	
2005	0,252	0,416
2004	0,255	
2003	0,262	
2002	0,263	
2001	0,264	
2000	0,268	0,416
1999	0,27	
1998	0,267	
1997	0,268	
1996	0,27	
1995	0,272	0,413
1994	0,275	
1993	0,274	
1992	0,274	
1991	0,275	
1990	0,276	0,41
1985		0,424
1980		0,441
1975		0,497
1970		0,521
1965		0,554
1960		0,6
1955		0,631
1950		0,675
1938		0,775
1933		0,807
1929		0,835
1925		0,86
1913		0,934
1900		0,949
1890		0,955
1880		0,974
1870		1

* Стандартное отклонение, делённое на среднее значение ИЧР в выборке стран мира в каждом году (Marques, Soukiazis 1998).

Источник: рассчитано авторами по данным Таблиц 2 и 3.

Рисунок 6

Траектории изменений Индекса человеческого развития в странах мира, стандартизированные значения от 0 до 1, 1990−2017 год
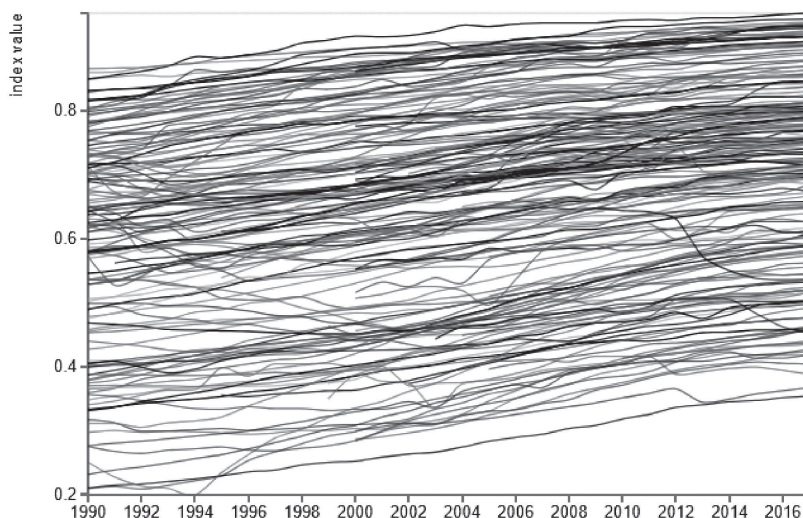
Источник: UNDP 2018b.

Далее алгоритм авторского анализа, представленный в предыдущем разделе статьи, предполагает аналогичное изучение распределения субнационального ИЧР, т.е. ИЧР внутренних регионов (NUTS 3) стран мира. Авторы выбрали в качестве объекта изучения внутренние регионы стран ЕС (с акцентом на Латвии) и США (для сравнения).

Как показывают результаты проверки на соответствие кривой Гаусса распределения субнационального ИЧР по внутренним регионам теперешнего ЕС за период с 1990 по 2017 год, представленные в Таблице 4, дифференцированность ИЧР по внутренним регионам ЕС стала устойчиво соответствовать нормальному распределению лишь после 2008 года, когда *p*-коэффициент статистической значимости теста Холмогорова-Смирнова стал стабильно превышать пороговое значение 0.05 (см. Таблицу 4).

Авторы объясняют длительное (с 1991 по 2001 год) и кратковременное (в 2007 году) несоответствие распределения субнационального ИЧР по внутренним регионам ЕС нормальному распределению тем, что до 2008 года множество внутренних регионов теперешнего ЕС были частью других политических и социально-экономических систем (например, СССР, Югославии) и, вероятно, подпадали под закон нормального распределения только в рамках своих систем. Это можно проверить, «почистив» базу данных внутренних регионов ЕС чётко в соответствии с годом вступления той или иной страны в Евросоюз и сравнив результаты (соответствия распределения субнационального ИЧР кривой Гаусса) с данными, представленными в Таблице 4. Но в рамках данного исследования авторы ограничатся предположением о том, что в периоды перехода стран теперешнего ЕС из одной

политической и социально-экономической системы к независимости или в другую систему (например, 1990−1991 годы для стран Восточной Европы, 2004 год для 10 «новых» стран ЕС − в т.ч. и Латвии, 2007 год для Болгарии и Румынии) дифференцированность человеческого развития внутренних регионов ЕС шла вразрез с законом нормального распределения и начинала снова ему соответствовать лишь после некоторого периода адаптации к новому состоянию или к новой системе. В одной из предыдущих публикаций по экономической дифференцированности внутренних регионов одного из авторов (5) данного исследования было установлено, что коэффициент вариации ВВП по внутренним регионам «новых» стран ЕС также резко увеличивался в периоды перехода этих стран к рыночной экономике (вероятно, нарушая закон нормального распределения, но это не было изучено в рамках вышеупомянутой публикации), а потом − по мере адаптации к ней − снова снижался до уровня, характерного для той политической и социально-экономической системы (в данном случае, рыночной системы Евросоюза), в которую эти страны вступили (Boronenko et al. 2014).

Таблица 4

Результаты проверки на соответствие кривой Гаусса распределения субнационального Индекса человеческого развития по внутренним регионам (NUTS 3) ЕС,* *n* = 278 регионов, 1990−2017 год

Год	Среднее значение ИЧР по внутренним регионам (NUTS 3) ЕС	Стандартное отклонение	Коэффициент статистической значимости теста Холмогорова-Смирнова	Решение о соответствии распределения ИЧР нормальному распределению (о нулевой гипотезе)
1	2	3	4	5
1990	0.746	0.049	0.115	Нулевая гипотеза принята
1991	0.748	0.053	0.027	Нулевая гипотеза отклонена
1992	0.753	0.056	0.006	
1993	0.758	0.059	0.007	
1994	0.766	0.060	0.003	
1995	0.773	0.059	0.001	
1996	0.780	0.058	0.003	
1997	0.786	0.057	0.006	
1998	0.793	0.056	0.003	
1999	0.799	0.056	0.011	
2000	0.806	0.055	0.015	
2001	0.813	0.054	0.011	
2002	0.818	0.052	0.059	Нулевая гипотеза принята
2003	0.824	0.051	0.099	
2004	0.829	0.051	0.133	
2005	0.835	0.050	0.055	
2006	0.841	0.050	0.066	

Продолжение таблицы 3

1	2	3	4	5
2007	0.847	0.049	0.025	Нулевая гипотеза отклонена
2008	0.849	0.048	0.120	
2009	0.849	0.048	0.093	
2010	0.853	0.048	0.102	
2011	0.856	0.048	0.107	
2012	0.857	0.048	0.205	Нулевая гипотеза принята
2013	0.862	0.047	0.143	
2014	0.864	0.047	0.276	
2015	0.868	0.047	0.196	
2016	0.871	0.047	0.122	
2017	0.873	0.046	0.237	

Примечание: по данным официального сайта Евросоюза (https://europa.eu/european-union/about-eu/countries_en), Великобритания на момент подачи статьи официально оставалась членом ЕС.

* В анализе с 1990 по 2017 год участвуют внутренние регионы (NUTS 3) всех стран (за исключением Кипра и Люксембурга, не имеющих внутренних регионов), являющихся членами ЕС в 2018 году.

Источник: рассчитано авторами на основе базы данных субнационального ИЧР (The Global Data Lab 2018).

Интересно, что практически во всех странах ЕС, имеющих внутренние регионы, лидерами человеческого развития являются столичные регионы. Исключение составляют только 3 страны: Германия, где лидером человеческого развития является Гамбург (ИЧР = 0.977), а столичный регион — Берлин (ИЧР = 0.944) — занимает лишь 5 место по уровню человеческого развития среди регионов Германии; Нидерланды, где лидером человеческого развития является Утрехт (ИЧР = 0.950) и за ним следует столичный регион — Амстердам (ИЧР = 0.946); Италия, где лидером человеческого развития является Тренто (ИЧР = 0.912), а столичный регион — Рим (ИЧР = 0.901) — занимает лишь 3 место по уровню человеческого развития среди регионов Италии.

Что касается Латвии, то малое количество её внутренних регионов не позволяет рассчитать соответствие распределения субнациональных ИЧР в Латвии нормальному распределению, но визуально (без расчёта коэффициента) на Рисунке 8 можно увидеть, что в четырёх временных точках периода с 1990 по 2017 год человеческое развитие регионов Латвии соответствовало кривой Гаусса.

Кроме того, на Рисунке 7 можно увидеть появившуюся в процессе региональной дифференциации уровня человеческого развития и заслуживающую внимания новейшую тенденцию изменения позиции Пририжского региона — конкретно, укрепления его «буферного» положения между столицей Латвии и всей её остальной территорией. С 1990 по 2016 год включительно распределение ИЧР по внутренним регионам Латвии выглядело, как показано на первых трёх картинках Рисунка 8, и только в 2017 году впервые картинка изменилась, и пустое про-

странство между лидером человеческого развития в Латвии − столичным Рижским регионом − и всей остальной территорией Латвии занял Пририжский регион (см. последнюю картинку на Рисунке 7).

Рисунок 7

Распределение субнационального Индекса человеческого развития по внутренним регионам Латвии, *n* = 6 регионов, 1990, 1997, 2007 и 2017 год
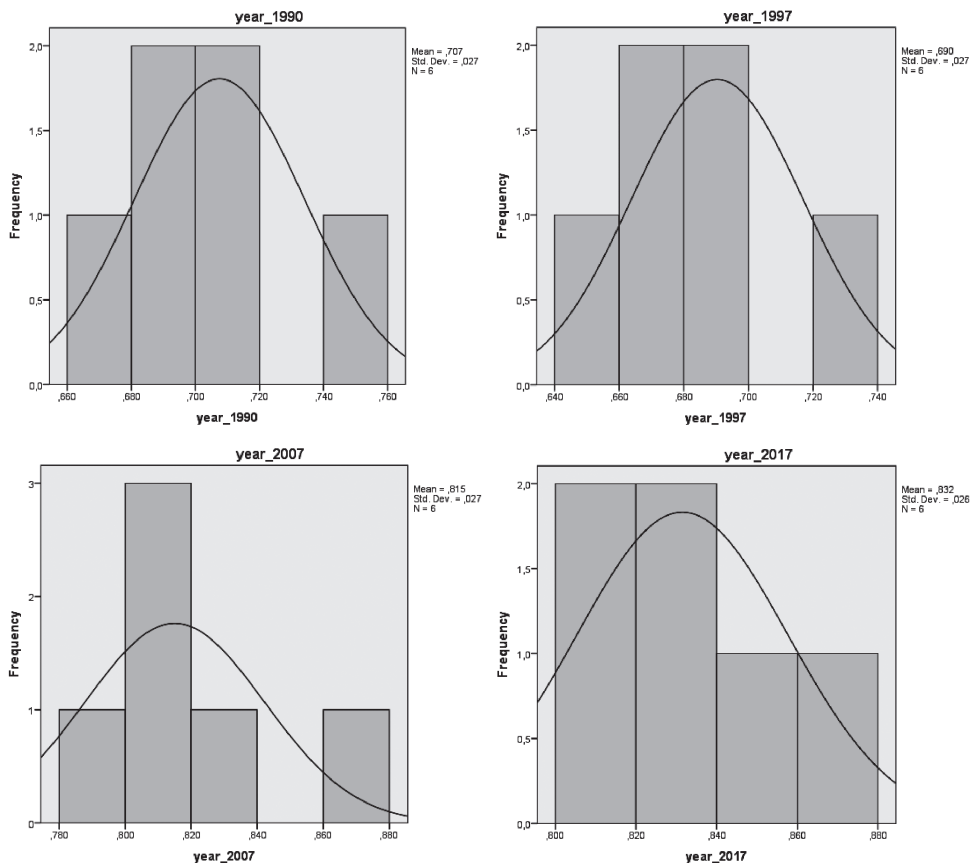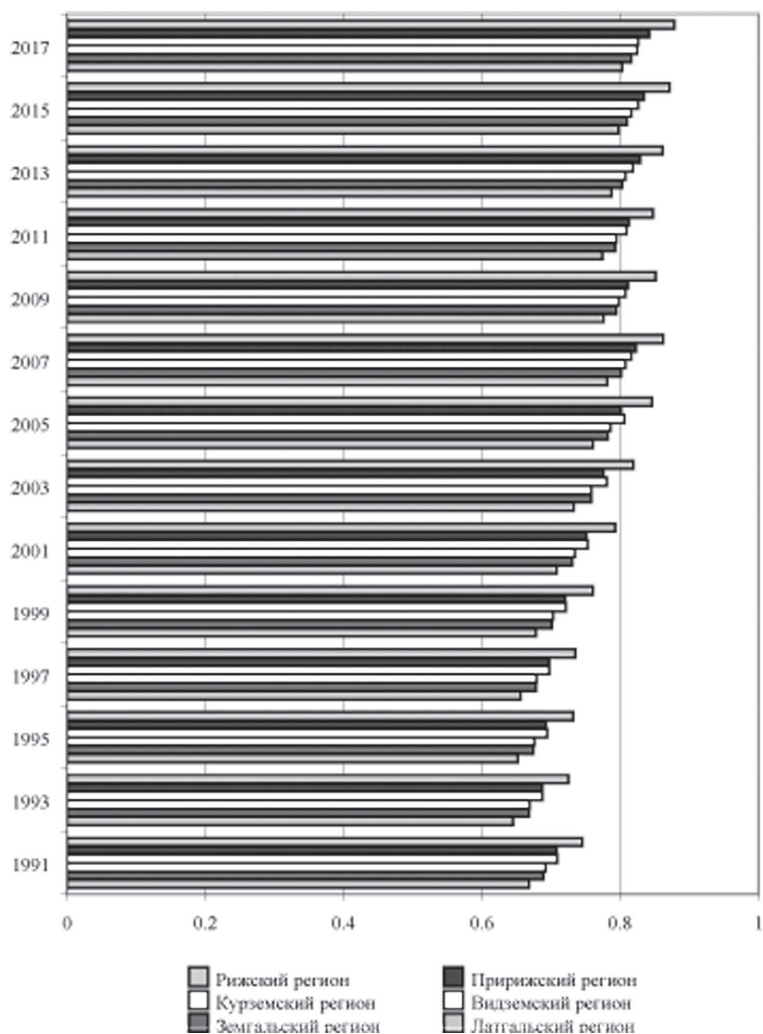

Источник: создано авторами на основе базы данных субнационального ИЧР (The Global Data Lab 2018).

Среднее значение ИЧР по Латвии в целом на протяжении всего периода с 1990 по 2017 год неуклонно росло (за исключением первой половины 1990-х годов − после распада СССР и обретения Латвией независимости, а также 2009−2010 годов − после глобального финансового кризиса), т.е. уровень человеческого развития в Латвии в целом (как и в каждом её регионе − см. Рисунок 8) постоянно растёт − за исключением вышеназванных двух небольших периодов, падение ИЧР во время которых происходило, по мнению авторов, только за счёт материального

компонента ИЧР. Но неизменным остаётся то, что дифференцированность уровня человеческого развития по внутренним регионам Латвии напоминает нормальное распределение, и это не является уникальным или не характерным для стран ЕС явлением.

Рисунок 8

Субнациональный Индекс человеческого развития в регионах Латвии, стандартизированные значения от 0 до 1, *n* = 6 регионов, 1990−2017 год*

* В указанном периоде оставлены данные только за нечётные годы для большей наглядности и качества восприятия рисунка.

Источник: создано авторами на основе базы данных субнационального ИЧР (The Global Data Lab 2018).

В подтверждение того, что в современном мире дифференцированность человеческого развития соответствует кривой Гаусса как на национальном, так и на субнациональном уровне, авторы проанализировали распределение субнационального Индекса человеческого развития по внутренним регионам США, поскольку их количество (51 регион) позволяет (хотя и с «натяжкой» (6)) применить тест Холмогорова-Смирнова для оценки соответствия кривой Гаусса распределения субнационального ИЧР (см. Рисунок 9).

Рисунок 9

Распределение субнационального Индекса человеческого развития по внутренним регионам США, *n* = 51 регион, 2017 год
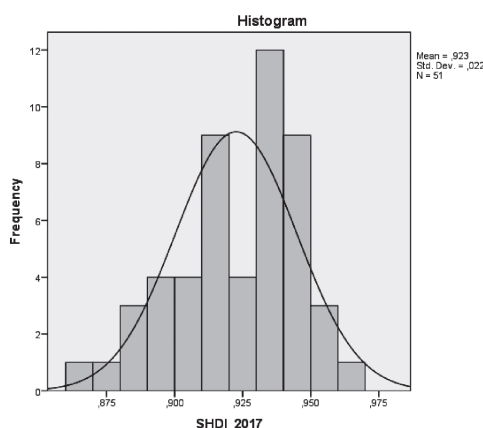
Примечание: распределение ИЧР по внутренним регионам США соответствует кривой Гаусса, т.е. нормальному распределению (*p*-коэффициент статистической значимости теста Холмогорова-Смирнова равен 0.296).

Источник: создано авторами на основе базы данных субнационального ИЧР (The Global Data Lab 2018).

Таким образом, в результате проведённого анализа авторы могут дать следующий ответ на главный исследовательский вопрос в рамках данной статьи: уровень человеческого развития в странах современного мира и их регионах устойчиво дифференцируется по закону нормального распределения, поскольку именно нормальное распределение наиболее эффективно обеспечивает одновременную устойчивость человеческого развития и возможность выживания и прогресса в странах мира и их регионах. Результаты данного исследования, а также результаты предыдущих исследований одного из авторов, свидетельствующие о том, что уровень культурной модернизации также имеет нормальное распределение (Vasserman 2007, 2014, 2018), дают авторам основание предполагать, что по закону нормального распределения дифференцируются и другие социально-экономические показатели, что может быть проверено в дальнейших исследованиях, применив методологию, представленную в данной статье.

Выводы

В результате проведённого исследования авторами сделаны следующие выводы, расположенные здесь согласно алгоритму авторского анализа, представленному в третьей — методологической — части данной статьи:

1) анализ динамики общемирового среднего показателя ИЧР за период с 1990 по 2017 год показал, что средний уровень человеческого развития в мире неуклонно растёт, даже несмотря на то, что выборка стран для расчёта ИЧР постоянно пополняется не самыми развитыми странами; то же самое показывает и анализ динамики общемирового среднего показателя исторического ИЧР за период с 1870 по 2015 год; таким образом, средний уровень человеческого развития в современном мире в разы превышает тот средний показатель ИЧР, который был достигнут в мире 150 лет назад;

2) анализ параметров распределения ИЧР в странах мира за период с 1990 по 2017 год, а также историчесого ИЧР за период с 1870 по 2015 год, и его соответствия кривой Гаусса, т.е. нормальному распределению, показал, что распределение ИЧР по странам мира в каждой временной точке изучаемого периода, начиная со второй половины XX века, соответствовало кривой Гаусса, т.е. каждое статическое среднее значение общемирового Индекса человеческого развития, к которому приближается большинство стран в современном мире (но так было не всегда в исторической перспективе), подразумевает наличие стран, отстающих от этого среднего уровня, и стран, опережающих его, и этому есть достаточно рациональное объяснение, предоставленное философией статистики;

3) анализ коэффициента вариации ИЧР по странам мира с 1870 по 2017 год показал, что межстрановая дифференцированность уровня человеческого развития в течение последних 150 лет постепенно снижается, т.е. разрыв между странами мира по уровню человеческого развития достаточно медленно, но неуклонно сокращается;

4) анализ параметров распределения субнационального ИЧР по внутренним регионам теперешнего Евросоюза (с акцентом на Латвии) и США за период с 1990 по 2017 год и его соответствия кривой Гаусса, т.е. нормальному распределению, показал, что в современном мире уровень человеческого развития имеет нормальное распределение также и на субнациональном уровне, при этом лидерами человеческого развития — по крайней мере, в странах ЕС, — практически всегда являются столичные регионы;

5) в Латвии, несмотря на постоянный рост — с небольшими падениями во время кризисов — уровня человеческого развития в среднем по стране и в каждом регионе в отдельности, само распределение ИЧР по внутренним регионам визуально выглядит как нормальное (точный коэффициент рассчитать нельзя по причине малого количества регионов в Латвии), что характерно также, к примеру, и для регионов США.

Примечания:

(1) Закон нормального распределения показывает вероятность некоторого значения из некоторой градации этих самых значений, графически моделируется колоколообразной кривой Гаусса, а математически — двумя параметрами: математическим ожиданием (или средним значением) и дисперсией (или стандартным отклонением) (Kremer, Putko 2010).

(2) По аналогии с партиями сонатной формы в музыке (Бобровский В.П. (2018) *Сонатная форма.* https://www.booksite.ru/fulltext/1/001/008/104/512.htm).

(3) Это наглядно демонстрируют маленькие дети, если их закрыть на какое-то время в комнате.

(4) Возможно, это связано также с достаточно длительной квазинаучной политизированной «истерией» вокруг легитимности результатов выборов в России. Считается, что несоответствие кривых голосования на выборах нормальному распределению свидетельствует о действии какого-то скрытого фактора, который интерпретируется, как вмешательство в процесс выборов (РИА Новости, Россия сегодня. (2012) *Как связаны кривая Гаусса и выборы.* https://ria.ru/vybor2012_hod_vyborov/20120306/586290625.html; Парло Г., Федеральное агентство новостей. (2018) *Гаусс против несогласных: «нормальное распределение» на выборах не работает.* https://riafan.ru/1030378-gauss-protiv-nesoglasnykh-normalnoe-raspredelenie-na-vyborakh-ne-rabotaet; Общественная палата Российской Федерации. (2018) *Математика и выборы: работают ли формулы, проверят общественные наблюдатели.* https://oprf.ru/press/news/2018/newsitem/44277 и другие).

(5) Бороненко — это фамилия соавтора статьи Веры Комаровой до 2016 года.

(6) Для корректного применения статистического теста Холмогорова-Смирнова нужна выборка, состоящая как минимум из 80 объектов (Kryshtanovskii 2006).

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ZINĀTNISKĀ DZĪVE

AIZSTĀVĒTIE PROMOCIJAS DARBI

Ingrīda Veipa

ROLE OF VOCATIONAL EDUCATION IN WORKFORCE PREPARATION FOR THE REGIONS OF LATVIA

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Topicality and rationality of the research. Training of educated and professional workforce, investments in human capital, public motivation for assimilating and using knowledge in a skilled manner form one of the decisive factors of development for Latvia in the 21st century, vital to ensure the country's growth on the European and global scale. The geopolitical position of Latvia, limited availability of input materials and energy resources determine educated population and qualified human resources as the main factor determining our competitive performance (Latvian Sustainable Development Guidelines 2002).

The political and economic situation in Latvia raises the question of where do professional and qualified experts in their respective domains go after graduation. Do they become employers – successful entrepreneurs, competitive producers, or employees – skilfullaborer's? What are the reasons behind the situation when workforce is being trained, but regions have to cope with a considerable shortage thereof? Over the course of the author's 20-year career with professional educational institutions, she has been dealing with various aspects of the process that grants knowledge and skills to apprentices and students on a daily basis, so she strongly agrees with the statement that the mission of professional education is to provide support to the development and competitive performance of enterprises and industries. Without a precise structure of professional qualifications and specializations sought after by the industries and the availability of an appropriate range of education programs, professional education is never going to be able to pursue its mission (Traidās 2015). In turn, such "precise structure" and the balance of supply and demand in education cannot be achieved without the will of all the parties concerned and the motivation to communicate and cooperate in practice.

Each year, a certain share of students is expelled from professional education institutions for different reasons. First-year students tend to be expelled most often; however, the current trend also shows that some graduates do not start their career in the chosen profession. This could be indicative of insufficient career education, the lack of young people's motivation and interest in the cognitive process, as well as of education programs that might fail to comply with the requirements of Latvian and global markets of the 21st century.

Professional education must be harmonized with the employment market. This thesis is upheld by employers' opinions, high national unemployment rates and the difficulties encountered by job seekers upon graduation from a professional education institution. In the meantime, Latvia could still face the situation when there is not enough information on the actual requirements of the labor market towards workforce at a specific time, let alone any future forecasts.

A noteworthy detail is that the funding per one student of a professional education institution in Latvia is one of the lowest among the OECD countries; the only countries below our own levels are Hungary and Turkey (OECD 2016). At that, most OECD countries allocate more funds to the training of apprentices in professional education institutions than to general secondary education. In Latvia, funding is rather similar for both types of education; however, "common" secondary schools do get a somewhat more generous financial support. These receive 5241 USD (all amounts are specified in U.S. dollars in the OECD report) per student a year, as compared to the annual amount of 4599 USD per student allocated to professional secondary schools.

Obtaining a better idea of the labour market development trends requires both scientific research and industry development forecasts at the national and municipal level, as well as prognoses from social partners. Up to this day, Latvia lacks the appropriate and adequate methods and mechanisms for the summarizing and analysis of such data, which could be used to forecast labor market trends for Latvian regions. Neither have there been any researches on the calculation of economic gains or losses that might result from the introduction and implementation of a specific complex of measures.

The global changes, often regarded to as the flow of "21st century skills" (e.g., creativity, critical thinking, communication, cooperation, etc.), help shape schools towards the teaching models that make a student better prepared for successful studies, work and life. The OECD skill strategy keeps in line therewith, shifting the focus from the formation of quantitative human capital (measured in years of formal education) towards skills that people can really master, use and improve in the course of their lives (OECD 2016).

Considering the prominent social and economic differences between the Latvian capital city of Riga and the rest of Latvia's territory, one could provisionally divide Latvia into 2 large regions – Riga and Non-Riga (Boroņenko 2007). The two regions differ in terms of development process and economic development stages (state of development) (Lonska 2014); therefore, in order to ensure common performance of regional economy, requirements towards the qualification level of a specific share of workforce are also slightly different. Nevertheless, at any rate, professional education institutions, higher education institutions and the study programs thereof must meet

the current needs of human resources and the public, these must focus on the learning of skills, competences, knowledge and attitudes, developing the ability to react in real situations, not just on memorising the facts and formulae from educational books. This would improve the students' creative and innovative capabilities, ensure greater success in learning skills and finding a job, and provide all regions of Latvia with qualified professional workforce, ultimately improving the overall well-being of the society.

The degree of development of the topic of research. The author of this Doctoral Thesis addresses the issue of workforce training, which is construed for the purposes of this Thesis as specialist training within the boundaries of professional education, which includes both the educational process at educational institutions and educational internship and in-service training at the workplace.

The concept of comprehensive capital was the initial stage of development of the human capital theory. This was developed and became a specific trend in the global economy over the period of late 1950s to early 1960s. The founders of this theory were American economists, representatives of the Chicago school of economics T. Schultz and G. Becker, whose works have determined the core guidelines for further studies in this domain worldwide. As emphasized by G. Becker in the human capital theory, investments in education and in-service training have a positive effect on the productivity of an employee, conduce pay rise and economic advance in general.

In the descriptions of human capital, one can discern several components used in professional activities for the development of new products (L. Thurow, H. Bowen, J. Coleman, E. Dolan, D. Lindsey, S. Dyatlov, T. Davenport, L. Prusak. Many scientists propose to consider not just the volume of human capital, but the positive result for a company, the public and the social and economic development of a country, which is provided through the usage thereof (N. Bontis, N. Dragonetti, K. Jacobsen, G. Roos, I. Lapiņa.

Aim of the research: to develop the most appropriate economically substantiated mechanism for the provision of Latvian regions with professionally educated workforce, considering the education, labour market and regional development trends of the 21st century in Latvia and Europe.

Objectives of the research:
1. To study the essence of human capital, intellectual capital, workforce and other terms most relevant to this Doctoral Thesis and the influence of these factors on the development of Latvian regions in the 21st century.
2. To analyse the role and availability of professional education (including studies based in the working environment) and career education, and the influence thereof on the development of qualified and professional workforce in Latvia in comparison with the experience of other European countries, as well as to identify the opinions of businesses and local municipalities regarding the preparation of qualified workforce for regions of Latvia.
3. To develop a mechanism for the attraction of professionally educated and qualified workforce to Latvian regions, which would be based on cooperation between

professional education institutions, businesses, local municipalities and government authorities.

Hypothesis of the research: preparation of workforce must be based on systemically established cooperation between professional education institutions, businesses and government and municipal authorities, in order to ensure reasonable usage of financial resources in specialist training and attract the workers required in the respective regions.

Object of the research: professional education in Latvia.

Subject of the research: mechanism for the provision of Latvian regions with professionally trained human resources.

Methods used:
- *monographic method* – research and analysis of scientific literature, results of economic and sociological studies and other primary information;
- *logical construction method* – logical analysis and synthesis;
- *statistical data analysis method* – analysis, grouping and dynamic analysis of official statistics;
- *sociological research methods*: a) *expert survey* (in order to determine the opinions of experts and representatives of businesses and municipalities regarding the agenda of the study); b) *quantitative survey* (questionnaire survey); c) interviews in Latvian and English;
- *SWOT analysis*, *PEST analysis*, in order to provide the data for illustrative grouping of the external and internal factors that influence the preparation and provision of professional and qualified workforce to regions, as well as opportunities for improvement;
- *EKD modelling method*;
- *Economical calculations*;
- graphic and cartographic method.

Scientific novelty and practical application of the Doctoral Thesis.

Scientific novelties:
- This is the first complex analysis of the factors that influence the attraction of professionally prepared and qualified human resources and the processes of attraction of qualified workforce to Latvian regions, which also suggests a new qualified human resource attraction improvement mechanism (with four key involved parties that cooperate in pursuit of a common goal – improved attraction of professional and qualified human resources).
- For the first time in Latvia, the external factors that affect the professional education environment are thoroughly analysed, including the peculiarities of the career education system and dual training process, in addition to a research on the experience of a number of EU countries.
- Experts of 21 regional development centre (municipalities) were interviewed on the subject of attraction of professional and qualified human resources to regions.
- Economical calculations of the gains from the implementation of a mechanism for cooperation between professional education institutions, businesses, govern-

ment authorities and local municipalities with the aim to prepare professional and qualified accounting specialists, based on the example of Jēkabpils Agrobusiness College.

- In reliance upon the labour market development trends, forecasts of supply and demand for workforce in the mid-term perspective (until 2022–2023), as well as the essence of professional and qualified human resources in the 21st century, prerequisites have been determined for the successful attraction of qualified human resources to the regions of Latvia, which requires actions on part of every social partner that would address the important aspects of education, employment and social policy.

Practical application:
- A platform for cooperation between professional education institutions, employers, local municipalities and government authorities has been developed as the main component of the mechanism for improving the attraction of professionally trained specialists to the regions of Latvia.
- Five key competences (or groups thereof) have been developed; the cooperation platform indicates the competence(s) primarily developed within the boundaries of the respective activity.
- The Doctoral Thesis can help the State Employment Agency, the Ministry of Education and Science, the Ministry of Economics, general education schools, professional education institutions, higher education institutions, local municipalities, employers and the involved social partners in planning and developing integrated development strategies, education promotion plans and specific projects based upon human capital and competences, long-term programs and short-term activities for boosting employment in the Latvian regions.

Theses set forth for defence. Economic development in the 21st century primarily relies upon professional and qualified human resources (including remote work forms). Availability of high-quality career education and professional education (including dual training) is one of the most essential prerequisites for the development of qualified human resources. Provision of regions with qualified workforce can be stimulated through the active use of a cooperation mechanism involving truly concerned parties – professional education institutions, businesses, government authorities and local municipalities, as well as other involved parties (e.g., non-government organisations, the media).

In this conclusion, the author of the Doctoral Thesis has summarised the key findings. The hypothesis of the study – preparation of workforce must be based on systemically established cooperation between professional education institutions, businesses and government and municipal authorities, in order to ensure more reasonable usage of financial resources in specialist training and attract the workers required in the respective regions – has been confirmed. In the future, globalisation trends – competition between developed and emerging economies, changes in the structure of workforce supply, as well as climatic change trends and the development of respective industries in all countries, which implies more jobs in renewable energy industries

and less jobs in industries that use fossil energy resources – are going to have a considerable influence on the labour market. Demand for professional and qualified human resources with the ability to solve a complex range of issues is going to rise by 2030.

New business models and the potential of modern technologies allow for the development of new corporate business structures, including those that merge a corporate workforce from professional and qualified employees hailing from numerous cities, regions and even rural territories.

Ministry of Education and Science does not carry out unified monitoring of graduates of vocational education institutions. The introduction of a unified monitoring system will provide an opportunity to evaluate the effectiveness of public investment in the preparation of a professional and skilled workforce and to make timely adjustments to the funding allocated to specific vocational education institutions.

Greater attention must be paid to career education for every age group, as well as dual professional education involving apprenticeship and similar structures, which would imply on-site training, and it is not the academicism, but rather the issue of quality that should be prioritised, as quality promotes integration in the labour market and a more fluent transition from studies to employment.

Even though there are many job vacancies, there is also a considerable number of young people in the labour market with overly high or inappropriate qualification, whose skills fail to meet the demand of the market; therefore, it is essential to improve synergy and cooperation between the education system and the labour market.

Businesses are essentially important as components of the national education system, very much so in the domain of professional education, so that vocational training could be adjusted to meet the current and future needs of the market, whereas local municipalities could have an essential role in the provision of general quality of life in the respective regions, so that the potential human resources would be willing to live and work there.

Each Latvian region requires the development of its dedicated cooperation platform for professional education institutions, businesses, government authorities and municipal institutions, as well as any other concerned parties (non-government organisations, the media, etc.), which would allow professional education institutions to conduce the establishment of an Advisory Council for Professional Education.

Implementation of the solutions proposed by the author of the Doctoral Thesis in the domain of professional education (dual training, career education activities since elementary school, involvement of businesses in the updating of education programs), aside from ensuring better training of professional qualified workforce and the allocation thereof to Latvian regions, could also result in more rational usage of funds allocated for the training of experts.

Problems and their possible solutions.

PROBLEM 1. Labour market of the 21st century demands professional and qualified specialists with new knowledge and skills; therefore, it is essential to develop new education programs and improve the existing ones. Possible solutions:

- educational institutions must have experts involved in the respective industries in the development and updating of education and academic programs;
- ministries and agencies have to cooperate with scientists in order to forecast the future labour market trends, so that competitive specialists could be trained pro-actively;
- involve representatives of municipalities and businesses in the development and implementation of study programs at professional education institutions, conduce the offer of lifelong education programs by professional education institutions in a specific region;
- motivate businesses to get involved in working environment-based educational activities by providing up-to-date in-service training opportunities appropriate to the labour market and thus ensuring maximum approximation of apprentices to the actual labour market situation.

PROBLEM 2. Latvia does not carry out monitoring of graduates of vocational education institutions and an analysis of the efficiency of state funds invested in the preparation of a professional and qualified workforce for the regions of Latvia. No statistics, database for companies requiring specific 3rd qualification level specialists is available. Possible solutions:
- Ministry of Education and Science shall introduce a unified monitoring system for the work of graduates of Latvian vocational education institutions;
- Entrepreneurs shall actively participate in the dual training project so that young specialists get to know their profession as quickly as possible and make a choice in favor of staying in the particular company, region. In the database, indicating that the company is ready to train a new specialist for the specific processes on the site, offering a place for qualification practice and, in the future, a job.

PROBLEM 3. The gradual increase in demand for professionally educated and qualified human resources, determined by increased productivity in different areas of national economy, is going to be accompanied by a greater need for career education at every age and dual professional education with apprenticeship and similar systems, which would provide for on-site training and conduce the reduction of funds required for formal education in the meantime. Possible solutions:
- the Ministry of Education and Science must develop and approve an in-service training funding model for professional education, and/or to implement the already approved Project of the Employers' Confederation of Latvia;
- the Ministry of Education and Science should take measures to smooth out the difference between the funding allocated per 1 student in professional education and that allocated per 1 student in general education, as well as to make provisions for increased funding of professional education institutions in the future.
- the Ministry of Education and Science has to develop and introduce a new funding model in order to ensure availability of competitive and high-quality professional education after the discontinuance of the EU funding;
- government and municipal institutions should develop strategic development plans with the participation of businesses and representatives of professional education

institutions in the respective workgroups, as well as develop specific targeted projects for boosting employment in the regions of Latvia;
- municipalities have to ensure the availability of career specialists in educational institutions.

PROBLEM 4. Cooperation between municipalities, business and professional education institutions, which would be aimed at the provision of regions with professional and qualified workforce, is virtually absent. Possible solutions:
- IMPLEMENT A COOPERATION MECHANISM through adaptation to the peculiar nature of a specific region, considering the trends of development of national economy industries within the region and the municipalities' long-term strategic development plans;
- promote trilateral (educational institutions, municipalities, businesses) cooperation, which would ensure future availability of a stable platform for the implementation of working environment-based studies in the professional education institutions of Latvia;
- adopt and adapt the best foreign practices of dual training in accordance with the specific nature of Latvian regions;
- municipalities have to organise and extend financial support for Entrepreneur Days, Career Days and other events that allow for active involvement and cooperation on part of any institutions and persons that might be interested;
- municipalities should offer scholarships to motivate young people for learning specific professions and returning to the region;
- homepages of municipalities should be supplemented with a dedicated section on the opportunities offered by professional education institutions within the region, which would also contribute to the popularisation of cooperative activities with businesses and educational institutions for the purpose of educating the population on the issues of professional education and business environment in the region.

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