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Dear readers,

Today it’s my pleasure to introduce the first issue of already the fourth volume of *Journal of Security and Sustainability Issues*. The journal has been started three years ago; it’s a short time from historical point of view but sufficiently long to live through turbulent times of change. The 21st century appears to be not only century of technology, innovations and rapid development; it appears to be century of new and not new; known and unknown threats and insecurities.

Economic security of any country depends on safety and security of trade, tax collection, transparency and equality of business conditions. Customs perform big, times invisible job, in protecting society, securing health of finance, economic health of country, which ultimately leads to social security of all citizens. Hence, sustainable development is intertwined, and I would say, dependent on various facets of security. Economic security here is of the second importance if to compare to security against military interventions.

In that context I wanted to greet and encourage ongoing attempts of scientific, statutory and civic societies, practitioners and other stakeholders in fostering international discussion bringing urgent issues of secure and sustainable development. I truly believe our common concern, interest, knowledge and enthusiasm will be rewarded by peace brought by security, and affluence brought by balanced sustainable development of our country and the whole global village.

*With best regards and encouragement* 

ANTANAS ŠIPAVIČIUS  
Director General  
Customs Department under the Ministry of Finance of the Republic of Lithuania
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SECURE SUSTAINABLE DEVELOPMENT: IMPACT OF SOCIAL MEDIA ON POLITICAL AND SOCIAL CRISIS

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Abstract. The aim of the article is to present and examine a unique role of social media in correlation with contemporary secure and sustainable development path by observing social and political processes, which in several instances led to a violent conflicts and crisis. Fundamental task of the article as well as its research goal is to give an answer to two questions – does the social media can be used to trigger revolutions and how military powerful entities as NATO and US are prepared to utilize the social media as a part of military efforts. First part of the article is focused on scientific approaches towards secure and sustainable development, followed by NATO’s and US military doctrinal approach to the use of the social media. After review of interrelationships between security and sustainable development, that part of the article covers such documents as NATO Military Concept for NATO Strategic Communication (2010), NATO Strasbourg-Kehl Summit Declaration (2009), NATO Strategic Communication Policy (2009), US Capstone Concept for Joint Operations (2009), US Commander’s Handbook for Strategic Communication and Communication Strategy (2010) and revised US Capstone Concept for Joint (2012). The second part of the article is focused mainly on presentation of the usage of the social media in selected conflicts which took place in Lebanon, Kuwait, Kenya, Egypt, Tunisia, Nigeria and another accord in long-lasting war between Israel and Hamas (so called operation Pillars of Defense). The article is concluded with final remarks addressing role of social media in processes of secure sustainable development of considered countries.

Keywords: security, social media, crisis, military doctrines, Arab Spring, social and political changes

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1. Introduction

ICT and cyberthreats play take a separate niche among all dimensions of secure development (Kaźmierczyk 2012; Białoskórski 2012; Dudziewińska 2012; Matei, Savulescu 2012; Laužikas, Dailidaitė 2013; Fusch, Tvronavičienė 2014; Raišienė, Jonušauskas 2013; Figurska 2014) and can affect us by plethora of life facets (Białoskórski 2012; Vosylius et al. 2013).

ICT threats had been discussed since the seventh decade of last century. It was in late 1960’s when a team of scientists working for the US Department of Defense had been tasked to create a digital network (called ARPANET - later on evolved into the Internet), that could connect military databases. What was originally designed to serve exclusively military purposes, recently turned out to be the major channel of communication for millions of people around the world and plays important social role that could be compared to a communication revolution in 1960’s brought by a satellite TV. The Internet nowadays is not only a tool to gather and exchange information, as initially designed, but is serving many other significant purposes. Foremost, the Internet is a great marketing tool, but what is the most important, it started to be used to initiate and manage political activities. In democratic countries where freedom of speech is protected as well as in countries where regimes hold a total control over all aspects of public sphere, the Internet helps people to gather and achieve different political goals. Well known example of “Arab Spring” speaks for itself. The Internet and the social media also play a significant role in social conflicts and as a natural disaster management tool. Therefore, taking into account its importance, the Internet and especially so called “social media”, are in a scope of interest of military and other institutions operating in areas of crisis.

There is several terms to describe a level and quality of social changes followed by introduction of the Internet and the social media. Particular scholars, like Alexander Bard and Jan Soderqvist – believe that the new post-modern world can be characterized, thanks to computerization and innovations, by the ability of the society to break barriers in almost every aspect of life. Most social activities will or already had moved to a virtual reality where people are getting know each other, doing business and where new issues of security arises. There are several actors interested in such a virtual reality – common people, private entities, and governments – those who succeed, later can become leaders and will hold a true power. A. Bard and J. Soderqvist called such a new social reality with a term – “Netocracy” (Olchowski, Mencel 2012: 31). A number of other scientists use expressions like “Web 2.0”, “global village” or “real time web” (Adamski 2012). According to J. Staszewska – the modern way of using the Internet can be described by influence of the users on content of web sites (Adamski 2012). The Internet is not only a source of information but a platform of cooperation. A new society has a strong influence on e-reality which is being created by it. A new society can oppose old realities; can invent new directions of development and takes responsibility for its content. It might sound a bit too academic and too general but as we will see later on, those ideas were very efficiently and swiftly implemented during the “Arab Spring” and in several other social and political conflicts which took place in past few years.

The Internet had been a communication revolution, and that fact is beyond any questioning. But a next step in that revolution took place when the first social media were introduced to users. The social media may be defined as “[…] web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd, Ellison 2008: 211). At the end of 2013, over 70% of the Internet adult users had access to social media websites. The social media are the most popular among younger users (18-29 years old) with a score around 90% (Social Networking Fact Sheet 2014). It is beyond any doubt that the social media started to play a substantial role in modern societies. Apart from their entertainment and social aspect, they are being used to pursue political and social changes. They can serve as a great tool to manage and coordinate aid during natural disasters. The use of the social media can also bring several serious threats to internal and international security when are being used to promote and support criminal activity – so called “soft cyber terrorism” (Olchowski, Mencel 2012: 35). Therefore, the social media in recent years turned out to be in a scope of interest and activity of governmental and military institutions which are trying to tune in to swift social and virtual-reality changes.

The study outcomes presented in the article are con-
nected with two research questions – does the social media can trigger a social and political revolutions and what is the approach of military institutions to the role of the social media nowadays. The article had been divided into two main parts. The first one presents NATO and U.S. military doctrinal approach to the use of the social media. The second part provides examples of social, political and military conflicts and how the social media were utilized during those conflicts. That part will focus on conflicts that took place in Lebanon, Kuwait, Kenya, Iran, Egypt, Tunisia, Nigeria and so called “the first social media war” between Israel and Hamas. At the end of the second part I will address in a concise manner to the use of the social media in case of natural disasters. And in final conclusion I will address to both research tasks presented above.

2. NATO and U.S. military doctrinal approach to the social media

2.1. NATO doctrinal approach to the social media

In April 2009, as a part of 60th anniversary of NATO establishment, Heads of States and Governments participated in a meeting of the North Atlantic Council in Strasbourg – Kehl and drafted a declaration. In that document, among the other important issues and plans, it had been stated, that: “[…] it is increasingly important that the Alliance communicates in an appropriate, timely, accurate and responsive manner on its evolving roles, objectives and missions. Strategic communications are an integral part of our efforts to achieve the Alliance’s political and military objectives. […] We underscore our commitment to support further improvement of our strategic communications by the time of our next Summit.” (NATO Strasbourg-Khel Summit Declaration 2009: 4).

Even though, the social media were not mentioned directly in the declaration, the signatories left no doubt, that communication should be a key activity of NATO and it needs further development. Encouraged by political declaration, NATO Secretary General presented in September 2009 a draft on NATO Strategic Communication Policy (NATO SCP). The reasons behind presenting the draft were stated plainly: “Today’s information environment, characterized by a 24/7 news cycle, the rise of social networking sites, and the interconnectedness of audiences in and beyond NATO nations territory, directly affects how NATO actions are perceived by key audiences. […] NATO must use various channels, including the traditional media, internet-based media and public engagement, to build awareness, understanding, and support for its decisions and operations.” (NATO SCP 2009: 1). In the document it had been stated, that implementation of the new communication strategy must follow several principles: messages must be consistent on all levels of command structures; it is desirable to engage in the information environment, including social media; messages should be accurate, clear and efficient; all NATO capabilities should be engaged and finally, soliciting public views and adapting efforts are necessary as well (NATO SCP 2009: 2–3).

The Secretary’s General draft policy had also introduced specific guidelines for the use of social media in NATO activities (NATO SCP, p. 5). In general, the policy allows to use the social media by all NATO military and civilian staff. The social media should be used to discuss and portray the profession and day-to-day activities, but there is several precautions that have to be observed. Any utilization of the social media cannot compromise operational security, reveal confidential issues, comment on NATO and nations policies concerning security issues and violate the national laws of the country of origin or of the staff member. In August 2010 NATO Allied Command Transformation working on application of political recommendations and further development of military doctrines, introduced a document – NATO Military Concept for NATO Strategic Communication (MCNNSC). In the document, we can read, that “despite the high level of interest and attention, Strategic Communication is still a field in its initial stages of development, both for the Alliance and the Nations” (MCNNSC 2010: 1, par. 1–2). Therefore, we can assume, that this document is another attempt to clarify, organize and coordinate all NATO’s activities concerning Strategic Communication and to some extent, a role of social media. The document points out, that a priority of Strategic Communication, is “[…] to ensure the NATO’s audience, whether in the Nations or in a region where a NATO operation is taking place, either friendly or adversarial, receives truthful, accurate and timely information that will allow them to understand and assess the Alliance’s actions and intentions” (MCNNSC 2010: 1, par. 1–4). The same document provides military guidance for units responsible for conducting Strategic Commu-
nifications and delineation of responsibilities. According to the document, that responsibility lays in hands of Public Affairs, PsyOps and Info Ops officers.

More about a role of the social media in military efforts may be find in a chapter 4-6, which describes a necessity of empowerment as many personnel as necessary, in order to act swiftly and accurate. According to the document: “[...] the use of new and emerging technology such as internet or mobile telephone based Social Media has resulted in a requirement to release information in as close to real time as possible; as events unfold, not minutes or hours later. By empowering more of our people to communicate, NATO will help ensure that it is not only the best source of information about the Alliance that gets out, but the first, best source as well” (MCfNSC 2010: 4, par. 4–6b). At the end, the doctrine points out one remarkable issue, that strategic communication is a critical factor in prevailing in a battle of competing narratives, but it is not a separate and independent process, therefore should be integrated into operation planning phase and executed since the very beginning of every operation (MCfNSC 2010: 9, par. 7–1).

During the NATO summit in Lisbon 2010 Heads of States and Governments accepted two important documents, both of political background – Declaration and Strategic Concept. It is quite unfortunate, that neither in the Declaration nor in the Strategic Concept a special and important role of strategic communication and social media in itself were not mentioned at all. On one hand, it might be justified by a fact, that these topics are already well covered by military doctrine i.e. NATO Strategic Communications Policy and Military Concept for NATO Strategic Communication. But on the other hand, taking into account dynamics of conflicts in North of Africa and other selected countries, and rising power of social media, it would be advisable to continue development of political and military doctrines and apply accurate approaches in accordance with ongoing development of international relations and modern conflicts.

2.2. The U.S. military doctrinal approach to the social media

The US military doctrine has also been developing in accordance with constantly changing contemporary conflicts environment. In January 2009 the Department of Defense introduced the Capstone Concept for Joint Operations (CCfJO). The concept in general is a vision of a new model of joint forces military operations in 2016-2028. According to the text the US have overwhelming military superiority over its enemies, but due to a diffusion of power in globalized environment, new challenges are arising: “[...] a variety of non-state actors – often motivated by extremist religious or ethnic ideologies – are emerging with some of the power of states. [...] Many operate across state or even regional boundaries. They rarely adopt the centralized structure of states, which would expose them to greater external pressure, but instead take the form of popular movements or distributed networks, usually empowered by the connectivity of the Internet.” (CCfJO 2009: 3). That major threat to international military operations, is not the only one. The concept points out that due to accelerating transparency and connectivity, modern military operations are becoming more sensitive to public perception, especially affected by pictures of victims of violence. Such transparency may also pose a great threat to operational security, since flow of information and messages in the Internet is rapid and usually beyond any control.

Following remarks and directions included in the Capstone Concept, the US Department of Defense presented in October 2009 reviewed Strategic Communication Joint Integrating Concept (SCJIC). According to the document “The concept deals with the challenge of influence - convincing others to think and act in ways compatible with our objectives, whether this means causing others to adopt a specific course of action or simply understand us better and accept us more.” (SCJIC 2009: ii). In detail the document points out four basic strategic communication goals: to improve US credibility and legitimacy and at the same time to weaken enemies’ credibility and legitimacy, convince people to support US military and political efforts and finally, to cause adversary to take or refrain from specific actions (SCJIC 2009: iii). In order to achieve these goals the document derives eleven capabilities necessary to implement strategic communication. One of capabilities, concerning an issue of ability to access, produce and maintain information, requires from military personnel to have a profound knowledge on complex social communication system and various media channels (SCJIC 2009: iv). In the document, we may also find a very interesting evaluation on how new means of com-
munication in the “Information Age” will affect joint operation: “This future world will be characterized by increased visibility and transparency. The future joint force commander will have to assume that every action of the force will be observed and reported to a variety of audiences. Every action will therefore send a signal, whether intentional or not, that can be received and interpreted differently by a variety of audiences. […] in the future there will be vastly greater numbers of information sources – such as weblogs or podcasts […] Not only will more people than ever before have access to more information, but each will also become a potential information source, contributing images and text, facts and opinion to the global network.” (SCJIC 2009: 7).

More precise and practical guidance on communication for military personnel had been presented in June 2010 by US Joint Forces Command and Joint Warfighting Center – Commander’s Handbook for Strategic Communication and Communication Strategy (CHfSCCS). Among the others, the handbook is addressing an issue of so called “battle of narrative” which is being defined as: “a full blown battle in the cognitive dimension of the information environment. […] a key component of the battle of narrative is to succeed in establishing the reasons for and potential outcomes of the conflict, on terms favorable to your efforts. Upon our winning the battle of narrative, the enemy narrative doesn’t just diminish in appeal or followership, it becomes irrelevant. The entire struggle is completely redefined in a different setting and purpose.” (CHfSCCS 2010: xiii, II-13). The handbook covers several other practical issues like unified communication policy on all levels of operation planning and executing stages, provides guidance and identify shortfalls. The handbook refers also to the issue of a specific role of media and social media as well. The most challenging issue is connected with continuous and rapid information flow, assisted by modern technological advance and media distribution methods, therefore “[…] requires responsive, agile process and capabilities to preserve and enhance the credibility and influence of the United States” (CHfSCCS 2010: xi). It is crucial to maintain an effective channels of dialog with community, the message has not only to be sent but also received and understood. Therefore, it’s important to stay in permanent touch with recipients and one of the useful means to achieve this goal, is to use social media to communicate. There might be some difficulties when communicating with local population mostly by means of social media, since access to the Internet is still very limited in underdeveloped and torn apart by conflicts countries. But in some instances, those who have access to the Internet and at the same time are active users of social media, may be the one who can control decision-making process, execute political powers and can influence dynamics of social unrests (CHfSCCS 2010: III-11).

The revised Capstone Concept for Joint Operations had been introduced in September 2012 (CCfJOrev.). The new concept focuses on main modern threats to international and operational security like: terrorism, proliferation of weapons of mass destruction, cyberspace terrorism, development, disaster and humanitarian relief (CCfJOrev 2012: 1–2). In general, the new concept doesn’t address to strategic communication issues and only tangentially covers the use and role of social media stating, that “Social media can catalyze protests in days that popular movements once took months or years to build. The penetration of mobile technology especially in developing nations will dramatically increase the number of people able to access and share information rapidly. […] As we have learned in Iraq and Afghanistan, military actions will receive intense media scrutiny, a dynamic that potentially invests otherwise inconsequential actions with strategic importance.” (CCfJOrev. 2012: 2–3). Even thought, the concept correctly describes importance of the social media and the way that they may affect future operations, does not provide any guidance or answers on how to utilize them to achieve operation goals and positive effect, to a common benefit to military as well as to civilian population.

3. The use of social media in contemporary social and political crisis.

For the first time in modern history social media were activated in context of “Cedar revolution” in Lebanon and during social protests – “Orange movement” in Kuwait. But those examples were not the only when the use of the social media triggered public debate followed by political and social changes. In countries like Kenya, Iran, widely covered by mass media revolutions in Egypt and Tunisia, Nigeria as far as so called “Twitter war” between Israel and Hamas, the social media played a crucial role as well.
3.1. Lebanon

On February 14th 2005 a car-bomb explosion in Beirut killed twenty-two people including former prime minister and a leader of opposition party and at the same time one of the most popular politician – Rafiq Hariri. That assassination was another accord of war in occupation of Lebanon territory by Syrian armed forces. In following days, the opposition and family members of R. Hariri called for mass protests against occupation and pro-Syrian government. The message had been aired on TV and radio but also by SMS messages and the Internet. The government, in order to prevent riots, shut down TV, radio stations and newspapers but couldn’t do much to prevent activities on the Internet. In following days most of the streets of Beirut were taken over by marchers and protests gathering hundred thousands of people (Cedar revolution). Finally, supported by overwhelming public sympathy, the opposition won elections and took a control over the parliament and the government. Hasty and to some extent unexpected change of power on a political scene had initiated peace talks and at the end led to withdrawal of occupation forces in April 2006.

3.2. Kuwait

Another example of the use of the social media as a tool to enhance and coordinate civil protest was a case of “Orange movement” in Kuwait. The movement, initially set-up by youth citizens, was a protest against patriarchal and family-business ties system of government. Younger members of society who felt excluded from political decision-making process had initiated a campaign using mostly Twitter to express their demands and expectations. Political opposition had further facilitated social demands by calling to mass non-violent protest which for several days took over streets of major cities in Kuwait. The government facing unprecedented social activity had chosen a way of concession instead of violence and repressions. In 2005 the parliament had approved amendments to electoral law and for the first time in history of Kuwait allowed women to vote and run for parliament. Shortly after, the first women – Masouma al-Mubarak has been appointed as a cabinet member. In following years, even though a political system is still very conservative and corrupted, new political system alterations has been implemented. Citizens had acquired far more greater space for free debate and new, more democratic laws has been introduced. It is interesting, that a debate in the Internet had been coordinated and relied on experiences from other examples of political activity which took place in Arab world at that time. One of the most useful and active social media portals had been Twitter channel: “Egyptian advice for Kuwaitis”, where social activists from different countries were exchanging views, solutions and experiences.

3.3. Kenya

In December 2007, after disputed elections, Kenya experienced violent clashes and humanitarian crisis resulting in 600.000 internal displaced persons, approximately 1200 deaths leading to a long-term economic recession. Turmoil was caused by historical ethnic inequality, mass corruption of political elites and land disputes between privileged landlords and poor masses vegetating from day to day. In case of Kenya, a role of social media was not as remarkable as in cases of Lebanon or Kuwait. In fact, both adverse political parties and their sympathizers used blogs and SMS messages as a cheap and efficient tool to disseminate false statements accusing others of frauds and urging citizens to acts of violence against each other. In 2007 only approximately 5 % of Kenya’s population had access to the Internet but posts from blogs and selected radical SMS messages were broadcasted over a radio increasing reach to 95 % of population (Goldstein, Rotich 2008: 8). This unique, at that time in Kenya, merge or traditional media, new social media and social journalism resulted in fueling clashes and quite likely led to a higher toll of deaths and destruction.

3.4. Iran

Beginning from exile of Shah in 1979 Iran navigated towards one of the most oppressive regime in the world. Entire political power rested in hands of religious extremists and Iran slowly turned from one of the most important countries in the region to a minor state isolated from international community. In years 1980-88 Iran had fought long and devastating war with Iraq resulting in over 1 million deaths and devastation of local economy. In the middle of 1990’s Iran regime started to support several terrorist groups and initiated nuclear program that have led to imposition of further economic sanctions by international community. For the first time the regime
had to face mass criticism and opposition in 1999 during pro-democracy student’s protests. The answer of the regime was fast and definitive. Many protesters were arrested and subjected to tortures and other cruel punishments. All independent newspapers were shut down and the regime pronounced permanent censorship and a ban on any public gatherings. It was only a temporary measure which in a long-term couldn’t prevent people from expressing their demands. In 2009 the regime announced reelection of Ahmedizani in presidential elections. According to official sources, vast majority of Iranian citizens has voted in support of Ahmedizani but realities were far away from official propaganda. International community and Iranian opposition claimed that the election was a fraud. The very same day when Ahmedizani was announced a winner, thousands of people protested on the streets. Initially, such a protest was nothing new in Iran and secret police as well as other forces could handle it swiftly the same way they did in past years. But there was one accident, which absolutely changed dynamics of protests. A 26-year-old female Neda Aghani Soltan was shot in the chest and a movie of her last seconds of life were recorded with a mobile phone and the very same day posted on YouTube channel. The movie, terrifying and cruel in itself, within next hours circulated a whole world and has been broadcasted by major TV stations like CNN and Al Jazeera, what at the end initiated a “snow ball” effect. The next and following days after accident the regime had to face over 3 million protesters. Riots lasted for several more months until 2010 when the regime finally putted an end to disorder with an excessive use of secret police forces and violent repercussions. Opposite to Lebanon and Kenya, in 2009 one-third of the Iranian population had access to the Internet (Wille 2012: 32). Even though that there was no free press in Iran at that time, a society had open access to the Internet and mobile phones which were very popular especially among youth. To communicate, organize and coordinate protests one didn’t need regular media since the social media were accessible and in common use. People had all necessary tools and being inspired by the “Arab spring” felt empowered enough to challenge the regime. The government had been aware that a brutal force is not enough to prevail in a short term. As a counter-measure Iran transferred all Internet communication through state-controlled telecommunication company in order to acquire IP’s of protest’s leaders. From now on, at the first sight of protests occurrence, the government was blocking access to Facebook and other major social media sites. Besides that, The Islamic Revolutionary Guard Corps – elite secret police – created Cyber Defense Command, which task is to monitor Internet activity in order to prevent any subversive actions (Wille 2012: 34). Well-coordinated repressions and limitation of access to the Internet and social media web sites at the end led to termination of civil unrest and failure of possible pro-democracy changes in Iran.

3.5. Egypt

Unlike in Iran, a conduct of revolutionary movement in Egypt and Tunisia took opposite direction, where the social media played crucial role and at the end led to success followed by positive political changes. In June 2010, Egyptian Khaled Mohamed Said had been beaten to death by secret police officers. Photos of his brutalized body had been posted on Facebook page “We are all Khaled Said” and had tremendous effect on public opinion in Egypt as well as on international public perception. An individual who posted the picture and created the Facebook page was Wael Ghonim – Google regional marketing manager for the Middle East and North Africa. Only the first day that Facebook page gathered over 36,000 followers (Wille 2012: 25). The idea behind that action was – as expressed by W. Ghonim – to expose corruption practices among government and initiate positive changes of President Hosni Mubarak’s regime. W. Ghonim who had a profound experience of using the Internet technologies and marketing techniques applied exactly the same rules to support his social media activities (Wille 2012: 25–26). At the beginning it was crucial to convince people to join his website (posting a picture of brutalized Khalid’s body was a critical factor here). The second step was to encourage people to interact on a website by posting comments and by participation in discussions (W. Ghonim was a major facilitator of discussions). In the third step people were supposed to contribute to further development of the website by creating new concepts of activities and implementing them in a near future. And the final step was to transfer digital activism to the streets of Egypt. An observable effect of such plan were so-called “Silent Stands” when, in most cases younger people, were gathering on the streets of major cities wearing black clothes and peacefully stand-


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ing in silence back to police officers ready to scatter any unauthorized public gatherings. Immediately, such actions were being posted on YouTube channel and got attention of international media. It brought tremendous effect on Egyptian society and all activists who no longer felt alone but instead of that felt empowered by cohesive and well organized actions and developed a self-confidence and power to act. Shortly before W. Ghonim created his Facebook website, in February 2010 a former UN nuclear chief Mohammad El Baradei came back to Egypt and stood up at the forefront of protests against regime of President H. Mubarak. Opposition demanded urgent political and economic reforms but above all, protesters demanded resignation of the President. Social media activities of youth overlapped with distinctive political demands. In following months, entire country was taken over by peaceful protests as well as fierce clashes between protesters and regime’s authorities. The government, being aware of the influence of social media on protest dynamics, took several steps to prevent it. Regime’s secret police tried to identify the leaders of protests as well as to block selected websites and blogs. Besides that, the government created Electronic Committee whose task was to influence public opinion in order to generate a different complexion on government’s activities. Nevertheless, all those efforts were ineffective and H. Mubarak decided to resign from his office. In March 2011 Egyptians approved new constitutional reforms and new electoral law.

3.6. Tunisia

In December 2010, 26-year-old Mohamed Bouazizi, inhabitant of Sidi Bouzid in Tunisia and a street vendor, set himself on fire in an act of desperation. His life was a constant struggle with poverty and corrupted officials who on a daily basis demanded bribes and several times confiscated his merchandise. His act of self-immolation had been a turning point in “Jasmine Revolution” in Tunisia. A video of his family demanding justice and protesting in front of one of government buildings had been recorded on a mobile phone and later on posted on YouTube. Within hours the video had been watched by thousands of viewers and in following days a story of that single Tunisian martyr had been broadcasted by CNN, Al Jazeera and other TV stations in Arab countries getting enormous attention. In several Tunisian cities large groups of people demanded changes and blamed the government for corruption, unemployment, poverty and political repressions. The government and the President Ben Ali, who by protester had been perceived as a symbol of regime, tried to quell protests, announced state of emergency, but it didn’t convinced protesters to abandon their ultimate goals. After a month of violent clashes between police and protesters, Ben Ali announced his willingness to initiate pro-democracy reforms, yet it didn’t stop the revolution. In January 2011 Ben Ali with his family self-exiled to Saudi Arabia. In next months the new interim government announced new elections and initiated preliminary reforms concerning constitutional law, human rights, freedom of expression and anti-corruption measures.

3.7. Nigeria

Once again the social media as a practical tool to communicate and gather support to achieve political goals were used in Nigeria during elections in 2007 and 2009. But that time, the social media played dual role – a positive one as well as a role of instrument to spread hostile propaganda. Nigeria is a country with typical post-colonial problems. Since its independence in 1960 Nigeria is being torn apart by ethnic and religious disputes, numerous coups and corrupted elites. In 2002 a new threat emerged – Boko Haram, also known as Nigerian Taliban. This group representing Islamic extremism is using acts of terror in order to establish its own country following Sharia law. Since 2002, during a struggle between governmental forces, Christian militias from the south and Islamist from the north of the country, all sides to that conflict started to utilize social media tools, especially Twitter and microblogs associated with Nigerian newspapers (Chiluwa, Adegoke 2013). On one hand, the social media were serving as a great tool for citizens to discuss and question propaganda and act of violence committed by all parties. Several interesting initiatives emerged for the first time in Nigeria: micro-journalism, blogs reporting violations of law, websites grouping human rights activists etc. But on the other hand, the social media had also served as a tools of propaganda, and in some instances as a tool supporting terrorism or other acts of violence. For instance, similar to Radio Television Libre des Mille Collines during genocide in Rwanda, several Nigerian micro-journalism blogs, Boko Haram’s Twitter channel and other websites were express-
ing direct support to illegal acts by providing names and addresses of foes and their families, coordinating militia actions and posting pictures of murdered enemies and burned villages.

3.8. Israel – Palestine

One of the most interesting case and at the same time a very unique one, is use of the social media in conflict between Israel and Hamas in November 2012. Israel armed forces operation “Pillar of Defence” aiming at the Hamas, had been for the first time announced not during a press conference but on Twitter. A concept behind the operation was based on two pillars – typical military operations coordinated along with full coverage of activities by using social media like Twitter, YouTube, Flickr and other popular social websites. In the first days of the operation – one was high-ranked leaders of Hamas - Ahmed Jabani has been assassinated by an air strike and a movie from that attack had been posted on YouTube within next few hours. Unprecedented use of the social media brought new dynamics to conflict and increased accessibility of information. From now on, every person around the world could sit in front of a computer and follow live streaming and flow of information concerning military activities. Every action taken by Israel military forces had been immediately announced on social media sites gathering huge attention of public opinion. The answer from Hamas was imminent and one could also follow actions and operations conducted by Hamas militias. Besides that, social media popular sites became popular forum for opinion exchange between Israel and Hamas as well. The war was not only taking place on the battlefield but at the same time in digital sphere. There was several issues, mostly of moral and ethical background, brought to public discourse. Those who supported such a use of social media during armed conflicts, were appealing to democracy and a concept of a right to access to information. Moreover, enthusiast claimed that a better coverage of conflict by social media, allows society to maintain better control over military activities. Those who were skeptical, claimed that posting pictures or videos of people being assassinated, mutilated bodies, or even dead children doesn’t serve any justified reason and can only contribute to conflict escalation. Regardless of moral and ethical issues, both sides of the conflict were using social media to their own benefit.

3.9. Natural disasters

Social media may also play a significant role in crises caused by natural disasters. Several states as well as international non-governmental organizations are using social media to prevent and manage disasters. For instance, International Red Cross is using social media to increase public opinion of ongoing disasters in order to facilitate funds gathering necessary to provide humanitarian assistance. In the United States, social media were activated by the government in 2005 when hurricane Katrina crossed southern Florida and New Orleans, and again in 2007 during California wildfires. In such situations, social media may be utilized as an early warning system or as an emergency management tool. Through websites and mobile phones may be issued emergency communications and warnings, send victim’s request for assistance or established situational awareness and evaluation (Lindsay 2011).

Conclusions

Wael Ghonim, who was a leader of online revolution in Egypt and was facilitating civil disobedience by using the social media, said “If you want to liberate a society, just give them the Internet” (Hofheinz 2011: 1). To a certain extent those words are definitely accurate. The Internet and the social media brought political and democracy changes to Egypt, Tunisia or even Kuwait but in Iran or Nigeria the Internet didn’t help to prevail over powerful and oppressive regimes. There is an ongoing debate between cyber-enthusiasts and cyber-skeptics. Those who are in favor of the Internet believe that the Internet became one of the most powerful social communicators, even more important than a regular media, and therefore can alter a society alone. Those who are skeptical say, that the Internet and the social media are definitely powerful tools to initiate changes. But progression of social changes, even as rapid as during “Arab Spring”, is ultimately complicated process which needs several factors to perform in order to become successful. Nevertheless, both groups agree, that the rules of a game has changed. Taking into account crisis in Arabic and African countries described in the second part of the article, it is reasonable to come to a conclusion presented by cyber-skeptics. In none of those conflicts, the Internet and the social media were the only and decisive factor but instead of that, we may say that they played significant role.
by mitigating and coordinating social groups which opposed regimes and demanded changes. F. Shirazi, who evaluated in his research the use of social media during “Arab Spring” came to a conclusion that stages of discourse development consisted of five following elements: 1) captured events, 2) social network discourse, 3) organized protests, 4) response of military forces and 5) radicalization of demands and conflict (Shirazi 2013: 7–8). It is clear, that the social media were used as a substitute for regular media like TV or newspapers, which in those countries were under state control and censorship. Common people took over tasks of journalist and “micro-reported” (Hamdy 2010: 4) about flaws, corruption, ineptness and violence of their governments. The Internet and the social media brought unique opportunity of free exchange of information and opinions. Moreover, they helped people to communicate freely, and who no longer acted in isolation from each other, empowered them in strength as a community. By connecting people, the social media created “critical mass” which was difficult to counter by regimes. Currently, according to S. Aday - The Internet and the social media can transform individuals’ approach and willingness to engage in political activity; can mitigate or aggravate group conflicts; facilitate collective actions; help regimes to surveillance their citizens and finally can help to gain international attention (Hofheinz 2011: 7). A. Adamski in his research has collected popular opinions concerning future of the social media (Adamski 2012: 121–127).

According to the research, in upcoming years, the most popular social media sites will grow even bigger taking control over smaller companies. A new model of the social media inflicts wider use of audio-visual tools (like YouTube). A very interesting and promising issue is a new system of “Web Semantic” which helps to analyze relations between users, identify the most influence one and collect selected important information posted in the social media (Adamski 2012: 124). That might become a powerful tool helping to foresee prospective outbursts of conflicts and letting prevent them before its breakouts. Nevertheless, the social media already became tools of network-centric warfare and therefore should need more attention especially from military organizations and all who are interesting in conflict management and prevention. Even though, in my opinion, the NATO as well as the US Army, are still operating with the social media on a very general and conceptual level, is not completely ready to face challenges being brought by the social media usage. Quite recent and interesting example of utilization by the US government the social media to initiate political changes, had been a case of establishment by US Agency for International Development (USAID) a social media web site called ZunZuneo, similar to Twitter, which originally was addressed to Cubans and was supposed to serve as a tool to communicate outside of Cuban regime censorship and control (Butler et al. 2014). The project soon after had been shut down due to allegations, that the CIA had been involved in its creation and management. Selected instances of utilization of the social media during “Arab Spring”, development of military doctrines concerning the social media and strategic communication, and more recent activities like an attempt of establishment of ZunZuneo on Cuba by the U.S. government are indicating that in the near future the social media will definitely play even more important role in social and political conflicts. To generalize, secure and sustainable development of countries is directly affected by spread of social media. We need to be aware of threats and be prepared to deal with plausible crises in contemporary complex conditions of global communication.

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TOWARDS SUSTAINABLE EMPLOYABILITY: EUROPEAN PRACTICES IN OFFICERS AND SERVICEMEN REINTEGRATION AFTER EARLY RETIREMENT

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Abstract. Drawing on policy variation across European countries this study analyses the differences, similarities and the best practices in officers and serviceman reintegration into labour market after their early retirement. The success of reintegration depends on national labour market policy towards employability and specific measures in employment assistance for officers and serviceman. The search for sustainable approach toward employability of retired officers and serviceman fostered to conduct institutional survey. The survey was conducted using set of connections of military attaché and the network of CEPOL. Analyzing retirement practice of the police and the military in EU countries, it is noted that the police officers retirement is organized 5-10 earlier than full retirement; their pension is worth a substantial part of previous salary. For that reason, reintegration programs are not needed and in majority of countries do not exist. The situation in military is different. Military rejuvenation forces to cut middle-age people into early retirement. It means that they will have to reintegrate into the labour market in order to maintain a similar level of well-being for themselves and their families. Results reveals four different types of reintegration programmes for serviceman in EU member states.

Keywords: officers and serviceman, early retirement, employability, EU

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JEL Classifications: J3, J380, E2

1. Introduction

Employability is seen as an agency rather than the achievement of individual person to get employed. According to McQuaid and Lindsay (2005) the concept of employability has been set up to describe the objectives of the economic strategies fostered by international institutions as OECD, ILO, UN and labour market policies at national, regional and local levels. The concept of employability continues to be used in a variety of contexts; nevertheless it is to a greater extent seen as institutional agency. Employability is intertwined with other factors impacting complex processes, which ultimately determine level of sustainable development (Grybaitė 2011; Stańczyk 2011; Korsakienė et al. 2011; Makštitis et al. 2012; Lankauskienė, Tvaronavičienė 2012; Balkienė 2013; Demir et al. 2014; Tvaronavičienė 2014; Bileišis 2014; Tvaronavičienė and Grybaitė 2012).

If the notion of employability is the assistance the institution provides for unemployed or vulnerable group in labour market, then the employability should be measured by outcomes in the form of employment.
Employability is set out as one of the four pillars of the European Employment Strategy (2006) and described in terms of individual capacity of a person to gain a job. In the European 2020 strategy (Europe 2020: Europe’s growth strategy 2012) the employability is seen as a precondition to achieve the targets for an increased employment rate. The strategy reflects the focus on employability and includes the promotions of active labour market measures. It is not a narrow straightforward definition of employability as ‘the character or quality of being employable’. The working concept of employability involves measures for sustainability as long-term employment, life-long learning and active aging (Prakash 2013). According to European Working Conditions Observatory, sustainable employability is characterized as “the capability of employees to participate in a healthy, vital and productive way in paid work until they are eligible for a pension” (Model developed…2012). Sustainable employability is described in twenty indicators; majority of those indicators measures the sustainability of labour market policies and instruments.

In terms of officers and servicemen sustainable employability after their early retirement the main issue concerns the relationship between active and passive labour market policies and conditions (Vigoda-Gadot et al. 2010; Tvaronavičienė, Lankauskienė 2011; Cawley and Maclean 2012; Matei and Savulescu 2012; Teivans-Treinovskis and Jefimovs 2012; Šileika and Bekerytė 2013; Demir et al. 2014; Mačiulis, Tvaronavičienė 2013; Laužikas, Mokščiukienė 2013; Rajšienė, Jonušauskas 2013; Tvaronavičienė 2014; Išoratė et al. 2014; Figurska 2014; Garškaitytė-Milvydienė 2014; Dzemyda, Raudeliūnienė 2014; Raudeliūnienė et al. 2014; Radović Marković 2011). Majority of EU member states with early retirement of officers and servicemen (passive support) do have active programs for their reintegration into labour market (active support) and coordinate between the two determinates the level of sustainability of employability of early retired officers and servicemen.

Early retirement guarantees a constant change of human resources in the interior and national defence systems which is necessary for their regeneration. Consequently, officers and servicemen retire on average 15-20 years earlier than people serving in civil workplaces. Despite the fact that servicemen and officers deserve a pension, it does not equal to income which would guarantee the standard of living that a person had before the retirement. Early retirement ensures meeting essential needs only; thus, in order to create and maintain well-being a person must continue working and receiving extra income. According to previous research (Early 2011; Ruiz and Morrow 2005), about two-thirds of servicemen who entered early retirement find a new job and work full-time.

Middle-aged servicemen and officers, who have been discharged and want to re-enter the labour market, experience adjustment problems and require external support. The case of every officer or serviceman is unique and depends on institutional factors such as previous work, attained rank or position, as well as on the individual’s personal characteristics, communicability, and flexibility. Previous studies does not provide an unified approach which factors and means have the greatest impact on employability after going into early retirement. Even though researchers sought to identify factors that could be used to assess the effectiveness of means of reintegration into the labour market which could be provided for the people entering early retirement, it is clear that a common denominator for solving the above mentioned problems has not been found yet.

This paper seeks to contribute to the debates surrounding employability of specific group in the labour market. Drawing on policy variation across EU countries this study analyses the differences, similarities and the best practices in officers and serviceman reintegration into labour market after their early retirement. The aim of the paper is to provide a composition of existing practices for employability of early retired officers and servicemen in EU member countries and evaluate employability practice in term of sustainability. Following this introduction, the second section of this paper provides research methodology used in the study including research instrument, sample and data collection. Section three presents research findings stating with the evaluation of role of pensions and compensation for officers and servicemen and following with the analysis of active labour market measures for employability in different EU countries. The article concludes with discussion on founding and implications for future research.

2. Research methodology

As a methodological approach for this study, the authors chose multi-institutional survey. Questionnaire has been prepared based on theoretical implications in passive and active labour market policy and insti-
tutional agency in employability. A questionnaire was designed with four sections. Section 1 requested basic information to identify passive support towards early retirees and initiatives in supporting employability of military/police officers to re-integrate them into the labour market after retirement. Section 2 requested information on particular activities that national authority (or other institutions) is implementing for retired military/police officers. Section 3 invited to provide the assessment of existing activities in employability, while section 4 demanded information for future development in labour market reintegration programmes.

The survey was conducted using two sources of information: (1) by sending questionnaires to Ministries of Defence of all (n=27) European Union member countries using Lithuanians military attaches’ network; and (2) using institutional network of CEPOL. From the first source a total 15 questionnaires of 27 were returned completed (table 1 provides the list of the countries where information come from). Additionally, information was collected from secondary sources about policy in Austria, Bulgaria, Germany, Ireland and United Kingdom.

From the second source of information a total 8 questionnaires of 27 were returned completed; additionally 2 questionnaires were competed from countries non-EU members (Table 1).

Table 1. Received answers from authorities

<table>
<thead>
<tr>
<th>Received answers from police authorities from:</th>
<th>Received answers from military authorities from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Belgium</td>
</tr>
<tr>
<td>Denmark</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>Germany</td>
<td>Denmark</td>
</tr>
<tr>
<td>Cyprus</td>
<td>Estonia</td>
</tr>
<tr>
<td>Poland</td>
<td>Croatia</td>
</tr>
<tr>
<td>Malta</td>
<td>Latvia</td>
</tr>
<tr>
<td>Finland</td>
<td>Poland</td>
</tr>
<tr>
<td>Sweden</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>+2 non EU countries:</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Iceland</td>
<td>Portugal</td>
</tr>
<tr>
<td>Norway</td>
<td>France</td>
</tr>
<tr>
<td>N=10</td>
<td>N=15</td>
</tr>
</tbody>
</table>

Source: author

Survey has provided a comprehensive qualitative on different policies and practices in EU regarding and reemployment of early retired officers and servicemen. The data were analysed using comparison of counties as cases.

3. Role of pensions and compensation on officers and servicemen employability after early retirement

Early retirement go along with pensions and compensations that are categorized as a passive labour market policy. On the one hand, passive policy represents protection mechanisms and insures a certain income, and, on the other hand, it has a major impact upon the gaining labour market adjustment capacity and financial incentive to work (Caurkubule, Rubanovskis 2014).

The analysis of retirement policy for officers and servicemen shows that the retirement age for police officers in most EU countries is close to the full retirement age while it is a lot shorter for military personnel. As a result, there is a need to reintegrate them into the labour market. Data in Table 2 illustrate the retirement age for police officers in European Union countries; the Czech Republic, Croatia, Latvia, Lithuania and Poland, Slovenia stand out where the retirement age for police officers is about 20 years shorter than the full retirement age.
Table 2. Retirement age for police officers and servicemen

<table>
<thead>
<tr>
<th>Country</th>
<th>Full retirement (men)</th>
<th>Age of retirement</th>
<th>Retirement of military personnel (average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>65</td>
<td>60</td>
<td>50-65</td>
</tr>
<tr>
<td>Belgium</td>
<td>65</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>63</td>
<td>55(^3)</td>
<td>52-54</td>
</tr>
<tr>
<td>Croatia</td>
<td>65</td>
<td>n.d.a.</td>
<td>45</td>
</tr>
<tr>
<td>Cyprus</td>
<td>65</td>
<td>60-61(^4)</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Czech R</td>
<td>62</td>
<td>n.d.a.</td>
<td>42</td>
</tr>
<tr>
<td>Denmark</td>
<td>65</td>
<td>60-65</td>
<td>60</td>
</tr>
<tr>
<td>Estonia</td>
<td>63</td>
<td>n.d.a.</td>
<td>52</td>
</tr>
<tr>
<td>Finland</td>
<td>62-68</td>
<td>58</td>
<td>46(^5)</td>
</tr>
<tr>
<td>France</td>
<td>62</td>
<td>n.d.a.</td>
<td>45-57</td>
</tr>
<tr>
<td>Germany</td>
<td>65</td>
<td>60-65</td>
<td>55-65</td>
</tr>
<tr>
<td>Iceland</td>
<td>67</td>
<td>65(^6)</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Ireland</td>
<td>65</td>
<td>n.d.a.</td>
<td>47-63</td>
</tr>
<tr>
<td>Italy</td>
<td>66</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Latvia</td>
<td>62</td>
<td>n.d.a.</td>
<td>43</td>
</tr>
<tr>
<td>Lithuania</td>
<td>62,8</td>
<td>44</td>
<td>47</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>65</td>
<td>55-60</td>
<td>60</td>
</tr>
<tr>
<td>Malta</td>
<td>61</td>
<td>51</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Netherlands</td>
<td>65</td>
<td>n.d.a.</td>
<td>60(^7)</td>
</tr>
<tr>
<td>Norway</td>
<td>67</td>
<td>57(^8)</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Poland</td>
<td>65</td>
<td>45(^9)</td>
<td>45</td>
</tr>
<tr>
<td>Portugal</td>
<td>65</td>
<td>60</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Romania</td>
<td>64</td>
<td>55-65</td>
<td>55(^10)</td>
</tr>
<tr>
<td>Slovakia</td>
<td>62</td>
<td>57,8</td>
<td>40</td>
</tr>
<tr>
<td>Slovenia</td>
<td>63</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>Spain</td>
<td>65</td>
<td>57-65</td>
<td>45-58</td>
</tr>
<tr>
<td>Sweden</td>
<td>61-67</td>
<td>60-65</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>65</td>
<td>60(^11)</td>
<td>55-60</td>
</tr>
</tbody>
</table>

(n.d.a. – no data available)

*Source: author*

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\(^2\) The average retirement age of officers is provided in case where soldiers are serving under term contracts.  
\(^3\) Requirement to serve at least 27 years in police.  
\(^4\) 60 years for police officers and non-commissioned officers, 61 years for others.  
\(^5\) The average retirement age for the last few years has been 52 years (counting those who are retiring after full service) and 46 years (counting also those who retiring before full service years).  
\(^6\) 65 is retirement age, but pensions are paid only at the age of 70.  
\(^7\) The retirement age for officers of the Navy is 58 years, for officers of the Army and Air force is 60 years.  
\(^8\) 57 is retirement age, but they can stay in service up to 60.  
\(^9\) In 2010 retirement age was 48, 2011 – 46, 2012 – 45.  
\(^10\) It is foresee to increase retirement age up to 60.  
\(^11\) Before establishing professional military service in 2006, the average retirement age was 47.  
\(^12\) 60 is retirement age from 2015.
While life expectancy and working age are increasing and birth rates are decreasing, in many EU countries pension reform, which is seeking to increase the retirement age, is being implemented (Table 3). This trend can be noted while analyzing pension systems for military and police reforms. Analyzing retirement provision for the police officers, it is necessary to mention that in most countries the retirement age for the police officers is gradually being extended; the retirement age for the police officers is 5-10 years shorter than the full retirement age.

Table 3. Existing and expected retirement age

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
<th>2060</th>
<th>2010</th>
<th>2020</th>
<th>2060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
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<td>65</td>
<td>65</td>
<td>60</td>
<td>60</td>
<td>65</td>
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<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
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<td>63</td>
<td>65</td>
<td>60</td>
<td>60</td>
<td>63</td>
</tr>
<tr>
<td>Croatia</td>
<td>62</td>
<td>62</td>
<td>62</td>
<td>62</td>
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<td>62</td>
</tr>
<tr>
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<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Czech R</td>
<td>62 y 2 m</td>
<td>63 y 8 m</td>
<td>69 y 4 m</td>
<td>58 y 8 m</td>
<td>61 y 8 m</td>
<td>69 y 4 m</td>
</tr>
<tr>
<td>Denmark</td>
<td>65</td>
<td>66</td>
<td>68</td>
<td>60</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Estonia</td>
<td>63</td>
<td>63 y 9 m</td>
<td>65</td>
<td>61</td>
<td>63 y 9 m</td>
<td>65</td>
</tr>
<tr>
<td>Finland</td>
<td>62</td>
<td>65</td>
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<tr>
<td>France</td>
<td>62</td>
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<td>62</td>
<td>57.9</td>
<td>61.7</td>
<td>62</td>
</tr>
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<td>Greece</td>
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<td>65</td>
<td>69.4</td>
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<tr>
<td>Italy</td>
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<td>65,8</td>
<td>67</td>
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<td>65,8</td>
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<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
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<td>65</td>
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<td>63</td>
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<tr>
<td>Malta</td>
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<td>65</td>
</tr>
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<td>Netherlands</td>
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<td>67</td>
<td>67</td>
<td>67</td>
<td>67</td>
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<tr>
<td>Norway</td>
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<td>65</td>
<td>65</td>
<td>65</td>
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<td>65</td>
</tr>
<tr>
<td>Poland</td>
<td>62,5</td>
<td>64</td>
<td>65</td>
<td>60</td>
<td>63</td>
<td>65</td>
</tr>
<tr>
<td>Portugal</td>
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<td>65</td>
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<td>59</td>
<td>61</td>
<td>63</td>
</tr>
<tr>
<td>Romania</td>
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<td>63</td>
<td>63</td>
<td>61</td>
<td>61</td>
<td>61</td>
</tr>
<tr>
<td>Slovakia</td>
<td>63-68</td>
<td>63-68</td>
<td>63-68</td>
<td>63-68</td>
<td>63-68</td>
<td>63-68</td>
</tr>
<tr>
<td>Spain</td>
<td>65 y 4 m</td>
<td>66 y 11 m</td>
<td>70 y 3 m</td>
<td>60 y 4 m</td>
<td>66 y 11 m</td>
<td>70 y 3 m</td>
</tr>
<tr>
<td>Sweden</td>
<td>65</td>
<td>65 y 9 m</td>
<td>67</td>
<td>67</td>
<td>65 y 9 m</td>
<td>67</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>65</td>
<td>65</td>
<td>72.5</td>
<td>65</td>
<td>65</td>
<td>72.5</td>
</tr>
</tbody>
</table>

Source: author

The same can be said about the military. In some countries (Ireland, Denmark, Great Britain, Croatia, Poland, the Netherlands, France, Germany) pension reforms for the servicemen are being carried out which are extending the retirement age for the servicemen and introducing more restrictions to the right to early retirement.

Analyzing retirement provision for servicemen, countries can be divided into three groups. The first group consists of the countries where there is a constant rejuvenation of the military and servicemen can retire more than a decade before the full retirement age. This group comprises the majority of our analyzed countries: Ireland, Bulgaria, the Czech Republic, Estonia, Spain, Croatia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, and Finland. The second group consists of countries where servicemen can retire 6-10 years earlier than other professionals. These are UK, the Netherlands and Germany. The third group consists of countries where the retirement age for the servicemen is close to the full retirement age (5 years or less before the latter). These are Austria, Belgium, Denmark, and Luxembourg.

In all our analyzed countries servicemen may termi-
nate their military service before the early retirement age. In some countries (Germany, the UK, France), such persons can benefit from the reintegration programs for servicemen who enter early retirement. Pension received by servicemen is calculated using different methods and its size, compared to the previously received salary, is also substantially different (Table 4). In some cases laws are being adopted to prevent retired servicemen from pension reduction due to a new state pension system (France) or when they are recruited in a public or private sector (Croatia).

Grouping countries by passive labour market policy regarding officers and servicemen, we cannot see any links to the prevailing social system models, so we can assume that this is rather related to the different development of police and military as a special institution in each country. At the same time there is a clear trend to provide bigger financial support (bigger pensions) in cases where early retirement age is close to full retirement age.

Table 4. Pensions in comparison with previously received remuneration

<table>
<thead>
<tr>
<th>Country</th>
<th>Pension as a part of previous salary (average, %)</th>
<th>Method of pension calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Belgium</td>
<td>75</td>
<td>Average of income of 10 previous years</td>
</tr>
<tr>
<td>Croatia</td>
<td>40-60</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Cyprus</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Czech R</td>
<td>5-60(^{13})</td>
<td>Service years and the maximum monthly remuneration received</td>
</tr>
<tr>
<td>Denmark</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Estonia</td>
<td>70</td>
<td>Salary for the rank (minimum, medium, maximum) and the average salary</td>
</tr>
<tr>
<td>Finland</td>
<td>60(^{14})</td>
<td>Average of income of 10 previous years</td>
</tr>
<tr>
<td>France</td>
<td>n.d.a.</td>
<td>Average of income through all service length</td>
</tr>
<tr>
<td>Germany</td>
<td>75</td>
<td>Previous incomes</td>
</tr>
<tr>
<td>Iceland</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Ireland</td>
<td>n.d.a.</td>
<td>Salary for the rank and pension insurance period</td>
</tr>
<tr>
<td>Italy</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Latvia</td>
<td>43</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>26</td>
<td>Average of 5 years best salary</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>70</td>
<td>Last salary</td>
</tr>
<tr>
<td>Malta</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Netherlands</td>
<td>70</td>
<td>Last salary</td>
</tr>
<tr>
<td>Norway</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Poland</td>
<td>40-75 (up to 2012), 60-75 (from 2012)</td>
<td>Last salary</td>
</tr>
<tr>
<td>Portugal</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Romania</td>
<td>75-80(^{15})</td>
<td>Average of income through all service length</td>
</tr>
<tr>
<td>Slovakia</td>
<td>30-60(^{16})</td>
<td>Service length and salary</td>
</tr>
<tr>
<td>Slovenia</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Spain</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>Sweden</td>
<td>n.d.a.</td>
<td>n.d.a.</td>
</tr>
<tr>
<td>UK</td>
<td>n.d.a.</td>
<td>Average of 2 years best salary</td>
</tr>
</tbody>
</table>

Source: author

\(^{13}\) max. 60 % AGMW for flight personnel, or after performing special type of service or dangerous service for the period of at least 5 years, or when serving on foreign deployments in dangerous conditions

\(^{14}\) The pension is the average of your last 10 years income

\(^{15}\) If person is living military service at the age 55 or more

\(^{16}\) The maximum pension of amounts to 60% of the rank salary after 30 years of active duty. The minimum pension amounts to 30% of the rank salary after 15 years of active duty
4. Active labour market policy for employability: four types of practices

Referring to the research results on employability of police officers, which covers ten European countries in detail, we can state that active labour market measures for the police officers in particular are not applied. Police officers who retire early or who leave the service voluntarily are generally classified as the unemployed; they are given general measures for reintegration into the labour market. Considering the fact that in many EU countries police officers retire only 5-10 years earlier than the others and that they are paid pension which makes a greater proportion of the salary they used to receive, there is no need for new paid employment and employability. Police officers, unlike servicemen, are not attributed to the vulnerable social group in terms of reintegration into the labour market. In some cases, when a state reform of the police is carried out and middle-aged people are dismissed, short-term programs of their reintegration into the labour market are applied. For example, in England and Wales by 2015 as a result of the reduction of the police budget by 20 percent and the reform of the police, 32,400 jobs will be cut (Policing in austerity 2013). This is happening gradually as officers are retiring. Measures of employability are only used in particular cases.

Reintegration of servicemen into the labour market is quite a different situation. The dismissal from service ten or even twenty years earlier than the full retirement age, people tend to look for new paid employment as occupational pension does not provide the same level of well-being, which they used to have in the military. On the basis of the practice of implementation of active labour market measures for retiring servicemen, countries are divided into three groups.

The first group includes countries where servicemen go into early retirement and are subject to measures of reintegration into the labour market. These are Ireland, Great Britain, France, Poland, Romania, Croatia, Germany and Lithuania. Implementation of measures is coordinated by an institution of the National Defence and its priorities and implementation mechanisms are very different in each country:

- In Ireland, the focus in terms of reintegration is on the gain of qualification and professional skills which would be recognized in the labour market. It is considered one of the most important criteria which ensure fulfilling civilian life for the retired servicemen. All courses for the reintegration are organized by the National Defence. The course content and questions are constantly revised and adapted according to the future needs of the labour market; however, servicemen are not provided with the exclusive right to attend these courses.

- In the UK reintegration, as well as other social services for servicemen, are provided by a contractor - a private company which has won the public tender. Counselling and training start immediately after making a decision to leave the military. A serviceman is first obliged to talk to the officers, who provide him/her with the general information, while an officer of individual training and reintegration advise him/her on the reintegration into the labour market. The officer helps the serviceman to define further goals and create a personal reintegration plan. On the basis of this plan, a private company continues to counselling him on employment and provide training. Reintegration in the UK is identified as a successful transition from the military life to the civilian world; it is mainly focused on the employment in the private sector. During the reintegration, information and counselling are provided that enable people, to make more effective decisions for employability. A person leaving the military, on the basis of the number of years in service and his/her rank, is supported as the reintegration program is seen as a reward for the time spent in service.

- Reintegration of Polish servicemen is organized in cooperation with central and local authorities, non-governmental education organizations and organizations that counsel on labour market. Counselling for servicemen on labour market is provided individually as well as in trainings and seminars; there is also a personal psychological test that they need to complete. On the basis of it, occupation, place of work and retraining are chosen. Professional counselling and training for the servicemen are provided by the same institutions that provide services for other Polish people. Former professional servicemen can benefit from the institutions that support employment. Military headquarters gathers information about job vacancies related to the defensive activities in public, governmental institutions and inside the territory administered by the municipalities where specialists mediate recruiting former servicemen.
Towards sustainable employability: European practices in officers and servicemen reintegration after early retirement

Rasa Smaliukienė

- In France reintegration is associated with retraining which the Mobile Defence Agency is responsible of. The Mobile Defence units are located in each base of defence; they form a network that employs mobile agents (servicemen and civilians). Career officers or people working under a contract of employment can benefit from counselling on assessment and guidance in order to prepare for the return to civilian life. They can also benefit from professional training or assistance in job search. Reintegration program is of two types - focused on employment in the private sector, where retraining is linked to the skills required in large private French companies (the Ministry has signed employment support contract), or focused on the private sector are transferred to the civil service. It is argued that a gradual transition from military service to work in the public sector is one of the state’s priorities of human resource policy. Both types of reintegration program consist of four phases: information provision, guidance, training and recruitment. Implementation of the program and payment of benefits is gradually being transferred from the Mobile Defence Agency to the National Employment Agency.

- In Romania since 1998 restructuring military and reducing the number of servicemen, a retraining system for the reintegration into the labour market has been created for servicemen with terminated contracts. The program is as a necessary social measure, compensation for the social and material losses servicemen encountered during the restructuring process. It was designed in cooperation with Ministries of National Defence, Labour and National Education. Specialized units in the internal structure of the Ministry of Defence, coordinate the system of vocational retraining in military centres in different counties. District experts work in accordance with the procedures of vocational training. Program activities, i.e. counselling and training, are implemented by the National Employment Agency, owned by the Ministry of Labour. Retraining system includes guidance that facilitates contact with the civil environment. The servicemen are provided with information, counselling and assistance in job search.

- In Croatia reforming the system of Defence, a transition program has been designed for servicemen going into early retirement. The program is implemented by the Ministry of National Defence through programs of special assistance: information program, transition workshops program, vocational training program, employment assistance program and self-employment assistance program. Training is organized as a part of an educational program which includes: getting familiar with and increasing the state of consciousness of one’s own potentials, individual preferences analysis, system of values and capabilities, testing one’s communication and career skills, decision making process, setting objectives, but also developing skills of presenting the picture of one’s own personality. The workshop is carried out in a dynamic manner through interactive cooperation with Program users. Ministry of Defence also conducts employment assistance program, which is carried out through individual counselling.

The second group consists of countries which have reintegration program for the servicemen although the difference between their retirement age and the full retirement age is little (less than 10 years). These are Belgium and Germany. In Belgium the difference between the retirement age for servicemen and the full retirement age is only 5 years whereas the difference between the pension and previous salary is only 15 percent, i.e. servicemen go into early retirement at such age and with the financial backing that there is no motivation to look for a new job and start a new career. Reintegration program is more like a relic of the time when the servicemen could retire at a younger age. Currently reintegration programs are mostly directed to those who leave the service voluntarily having secured the minimum or slightly bigger pension. Such persons go to the early retirement at 40-45 and the pension is usually not paid until they are of a particular age (it is about 60). Meanwhile in Germany, the difference between the retirement age for servicemen of different categories and the full retirement age is 9 years.

- In Belgium reintegration program is available only to non-commissioned officers and career officers; the program itself is directed to vocational retraining. It means that servicemen who want to leave the military service and find a new job in another field (in private or public sectors or work on their own) can get help from a specialized office. Retraining is finished when a person starts a new job. The servicemen can choose in which, private or public, sector they want to continue their career. The program is basically focused on the employment in the private sector. Having chosen the public sector, they participate in
recruitment projects which transfer them into public institutions. The program is funded by the Ministry of Defence which allocates a retraining bonus and “secured” salary (a guarantee that during the retraining period the remuneration received by the serviceman will not decrease).

- In Germany the reintegration of servicemen into the labour market is mostly related to the military reform, i.e. the reduction or rejuvenation of the military. Measures of reintegration are long-term and systematic; however, they are employed only during the period of the military reform. Full reintegration program is only for the servicemen serving under long-term contracts. Servicemen, serving under short-term contracts, at the end of their service can benefit from a partial reintegration package, which gives them personal training and professional qualification. They are subject to active labour market measures that encourage professional development; moreover, during the learning period they are also paid. During full reintegration program, just like in Belgium, the servicemen are given long-term (up to three years) retraining leave and if the salary is lower than that obtained in the military when working for another employer, it remains the same.

The third group consists of countries where servicemen go into early retirement, but are not subject to special measures of reintegration. These are Estonia, Latvia, the Netherlands, Slovakia and Finland. In these countries servicemen who have completed the service are not attributed to the special group which should be given special attention and individual measures. Measures of reintegration into the labour market for the servicemen, who have completed their service, are given just like to the other members of the social system. Reintegration activities for servicemen are financed from the budget of social security.

- In Estonia there is no special programme that would help former servicemen to reintegrate into the labour market. New profession, training and counselling on the labour market they can get just like the other citizens in the public institution Social Security Fund.

- State Employment Agency of Latvia provides recruitment and other services of the reintegration into the labour market for all the residents of Latvia, including former servicemen. Social Issues Division of the Ministry of Defence partly coordinates cooperation between National Armed Forces and State Employment Agency.

- In Slovakia there is no state-level program designed to support the reintegration of professional servicemen into the labour market after they retire. Institutions of the Ministry of Defence provide brief training to prepare for a job interview.

- In Finland there are also no specific support measures for the retired officers to reintegrate them into the labour market. The local employment and economic development office (Ministry of Labour) is responsible for employment measures for former servicemen and other unemployed people. The objective of labour market training is to improve the participants’ chances of finding work. Therefore it is diverse and practical in nature and in most cases includes on-the-job learning.

The fourth group consists of countries where servicemen are not subject to early retirement or reintegration programs. These are Denmark, the Netherlands and Luxembourg. In these countries servicemen retire at the age of 60 which is five years earlier than the full retirement age; however, it is not considered early retirement. Persons who retire earlier can apply to public employment agencies. In the Netherlands, this function is performed by the pension fund. The data provided by Czech Republic are too fragmentary to attribute any of these countries to one of the aforementioned groups.

5. Measures for employability: reintegration programmes financing and efficiency

In countries where reintegration programs are carried out, a variety of active labour market measures are used. In some countries, they are combined into a coherent program; in others they are rather fragmented. Customized reintegration programs based on psychological and skills tests as well as on personal motivation are applied in Belgium, Great Britain, France and Croatia. The program is designed in the presence of the person and reintegration specialist (a representative of the military); then the targeted financing is provided to implement the program and the person receives counselling and training. Training can take place in both military and civil environment. There is continuous training, traineeship or training in stages. In these countries servicemen are awarded retraining leave. The effectiveness of the reintegration programs is measured by the indicator of successful employment by the servicemen who have completed their military service. A rather frag-
T owards sustainable employability: european practices in officers and servicemen reintegration after early retirement

mented reintegration program can be found in Poland: here psychological tests are also performed and persons receive individual counselling on the labour market; however, without the targeted financing, opportunities for a person to choose the right training are limited.

Quite a different reintegration system of servicemen into the labour market exists in Ireland. Here servicemen going into the early retirement are counselled just like everybody else and they may participate in the courses of reintegration into the labour market. Competencies needed for successful reintegration are acquired during the service in the military, i.e. when the servicemen take part in training courses. The courses are organized in such a way that their participants could receive qualification and skills valuable and recognized in the labour market.

Reintegration programs are long-term: they last for two years (in the UK, Poland, and France), 2 years and 11 months in Belgium, three years in Germany. These periods have not been chosen randomly. During them a person can acquire a new profession as well as prepare to get into the labour market. At the same time this is the period during which the person is sought to be employed in order to facilitate the transition to a new job when the contract in the military is terminated.

Funding of reintegration activities in countries where reintegration programs of servicemen take place is from the budget of the National Defence. In countries where there are no such programs, reintegration activities are financed from the budget of Private Social Funds (in the Netherlands) or from the state budget for maintaining the social system (in Estonia, Latvia, Slovakia, Finland). It is noted that in best practice countries financial support mechanisms of the reintegration of servicemen are clear and reasonable. Servicemen leaving the military service receive cash benefits for retraining. The size of benefits is determined by the project the serviceman presents that reflects the knowledge and skills required for the new job/ workplace and their potential in the labour market (in Belgium, France, Germany).

The effectiveness of reintegration programs is quite different. Good results are reached in France 75 percent of servicemen, who have completed the military service, are successfully employed; in Poland - 67 percent. On the basis of the data, about one third of servicemen who have completed the service no long-

er look for work because of age or sufficient income. Due to different priorities of the program, different percentage of former servicemen find employment in private and public sectors. Croatia focuses on people generating private economic activity whereas in Belgium and the UK reintegration program is mainly focused on the employment in the private sector; in France and Poland priorities of employment in the private and public sector are balanced. Consequently, the effectiveness of different programs is different. Assessing the effectiveness of reintegration activities, the saved amount of money in the form of benefits for the unemployed should be also assessed. It is estimated that in France 6 million Euro was saved within one year while improving reintegration activities. In countries where the reintegration programs are not carried out, former servicemen are not distinguished as a separate group; therefore, data about them are not separately collected. As a result, it is impossible to compare the effectiveness of reintegration programs for the servicemen across countries.

Conclusions and research limitations

The results of the comparative analysis of policies point out the fact that demand for reintegration of early retired officers and servicemen vary across EU member states. Analyzing retirement practice of the police and the military in EU countries, it is noted that the police officers retirement is organized 5-10 earlier than full retirement; their pension is worth a substantial part of previous salary. For that reason, reintegration programs are not needed and in majority of countries do not exist. The situation in military is different. Military rejuvenation forces to cut middle-age people into early retirement. It means that they will have to reintegrate into the labour market in order to maintain a similar level of well-being for themselves and their families. Accordingly, the reintegration programs are not only to prepare servicemen, who are being dismissed from the service, for the labour market, but to recruit them and create conditions for the successful reintegration into their new place of work, i.e. to create higher long-term employability. One of the greatest challenges is to reach sustainable employability, i.e. to set reintegration activities to recruit former servicemen in the right place where a person could reach the maximum productivity and job satisfaction.

The impact of specific reintegration programmes on
servicemen employability is very different across EU member states. Active labour market policies have positive effect on servicemen employability, but the intensity and effectiveness of these policies vary across countries. Within the analysis, countries are grouped according to intensity of reintegration programmes and the impact towards employability. The first group includes countries where servicemen go into early retirement and are subject to measures of reintegration into the labour market. These are Croatia, France, Great Britain, Germany, Ireland, Lithuania, Poland, and Romania. The second group consists of countries which have reintegration program for the servicemen although the difference between their retirement age and the full retirement age is little (less than 10 years). These are Belgium and Germany. The countries of those two groups provide most inclusive reintegration programmes that could lead to sustainable employability of retired servicemen. The third group includes countries where servicemen go into early retirement, but are not subject to special measures of reintegration. These are Estonia, Latvia, the Netherlands, Slovakia and Finland. In these countries servicemen who have completed the service are not attributed to the special group which should be given special attention and individual measures. Measures are given just like to the other members of the social system and highly depend on general employment policy in the country. The fourth group pools countries where servicemen are not subject to early retirement or reintegration programs. These are Denmark, the Netherlands and Luxembourg.

This study has several limitations that should be identified while interpreting the results. The first limitation is that the questionnaire relies upon purchasing one-side representation: only institutions were surveyed. Sustainable employability refers to institutional and individual agency. Person’s internal motivation is one of the biggest factors that make an impact towards results of employability (Sileika, Bekeryte 2013; Isoraitė et al. 2014; Dzemyda, Raudeliūnienė 2014; Raudeliūnienė et al. 2014). Taking a classical approach toward boundaryless career, the retired officers and servicemen have to take responsibility for their own future career.

The limitation of the research lies in the representation of the countries practices too. The results of institutional survey represents only half of EU member countries practices, while responds rate form authorities was 40% in case of police and 55% in case of military. Finally, although the literature suggests more detailed indicators for sustainable employability, more research may be necessary to empirically test whether those indicators are adequate in measuring the employability of officers and servicemen.

References


Towards sustainable employability: european practices in officers and servicemen reintegration after early retirement


Tvaronavičienė, M. 2014. If industrial sector development is sustainable: Lithuania compared to the EU, *Entrepreneurship and Sustainability Issues* 1(3):134–142. DOI: http://dx.doi.org/10.9770/jssi.2014.1.3(2)


FINANCIAL LITERACY AS A PREREQUISITE FOR CITIZENS’ ECONOMIC SECURITY: DEVELOPMENT OF A MEASUREMENT INSTRUMENT

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Abstract. The level of citizens’ financial knowledge has a great impact on financial well-being of individuals and society. In this regard public authorities in many countries initiated a process of development and implementation of National strategies to enhance financial literacy level. The initial step of developing a national strategy is evaluation of current situation. Thus, financial literacy measuring issues are frequently debated in the academic and public environment. The goal of the current research is to develop a measurement instrument to evaluate the level of financial knowledge of Latvian citizens. The present paper reflects the results of the authors’ conducted survey based on the sample of 169 respondents. A set of 12 questions on financial matters was developed to detect perceived importance and complexity of financial literacy components, as well as to get financial literacy self-assessment scores. Data was processed by means of SPSS, applying such methods, as analysis of means, analysis of frequencies and independent samples t-test. Received results assist to precise the content and wording of questions to be included into the questionnaire for evaluation financial literacy level of Latvian citizens.

Keywords: financial literacy, measurement, evaluation, survey, Latvia

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JEL Classifications: G100; G11

1. Introduction

Financial literacy (FL), its importance, measuring issues, implementation of financial education programmes and related topics economic security and sustainability are frequently discussed in academic and public environment (Makštutis et al. 2012; Lavrinovich et al. 2012; Vasilianaitė 2014). High level of financial literacy makes a large contribution to the financial well-being of individuals, because financially literate people are more likely to plan for retirement (Almenberg, Save-Soderbergh 2011; Caurkubule, Rubanovskis 2014), more likely to participate in financial markets and perform better on their portfolio choice (van Rooij et al. 2011), as well as they accumulate higher amounts of wealth (Lusardi, Mitchell 2011). In turn “lack of financial literacy was one of the factors contributing to ill-informed financial decisions and that these decisions could, in turn, have tremendous negative spill-over” (PISA/OECD 2012). In many countries governments are increasingly concerned about financial illiteracy of their citizens. In Latvia, the issues of the improvement of financial literacy level are emphasized at the government level.

According to the National Development Plan of Latvia for 2014-2020 (CCSC 2012) human economic security and citizens’ resilience are on the

1 This study was conducted within the scope of the research „Enhancing Latvian Citizens’ Securitability through Development of the Financial Literacy” Nr. 394/2012.
agenda. Economic security means that citizens have predictable and sufficient income that, in turn, implies the high level of financial literacy. Following the experience of other countries, in 2014 strategic partners (Financial and Capital Market Commission (FCMC), Ministry of Education and Science, National Centre for Education, BA School of Business and Finance, Consumer Rights Protection Centre, Association of Commercial Banks of Latvia and Latvian Insurers Association) signed the memorandum on the implementation of the National Strategy for Financial Literacy in Latvia 2014–2020 “aimed at promoting a progressive rise in the public financial literacy” (FCMC 2014).

An important step in defining a national strategy is measuring of a current level of financial literacy, because it provides an evidence of the issues faced by different socio-demographic groups, enables policymakers to identify the needs of the population, provides a baseline for designing educational programmes, and etc. In turn, measuring process requires a clear understanding of financial literacy concept and an appropriate evaluation instrument.

The goal of the present research is to develop a measurement instrument (questionnaire) to evaluate the level of financial knowledge of Latvian citizens. To achieve the established goal the authors conducted a pilot study that was aimed: (1) evaluate perceived importance of financial literacy components from the viewpoint of different respondent groups, (2) evaluate respondents’ perceived complexity of financial literacy components, and (3) test self-assessed level of financial literacy of respondents. The survey among different groups of Latvian citizens was performed, using the simplified measurement scale with 12 questions representing all the components of financial literacy. The results of the study are reflected in the current paper.

Data processing was conducted by means of SPSS 20.0 software. Such methods, as analysis of means, analysis of frequencies and independent samples t-test were applied. To get a comprehensive picture of respondents’ perceptions of financial literacy questions, responses of particular groups of respondents were analysed separately, considering socio-demographic characteristics of citizens. Research findings allowed the authors to precise the content and the structure of the questionnaire. Conclusions drawn from the received results indicated several key points in regards to wording of the questions and highlighted possible issues related to the data processing.

2. Defining and Measuring Financial Literacy

Results of various researches in the field of financial literacy indicate the fact that there is no consistent approach to understanding of the concept. A clear conceptual framework for understanding the concept of financial literacy is necessary to build a theoretical foundation for development of the methodology of financial literacy evaluation.

Different organizations and individual researches define financial literacy in a specific manner, emphasizing different aspects. Most often financial literacy is defined as (1) a financial knowledge (FINRA 2010), (2) financial skills (Kozup, Hogarth 2008), (3) financial behavior (ASIC 2011) or a certain combination of elements (Atkinson, Messy 2011; Hung et al. 2009; PISA/OECD 2012; Widdowson, Kim 2007). As for particular elements, Gerardi et al. (2010) decomposes the concept into money literacy, price literacy and budget literacy. According to Kefela (2011), thematic areas for studying financial literacy are budgeting, savings, debt management, financial negotiations and bank services. Remund (2010) defines five categories: (1) knowledge of financial concepts, (2) ability to communicate about financial concepts, (3) aptitude in managing personal finances, (4) skill in making appropriate financial decisions and (5) confidence in planning effectively for future financial needs. Experts from the Financial Services Authority (FSA), emphasize such elements of financial literacy, as (1) managing money, (2) planning ahead, (3) making choices, and (4) getting help (FSA 2005).

Considering the existing variety of understanding the concept of financial literacy, it is clear why methodological approaches to financial literacy assessment differ so widely. Measuring the level of financial literacy, different researchers emphasize: 1) the issues associated with retirement wealth accumulation (Almenberg, Save-Soderbergh 2011; Lusardi, Mitchell 2011); 2) evidence and implications for financial education programmes (Lusardi, Mitchell 2007; Mandell, Klein 2009); 3) the link between wealth accumulation and financial literacy (Behrman et al. 2012); 4) the interconnection between financial crisis, debt behaviour and financial literacy (Lusardi, Tufano 2009).
Ambiguous viewpoints about the concept of financial literacy generated a need for applying statistical methods in the analysis of the definitions. The explorative research on defining financial literacy and its components was conducted by the authors by means of AQUAD 6.0 and Hamlet II (Titko, Lace 2013). A comprehensive set of definitions of the term “financial literacy” extracted from the scientific papers and official documents was analysed using such methods, as content analysis, analysis of joint frequencies and cluster analysis.

Research results indicated that financial literacy most often is defined as a set of cognitive (knowledge and skills) and behavioural attributes. Non-cognitive terms, such as motivation or confidence, are not mentioned so frequently. However, people confidence, motivation and beliefs are all the contributing factors to a person’s self-efficacy. In turn, financial self-efficacy plays a crucial role in promoting economic prosperity (Lapp 2010). It was confirmed that financial self-efficacy correlates with financial literacy scores (ANZ/The Social Research Center 2011). This is the reasons why attitudes are among financial literacy dimensions (Robson 2012; Atkinson, Messy 2011). The results of the authors’ conducted research were expressed in the conceptual model of financial literacy (Figure 1).

Knowing the components of the concept is the first step in the process of designing a questionnaire to measure a level of financial literacy. Another important issue in measuring process is a proper wording of questions. Sometimes lack of financial knowledge points to the fact that respondents simply did not understand the questions, i.e., “low scores are due to not understanding the questions being asked, rather than understanding the question but answering it incorrectly” (Capuano, Ramsay 2011). Thus, the questions should be properly formulated. Besides, it is necessary to weight questions according its complexity to detect a relevant contribution of each question to the overall index of financial literacy. There are different opinions among the researchers about self-assessment questions.

These questions should be used in surveys with caution, because people tend to overestimate their knowledge (Guiso, Jappelli 2008; Capuano, Ramsay 2011).

Despite of variety of measurement instruments used in previously conducted studies, there are several barriers for using existing questionnaires in Latvia:

- the content of questionnaires is not relevant to the Latvian economic reality;
- the questions are mainly aimed to test elementary numeracy instead of respondents’ financial knowledge and ability to deal with financial issues;
- questionnaires involve questions on financial products and instruments that are not available in Latvia.

![Fig.1. Conceptual model of financial literacy](source: Titko et al. (2013))
Thus, the measurement instrument (questionnaire) to evaluate the level of financial knowledge of Latvian citizens should be based on the authors’ developed conceptual model of financial literacy (Figure 1) and all the revealed elements should be incorporated into the measurement scale.

3. Methodology and sample data

To achieve the research objectives, the authors constructed a 12-question instrument with 2 questions related to each component of the developed conceptual model. The questions represented not only knowledge dimension of the financial literacy, but also behavioural dimension. It should be emphasized that a large-scale survey on measuring financial literacy level is planned to be performed within only knowledge dimension, i.e., respondents will be offered to pass a multiple choice test with only one correct answer. For research purposes the questions were labelled with appropriate combinations of words (see Table 1).

Table 1. Design of the questionnaire for the pilot study

<table>
<thead>
<tr>
<th>No.</th>
<th>Element</th>
<th>Label</th>
<th>Content of the question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Savings – Borrowings</td>
<td>Loans</td>
<td>How to borrow money for different purposes? What are the differences between the types of loans (mortgage loan, short-term loan...)?</td>
</tr>
<tr>
<td>Q2</td>
<td>Deposits</td>
<td></td>
<td>What should you pay attention to when making a deposit in a bank?</td>
</tr>
<tr>
<td>Q3</td>
<td>Personal budgeting</td>
<td>Spending</td>
<td>How much of your income do you spend for meals, utility bills etc.? How much do you spend in a particular period of time?</td>
</tr>
<tr>
<td>Q4</td>
<td></td>
<td>Balance sheet</td>
<td>How to prepare a balance sheet of your personal finance in order to evaluate your current financial situation?</td>
</tr>
<tr>
<td>Q5</td>
<td>Economic issues</td>
<td>Employment and inflation</td>
<td>What is the relationship between employment and inflation?</td>
</tr>
<tr>
<td>Q6</td>
<td></td>
<td>Purchasing power</td>
<td>How to evaluate the impact of inflation on the purchasing power of money?</td>
</tr>
<tr>
<td>Q7</td>
<td>Financial concepts</td>
<td>Time value of money</td>
<td>What does it mean „time value of money”?</td>
</tr>
<tr>
<td>Q8</td>
<td></td>
<td>Risk and return</td>
<td>What is the relationship between risk and return?</td>
</tr>
<tr>
<td>Q9</td>
<td>Financial services</td>
<td>Payments cards</td>
<td>How to choose a payment card? What are the differences between debit and credit cards?</td>
</tr>
<tr>
<td>Q10</td>
<td></td>
<td>Online bank services</td>
<td>What online services are available in a bank? How much you should pay for them?</td>
</tr>
<tr>
<td>Q11</td>
<td>Investing</td>
<td>Stocks and bonds</td>
<td>How to analyse stocks and bonds before making an investment?</td>
</tr>
<tr>
<td>Q12</td>
<td></td>
<td>Diversification</td>
<td>What option is more risky – investment into the shares of one company or investment into different companies, using the same amount of money?</td>
</tr>
</tbody>
</table>

Source: authors

Respondents were not asked to answer to these questions, but to evaluate them according three criteria, using 5-point scale:
1. Simplicity of wording (1 – it is hard to understand a question; 5 – it is easy to understand).
2. Importance (1 – absolutely non-important question; 5 - very important question).

The developed questionnaire for evaluating financial literacy components was disseminated among the students of Riga Technical University, University of Latvia, Latvian Academy of Sport Education, and Art Academy of Latvia (“students”), as well as among other groups of Latvian citizens of different ages, gender, education level and social status (“adults”).

The 169 fully-completed questionnaires were received. About two thirds of the respondents are females and one third is males (38 per cent and 62 per cent, respectively). Sample contains 55% “students” and 45% “adults”. The most respondents are between the ages of 18 and 25 (58%), 33% of respondents are 26 – 62 years old, and the remaining 9% are citizens older than 62 years (the age of retirement in Latvia). As for education field, 24% of respondents are students or graduates from economics/finance and related programmes, the rest being students and graduates from non-economic faculties. Respondents’ profile data is presented in the Table 2.
Table 2. Respondent profile

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Values of criteria</th>
<th>Number of respondents</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18 - 25</td>
<td>58%</td>
<td>Percentage of total number of the respondents</td>
</tr>
<tr>
<td></td>
<td>26 - 30</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31 - 45</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>46 - 62</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>over 62</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Education field</td>
<td>Economics, finances</td>
<td>24%</td>
<td>Percentage of total number of the respondents</td>
</tr>
<tr>
<td></td>
<td>Other field</td>
<td>76%</td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td>Primary education</td>
<td>3%</td>
<td>Percentage of total number of „adults“</td>
</tr>
<tr>
<td></td>
<td>Secondary education</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher education (1st level)</td>
<td>29%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher education (2nd level)</td>
<td>32%</td>
<td></td>
</tr>
</tbody>
</table>

Source: authors

Values for the criterion „Education level” were determined, based on the simplified interpretation of the regulations issued by the Latvian Cabinet of Ministers on Classification of Latvian education:

- Primary education – general education program, 1-9 classes;
- Secondary education – general education program, 10-12 classes;
- Higher education: 1st level – bachelor degree;
- Higher education, 2nd level – master degree.

The analysis of the received data was performed in SPSS 20.0. In the first stage the whole data array was processed to get the mean scores of all the responses to all the questions according to three criteria. Subsequently, respondents were divided into target groups according to the respondent profile questions. When it was possible to split respondents into only two groups (for instance, based on the education field), data was analysed using independent samples t-test to find out the statistically significant difference in the respondents’ responses.

4. Results

The initial results of data processing - the mean scores of responses for each criterion - are presented in the Figure 2.

![Figure 2: Assessment of questions - mean scores for each criterion](source: authors)
From the viewpoint of all the respondents the most simple, the most clearly formulated and the most important questions are “spending”, “online banking services”, “loans”, “payment cards” and “deposits”. According to the criterion “simplicity of wording”, the most respondents evaluated the questions “spending” (75%), “payment cards” (58%), and “online banking services” (67%) as the easiest questions to understand. In turn, the worst worded questions are “time value of money” and “stocks and bonds”. The highest perceived importance was assigned to the questions “spending” and “online banking services”: these questions were marked with “5” by 51 per cent and 44 per cent of respondents respectively. The least important questions represent the element “investing”: “stocks and bonds” (32%) and “diversification” (30%). As for complexity, the questions “spending” and “online banking services” are perceived as the most simple and easiest to answer by respondents (51 per cent and 40 per cent respectively). In turn, the most complex questions are “stocks and bonds” (40%) and “diversification” (35%). Analysing the responses of particular groups of respondents, several important conclusions were made. In particular, the results revealed the fact that “adults” demonstrated higher self-assessment scores than current students in the age below 25 (Figure 3).

![Figure 3. Perceived complexity of the questions by “adults” and “students”](image)

In this regards the very important step in the process of evaluation of financial literacy level is a comparison between respondents’ self-assessment scores and their demonstrated level of financial knowledge. Thus, the questionnaire should include both types of questions.

To determine the difference between the perception of questions by “adults” and “students”, data was processed, using Independent samples t-test in SPSS environment. The gap between average scores given by two groups of respondents and statistical significance of the difference (Sig.) is demonstrated in the Table 3.
Table 3. Evaluation gap: “adults” vs. “students”

<table>
<thead>
<tr>
<th>Question</th>
<th>Simplicity of wording</th>
<th>Importance</th>
<th>Complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GAP</td>
<td>Sig.</td>
<td>GAP</td>
</tr>
<tr>
<td>Loans</td>
<td>,44737</td>
<td>0,003</td>
<td>,01882</td>
</tr>
<tr>
<td>Deposits</td>
<td>,52858</td>
<td>0,001</td>
<td>,21703</td>
</tr>
<tr>
<td>Spending</td>
<td>,04825</td>
<td>&gt; 0,05</td>
<td>,16398</td>
</tr>
<tr>
<td>Balance sheet</td>
<td>,20048</td>
<td>&gt; 0,05</td>
<td>,38144</td>
</tr>
<tr>
<td>Employment and inflation</td>
<td>,11927</td>
<td>&gt; 0,05</td>
<td>,32559</td>
</tr>
<tr>
<td>Purchasing power</td>
<td>,79683</td>
<td>0,000</td>
<td>,56197</td>
</tr>
<tr>
<td>Time value of money</td>
<td>,18831</td>
<td>&gt; 0,05</td>
<td>,11135</td>
</tr>
<tr>
<td>Risk and return</td>
<td>,59748</td>
<td>0,002</td>
<td>,13045</td>
</tr>
<tr>
<td>Payments cards</td>
<td>,49278</td>
<td>0,007</td>
<td>,07385</td>
</tr>
<tr>
<td>Online bank services</td>
<td>,03282</td>
<td>&gt; 0,05</td>
<td>,02872</td>
</tr>
<tr>
<td>Stocks and bonds</td>
<td>,49915</td>
<td>0,022</td>
<td>,20855</td>
</tr>
<tr>
<td>Diversification</td>
<td>,88059</td>
<td>0,000</td>
<td>,28862</td>
</tr>
</tbody>
</table>

Source: authors

Respondents from both groups evaluate the questions equally according to the importance criterion: evaluations differ with the statistical significance Sig. < 0.05 only for the question “purchasing power”. However, evaluating the questions by their complexity and simplicity of wording, essential disagreement is observed among the respondents. Using both criteria, almost all the questions “adults” evaluate higher than “students”. It means that the questions seem to be easier to answer and easier to understand for “adults”. The results, in turn, can be explained either by broader financial experience of “adults” or by higher level of self-assessment.

An independent samples t-test was applied also for processing two data sets representing the viewpoint of “economists” and “non-economists”. The authors take for “economists” all the students of economics-related programs (finance, taxes etc.), as well as “adults” with economic education.

The gap between average scores given by two groups of respondents and statistical significance of the difference (Sig.) is demonstrated in the Table 4.

Table 4. Evaluation gap: “economists” vs. “non-economists”

<table>
<thead>
<tr>
<th>Question</th>
<th>Simplicity of wording</th>
<th>Importance</th>
<th>Complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GAP</td>
<td>Sig.</td>
<td>GAP</td>
</tr>
<tr>
<td>Loans</td>
<td>,32597</td>
<td>&gt; 0,05</td>
<td>,73973</td>
</tr>
<tr>
<td>Deposits</td>
<td>,32074</td>
<td>&gt; 0,05</td>
<td>,83643</td>
</tr>
<tr>
<td>Spending</td>
<td>,10484</td>
<td>&gt; 0,05</td>
<td>,31473</td>
</tr>
<tr>
<td>Balance sheet</td>
<td>,10911</td>
<td>&gt; 0,05</td>
<td>,12674</td>
</tr>
<tr>
<td>Employment and inflation</td>
<td>,67035</td>
<td>0,002</td>
<td>,34531</td>
</tr>
<tr>
<td>Purchasing power</td>
<td>,54516</td>
<td>0,027</td>
<td>,83953</td>
</tr>
<tr>
<td>Time value of money</td>
<td>,64167</td>
<td>0,008</td>
<td>,70233</td>
</tr>
<tr>
<td>Risk and return</td>
<td>,70310</td>
<td>0,001</td>
<td>,44205</td>
</tr>
<tr>
<td>Payments cards</td>
<td>,76725</td>
<td>0,000</td>
<td>,58934</td>
</tr>
<tr>
<td>Online bank services</td>
<td>,48391</td>
<td>0,000</td>
<td>,45678</td>
</tr>
<tr>
<td>Stocks and bonds</td>
<td>,63566</td>
<td>0,012</td>
<td>,73740</td>
</tr>
<tr>
<td>Diversification</td>
<td>1,02442</td>
<td>0,000</td>
<td>,87791</td>
</tr>
</tbody>
</table>

Source: authors
Table 4 data indicates the fact that respondents with the economic education perceive financial questions as less complicated and more important comparing with the other respondents. Results are aligned with general logical assumptions. Financial knowledge was acquired by “economists” during the studying process on a mandatory basis. In turn, “non-economists” learn financial matters in practice and get financial knowledge with a life experience only. To compete with “economists” they should have a strong self-education motivation.

Responses were analysed also considering the age of respondents. Highest evaluation scores assigned to almost all the questions were demonstrated by the respondent group in the age 31–45 years old. In turn, citizens in the age over 62 (age of retirement in Latvia) consider the questions as more difficult to understand aside from those related to daily financial decisions (utility bills payments, savings and borrowing). The aged people do not understand questions in regards to economics and financial concepts (Figure 4). Besides, they do not see them as important ones (Figure 5).

Many questions are not clear for the respondents in the age below 25. This fact can be explained with a lack of life experience. For instance, survey results indicate the fact that in Latvia the average age of a mortgage loan user is 35 years, but of life insurance user – 37 years old. Besides, the most of “students” participated in the survey are studying in the field that is absolutely not related to economics or finance (pedagogy, art, chemistry, sports).

Designing and implementing a national strategy for enhancing financial literacy level, one of the key issues is to improve the educational system. Thus, it is critically important to evaluate financial knowledge of citizens in regards to their educational background.

Survey results demonstrate the essential difference in the perception of financial questions among the respondents with different level of education (Figure 6, 7 – see labels of questions in the Figure 4, 5).

Fig.4. Simplicity of wording perceived by respondents of different age

Fig.5. Perceived importance by respondents of different age

Source: authors
The survey results demonstrated in the Figure 6 and 7 point to the fact that master level graduates perceive financial questions as less complicated comparing with the other respondents. Evaluation of the questions provided by bachelors does not differ strongly from the scores of respondents with completed secondary education.

However the in-depth analysis of the responses of bachelors (splitting them into “economists” and “non-economists”) revealed obvious differences (Figure 8).

It should be emphasized that the analysis of survey results should be done with the extreme attention to the respondent profile data. In the current survey there were no master students within the sample. In turn, “adults” were mostly represented by the respondents with master level education and secondary education.

Besides, it is important to avoid the overgeneralization. It can be illustrated by the simple example from the given study. Respondents with economic education – both graduates and current students of economics-related programmes – evaluated the questions as more important, easier to understand and easier to answer. However, analysing the responses...
received from the respondents with master level education, no significant difference between “economists” and “non-economists” was revealed (Figure 9).

![Figure 9. Simplicity of wording perceived by “adults” with master level education](image)

*Source: authors*

It means, in turn, that the level of education probably is more important factor than the field of education. However, such assumptions should be confirmed or rejected during the large-scale survey. The only conclusion can be made at the moment that all the facets of survey results should be studied, considering the impact of respondents’ characteristics.

**Conclusions**

The current paper reflects the results of the pilot study conducted by the academic staff of the Department of Finance of Riga Technical University within the framework of the research project “Enhancing Latvian Citizens’ Securitability through Development of the Financial Literacy”.

The study was aimed to develop a basis for constructing a measurement instrument that could be used to evaluate financial literacy level of Latvian citizens. The set of twelve questions on financial matters was designed for study purposes. Respondents were offered to evaluate these questions according to three criteria: 1) simplicity of wording, 2) perceived importance, and 3) perceived complexity.

Based on the received data, the results are summarized, as follows:

- The questions “spending”, “online banking services”, “loans”, “payment cards” and “deposits” are the easiest questions to understand, the most important and the simplest questions. In turn, the most complicated and the less important questions are “inflation and employment”, “purchasing power”, “stocks and bonds” and “diversification”.
- Self-assessment scores of the “economists” are higher than those of respondents with the background in other educational fields. Besides, financial questions are considered to be more important for graduates and students of the programmes related to economics and finances.
- The significant gap in the perception of the questions is observed, analysing the answers of the respondents of different age groups. The lowest rates to almost all the questions were given by retirees (respondents older than 62 years). Senior respondents demonstrate the lowest understanding of the economic questions and financial concepts. They are also less interested in these questions (as well as all other questions) than the respondents in the other age groups. “Spending” is the most important and the easiest question for those respondents. All the questions were rated higher by the group of respondents aged from 31 to 45. Obviously, respondents over 30 have larger working and life experience. In most cases people have children who should be taken care of. Respondents at this age have faced already various financial issues and problems. Thus, the range of their
financial skills is wider (for instance, they know the process of application for a mortgage loan and etc.).

Received results allowed making important conclusions about the content and wording of questions to be included into the questionnaire for evaluation financial literacy level.

Researchers should avoid using complex questions without providing any explanations. For instance, the questions about financial concepts should be included into a questionnaire in a wording that does not require keeping in mind a definition.

Each question should be weighted according to its complexity to differentiate simple questions (for instance, payments of utility bills) from complex questions (financial instruments and etc.). Otherwise, respondents can receive equal number of scores, answering correctly on both questions, and the total financial literacy score might be misleading.

Respondent profile should contain a number of criteria to define particular groups of population, because “one size fits all” approach yields inaccurate survey results (Capuano, Ramsay 2011). The main purposes of measuring citizens’ financial literacy level are to identify groups with lack of financial knowledge, to find out imperfections in the existing educational system, and to define targets of financial literacy strategy. It would be difficult to achieve these goals without splitting respondents into target groups.

To continue the research the authors will test financial literacy components on sample data of other countries. All the acquired information will be used for development of the measurement instrument for Latvia to measure financial literacy level of different target groups of Latvian citizens.

References


Abstract. The paper presents a conceptual framework and a complex understanding of the quality of life. On the basis of the system of indicators of the quality of life as offered by the author, a long term changes in the quality of life of the Lithuanian population during the period of functioning of the market over 1990-2012 is analysed. There is presented analysis of the changes of Lithuanian population's on the areas of material well-being, health and demographics according to the trends of shift of cultural, moral-ethical and spiritual values. The article presents how the quality of life of Lithuanian population has changed after the implementation of the market economy, membership in the European Union and through the time of the crisis. The main positive and negative factors influencing the population's quality of life are identified as well as achievements, major issues and the possible ways of their solutions and future prospects.

Keywords: conception framework of quality of life, material wellbeing, health and demographics, culture, system of moral, ethical and spiritual values

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JEL Classification: I310, I390, J1

1. Introduction

A growing disappointment in the universal monetary methods which are based on monetary and fiscal policy priorities has been felt in Europe in recent years. Non-orthodox economic development concepts, having regard to a broader and more in-depth perception of economics, are attracting more attention. Contrary to the monetary approach and technocratic practice (which is so popular and well-established in Lithuania), where market economy seems to omit an individual, in the leading EU Member States, such as Germany, France, Italy, Austria and Scandinavian countries, economic reforms are oriented more towards the achievement of objectives which the society at large aims to achieve. These objectives are vital to the majority of people, i.e., they reflect the interests of social layers on a mass scale, which are the foundation of the country’s economic development strategy. It is only by taking into account the priorities of social objectives that solid and powerful stimuli are likely to be created for economic growth, business modernisation and increase of national competitiveness, at the same time creating a steady

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resource of the state budget revenue.

Global experience confirms such an approach. In 2008 the Commission on the Measurement of Economic Performance and Social Progress (also known as the 'Happiness Commission'), chaired by one of the most outstanding contemporary economists, Nobel Prize winner, Joseph Stiglitz, other members of the Commission included the world-renowned economist, Nobel Prize winner Amartya Sen and Jean-Paul Fitoussi. The conclusion of Report of the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz et al. 2010) challenged the currently accepted system of measurement of economic performance indicators: general economic indicators, such as GDP, inflation and budget deficit do not entirely reflect the actual economic situation in a country, the real economic situation and effectiveness of economic policy are revealed by the indicators of the well-being and quality of life of the population. Therefore, when assessing the economic situation in a country, it is necessary to shift the centre of gravity towards the indicators of the well-being and quality of life of the population (Easterlin 2001, 2009; Easterlin and Angelescu 2009, 2012; Easterlin and Sawangfa 2009; Giddens 2007; Veenhoven 2005, 2008, 2013).

The most significant conclusion of this authoritative Commission was its recommendation to apply a system of indicators reflecting the well-being of the population instead of finance oriented statistics. This system of indicators covers the following dimensions: indicators of the level of material life, health, education, work, possibility to influence the decisions of the authorities, social relations and community participation, living environment and ecology, as well as physical and economic security (World Economic Forum 2012).

All over the country, citizens are demonstrating a desire to engage in serious discussions about how to measure quality of life. For the past five years, Calvert Group has been preparing for this exciting debate (Henderson et al. 2000). The 12 Calvert-Henderson Quality of Life Indicators range far beyond the traditional national accounts of Gross National Product (GNP) and its narrower form Gross Domestic Product (GDP) and other money-denominated indexes on inflation (CPI), incomes, interest rates, trade deficits, and the national budget. The Calvert-Henderson indicators dig deeper, going behind the national statistics on employment, health, education, and the state of our infrastructure and national security. They are not trying to offer reweighted and recalculated versions of macroeconomic statistics, as many other worthy efforts have attempted. This approach is to paint a broader picture of quality of life to complement current statistics and identify statistical “blind spots” where new data collection is needed.

On the conceptual foundations of these early economic innovators, a host of new efforts to redefine human development, wealth and progress emerged in the 1980s and 1990s. David Morris (1979) of the Institute for Local Self-Reliance produced the Physical Quality of Life Index (PQLI) for the Overseas Development Council; Herman Daly and John Cobb created the Index of Sustainable Economic Welfare (ISEW) in 1989. These indices deduct from GNP many environmental and social costs, arriving at a significantly lower “net GNP”. They have been adapted widely in Europe, Australia, and the United States as the Genuine Progress Index (GPI) by 1995. Other approaches include the Fordham University Index of Social Health devised by Marque-Luisa Miringoff and Marc Miringoff (1999), also a consultant on our Calvert-Henderson Quality of Life Indicators.

In the opinion of political scientists Przeworski and Limongi (1997) social and economic development facilitates the entrenchment of democracy institutes. According to them, the prospects of preservation of the newly established democracy are larger if the country is wealthier and, in addition, if it is a parliamentary democracy. Democracy is capable of promoting economic growth, controlling inflation and, in its turn, economic development reduces the risk of conflicts in relation to social inequality, weakens the impact of political alienation, polarisation and social cohesion. The link between the quality of democracy and welfare has been emphasised by a number of scientists. According to Przeworski et al. (1996), appropriate distribution of income is becoming a highly significant factor in consolidating democracy (the problem of property distribution and inequality).

The World Bank in 1995 issued its own Wealth Index, which redefined “the wealth of nations” in significant ways. The World Bank now defines 60 percent of this wealth of nations as “human capital” (social organization and human skills and knowledge), 20 percent as environmental capital (nature’s contribution), and 20 percent as “built capital” (factories, finance, capi-
The recent global economic crisis has been considered by Paul Krugman (2009a, b), Stiglitz et al. (2006), Grzegorz Kolodko (2008) and others as a crisis which happened, first of all, in ‘people’s minds’, when a clear decline in the moral and ethical values affected the economic behaviour of people as well as economic development. The current crisis is primarily the crisis of the system of values and outlook. Economy is not merely a sphere of material interests and immoral economy is ineffective economy, because it destroys instead of creating. There are plenty of examples to prove it: widespread poverty, soul-destroying cult of consumption and ecological crisis. All these are the results of spiritless government and egoistic economic benefit pursued at all costs. Concern of raised issues is being reflected by raising stream of scientific papers devoted to array of questions related to secure sustainable development of regions, counties and societies (Ercey 2012; Mačiulis, Tvaronavičienė 2013; Balkienė 2013; Prakash 2013; Vosylius et al. 2013; Baublys et al. 2014; Raudeliūnienė et al. 2014; Vasilienė 2014; Tvaronavičienė 2014).

2. Conceptual Framework and Methodology of the Quality of Life of the Population

On the basis of the European economic model, which Lithuania seeks to implement, a country must create and develop a competitive economy also ensuring the well-being of the population. The country’s competitiveness is determined not only by the effort of all economic sectors, enterprises and the state to seek growth of profit and the economy, but also the ability to ensure the quality of life for specific social groups of the Lithuanian population.

The research conducted in Lithuania in the field of economy is focused on the securing of a fast economic growth, macroeconomic stability, achievement of the development and profitability of the banking and business sectors, whereas research of the social and economic development, the well-being and quality of life of the population was not given sufficient attention during the period of formation of the market economy. The well-being of life of the population was not a priority object of research in Lithuania. In part, this may be accounted for by the fact that at the beginning of market reforms, results in this field were modest, and the issues of the well-being and quality of life were just emerging, hence it seemed that no palpable object of research existed. However, almost two decades since the re-establishment of the Independence, a functioning market economy has been created in Lithuania with all the institutional foundations typical of it, Lithuania has acceded to the EU, has joined the WTO and NATO. All these events of importance to the country have essentially changed the standard and quality of life of the population, which has in turn laid down a ground for discussing and analysing this field.

The quality of life of the population may be claimed to be the most important and the main indicator of the efficiency of provided economic policy of government. Therefore, it is expedient to answer the questions of what constitutes the essence and content of the quality of life of the population, what is Lithuania’s ranking according to indicators of the quality of life among other world countries. On the basis of research of various authors and the attempts to define the essence and content of the quality of life, the author proposes a conceptual framework of the quality of life, generalised on the complex understanding: The quality of life is a concept which reflects the degree of satisfaction of demographic and health as well as healthy environment, material, cultural and spiritual needs, which is measured at the macrolevel (countrywide) and the microlevel (from a specific individual’s perspective). We underline that an analysis of the quality of life of the population must take into consideration a person’s need to realise his creative abilities, his potential and to express himself. We would also like to stress our understanding of the quality of life, which differs from a widely spread consumer approach based on the model of a person as a universal consumer. A person is not only a consumer of goods and services, but also a creator, not only of those goods and services, but also of his own life and personality. We offer a systemic concept of the quality of life (Figure 1). The quality of life of the population is an integrated notion which describes, in a comprehensive manner, the health and ecological, economic and material as well as spiritual development of society. The notion of the quality of life is particularly broad and all inclusive and it is difficult to define it not only by some single indicator, but also by a system of indicators. The more
intensive are the processes of internationalisation and
globalisation, the more complicated this notion is be-
coming. Each person can give his own meaningful
shade to the concept of the quality of life, though in
science the quality of life is a concept expressed in
and measured by specific indicators and relating to
the well-being of the population in a specific country.
In order to evaluate the status of the quality of life of
the population, one of the principal tasks is to create
a system of indicators of the quality of life.

Based on the systemic concept of the quality of life as
presented by the author, it becomes possible to evalu-
ate and measure the quality of life through creation
and use of a system of indicators of the quality of
life. The system of the indicators of the quality of life
consists of three main groups.

The first group of indicators of the quality of life
covers a person’s health indicators and demographic-
cs, namely, the average life expectancy, birth and
mortality rates, population reproduction indicators
(fertility rates, number of children), marital status,
extent of emigration of the population. It may also
include additional indicators such as sickness rates,
indicators of disability, family stability, number of
marriages, etc.

The second group of indicators includes indicators
of the standard of living of the population. Con-
sumption resources, as the result of production, are
the goods and services intended for consumption,
they are the source of the well-being of life consisting
of a consumption share of GDP (70-90 per cent of
GDP). The level and structure of real consumption
are determined by the degree of affordability of goods
and services for separate social groups and strata of
society, which in turn depends on the earnings and
level of income of the population, on income distri-
bution, also on savings, real property, etc. The quality
of life as the field of human activity which is associ-
ated with satisfaction of material and spiritual needs
deps on the level of development and growth of
a country’s economy and also has its own impact on
economic development by providing impetus for the
economic growth.

The third element showing the quality of life is the
system of indicators of education, culture, moral and
spiritual values.

Culture is among the main concepts not only of so-
ciety (sociology), but also of economics. Culture is
understood worldwide as an economic notion. No
morality can exist without culture. A poor morality
determines a “poor”, that is, inefficient, economy.
Firstly, an educated, highly-cultured and highly-
professional person possesses at his disposal qualita-
tive “unpalpable” resources, such as knowledge,
competence, intellect, expertise, high-level spiritual
and moral values, which are more important in a
knowledge-based economy than material resources;
secondly, such a person also creates a high-quality
product (e.g., innovations), ensures a better work
productivity, makes a larger contribution to GDP.
and creates a higher quality of life. A society's culture covers two types of elements – non-material, such as convictions, ideas and values, which constitute the content of a culture, and material, that is, objects or technologies, which materialise this cultural content. The basis of all cultures is made up of the ideas defining what is of importance for a society, what is valuable and desirable. These ideas are the values which provide a meaning and direction to people: “In which direction to live”, “What is the meaning of life”.

It is particularly difficult to express the third element of the quality of life by means of quantitative indicator, however, it is partially possible to accomplish this with the help of the material element of culture. The author would like to stress that when analysing the quality of life of the population, one may not ignore another element of high relevance, namely, gender equality. Much attention has recently been paid in the European Union Member States to gender equality, which is recognised as one of the most effective means of raising the quality of life of the population. An analysis from the gender perspective helps, on the one hand, to improve the efficiency of distribution of a state's expenditure and to achieve better macroeconomic results and, on the other, allows meeting the needs of specific groups of society in a better way, to improve the quality of their life. Nowadays the approach to gender problems is becoming an indicator of an individual’s and the whole country’s well-being, culture and civilisation.

The concept of the quality of life of the population and its systemic understanding (which means a possibility to measure this complex phenomenon and analyse on the basis of measurements) allow to shape for the future the outline of an efficient programme which would be focused on the overcoming of negative tendencies and positive transformation of the content of the quality of life of the country's population.

3. General Tendencies of Development of the Quality of Life of the Population of Lithuania

A system of the indicators describing the quality of life has permitted a complex determination of changes in the well-being and quality of life of the Lithuanian population during the period of functioning of the market and identification of the key positive and negative factors which influenced the quality of life of the population in 1990-2012. As changes in the main indicators describing the quality of life show, Lithuania has achieved good results in the field of the well-being of life, especially upon accession to the EU: GDP was rapidly growing, employment rates conformed to requirements of the Lisbon strategy, earnings, income and savings of the population were increasing, the loan volume was growing due to acceptable interest rates, increase in consumption and provision with housing, vehicles and personal computers was impressive, growth of consumption prices conformed to (and following accession to the EU slightly exceeded) the Maastricht criterion. However, in the context of the 2008 global crisis a breakdown occurred in the favourable tendencies of indicators of the quality of life: the country began to face the threat of growing unemployment, a decrease in earnings and income of the population, and also the danger of a fall in the level of consumption, which has a negative impact also on the prospects for the coming period of 2009-2012. In this context two separate periods of Lithuanian economy could be excluded – before (till 2008) and after crisis (till 2009). Different factors – positive as well as negative can be identified in these two periods.

The positive factors (till 2008) which have recently particularly promoted the growth of the quality of life of the Lithuanian population are the following: rapid economic growth; employment and decreasing unemployment rates; fast growth of earnings and income of the population; fast growth of savings of the population and bank loans; increase of consumption; growing of the real property market – housing construction, fast growth of construction of private houses.

The quality of life of the population in Lithuania has been negatively influenced by: worsening demographics and the growing extent of emigration; worsening indicators of population health; growing of social and economic inequality of population; increasing unemployment and emigration (especially still 2009); models of hypertrophied consumer behaviour and a decline of culture, moral and ethical as well as spiritual values.

Enrichment of the population (growing earnings, savings and consumption) does not necessarily guarantee the growth of the quality of life. It is possible to claim that opposite processes are taking place: material well-being is growing at the expense of the quality of life owing to a person's huge effort while working under the conditions of fierce competition.
and frequently even at several workplaces (which is still forbidden by our laws) as well as overtime at the expense of health. On the one hand, immense work effort in our poor country is simply a necessity, the only condition of earning and surviving, though, on the other, when material well-being and money become the sole goal prevailing over personality development, family values, and such a massive effort is directed solely towards profit making, a person’s personality is being destroyed, which results in a detrimental impact also on the country’s economy.

The negative tendencies of demographics are also a consequence of poor-quality life. Intensive work to achieve material well-being means that no time is left for rest, less care is taken of health, family creation is no longer a fundamental value. Young people are searching for a full life abroad, which aggravates the ageing of the country’s population and the relative mortality, because it is those who are the strongest and most capable of initiative-taking that emigrate. In this case, a different problem arises, namely, a dis-integrating family stability, because people become separated from their children, other family members.

Irrespective of the growth of all macroeconomic indicators, demographics fail to improve: the average life expectancy has shortened by 3 years, mortality rates are the highest since 1950 (the period when destroyed farms were been restored, the population was exhausted after the war, the required health care was not ensured). Surprisingly, in Lithuania, as opposed to the common tendency in the majority of countries worldwide, the life expectancy is decreasing in the presence of a rapidly growing economic welfare. There are many countries worldwide whose living conditions are considerably worse than those in Lithuania, however there is no deep depression in society to place any of the countries on the first place according to the number of committed suicides. Simply enough, other countries’ societies adhere to the norms and principles of morality which may not be violated under any circumstances, they preserve their eternal values.

3.1 Material Well-Being of the Population of Lithuania

During the period of Lithuania’s transition to market economy, in the years 1990–1996, a sharp decline in GDP was as high as 44%, in 1995, Lithuania’s economy started to slowly recover and continued to grow consistently after the recession caused by the economic crisis in Russia in 1999. Before accessing the EU, Lithuania was among the most dynamically developing countries in Europe and the world: in 2003, the GDP growth rate was 10.2% and in 2007-8.8%. The GDP growth rate slowed down significantly only at the end of 2008, influenced by the global economic crisis: the GDP was LTL 111.4 billion, and rose by 3.1% compared to 2007. In 2009, compared to 2008, the GDP decreased 14.8 %. Compared with other EU Member States based on this indicator, Lithuania is only ahead of Latvia, Poland, Romania and Bulgaria. But in 2012 real GDP increased 3.7 % and accounted LTL 113.75 billion.

Lithuania’s integration into the EU has expanded foreign market sales and created preconditions for recovery in foreign trade and growth in foreign investment, which helped to reduce economic and social disparities between Lithuania and more developed EU Members States. According to foreign experts, the new EU Member States are simultaneously trying to achieve two quite opposite goals – to catch up with the Western neighbours in terms of standards of living and to comply with the criteria for the introduction of the Euro. Lithuania, along with the other Baltic States, is still halfway reaching the average Western European standard of living.

Income of population. In recent years, with employment rates going up continuously (employment rate in Lithuania had been rising consistently: from 57.5% in 2001 to 62.0% in 2012) and unemployment rates falling down (the highest unemployment rate after the re-establishment of independence was registered in 2001 at 17.4% and the lowest in 2007 at 4.3%, but it increased till 17.8 % in 2010 through the crisis, there was respectively a significant increase in salaries in 2007 – 20.5 %) (Table1). During the years 2000–2008, the average monthly earnings increased almost three-fold and in 2008 reached LTL 2174. The growth of salaries accelerated after the accession to the EU, reaching 17-20% per year. However the main decline of income of the population was in 2009 – in time of the crisis and consists – 7.8 %.

Long term changes in the quality of life of lithuanian population: 20 years in the market economy

Ona Gražina Rakauskienė

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As evidenced by the changes in the income of the population of Lithuania, after the re-establishment of independence, the income was growing consistently and in 2000-2008, the disposable income per capita increased almost three times and amounted to LTL 1133.2 per month. It was recorded income growth in 2008. In 2012, the average disposable income of the population was LTL 997.3 per household member per month, and was brought down to the level recorded in 2007 before the crisis. The main reason of income decrease was the growing unemployment rate in Lithuania in time of crisis, which continuously remains high – 13.4 % in 2012. Measuring well-being of the population in a consumer society reveals certain paradoxes: increasing life satisfaction is not directly proportionate to growing income, i.e. material well-being by itself does not make a person happy (R. Veenhoven 2008, 2013). The needs of the population and their attitudes in most cases also depend on a country's history, economic development, level of education and culture. It has to be noted that the importance of income for individual well-being varies depending on a person's marital status or his personal health: same income may represent a totally different level of well-being to different people.

**Social and economic inequality.** Lithuania’s pursuit of macroeconomic stability indicators is impeded by unjustified distribution and polarisation of income of the population and social and economic inequality. It is obvious that growing polarisation of society, where there is no middle class or it is very small, is a particular cause of crisis in Lithuania and requires attention from the state, as it promotes social tension and cataclysms in society, such as social threats and emigration and may hinder the development of the economy at large. In 2011 Lithuanian integrated index of income and consumption distribution was the highest in EU (0.96), which indicates the highest social and economic inequality (Figure 2).

Global experience points to the fact that income inequality (decile coefficient Kd=10) threatens the macroeconomic stability of the country. Today this limit has been overstepped in Lithuania. Excessive differentiation of income in Lithuania (with the decile coefficient of income differentiation being Kd=12-14) is one of the country’s most urgent problems and not a single long-term strategy and medium-term programme can be implemented without first resolving the problem. Lithuania should implement the European economic model of well-being which, based on the best global practice but also taking account of Lithuanian history and national mentality, and its natural, social and economic conditions, peculiarities and specific features, would not only allow for stabilisation of the economy at present but would also allow for getting back on track to rapid and long-term economic growth.

### Table 1. Earnings and income of the Lithuanian population

<table>
<thead>
<tr>
<th>Year</th>
<th>Average monthly earnings (LTL)</th>
<th>Change in the average monthly salary (%)</th>
<th>Income (per household member on average per month, LTL)</th>
<th>Change in the income per household member (%)</th>
<th>Unemployment rate (%)</th>
<th>Employment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>980.8</td>
<td>0.5</td>
<td>415.4</td>
<td>-</td>
<td>11.5</td>
<td>54.3</td>
</tr>
<tr>
<td>2001</td>
<td>982.3</td>
<td>1.2</td>
<td>409.9</td>
<td>-1.3</td>
<td>13.0</td>
<td>57.5</td>
</tr>
<tr>
<td>2002</td>
<td>1013.9</td>
<td>3.2</td>
<td>422.0</td>
<td>3.0</td>
<td>14.7</td>
<td>59.9</td>
</tr>
<tr>
<td>2003</td>
<td>1072.6</td>
<td>5.8</td>
<td>457.6</td>
<td>8.4</td>
<td>12.9</td>
<td>61.1</td>
</tr>
<tr>
<td>2004</td>
<td>1149.3</td>
<td>7.2</td>
<td>509.3</td>
<td>8.3</td>
<td>12.2</td>
<td>61.2</td>
</tr>
<tr>
<td>2005</td>
<td>1276.2</td>
<td>11.0</td>
<td>601.1</td>
<td>16.9</td>
<td>11.8</td>
<td>62.6</td>
</tr>
<tr>
<td>2006</td>
<td>1495.7</td>
<td>17.2</td>
<td>767.3</td>
<td>17.4</td>
<td>8.3</td>
<td>63.6</td>
</tr>
<tr>
<td>2007</td>
<td>1802.4</td>
<td>20.5</td>
<td>952.1</td>
<td>26.2</td>
<td>5.4</td>
<td>64.9</td>
</tr>
<tr>
<td>2008</td>
<td>2174.1</td>
<td>17.1</td>
<td>1 133.2</td>
<td>14.9</td>
<td>5.8</td>
<td>65.0</td>
</tr>
<tr>
<td>2009</td>
<td>2 056.0</td>
<td>-7.8</td>
<td>983.5</td>
<td>-13.2</td>
<td>13.8</td>
<td>60.1</td>
</tr>
<tr>
<td>2010</td>
<td>1 988.1</td>
<td>-2.3</td>
<td>894.2</td>
<td>-9.1</td>
<td>17.8</td>
<td>57.6</td>
</tr>
<tr>
<td>2011</td>
<td>2 045.9</td>
<td>1.0</td>
<td>1 016.5</td>
<td>13.7</td>
<td>15.4</td>
<td>60.2</td>
</tr>
<tr>
<td>2012</td>
<td>2123.8</td>
<td>3.8</td>
<td>997.3</td>
<td>-1.9</td>
<td>13.4</td>
<td>62.0</td>
</tr>
</tbody>
</table>

*Source: Eurostat (2014)*
Consumption. The team administrative economy of the Soviet period was only able to ensure basic needs. The concept of “deficit” goods and difficulties related to acquiring such goods was one key difference from Western markets and Western goods, in particular, were highly desirable. Z. Bauman states that one of the major differences between the communist regime and Western consumer capitalism was the lack of shopping opportunities. According to the scholar, the majority of modern society members perceive their personal freedom as consumer freedom, with all its acceptable and not quite acceptable attributes (Bauman 1988). Having freed the “dream” of free consumption, shopping also became an opportunity for people to demonstrate their purchasing power in exclusive boutiques and big shopping centres. In the same context, consumption in Lithuania has soared in recent years: in 2000, household consumption expenditure accounted for 64% of GDP and in 2008, it accounted for 67%. Average consumption expenditure per family member in 2008 increased almost twice, as compared to 2000, and amounted to LTL 749 per month, but in 2012 it decreased to 63% and consisted LTL 854.2 per month. A clear tendency throughout the period of market economy is the decreasing comparative weight of expenditure on foodstuffs (Table 2). When it comes to consumption, a clear breakthrough can be observed in Lithuania: at the beginning of market reforms in 1996 the expenditure on foodstuffs amounted to 55%, whereas in 2007 – only 33%, i.e. 1.7 times less, and in 2012 – 33.7%. However, in highly developed countries, e.g. the USA and the old EU Member States, the expenditure on foodstuffs accounts for 15-20%. Therefore, more than one-third of expenditure on foodstuffs in Lithuania indicates that the standards of living are still not very high, which is also evidenced by other indicators of consumption expenditure.

One positive sign is the growing expenditure on leisure and culture: from 3.8% in 2000 to 4.9% in 2012; on clothing and footwear: from 6.8% to 9.3% in 2007, but in 2012 there is only 6.6%; on home furnishing: from 4.5% to 5.8%, but 4.4 respectively; on healthcare from 4.8 to 5.9 in 2012; on transport: from 8.7% to 10.3%; on communications: from 4.2% to 5.5% in 2007 and 3.7 in 2012. However, by far the biggest part of the expenditure goes towards home upkeep (electricity, gas, heating, water and utilities), even though from 2000 to 2012, it has increased by 6 percentage points to 18.0% and it is the strongest blow to the standards of living of the population in Lithuania.

Lithuania stands out as a country with a high level of vehicle ownership (Figure 3). The number of individual cars over the period of market economy had been growing consistently and in 2011, the number of registered cars amounted to 1.6 million, i.e.
497 cars per 1000 population. To compare, in 2005, there was one car per one apartment and in 2011, the number increased to 1.5 or on average one car per two people. 25.7 thousand new cars were registered in 2007 (before crisis), i.e. 41% more than in 2006, this being the highest number in the Baltic States.

Table 2. Composition of household consumption expenditure (per cents)

<table>
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<tr>
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<tbody>
<tr>
<td>Foodstuffs</td>
<td>37.7</td>
<td>35.7</td>
<td>34.1</td>
<td>39.0</td>
<td>38.0</td>
<td>36.6</td>
<td>33.7</td>
<td>33.1</td>
<td>34.8</td>
<td>33.7</td>
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<tr>
<td>Alcoholic beverages</td>
<td>2.6</td>
<td>2.5</td>
<td>2.3</td>
<td>2.2</td>
<td>3.9</td>
<td>2.4</td>
<td>2.5</td>
<td>2.5</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Tobacco products</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.5</td>
<td>1.5</td>
<td>1.4</td>
<td>1.2</td>
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<td>Clothing and footwear</td>
<td>7.5</td>
<td>7.2</td>
<td>7.0</td>
<td>7.8</td>
<td>8.1</td>
<td>8.6</td>
<td>8.8</td>
<td>9.2</td>
<td>8.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Housing, water, electricity, gas, other fuel</td>
<td>15.6</td>
<td>15.8</td>
<td>16.2</td>
<td>12.6</td>
<td>12.2</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>12.6</td>
<td>18.0</td>
</tr>
<tr>
<td>Home furnishing</td>
<td>4.5</td>
<td>5.6</td>
<td>5.2</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>5.5</td>
<td>5.8</td>
<td>5.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Healthcare</td>
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<td>5.0</td>
<td>5.3</td>
<td>4.2</td>
<td>4.5</td>
<td>5.1</td>
<td>5.0</td>
<td>4.8</td>
<td>4.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Transport</td>
<td>8.7</td>
<td>8.3</td>
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<td>9.6</td>
<td>10.0</td>
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<td>10.3</td>
</tr>
<tr>
<td>Communications</td>
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<td>6.0</td>
<td>5.9</td>
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<td>5.0</td>
<td>4.9</td>
<td>4.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Leisure and Culture</td>
<td>4.1</td>
<td>4.3</td>
<td>4.6</td>
<td>5.0</td>
<td>5.1</td>
<td>4.7</td>
<td>5.2</td>
<td>5.5</td>
<td>4.8</td>
<td>4.9</td>
</tr>
<tr>
<td>Education</td>
<td>0.7</td>
<td>0.8</td>
<td>0.7</td>
<td>0.9</td>
<td>1.0</td>
<td>1.2</td>
<td>0.9</td>
<td>0.8</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Hotels, cafes, restaurants</td>
<td>4.5</td>
<td>4.4</td>
<td>4.8</td>
<td>4.5</td>
<td>4.3</td>
<td>5.0</td>
<td>4.8</td>
<td>5.2</td>
<td>5.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Various goods and services</td>
<td>3.2</td>
<td>3.7</td>
<td>4.0</td>
<td>4.9</td>
<td>5.1</td>
<td>4.6</td>
<td>4.9</td>
<td>4.7</td>
<td>5.0</td>
<td>5.0</td>
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<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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Source: Eurostat (2014)

Recently there has also been an increase in the ownership of information and communication technology (ICT) tools: computers and Internet access are spreading in households (Figure 4). According to the household study, 48% of households had personal computers in 2008, of which 54% in urban areas and 34% in rural areas. 47% of all households used the Internet at home in 2008. Internet access was available at 53% of homes in urban areas and one in three households in rural areas (33%).

Fig.3. Number of individual cars per 1000 population

Source: Eurostat (2014)
**Home ownership.** Seeking better quality of life in Lithuania has recently been developing according to a clearly European model. So it is only natural that price differentiation is becoming the main tendency on the real estate market, based on home and residential area quality valuation. All the market participants, both buyers and sellers, are returning to the traditional aspects of home valuation: location, natural surrounding, fast connection possibilities, architectural solutions and building materials used to build the home, family-friendly environment with local amenities etc.

There is a transition from quantity to quality. During the rapid economic growth in Lithuania in recent years the society has fulfilled its basic needs and acquired extensive experience by observing the level of quality of life in European countries. The new perception of quality as well as new opportunities prompted many people to “migrate” from apartment blocks to new homes. An increase in the share of the newly developed property up to 10% of the Lithuanian housing fund over the last four years proves the tendency. Quality of life in terms of housing for most people means the freedom to choose a home that would enable to lead a chosen way of life. New property development industry has been constantly growing in Lithuania since 2001. Favourable mortgage conditions and the natural need of people to create well-being by owning real estate determined strong demand for newly developed properties. Lithuania is the leader among the Baltic States in terms of the number of new homes. Living premises in individual houses amounted to 46%. At the end of 2011, the housing fund consisted of 1 305.1 thousand apartments, i.e. 388 apartments per 1000 population. The average size of an apartment was 62.1 m², 58.2 m² – in urban areas and 70.1 m² – in rural areas. There was on average 26.1 m² of residential useful floor space per capita (Figure 5), 23.2 m² – in urban areas and 27.8 m² – in rural areas. All the above figures point to a relatively high level of well-being.

In the last 50 years the proportion between urban and rural population has changed significantly. Lithuania is no longer a rural country – two-thirds of its population now live in cities. When assessing living conditions in urban and rural areas of Lithuania (employment, home amenities, availability of resources, education opportunities and access to cultural activities), moving to cities is considered to be a positive tendency, however, migration from rural to urban areas should not be encouraged. Living conditions in rural areas should be improved instead, with emphasis on creating healthy, beautiful and comfortable environment for living. The development tendencies of material well-being reveal a visible growth in the standards of living of the population in Lithuania. Lithuania’s accession to the EU was a prerequisite for positive changes in terms of well-being of the population, however, at the same time, ensuring the compliance with the Maastricht criteria, i.e. curbing the
inflation and budget deficit within the allowed limits, is in a way limiting the possibilities of growth of the standards of living.

![Fig. 5](image)

**Fig. 5.** Living space per capita (m²)

*Source: Eurostat (2014)*

### 3.2 Demographics and Health of the Population

#### Demographics.

After the re-establishment of independence, the demographic development of the population of Lithuania changed in essence. Since the beginning of the last decade, the changes in demographic processes such as: birth rate, death rate, family planning and migration have all been negative and resulted in the decreasing number of people, depopulation and rapid aging of the population. The population numbers started decreasing in 1992. At the beginning of 2012, the number of population of Lithuanian was 2.9 million people, that is 900 thousand less than 20 years ago. The number of population started to decrease primarily due to emigration, from 1994, due to natural turnover, i.e. due to mortality rates being higher than birth rates. In 1995, the natural increase reached a critical line, i.e. the birth rate became lower than what is required for the process of reproduction and it has been falling since then (Figure 6). The country is depopulating rapidly and the generation of children cannot replace the generation of parents.

The average expected lifespan of the population in Lithuania in 2011 dropped by 2.7 years for men and 0.7 years for women and was 64.9 and 77.2 respectively. During the last five decades, the proportion of people over 60 years of age of the total population increased by two-thirds: from 12% in 1959 to 20% in 2003, and the proportion of children under 14 years of age decreased by one-third (from 27% to 18%). At the moment, there are more people who are 60 years of age and older than children in Lithuania. However, Lithuania is still not in the top 20 of the demographically oldest countries in the world.
Periods of demographic development, when the age composition of the population changes rapidly (ages), require timely and well-considered adaptation actions in almost all spheres of life. The new ratio of young people to the elderly population forces to review and adapt to the new circumstances possibilities of participation in the labour market, social guarantees, social care services, health and ecology-related measures (environment, community infrastructure, communications etc.). If the State ignores the increasing number of the elderly and their special needs, it would put the well-being of this age group under threat.

3.3 Emigration

One of the main reasons of decreasing population in Lithuania is emigration, which grew significantly after Lithuania’s accession to the EU. According to the data of the Department of Statistics, about 500 thousand people left Lithuania declaring their departure in 1990-2012 (Figure 7). This number is doubled by the number of people who left without declaring their departure because only one out of two or one out of three people declare their departure when emigrating. After the crisis in 2008, the biggest flow of emigrants was fixed in 2010 – more then 83 thousand people abandoned Lithuania. Considering the number of population, Lithuania was leading in terms of emigration rates in the EU. The research data show that among those leaving the country are mostly young, well-educated, proactive and efficient people as well as young families. The conclusions of the research state that the main reason for emigration is work: almost 70 % of emigrants are leaving in search of work, 8 % of people leave to join family members who left earlier or after having married a foreigner, 13 % of people go to study (it has to be noted that the number of people studying abroad is constantly growing and in 2001-2012, increased from 4% to 13%).
It is commonly thought that emigration is determined by predominantly economic factors: differences in salaries and standards of living in Lithuania and foreign countries. However, this idea must be questioned. Economic reasons for emigration are overestimated. The amount of earnings is not the only criterion determining people’s choices on the labour market (to work or not to work, in Lithuania or abroad) also because each year more investment goes into creating comfortable and safe working environment. The quality of workplace also covers such aspects as professional development opportunities, possibilities of putting to use the acquired knowledge and skills, creating added value, having healthy and safe working environment and ensuring good income. According to the survey of people in employment, only 68% of them are content with their workplace (in old EU Member States – 85%). Emigration is largely a response to poor quality of workplaces. Therefore, the reasons for emigration from Lithuania are social rather than economic.

According data of the Department of Statistics in 2012 there will be only 2.9 million people living in Lithuania (comparing with 1989, it was 3.8 mln. citizens in Lithuania) i.e. the population was decrease by 24 %. This was, for the first, result of decreasing of unemployment rate and emigration from Lithuania, and after that affected the labour market with a decreasing supply of workforce and the number of working-age population, it became increasingly difficult to maintain health and social security systems, which are financed from tax payers money. At the same time, the need for such services will grow with an increasing number of the ageing population.

4. Decline of Culture, Moral and Spiritual Values

Unlike the economy and standards of living, where over the 20 years of its independence Lithuania has made significant improvements, quite a lot ambiguity can be encountered in terms of culture and the system of moral, ethical and spiritual values. The total propaganda of the material and financial aspect in the official doctrine of global economy in the 20th-21st centuries has triggered a sharp decline in terms of culture and moral, ethical and spiritual values across the world. It became obvious that models of absolutization of private capital are incompatible with ideas of social justice, destroy traditional principles of ethics and morals, turn a human being into a money slave and degrade personality. All of the above became evident also in Lithuania.

A dysfunctional system of values manifests itself through the loss of self-identification of an individual, the crisis of the institution of family, devaluation...
of education, professional skills and culture. The acceptable moral values scatter in the consciousness of an individual and society causing diffusion, i.e. the line between the good and the bad disappears. Individual pragmatism, cynicism and seeking self-benefit all become widespread as consumption becomes the ultimate goal of life, leaving aside professional growth as well as inner spiritual development. The cult of brutality and violence is spreading among the young population; aggression is viewed as something valued, which helps to numb the feelings of compassion. Kindness, humanity, decency, intelligence, mutual assistance as values all decline and lose their significance. Under such circumstances, a young person becomes disorientated, finds it difficult to understand the meaning of life and to choose his way – “the direction in life”.

Psychologists, sociologists and church representatives all state that negative moral and ethical principles have grown stronger in all layers of society thus influencing the behaviour of the entire society as well as behaviour in the family. The main reason for growing depression, alcohol and drug addictions, increasing crime and suicide rates in Lithuania is spiritual emptiness, loss of the meaning of life and obscure moral and ethical values. This is the price for the absolutization of consumer ideology, cult of material success and loss of high ideals of humanity.

Without culture, there are no morals in society. Without culture, there are no highly qualified professionals. Moral values are an important criterion regulating the economy and politics. Without the basic moral principles, economic and social laws fail, instructions are not carried out and education, science and arts cannot exist. Low level of culture and morals determines the growth of criminality, dooms any positive efforts in economy, social life and politics.

**Culture.** The statistical data from the period of 1970-2012, indicating dramatic cultural changes, confirm the revolution in the system of values of the population that took place over the period of market economy. Over the 20 years of market economy in Lithuania, the number of people attending theatres and concerts has dropped by 75% (Figure 8). In 2000, there were 71 listeners per 1000 population, as opposed to 44 per 1000 population in 2011. According to the culture indicator, Lithuania’s situation is quite difficult, compared to the rest of Europe, Lithuania is third from the bottom among EU countries (Figure 9). Although, based on the proportion of people working in the sphere of culture Lithuania almost meets the EU average, (EU – 2.4%, Lithuania – 2.5%), for instance theatre attendance indicators are among the lowest in the Baltic States: there are 748 theatregoers per 1000 population in Estonia, 378 – in Latvia and only 212 – in Lithuania.

![Fig.8. Culture indicators: visiting theatre, concerts thousand (day average)](source: Eurostat (2014))
Reading to a cultured person is both the need and pleasure as it is a way to expand his knowledge, making use of the wisdom experienced, analysed and conveyed by others. Reading, which improves the level of education, is also used as a method of improving quality of life. The number of library subscribers has dropped significantly in recent years and has reached the lowest level within the last 50 years. Obviously, this may be related to the fact that nowadays there are more opportunities to find the necessary information and read books on the Internet using virtual libraries. However, an assumption can still be made that the demand for literature has decreased. According to our research data, as much as 33.6% of the population of Lithuania in the age group of 25-64 do not read fiction, 40.6% of the population only read 1-3 books per year. It follows that spiritual growth and improving the education level through reading is only part of the system of values of one in four people in Lithuania.

Museum attendance, however, has gone up by 48.7% in 2007 as compared to 1995. Although this positive indicator has to be attributed first of all to the increased number of foreign tourists, when compared to the other Baltic States, Lithuania’s indicators are well behind: Estonia has 1530 museum-goers per 1000 population, Latvia- 1056 and Lithuania- 925. Lithuania is also leading by the number of publications: books, magazines and newspapers. Among the most popular fiction published in Lithuania is American literature (amounts to 11.3% and ranks second after Lithuanian literature; Lithuanian literature accounts for 47.8% of all the fiction published).

Nowadays there is a lot of talk about the decline in spirituality in the world. So the lack of spirituality is not specific to Lithuania alone but characteristic of the whole world. Devaluation of the role of spiritual culture, no interest taken in high culture and shortage of basic knowledge and basic professional skills— all this is an indication of the lack of spirituality and spiritual poverty. Spiritual life has been substituted with an outward civilisation. Technology and comfort, linked to civilisation, and growing consumption may eliminate spiritual life from people’s activities but cannot replace it. Spiritual emptiness encourages aggression, which becomes more evident in our lives. Aggressive culture forms (TV, the media, mass events, concerts, sports, entertainment), simplified conceptions of life fill people’s lives with aggression, which is dominant in all spheres of economic, social and political life. How do we fight against it, by what means?

The only way is to defeat this aggression with culture. Culture is not aggressive, what is aggressive is semi-
culture, lack of it. The real communication culture, knowledge culture, reading culture, economic, social and political interest culture and business culture are not aggressive; on the contrary, they encourage communication, cooperation and partnership. The author is deeply convinced that it is the culture of a country that determines economy and politics. A low level of culture and morals will result in ineffective economy and economic policy. A decline in the sphere of humanities (e.g. literature, arts, music) will have an inevitable effect on the economy. Therefore, it is essential to re-establish moral, ethical and spiritual values invoking culture. The key tasks in this area should be nurturing patriotic feelings—serving the homeland, sense of responsibility, spirituality and intelligence, all based on culture.

Lithuania has yet to develop a comprehensive conception of cultural development. Culture is often perceived as a very narrow circle of phenomena: theatre, museums, music, literature and occasionally show business. Whereas culture is an enormous, uniform phenomenon that turns people living in a certain area into a nation. The concept of culture encompasses belief, science and education, ethical and moral norms of human and political behaviour. For the real high culture to exist and develop, it is necessary to have a high level of culture awareness, cultural environment that encompasses not only national but also global cultural values. What we need is eternal values, classical arts and everything that exists in our culture eternally. Real beauty is eternal. Beauty in architecture, music, poetry, sculpture is eternal. And just like beauty, morals are eternal too—the moral commands: not to kill, not to steal, not to lie and to respect one’s parents and ancestors’ traditions. The relation between beauty and morals is unquestionable. Spirituality is the key to morals. Classical principles are the propelling force of education. It is alternatively opposite to mass culture and its vulgar manifestations.

![Table](http://example.com/table.png)

**Fig.10.** Subjective evaluation of how did life satisfaction of Lithuanian population/quality of life change during the recent 20 years?

*Source: Rakauskiene, Servertiene (2011); N=1002*

**Subjective evaluation of the quality of life of population.** The attention should be paid to the subjective evaluation on how satisfaction of quality of life of Lithuanian population has changed during the past 20 year’s of market economy. The results are quite pessimistic – as the survey revealed, 74% of the population has indicated that their life satisfaction has decreased within past 20 year period. The highlighted negative reasons, such as unemployment, mass scale emigration, unprecedented social and economic inequality, and decline of culture, moral, ethical and spiritual values have influenced the satisfaction of life of Lithuanian population. However, even more emphasis was paid to the factors, which had the severe impact on the quality of life decrease, was unprofessional, unqualified and ineffective social and economic policy provided by Lithuania’s government institutions.

**Conclusions**

The quality of life of the population is an integrated concept offering a comprehensive description of the
health, ecological, economic, material as well as spiritual development of society. The quality of life of the population is also the main indicator of the efficiency of a country's economic government. The author offers a systemic concept of the quality of life which enables to evaluate and measure the quality of life by means of a system of indicators of the quality of life. The totality of the indicators of the quality of life consists of three main groups: 1) a person's health and demographics, 2) indicators of the standard of living of the population, 3) indicators of education, culture, moral and spiritual values.

The system of the indicators describing the quality of life has enabled a complex determination of changes in the well-being and quality of life of the population of Lithuania over the period of functioning of the market and identification of the key positive and negative factors which affected the quality of life of the population during 2000-2012. The positive factors which have particularly enhanced the improvement of the quality of life of Lithuania's residents over the recent years include a rapid economic growth, increasing employment and decreasing unemployment rates, the fast growth of earnings and income of the population, the fast growth of personal savings and bank loans, increase of consumption, development of the real property market, that is, housing construction, rapidly growing construction of private houses. The negative impact on the quality of life of the population of Lithuania has been exercised by worsening demographics and the growing extent of emigration, worsening indicators of population health, rising of social and economic inequality, models of hyper-trophied consumer behaviour and a decline of culture, moral and ethical as well as spiritual values.

When assessing changes in indicators of the quality of life of the population of Lithuania over 1990-2012, the following patterns can be noticed. Firstly, macroeconomic indicators showed that upon the re-establishment of independence, Lithuania was making a rapid progress, meanwhile it was lagging behind according to social indicators; secondly, material economic indicators (earnings, income, savings and consumption) suggest that the well-being of life of the population was improving, however demographics and health indicators were worsening, whereas the system of culture, moral and ethical values exhibited an evident decline. Therefore, material well-being in Lithuania was improving at the expense of non-material indicators of the quality of life.

The statistical data from the period of 1990-2012 indicating dramatic cultural changes, confirm the decline in the system of values of the population that took place over the period of market economy. According to the authors, re-establishing the culture and system of spiritual values is the basis for economic efficiency in Lithuania. A low level of culture and morals will result in ineffective economy and economic policy. Therefore, one of the key goals of the present days, in order to achieve effective economy and sustainable economic growth, is re-establishing full-fledged high culture stressing not just material but fostering moral, ethical and spiritual values. The intellectual potential of a nation can develop and its economic efficiency and well-being increase only when the country has a solid cultural foundation.

References


SUSTAINABLE DEVELOPMENT OF LOGISTICS CLUSTERS
IN GREEN TRANSPORT CORRIDORS

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Abstract. In the White Paper on Transport 2011 the European Commission stressed the concept of green transport corridors, i.e. transshipment routes with concentration of freight traffic between major hubs and by relatively long distances of transport marked by reduced environmental and climate impact while increasing safety and efficiency with application of sustainable logistics solutions. Green transport is based on inter-modality, powerful logistics hubs and advanced ICT-systems improving traffic management, increase efficiency and better integrate the logistics components of a corridor. Sustainable hub development along the transshipment routes of green corridors is one of the major tasks of green corridors in order to safeguard and meet the necessary corridor performance for the current and future transport demand. The main corridor hubs represent logistics clusters in the sense of Yossi Sheffi, comprising ports, logistics centers and other transshipment nodes. The paper will present results about the development of core logistics clusters representing hubs in green transport corridors and it will indicate actions for hub development with a future-oriented compilation of sustainable development measures of infrastructural, legal or organizational nature. Since the author took part in some important green transport corridor initiatives around the Baltic Sea, including "East-West Transport Corridor (EWTC II)" initiative, representing the first European project which delivered a green corridor manual formulating recommendations and requirements of green transport corridors to European level, some case studies from EWTC project will be discussed.

Keywords: sustainability, logistics cluster, hub development, green transport corridors

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JEL Classifications: R110, D85, L9

1. Introduction

Regionally concentrated business activities, i.e. regional agglomerations of companies firms drawing economic advantages from their geographic proximity within the same industry, have been in the focus of economic research already for a long period (Marshall 1920; Peneder 1997; Porter 1998, 2000). Already Alfred Marshall (1920) hypothesized in his classic work “Principles of Economics” that the development of industrial complexes implies the existence of positive externalities of co-location based on three main forces, the knowledge sharing and spillover among the co-located firms, the development of specialized and efficient supplier base, and the development of local labour pools with specialized skills. Michael Porter (1998) provided a framework for cluster analysis by focusing on the competitive

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advantages and the increased innovation offered by clusters, due to affected competition through an increase of productivity of the collocated companies, an increase of innovation speed, and a stimulation of the formation of new businesses. Most of the studied clusters in academic literature are related to ICT, life science, automotive industry and other industrial clusters, but there exists nearly nothing about logistics clusters until Yossi Sheffi (2012) published his book.

In his understanding “logistics intensive clusters” are agglomerations of several types of firms and operations providing logistics services and logistics operations of industrial firms and operations of companies for whom logistics is a large part of their business. Such logistics clusters also include firms that provide services to logistics companies like maintenance operations, software providers, specialized law firms or international financial services providers (Sheffi 2013).

In order to promote and facilitate green and sustainable transportation the European Commission (EC) introduced the concept of Green Transport Corridors (GTC) in their Freight Transport Logistics Action Plan (FTLAP 2007) which was meant to “reflect an integrated transport concept where short sea shipping, rail, inland waterways and road complement each other to enable the choice of environmentally friendly transport”. The initial concept of GTC was only dedicated to the freight transportation so that the passenger transport was only considered as an external effect (road congestions, infrastructure improvements, etc.). In recent years, on European and also on national level an increasing number of initiatives have been started and realised to speed up the shift towards greener and more efficient freight logistic solutions in Europe. Important steps on EU level in this development process have been the Green Paper on TEN-T from 2009, as well as the TEN-T Policy Review 2011 and the EC White Paper on “A Sustainable Future of Transport” (COM 2011).

A green transport corridor can be seen as a network with a relative high number of nodes with relations to other nodes, usually called “hubs”. The transported cargo in the GTC is moved, or transhipped, from one hub to another by using different transport modes. All these activities require a sophisticated handling and time and cost oriented planning. Therefore, one of the main activities of green corridors is dedicated to the improvement and development of the underlying transshipment hubs and the removal of existing and future bottlenecks (Daduna et al. 2012).

Transshipment hubs differ in their portfolio of products and services depending on the geographical location and on their connection to different transport modes. At the same time transshipment hubs of GTC can be regarded as logistics clusters, or logistics intensive clusters in the sense of Sheffi (2013), where the focus on the cluster development of hubs in green transport corridors should be laid on the bi- or tri-modal combinations of different transport modes and, in an extended form, on the provision of services in the field of warehousing, distribution, and (logistics related) services (van der Lugt and DeLangen 2005; Grundey and Rimienė 2007; Jaržemskis 2007).

This paper focuses on the discussion of sustainable development the logistic clusters in the context of Green Transport Corridors. Different approaches to promote and measure the performance of logistics clusters are presented in the paper and the main research question is how the sustainable development targets of green transport corridors and their underlying hubs, or logistics clusters, can be expressed into a coherent strategic management system.

2. Theoretical frame

Simchi-Levy et al. (2003) defined the aim of supply chain management as a set of approaches utilized to efficient integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize system wide costs while satisfying service level requirement. That means that supply chain management touches the whole cross-company value chain including suppliers, manufactures, customers and disposal companies are involved in the supply chain activities. Green supply chain management is the concept of SCM extended by adding sustainability, i.e. integrating environment thinking, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers, and end-of-life management of the product after its useful life (Shrivastava 2007). By following Adams (2006) we state more precisely that the core of mainstream sustainability thinking has
become the idea of three dimensions, environmental, social and economic sustainability. There exists interdependency between conventional supply chain management and eco-programs (Sarkis 2001). This includes the approach on how ecological aspects can be considered in the whole business processes in the most effectively way. Hervani et al. (2005) proposed that green supply chain management practices which include green purchasing, green manufacturing, materials management, green distribution/marketing and reverse logistics. Therefore, it can be assumed that the involvement of green aspects in the supply chain of a company also involves changes in the supply chain itself. Of course, this will then also have an impact on the cooperative alliances with suppliers, manufacturers and the customer at the end of the logistics chain but green supply chain management can lead to better performance in terms of indicators such as environmental protection, efficient usage of resources and even to additional turnover due to a green company image (Hunke and Prause 2014).

The concept of green transport corridors of European Union stresses that it will “reflect an integrated transport concept where short sea shipping, rail, inland waterways and road complement each other to enable the choice of environmentally friendly transport”. Already the Freight Transport Logistics Action Plan (2007) specified further that the concept of transport corridors is marked by a concentration of freight traffic between major hubs and by relatively long distances of transport, that along these corridors industry will be encouraged to rely on co-modality and on advanced technology in order to accommodate rising traffic volumes while promoting environmental sustainability and energy efficiency, i.e. green transport corridors can be regarded as the platform for medium and long range freight transport and the frame for European green supply chains which are running fully or partly within the corridor.

Since such a transport corridor is realised by a conglomeration of different public and private stakeholders who act along a defined geographical area in order to achieve different goals but with the same objective to reduce costs, increase efficiency, minimize environmental impact and create sustainable logistics solutions. The interactions among actors along the supply chains of big manufacturers suggests that a network perspective may better explain the emergence of collaborative practices and integrative behaviours in logistics in general and supply chain management from organisation's point of view (Lee 2005). The network-based view of supply chains recognizes that the interactions between organisations in a supply chain are rarely as sequential as a chain structure would suggest (Bovel and Martha 2000). As a whole, studies acknowledge the importance of a network structure for the effective diffusion of supply chain-related practices (Roy et al. 2006), as well as for efficiency and flexibility of the responses of the supply chain to customer expectations (Wathne and Heide 2004).

From Port-hinterland container logistics fundamental concepts are well known featuring physical and information flows among actors and nodes operating in port-hinterland networks in order to organise powerful and efficient container distribution systems (Rodrige and Nottebaum 2009). The stakeholders act in those network in a coherent sense and are located in a certain geographical area but the geographical logistics chains are usually shapes rather like trees. The concept of a transport corridor is more restrained where the physical logistics flows are connecting the main hubs in shape of a tubular transport system leading to the perception of a transport corridor as a tubular logistics cluster (Hunke and Prause 2013; Prause and Hunke 2014b). Due to natural reasons transport and logistics activities have often close relations to cluster and networking activities. Transport corridor can be seen as a scale free network. It started from dyadic relationships between two stakeholders and grew to a broader network. Specific characteristics of scale-free networks vary with the theories and analytical tools used to create them, however, in general, scale-free networks have some common characteristics. One notable characteristic is the relative high number of nodes with relations to other nodes which greatly exceeds the average. The nodes, hubs or transhipment hubs, may serve specific purposes in their networks. It turns out that the major hubs are closely followed by smaller ones. These ones, in turn, are followed by other nodes with an even smaller number of degrees and so on (Prause and Hunke 2014b).

Transhipment hubs, logistics clusters or logistics intensive clusters can be defined and classified in terms of their transport functions and their underlying maritime and terrestrial facilities (Daduna et al. 2012):
1) Sea port container terminals (SCT) with international hub function and multimodal linkages (Notteboom 2008; Roso et al. 2009; Rodrigue and Notteboom 2010; Daduna 2011), within trunk and feeder networks for short sea shipping.

2) Regional and local SCT in the transport corridor with a normally restricted hinterland which constitute the predominant form, e.g. in the Baltic Sea Region.

3) Inland ports with regional and local function and, if applicable, connection to the River-Sea Shipping.

4) Hinterland terminals with supra-regional function (e.g. in the form of Mega-Hubs with the focus on rail / rail transhipment) (Alicke 2002; Rodrigue 2008; Limbourg and Jourquin 2009; Daduna 2011).

5) Regional and local transshipment terminals with (bi- or multimodal) cargo transport, especially taking into account the access to railway freight transport.

These logistics clusters enjoy the same advantages that general industrial clusters, i.e. the increase of productivity due to shared resources and availability of suppliers, improved human networks, including knowledge sharing, tacit communications and understanding, high trust level among companies in the cluster, availability of specialized labour pool as well as educational and training facilities, and knowledge creation centres, such as universities, consulting firms, and think tanks (Sheffi 2013). But Sheffi (2012) also pointed out that logistics clusters show characteristics which make them unique in terms of cluster formation and their contribution to economic growth. Logistics operations may locate in a logistics cluster due to the cluster’s role in supporting economies of scope as well as economies of density. Furthermore they provide spill-over capacity for warehousing and transportation; and the ability to cooperate between providers when dealing with demand fluctuations. Logistics clusters also provide a range of employment opportunities in transportation, ICT and other professional jobs, and they diversify the economic basis since they support other industries. Logistics clusters also bear the possibility for improved flexibility by using cooperative slack for all kind of resources including work force (DeLangen 2004; Sydow and Möllering 2013). Logistics clusters, acting as hubs within green transport corridors, also play a crucial role for modal shift from road transport to other modes. According to the White Paper, the demand in road transport has been constantly increasing over the last 20 years, against a steady decrease in rail freight transport. This considered the most important goals of a hub are to: bring together the flow of the freight transport managed by the transport and logistics operators; and to offer very convenient transport and synergic solutions (rail/road/short-sea-shipping) using for instance block shuttle trains on long-range journeys (Euro-platforms EEIG 2004).

3. Sustainable cluster development

Clusters and cluster development are widely discussed in academic literature because they allow companies to be more productive and innovative than they could be in isolation and due to low entry barriers for new businesses compared to other locations. Many studies have been realised, analysing different aspects of governance, structure, competitiveness and other issues. Van der Linde (2003) revealed that beyond the diamond approach of Porter, based on factor and demand conditions, additional determinants like the type their emergence, management, financing, related and supporting industries as well as different concepts for strategy and rivalry have an impact on the competitiveness and success of clusters and their development. Of special interest for network and cluster building are “soft factors”, like language skills, regional innovation and trust level. There exists a general North – South and West – East down slope within Europe so that the soft factors have been investigated in several studies for Eastern Europe due to an observed weakness in network and cluster in this area (Wölf and Ragnitz 2001; Prause 2010a, b). These studies revealed that knowledge spill-over effects inside the cluster have been regarded as relatively unimportant by the Eastern European managers of the cluster companies. The perception of the interviewed managers was more focused on operational topics like cheap labour and land prices than on strategic soft topics like innovation, cooperation and networking. As a result the authors proposed that initiatives for establishing networks and clusters should rather on the development of soft factors than on pure investments in hard infrastructure. So the underestimation of the soft dimensions is indicating a strategic weakness of the cluster and a threat for the future networking activities and cluster development (Prause 2010a).

These results are in line with the outcomes of the European logistics project “LogOn Baltic” which took place between 2005 -2007 in the Baltic Sea Region.
The project was based on different empiric types of studies and Kersten et al. (2007) described in the final project report big differences in the level of the regional networking activities around the BSR and the development of cluster structures in the logistical sector were remarkably underdeveloped, especially in the regions located beyond the Berlin Wall. The project revealed a lack of regional offers for logistics services in Central-Eastern and Eastern Europe and this structural weakness was linked with a general lack in language skills and intercultural experience, i.e. a lack of “soft factors”, of the people in the logistics sector.

For Central – Eastern Europe the emergence of new founded clusters is of special importance since most of the traditional clusters collapsed after the fall of the Berlin Wall and huge efforts have been made to establish new clusters. Meier zu Köcker (2008) studied about 100 German initiatives of cluster emergence together with their framework conditions and tried to analyse the long-term impact of special parameters on the cluster performance. His results revealed that crucial parameters for sustainability of cluster initiatives are the clusters organisation and its management, the financing, the quality of cooperation, the level of collaborative R&D development and degree of internationalisation. So the sustainability of the network and cluster development heavily depends on “soft factors”, which are part of the regional socio-economic business environment.

4. The Performance of Logistics Cluster
There are a large variety of possible factors influencing the performance of clusters. Furthermore, the performance of companies inside a cluster can only be understood when their integration is taken into account. The most complete measure for the performance of clusters is the value added generated in the cluster. The value added generated in the cluster is the sum of the value added generated by the members of the population. In practice, the measurement of the performance of clusters is a very complicated task because the necessary data for the analysis of the various variables influencing the performance of a cluster are not available.

In his PhD thesis Peter DeLangen (2004) developed a framework for the assessment of the performance of seaport clusters and considered a set of variables influencing the performance of a seaport cluster. He proposed eight variables describing the cluster performance where four variables were dedicated to the cluster structure and another four variables for the cluster governance. Whereas the cluster structures depict mainly the “hard” infrastructure of the seaport cluster, the cluster governance is oriented more on the “soft factors” of the cluster.

Table 1. Performance areas of sea port cluster

<table>
<thead>
<tr>
<th>Cluster Structure</th>
<th>Cluster Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomeration economies</td>
<td>The presence of trust</td>
</tr>
<tr>
<td>Internal competition</td>
<td>The presence of intermediaries</td>
</tr>
<tr>
<td>Cluster barriers</td>
<td>The presence of leader firms</td>
</tr>
<tr>
<td>Cluster heterogeneity</td>
<td>Quality of collective action regimes</td>
</tr>
</tbody>
</table>

Source: DeLangen (2004)

Peter DeLangen tested his analytical framework in an empirical part assessing the seaport clusters of Rotterdam, Durban and the Lower Mississippi Port Cluster (DeLangen 2004). As a consequence, he was able to provide a basis for an assessment of strengths and weaknesses of the structure of the considered seaport clusters and derived from their strengths and weaknesses recommendations for improving the performance of these clusters. A case study according to the analytical framework of DeLangen in the Eastern German Seaport Cluster of Rostock revealed that the intensity of integration of the different service providers into the seaport cluster, representing a logistics cluster in the sense of Sheffi (2013), differed heavily. Characteristics of the seaport cluster in Rostock are the absence of a strong cluster management, a focus on hard infrastructural investments of the available financial means and only a weak link to innovation and qualification institutions. As strength of the logistics cluster have been mentioned the available working power, the high transportation volumes and the low land prices are revealing an emphasis on operating topics in the perception of the cluster companies. When it comes to the weaknesses inside the cluster, the low level of trust was mainly mentioned pointing out again a strategic problem for the future cluster development. But not only level of trust inside the cluster was very low, also the importance of trust for the cluster development was regarded as low by the cluster companies (Biebig and Prause 2007;
Prause and Hunke 2014a).
In comparison a case study of the Western German Hamburg logistics initiative, managing and coordination institution for the Hamburg logistics cluster, with more than 5,000 classical logistics companies and approximately 150,000 employees in the logistics sector proved over the last 10 years a sustainable cluster development around Hamburg seaport. Sustainable financing with a focus on the improvement of the level of cooperation, innovation and qualification, i.e., financial investments into soft factors of the logistics cluster, and strong level of networking and cooperation among the stakeholders, high level of internationalisation, a strong cluster management together with a higher level of trust, compared to the Eastern German Rostock region, were responsible for the generation of more than 10,000 new jobs and an average annual economic growth of about 3% in the logistics cluster (Prause and Hunke 2014a).

Hunke and Prause (2012) illustrated in another case study within the EWTC2 project how cooperation generates synergies in the context of logistics hubs. Since bottlenecks in the infrastructure hinder sustainable hub development the Danish owner of Fredericia port and the ports of Middelfart and Nyborg, ADP A/S (Associated Danish Ports), invested approx. DKK 400 million in the port areas from 2000 to 2010 in order to port infrastructure. The cooperation of the mentioned ports around Fredericia is one of the best examples of cooperation between ports in Denmark. Operating as one company allows port officials to effectively move equipment (e.g., cranes) and personal to ports where there is demand. This contributes to an effective and efficient operation and realizes ultimate synergy effects. Furthermore, this approach bears the possibility for the administration to diversify the various ports. For example, the Port of Nyborg is being developed to be an important hub for the shipping of windmill blades to points east of Denmark so that the other two ports are able to focus on other industries and products. There are also benefits for clients, whose needs could be better fulfilled by tailor-made offers, with access to three different harbour areas and their infrastructure. The administration and promotion of the ports are also done centrally, which minimizes the costs, something that can be a high burden, especially for smaller ports. Finally, having three harbours in close proximity of each other also gives port of-ficials the chance to re-direct ships to the other ports, if one is fully booked. This could save shippers time and money. All three presented case studies, which are all related to the performance of logistics clusters, underpin the importance of “soft factors” for sustainable cluster development and stress the impact of the variables, linked to the cluster governance in the model of DeLangen, on the long-term success of logistics clusters.

5. Controlling of logistics clusters and green corridors

Since logistics cluster represent hubs in green corridors the issue of monitoring and controlling the performance of those logistics clusters have to be compatible with monitoring and controlling concepts for Green Transport Corridor. The author participated in the European funded project East-West-Transport Corridor (EWTC) under the Baltic Sea Region Programme 2007-2013, where for the first time a “Green Corridor Manual” based on the green EWTC was developed trying to give a holistic and consistent monitoring concept for multi-modal sustainable transport (EWTC 2012). The green corridor manual consists of a set of recommendations and guidelines on how to implement the green corridor concept according to the EU freight agenda and as promoted by the EU Baltic Sea Strategy. An important source for the development of the green corridor manual was the requirements of the green corridor initiative of the Nordic States for green corridor concepts (Green Corridor 2010).

The green corridor manual focusses on the definition of a set of Key Performance Indicators (KPI) and incentives and regulations for more efficient, high quality, safe, secure and environmental friendly transport facilities and services. Such a manual can list indicators and measures with their potential impacts, together with a governance model for the development of a stepwise deployment of this concept. The following table gives an overview about the KPIs which were selected from the EWTC project and were also tested during the project duration (EWTC 2012).
There are different aspects influencing the performance of the Transport Corridor. The EWTC approach separates these aspects into enabling and operational criteria. Enabling criteria describe the settings of the transport chain in regard to the hard infrastructure, whereas operational aspects highlight the soft infrastructure including the information and communication systems and logistics solution by involving new and innovative business models (Hunke and Prause 2013). The performance areas are furthermore considered under economic, environmental and social aspects representing the three dimensions of efficiency (EWTC 2012). But a deeper view on the proposed KPI show that important “soft factors” for cluster measurement mentioned in the model of DeLangen are not covered by the KPI of the EWTC project.

But the current academic discussion related to performance monitoring of green corridors focusses on different sets of Key Performance Indicators (KPI) for the sustainable management of green corridors are neglecting a network-oriented controlling approach so that a general concept for green corridor controlling is still missing (Sydow and Möllering 2009; Hunke and Prause 2013; Prause 2014). A widespread approach for a network-oriented controlling is based on the balanced scorecard concept of Kaplan and Norton (1996), which has been transferred and adapted to a cross-company interactions leading to “cooperative scorecards” of “network-balanced scorecards” (Hippe 1997; Lange et al. 2001; Hess 2002). Ackermann (2003) proposed for the controlling of a supply chain a “supply chain balanced scorecard”, where the traditional perspectives related to finance, processes, clients and learning are still maintained but they are oriented on the integral supply chain instead on unique companies or stakeholders. Weber (2002) took one step further and created cross-company balanced scorecard for a supply chain, which keeps the two traditional perspectives finance and processes but he replaced the other two traditional perspectives by two new ones, which he called cooperation intensity and cooperation quality:

- financial perspective,
- process perspective,
- cooperation intensity, and
- cooperation quality.

In his proposal Weber subsumed under the cooperation intensity perspective the “hard factors” of cooperation like data exchange, whereas he used the cooperation quality to focus on the “soft factors” like trust and cooperation. Weber’s proposal for a supply chain balanced scorecard has the following structure (Table 3).
Weber’s proposal was oriented on the needs of supply chains but like Prause (2014) proposed, due to the conventional proximity between supply chains and green corridor, to use Weber’s ideas for constructing a green corridor balanced scorecard which includes the KPI system of the EWTC “Green Corridor Manual” and which respect also the frame conditions of green transport corridor. Prause and Hunke (2014b) exhibited that beside the criteria covered by be EWTC key performance indicators also other aspects like openness, transparency, fair and harmonised access regulations as well as cooperation aspects are common and characteristic frame conditions for green transport corridors which have to be integrated into a strategic management control system.

Consequently as acceptable Green Corridor Balanced Scorecard should again allow four perspectives including all important perspectives for green transport corridors and should additionally focus on the underlying network and cluster properties of a corridor. One possible approach for such a concept for a green corridor balanced scorecard which is in line with a controlling concept for supply chains has been elaborated and proposed by Prause (2014). Even if the set of indicators is not complete and furthermore the type of measurement and evaluation of the indicators is still open this approach integrates the existing knowledge about supply chains, logistics clusters and green transport corridors:

- Sustainability perspective
  - Economic efficiency
  - Environmental efficiency
  - Social efficiency
- Growth perspective
  - Innovation activities
  - New services
  - Green corridor stakeholder fluctuation
  - TO of new services
- Cooperation intensity
  - Data exchange
  - Coordination needs
- Cooperation quality
  - Openness
  - Trust level
  - Transparency level
  - Conflict level

In this sense the presented balanced scorecard represents an important stepping stone for a management control concept for green corridors including the development of its underlying hubs. Especially it comprises the KPI set, the “soft factors” dimension for sustainable logistics cluster development as well as the most important aspects of green corridor management. It is obvious that further research has to be done towards a mature and complete controlling concept for the sustainable development green transport corridors and their underlying network of hubs.

**Table 3. Weber’s modified Supply Chain Balanced Scorecard**

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Strategic target</th>
<th>Indicator</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial Perspective</strong></td>
<td>Increase return of SC</td>
<td>Increase RoA of SC by x %</td>
<td>Outsource warehousing</td>
</tr>
<tr>
<td></td>
<td>Try to achieve cost ledership</td>
<td>Reduce logistics costs in SC per unit by x %</td>
<td>Reduce working capital</td>
</tr>
<tr>
<td><strong>Process Perspective</strong></td>
<td>Max. lead time client: 10 days</td>
<td>Reduce SC lead time to 10 days</td>
<td>Cross partner process optimization</td>
</tr>
<tr>
<td></td>
<td>Increase flexibility of operations</td>
<td>Increase freezing point in % of lead time of SC</td>
<td>Flexible parts, postponement</td>
</tr>
<tr>
<td><strong>Perspective of Cooperation Intensity</strong></td>
<td>Increase data exchange between SC partners</td>
<td>Number and frequency of exchanged data sets</td>
<td>Improve IT - networking of SC partners</td>
</tr>
<tr>
<td></td>
<td>Increase coordination between SC partners</td>
<td>Number of necessary coordination meetings</td>
<td>Systematic management of notes and minutes</td>
</tr>
<tr>
<td><strong>Perspective of Cooperation Quality</strong></td>
<td>Increase trust and satisfaction level between SC partners</td>
<td>Establish indicators for trust and satisfaction</td>
<td>Define common visions and guidelines</td>
</tr>
<tr>
<td></td>
<td>Increase cooperation quality</td>
<td>Number of uncooperative solved conflicts</td>
<td>Establish “referee” for the SC</td>
</tr>
</tbody>
</table>

Source: Sydow and Möllering (2013)
Conclusions

The concept of Green Transport Corridor is highly ranked on the European transport agenda and its performance heavily depends on the underlying hubs which are representing logistics clusters. Therefore sustainable cluster development becomes a major issue in the management of green transport corridors. Until now logistics clusters and their performance and development represent a neglected area in the academic literature. The presented research shows how existing performance measurement and strategic management systems for logistics clusters as hubs of green transport corridors and for green corridors themselves can be combined in a coherent way so that a sustainable development is possible.

On the level of logistics clusters the cluster performance measurement approach of De Langen, based on sea port clusters, has been discussed and illustrated with case studies in the context of sustainable development. Parallel the key performance indicators (KPI) of the “Green Corridor Manual” of the EWTC project have been taken under consideration on the level of the corridor level. Finally the current research in the area of controlling of supply chains and green corridors has been highlighted and discussed on the base of the balanced scorecard concept. As a conclusion a coherent strategic management control system for the sustainable development of green transport corridors including underlying transshipment hubs has been presented.

However, the first experiences of Green Transport Corridors on European level are showing that beyond the development of appropriate KPIs the success and performance of corridors heavily depend on the sustainable development of the underlying network of hubs, which are representing logistics clusters in the sense of Sheffi. For their development “soft factors” are playing a crucial role, which is yet now fully integrated into the systems of management control of green corridors. Future research should be done on coherent controlling concepts of green corridor and their integrated logistics clusters in order to safeguard a sustainable development.

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Gunnar Prause

Sustainable development of logistics clusters in green transport corridors


BRINGING SUSTAINABILITY INTO DISPUTE RESOLUTION PROCESSES

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Abstract. The goal of this research is to formulate the notion of sustainable dispute resolution and distinguish main characteristics of those dispute resolution procedures that can be considered to be sustainable having an idea of bringing together sustainability, law and dispute resolution. Thus the object of the research – dispute resolution procedures, their main features and capability to be qualified as sustainable. The research is composed of introduction, two parts and conclusions. Introduction provides a brief overview of the object of that research and its goal, part one describes main criteria for distinguishing the sustainable dispute resolution, in part two analysis of sustainability in main dispute resolution processes (negotiation, mediation, conciliation, arbitration and litigation) is presented. Conclusion gives main ideas of the assignment of that work in brief.

Keywords: sustainability, sustainable development, alternative dispute resolution (ADR), mediation, law, litigation

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JEL Classifications: O1, K00, K2

1. Introduction

Despite of the fact that nowadays the term sustainability is widely used, it should be noted that mostly people still associate it with environmental context. We typically think of sustainability as it relates to protecting environment, going green, conserving energy, avoiding pollution (e.g. Makštutis et al. 2012; Vosylius 2013; Mačiulis, Tvaronavičienė 2013; Vasilįnaite 2014; Prause, Hunke 2014; Baublys et al. 2014). Phrases ‘sustainable environment’ and ‘sustainable development’ tend to become part of our everyday lexicon not only for the scientists but also for men on the street. Thus still the amplitude of this concept in society is not clearly conceived and the need to understand it not only as a necessity to preserve natural resources is noticeable.

The concept of sustainability and sustainable development first was introduced by the United Nations Organization World Commission on Environment and Development (also known as Brundtland Commission) in year 1987 in the report ‘Our Common Future’ (United Nations Organization 1987). It has stated in the Report that sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Article 27). This statement changed the ideological attitude towards development in general. The primary goal of the Commission was to reconcile physical sustainability, need satisfaction and equal opportunities, within and between generations.

Step by step the idea of sustainable development had spread around the world as the main vision for the development of the world community. Gradually sus-
Sustainable development has become a political task for many international organizations. European Union brought the notion of sustainable development into the list of the priority goals in year 1997 after enacting Treaty of Amsterdam (European Union 1997) (Article 11). Through the international policy in this field, ideas of the sustainable development concept were spread in national strategic documents and brought these requirements into the life of every individual. The striking feature of the sustainable development is that it ties together different areas of our life and activities, including but not limited to environmental concerns: social, political, and economic. These three dimensions of the sustainable development ideology cover almost all areas of societal life. The United Nations Millennium Declaration (United Nations 2000) identified principles and treaties on sustainable development, including economic development, social development and environmental protection.

The harmonious development of all three elements of sustainable development – environmental, economic and social – has to be done in a complex, bearing in mind permanent interaction of different social systems. That is why the problems of sustainable construction, tourism, energetics, agriculture, industry etc. are being raised (Tvaronavičienė 2012: 199).

The last few decades brought great changes into European societies, their social and economic life. Acceleration of our daily life, the desire to limit the financial costs, the willingness to resolve disputes effectively and to regulate the workload in the courts has brought changes to the legal system of most of the European countries. As a consequence, naturally the idea of the sustainability and sustainable development could become relevant to one of the most important area of social life – law and dispute resolution. But what does the issue of sustainability has to do with law and dispute resolution? This is essential problematic question of this research. Dispute resolution is an activity of parties to a dispute and third people, involved depending on selected method, which may be oriented toward protection of violated individual rights as well as towards restoration of relationship between people. This option rebuilds social peace and in fact may be evaluated as bringing sustainability back into interrelations.

As long as social peace and social justice constitutes an inherent part of the conception of sustainable development (Langhelle 2000: 318), the goal of this research is to formulate the notion of sustainable dispute resolution and distinguish main characteristics of those dispute resolution processes that can be considered to be sustainable having an idea of bringing together sustainability, law and dispute resolution. Thus the object of the research – dispute resolution procedures, their main features and capability to be qualified as sustainable.

The subject matter of this article has not been addressed in legal literature yet. You can easily find lots of sources about sustainability and sustainable development in non-legal matters (for example Redclift 2005; Beckerman 1994; Norgaard 1988 and etc.) also about alternative dispute resolution and improving civil justice (for example Riskin and Westbrook 1997; Nolan-Haley 2001; Kaminskienė 2011) but the review of accessible legal literature leads to a conclusion that the question of linking together sustainability, law and dispute resolution, that is discussed in this paper, is very rear. For instance, Langhelle (2000) has dedicated his research to examine relationship between social justice and conception of sustainable development, Barry - to analysis of sustainability and intergenerational justice (Barry 1999), Dobson has linked together conceptions of environmental sustainability and theories of distributive justice (Dobson 1998), Thompson (1996) combined sustainability, justice and market relations. Several works dedicated to the topic of social peace and peacebuilding methods of conflict transformation, conditions for sustainable peace are written by Bond in the context of mining enterprises (Bond 2014), by Kaw in the context of multilateral international conflicts in Asia and Middle Eastern space (Kaw 2011), by Wade in the context of armed conflicts in El Salvador (Wade 2008), by Gauthier and Moita (2011) in the context of on-going Justice reform in Haiti. More subject oriented and closest works to the subject analyzed in this work are the works of Spiroska (2014), who focused on mediation as conflict management strategy linked with successful outcomes aimed to sustainable development of the society; Siedel (2007), who focused on business
deal-making and ADR as promising models for fostering peaceful societies and contributing to sustainable peace; and Oddison (2003), who analyzed use of preparation strategies for establishing a foundation for sustainable conflict resolution outcomes, to be an objective of ADR processes.

The authors present their research based on the following classical methods of social research: historical, logical analytical, systematic, document analysis method and method of generalization.

2. Main Criteria for Distinguishing the Sustainability of Dispute Resolution

In order to have capacity for distinguishing sustainability aspect in different dispute resolution processes it is essential to find out what criteria identifies such characteristics.

- Privacy and confidentiality. Judicial proceedings are generally open to public and documented, though civil cases are often associated with private information, sometimes even shameful disagreements. Hence, privacy is particularly valuable in civil cases where disclosure of unpleasant private affairs or commercial secrets is important. Only when dispute resolution process allows ensuring privacy and confidentiality of the dispute, the parties engage in open conversations about true needs and desires standing beside legal positions. Thus it allows discovering true reasons of disagreement more easily. So, the first criterion for distinguishing if the dispute resolution process is sustainable is its privacy and confidentiality.

- Preservation and continuity of good relationships. Only such dispute resolution process that seeks to reduce conflict and increase harmony can be named sustainable. In most cases, protracted dispute and litigation can irreparably destroy relationships between the parties, while truly sustainable dispute resolution process can repair, maintain or improve ongoing relationships. In order to settle the conflict the parties must cooperate and jointly find a solution. That could help them to build communication and problem-solving skills not only for instance, but also for preserving good relationship in the future.

- Making it easier to resolve emotional aspects of the dispute. This is especially important in disputes involving family members. Both informality and confidentiality of the process of dispute resolution helps in this case. Disputes over family matters are often caused by long-repressed family problems. Often in such cases the parties do not seek more than certain emotional outcome – perhaps an apology or just vent the anger about the situation, which is considered as unfair. The truly sustainable dispute resolution process leads to a better understanding between the parties, an opportunity to express their views and be heard. The court will not investigate personal issues, only legal rights and legally significant facts. According to Madoff, a mere communication only sometimes helps to regulate some of the disputes (Madoff 2004: 710). Thus it is possible to accept the view that the main purpose of sustainable dispute resolution process is not always to seek for a mutually acceptable agreement. More important result can be mutual understanding achieved among the parties.

- Opportunity for the parties to create an individual dispute solution. Sustainable dispute resolution process encourages parties to take responsibility for their future life and actions, gives them control over settlement procedures and conditions of the final agreement. Such an autonomous final dispute resolution is considered to be a guarantee that the parties will follow this agreement voluntary, and assess the agreement as honest. This flexibility is an important criteria to determine if dispute resolution process is sustainable. There are two major disadvantages in the judicial process. In most of the cases court decision is favorable to only one party and the other becomes disappointed. Secondly, in litigation process the outcome of the dispute is strictly limited only to legal alternatives. Sustainable dispute resolution process eliminates these disadvantages of the judicial process and allows the parties themselves to decide what final solution is acceptable to both of them and meets their needs.

- The possibility to find a solution that will be considered as fair by all the parties. It will be more satisfactory decision than a formal court resolution because it will be consistent with parties’ values and will take into account the feelings of not only legal, but also non-legislative side of the dispute. It should be noted, that the recognition of fair decision is very important, because the principle of good faith is a fundamental principle of law recognized by the courts. The law requires diligence, honesty, parties’ cooperation, informing each other, taking into account the legitimate and reasonable interests of the other party. In some cases, recognition of bad faith in legal rela-
Dispute resolution efficiency could be presented as another advantage of sustainable dispute resolution process. Efficiency is usually associated with reduced legal dispute resolution costs and shortened duration of dispute resolution (Radford 2000: 642). Sustainable dispute resolution process is quicker than court and even arbitration proceedings, it is easier to appoint and hold meetings, and decisions are made faster. It might be even possible to reach mutually acceptable agreement in one meeting or session. Of course, the operative decision making reflects in reduced legal costs, which is especially important in cases where costs can become disproportionately high compared with the value of the estate.

- Another criteria for sustainable dispute resolution is its convenience. It may be important to those who work long hours or are disabled and therefore of a reduced mobility. As the sustainable dispute resolution process is not linked to specific location, date and time, and serve for the needs of the parties alone, it can be determined by the free consent of participants.

- Perception of situation in different manner. It can be noted, that even if through dispute resolution process a peaceful agreement is not achieved, sustainable dispute resolution process can have positive value and benefit for both parties in being able to open the eyes both to a lawyer and a client in understanding the core reasons of the dispute. In this way, the perception of the situation is expanded, which is likely to lead closer to the resolution of the dispute.

Concluding this chapter it is worth to present visual scheme of main characteristics of sustainable dispute resolution that were provided (Figure 1).

### Fig.1. Characteristics of sustainable dispute resolution

*Source: authors*

3. Verifying Sustainability in Main Dispute Resolution Processes

In temporal society individuals or groups of people are empowered to make their decisions about the methods of their conflicts resolution. Depending on their knowledge and experience in this area, they are ought to select negotiation, mediation, arbitration, litigation or wide range of other less popular globally methods of dispute resolution. Generally all dispute
resolution procedures may be divided into two big groups: adversarial (adjudicative) and compromise based (consensual) processes. Adversarial system of dispute resolution relies on the contest between each party's positions and involves an impartial person or group of people, usually a jury or judge, trying to determine the truth of the case (DeBarba 2002). Compromise based dispute resolution processes are such methods, where a right to make a decision is not delegated to any third person. During such processes the main aim mostly is to restore relationship to such level, when people would be able to communicate and find out mutually agreeable solutions. The main methods of such processes in big part coincide with ADR methods. ADR basically is an alternative to a formal court hearing or litigation. It is a collective term for the ways that parties can settle disputes with (or without) the help of a third party (Udoh, Sanni 2014). To compare adversarial and compromise based dispute resolution processes, the main difference is connected with almost opposite attitudes: the philosophy behind litigation is to apportion blame; and the philosophy behind ADR on the other hand is to build relationship (Udoh, Sanni 2014). It should be stated that people, who are able to communicate constructively tend to find solutions naturally even before the conflict escalated into legal dispute. Hence we may conclude that litigation (as classical form of adversarial processes) is granting a restoration of violated rights, meanwhile compromise based methods work for restoration of social connections between people.

The main methods of adversarial (adjudicative) dispute resolution are litigation and arbitration. Mediation, facilitation and negotiation may be named as basic forms of compromise based (consensual) dispute resolution methods. In practice some hybrid methods are applied. One of the most popular mixed processes is mediation-arbitration (also known as ‘med-arb’). In the Figure 2 below the classic ADR continuum scheme is provided.

![The ADR Continuum](image)

**Fig.2.** The classic ADR continuum scheme

Source: ADR Continuum (2000)

It can be noted that all spectrum of applicable dispute resolution methods all over the world find their place in presented picture. Having in mind that the most popular processes in contemporary world are litigation, arbitration, mediation-arbitration, mediation and negotiation, further analyses of their conformity to sustainability criteria presented above in this article will be fulfilled.

3.1. Adversarial dispute resolution processes in the light of sustainability

As it was mentioned before, the main methods of adversarial (adjudicative) dispute resolution processes are litigation and arbitration. Both methods of dispute resolution have in fact only few main characteristics. First of all, during the litigation and arbitra-
Bringing sustainability into dispute resolution processes

Litigation cannot be treated as sustainable dispute resolution process also because it does not confirm almost all sustainability criteria, which were provided earlier in this article. Process in ordinary state court in most cases is public and do not take into account emotional side to a conflict. Cases are investigated in formal manner with an aim to find "guilty" person and restore the factual status of parties to a conflict, which was before infringement of certain rights or obligations. Thus such restitution does not involve personal relations, which are essential in big number of cases: family, labor, succession, consumer disputes as well as commercial disputes between long term partners. Quite the same situation is in case of arbitration. Despite of the confidentiality of the procedures and bigger effectiveness of it, arbitration in big part continues to be alike litigation. It lead to a conclusion that adversarial dispute resolution methods cannot be named sustainable, thus they should be used in cases when dispute is found impossible to be solved through more socially oriented and more sustainable compromise based dispute resolution procedures.

3.2. Compromise based dispute resolution processes in the light of sustainability

As a counterweight to adversarial processes such dispute resolution methods as mediation and negotiation, in other words – ADR procedures – are interest oriented, relatively low-cost, relationship-friendly, speedy and controlled by parties themselves, speaking about the results of such processes. The level of satisfaction with these ADR procedures is usually rather high, even in cases when parties do not reach a decision. Because of these characteristics these processes can be characterized as sustainable because seek to establish social, but not legal peace.

In the context of sustainable dispute resolution mediation fits very well. In general mediation can be defined as the attempt to settle a legal dispute through active participation of a third party (mediator) who works to find points of agreement and make those in conflict agree on a fair result. The intervention of the third party in case of mediation differs a lot to compare with litigation or arbitration. Mediator has no right to make a binding decision, he just helps parties to communicate and diverts them towards mutual acceptable
decisions. In mediation in order to gain success parties must be active and ready to compromise. That’s why in countries, were adversarial dispute resolution methods prevail, it is quite difficult to make mediation work. The main difficulties are connected with emotional side of the conflict. Parties to a highly escalated dispute mostly cannot communicate between each other. Every attempt to discuss the situation, even in first stages of mediation, often ends unsuccessfully. Thus mediator is a person, who has necessary skills and characteristics, able to help parties to cope with their emotions and start investigate situation more objectively. Mediation is more oriented to societal needs as other dispute resolution methods, because works towards restoration of inter relations of people. Preventing the Scandinavian or reflexive model of mediation towards restoration of inter relations of people. Presenting the Scandinavian or reflexive model of mediation Vindelov (2012: 15) describes her view towards mediation: ‘Even though, naturally, mediation cannot ‘save the world’, an approach to conflicts in which one recognizes the needs both of the individual and of society and the essential connection between them – in both major and minor conflicts – is a necessary development. The reflexive mediation model thereby takes longer view and has a sustainable perspective’. Mediation fully satisfies all criteria, which were selected for defining sustainable dispute resolution.

The most popular dispute resolution method all over the world is negotiation. To compare with mediation it enjoys all positive characteristics, thus does not involve the third party. Despite of the fact that the biggest part of legal disputes are successfully resolved without any special procedures, just by negotiation, this alternative dispute resolution method also cannot be named as panacea in all cases. Universally admissible in case of appearance of any disagreement to hold up interpersonal negotiations. Due to these characteristics negotiation generally can be named a sustainable method of dispute resolution. Though in case of unsuccessful performance in it, parties are searching another methods for their dispute resolution. Thus negotiation always require personal active involvement and friendly attitude towards opponent. In case of highly escalated conflicts negotiation in most cases is inclined to fail. In regard to these reasons negotiation appears to be less effective than other compromise based dispute resolution procedures.

3.3. Mediation-arbitration as a mixed process in the light of sustainability

Mediation-arbitration hybrid (also referred to as med-arb) is a relatively new alternative dispute resolution method known since the 1970’s. It is argued that this method combines the advantages of both mediation and arbitration and eliminates most of their disadvantages (Vorys 2007). In recent years a lot of variations of mediation and arbitration applied together appeared: at first mediation, if unsuccessful, then arbitration; arbitration begins but certain degree of mediation is allowed; mediation is applied to deal with particular issues, arbitration with others; mediation begins, then arbitration is addressed to the issues on which agreement was not reached, then mediation re-applied; the mediation is carried out and if there is a failure, then the mediator is asked for an “advisory opinion”, which is mandatory, unless any of the parties within a period of time vetoes it (Oghigian 2003). Med-arbitration, as we have seen from the above, combines many possible variations and is quite flexible procedure. In principle, both methods of alternative dispute resolution (mediation and arbitration) in terms of sequence and procedural specificities depend on a will and general consensus of the parties, and on the selected mediator’s practice as well. This controversial hybrid method combines the ultimate decision-making guarantee (this is achieved through arbitration), and the subtle management of delicate issues, which ensures mediation. Basically med-arbitration eliminates the biggest disadvantage of mediation – final decision is guaranteed and there is no need to litigate. It should be noted that arbitration, if used alone, is not considered to be appropriate to deal with disputes for example from family law or succession, but in combination with mediation, is thought to be a functional tool helping parties to solve it. The largest med-arbitration advantage – time and cost efficiency (Vorys 2007). The reason of cheaper procedure is also the double med-arbiter role. It is argued that because the med-arbiter performs both the role of mediator and arbiter, this also saves parties’ time and finances. Despite the fact, that med-arbitration is a relatively new process, it gets a lot of criticism and is not used often, some authors argue that this method is avoided without reason, because, according to its potential and flexibility, there is no reason to ignore it (Vorys 2007).

In the light of sustainable dispute resolution media-
tion-arbitration mixed processes should be evaluated as having a potential to bring parties to a restoration of social peace. Thus here two scenarios mostly are possible. First of all in the case of successful mediation stage such dispute resolution method may be no doubt announced to be sustainable. However, despite of a fact that mediation has potentiality to deal with wide range of disputes, it is also established that it is not panacea and number of dispute will always not be settled during mediation and will request arbitrational stage. In case mediation-arbitration process it can be easily done by ending mediation stage and having an opportunity to ask for binding decision in arbitrational stage without additional efforts. Thus national legislation often creates some legal obstacle in certain disputes to use arbitration. For example according to the Law on Commercial Arbitration (1996) of the Republic of Lithuania, cases, which should be investigated by administrative procedure, cases, which must be investigated by Constitutional Court of Lithuanian Republic as well as disputes, which raise out of family law or registration of patents, trademarks, designs. Another concern about relationship between sustainability and arbitration-mediator dispute resolution is connected with adversarial nature of arbitration. In case dispute was not settled during the mediation stage, all weaknesses of arbitration in the light of fulfillment of indicated sustainability issues are going to manifest. In regards of this statement, mediation-arbitration may not be considered as fully confirming the requirements for sustainable dispute resolution.

Conclusions

In the context of necessity to implement the concept of sustainable development in all fields of political, social and economic life of every society, the topic of sustainable dispute resolution was raised. Despite of the fact that such concept was almost never researched in the legal aspects, the connections between sustainability and dispute resolution as a way out of socially undesirable situations were already noted. In order to have capacity for distinguishing sustainability aspect in different dispute resolutions processes, main criteria for such assessment were selected and reasoned: 1) Privacy and confidentiality of the process; 2) Preservation and continuity of good relationships between parties to a dispute; 3) necessity to deal with emotional part to a conflict during the dispute resolution process; 4) necessity of providing individual approach towards possible dispute solutions; 5) need to ground solution on mutual compromise; 6) efficiency of dispute resolution procedures; 7) convenience and accessibility of dispute procedures and 8) perception of situation in different manner.

The research enabled to state that litigation cannot be treated as dispute resolution process bringing to sustainability. The same situation with few apprehensions was determined in case of arbitration too. Despite of such presumptions of sustainability as privacy and confidentiality of the process as well as effectiveness of it, in general arbitration is an adversarial process, where decision is taken by the third party and may be enforced to be implemented by state. In case of compromise based or consensual dispute resolution processes (in other words ADR), the different situation was observed. Negotiation and mediation, as improved form of it, confirm all criteria listed for sustainable dispute resolution. Though in case of negotiation only one main apprehension was found. In case of high level escalation of conflict parties often are not able to communicate constructively and it leads to decreasing of effectiveness of such dispute resolution. In case of one of the most popular adjudicative and consensual dispute resolution processes mediation-arbitration, all advantages of mediation stage covers criteria set up for sustainable dispute resolution processes, thus arbitrational stage in case of the dispute reaches it brings the processes back to adversarial model, what cannot be treated to be sustainable in regards of it outcomes.

References


EVALUATION OF SOCIAL, ECONOMIC AND FISCAL IMPACT ON INCENTIVES OF PERSONAL TAXATION IN LITHUANIA

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Abstract. Tax incentive is optional but highly important element of taxation, used in order to achieve different goals. On the one hand, tax incentives form tax expenditures and thus reduce budget revenue; on the other hand, they influence behavior of persons and businesses and may have positive or negative social and economic effect. This article analyzes the incentives of personal taxation in Lithuania and their social, economic and fiscal impact. The study was conducted using the method of descriptive and factor analysis. The results revealed economic impact of tax incentives applicable in Lithuania¹.

Keywords: tax incentives, tax expenditure, social, fiscal, economic impact

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JEL Classifications: K36

1. Introduction

Tax incentive is one of the tax elements, performing a crucial role in the tax system, which in its turn affects wide spectrum of sustainable development facets (Mackevičius, Novikovas 2012; Giriūnas et al. 2013; Giriūnienė 2013; Laužikas, Mokšeckienė 2013; Giriūnas, Mackevičius 2014; Bileišis 2014). Although tax incentive is not a mandatory element of tax system, however during the last decade it is widely used in the practice of significant number countries in whole world. Most low-income countries, even those with a high level of public debt and those where most of the population lives below the poverty threshold, use tax incentives in national tax systems (Zhicheng Swift 2006).

The prevalence of tax incentives can be associated with financial globalization and global financial crisis started in 2008. While these processes require ensuring and promoting economic growth of the countries, tax incentives are the instrument which helps to reach these goals. Despite that, the tax system which includes tax incentives encourages businesses and private persons to change their behavior. Malinina (2010) points out that tax system, embracing tax incentives, is distorted since it encourages tax payers to carry out different activities than they would carry out under neutral tax regime. Moreover, tax system becomes less fair and equitable, since some persons pay fewer taxes than others with same level of income. On the other hand, tax incentives are considered to be an appropriate fiscal measure which enables to adjust economic and social processes, to promote the priority areas of economy, attract capi-
tal and investments as well as stop undesirable socio-economic trends (Klišauskas, Puzinskiaté 2012).

Since tax incentives have social, economic and fiscal impact, in order to evaluate the relevance and necessity of incentives of personal taxation in Lithuania, it is appropriate to investigate the impact of tax incentives in these three dimensions. The purpose of this research is to determine and evaluate expediency of incentives of personal taxation, uncovering their social, fiscal and economic impact. In order to reach this goal there were used the following methods: analysis and synthesis of scientific literature and legal documents, statistical data analysis, factor analysis. In order to eliminate impact of limitations encountered statistical methods including the trend of data series and relative data were used. Factor analysis is carried out in four phases: verification of data compliance to the method based on the Kaiser-Meyer-Olkin measure, indication of the factors, rotation and interpretation of factors, estimation of factor values. Data period used for analysis is year 2010-2014.

2. Theoretical aspects of tax incentives

Tax incentive is a highly controversial element of taxation, usage of which is related to ambiguous relationships, which occur from one side, by promoting growth of business and personal income and lowering social exclusion, from the other side, by growing tax expenditures. This presupposes that tax incentive is multifaceted and diverse element of taxation. Due to this reason, the definitions of tax incentive still do not lead to unified concept. Finance theorists provide different definitions of tax incentives, which vary from tax privilege to tax expenditure (Table 1).

Table 1. Variety of concepts of tax incentives

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. Vainienė</td>
<td>2000</td>
<td>Tax incentive is the privilege to a taxpayer distinguishing one by some characteristics.</td>
</tr>
<tr>
<td>A. Easson, E. M. Zolt</td>
<td>2002</td>
<td>It is special exemptions or deductions, given by special credits, preferential tax rates or deferred taxes. Though, it is difficult to distinguish them from the provisions indicating that it is a part of overall tax structure.</td>
</tr>
<tr>
<td>B. Bolnick</td>
<td>2004</td>
<td>It is a benefit resulted by tax incentives: tax holidays, preferential tax rates, etc.</td>
</tr>
<tr>
<td>Republic of Lithuania Law of tax administration</td>
<td>2004</td>
<td>Tax incentives are exceptional taxation conditions that are more favorable than other conditions, and are laid down to particular taxpayers or group of them.</td>
</tr>
<tr>
<td>Zhicheng Li Swift</td>
<td>2006</td>
<td>All tax incentives are tax expenditures designed to change the behavior in order to achieve specific economic and social goals.</td>
</tr>
<tr>
<td>Review of tax expenditures...</td>
<td>2009</td>
<td>Alternative to direct government expenditures made in order to achieve economic and social goals, which is usually considered as tax expenditures.</td>
</tr>
<tr>
<td>M.R Jacobsen et. al.</td>
<td>2009</td>
<td>Tax expenditures that provide more favorable taxation conditions for certain activity group of taxpayers.</td>
</tr>
<tr>
<td>B. Sudavičius</td>
<td>2010</td>
<td>Exceptional taxation conditions for taxpayer or group of them, which are more favorable compared to normal conditions and which enable taxpayer not to pay tax at all or to pay a smaller amount.</td>
</tr>
</tbody>
</table>

The analysis of definitions of tax incentives allows distinguishing three fundamental aspects: tax incentive is a component of overall tax system; it is set by tax law; this is tax expenditures deriving from exceptional conditions of taxation, which occur in many different forms. Taking into account the first two aspects, it can be noted that tax incentives are regulated exclusively by legislators, which must reflect economic and social politics in the country and provide an implementation of specific objectives.

Governments have a number of social and economic objectives and different measures to achieve them. Tax policy is one of alternatives for implementing specific goals, using regulation function of taxes. Governments use taxes to raise more revenue necessary to fund government expenditures. In such way governments affect income distribution and influence behavior (Easson and Zolt 2002). In order to implement economic and social objectives, tax incentives are widely used. The goals of tax incentives are:

- solve certain social problems (support for socially vulnerable groups of society, promotion of employment, lower social exclusion and tax burden);
- to encourage certain business activities and eco-
nomic activity in priority regions (investments, agriculture);
• to encourage economic growth in the country.

These goals reveal that tax incentives are directed to certain groups of society or businesses, what results that these subjects receive some form of financial benefit. However, in some cases in practice, a person who benefits from tax incentive may depend on circumstances in which tax incentive is embraced. When tax incentive is aimed to reduce the price of goods and services, a person who benefits from such tax incentive is a resident (private person) (in such cases when lower price is paid due to application of tax incentive), however, the actual beneficiary is a business entity (National audit office report on tax incentives 2013). Easson, Zolt (2002) state that tax incentives do not justify in practice because they are usually ineffective, inefficient and create conditions for abuse and corruption. National Audit Office of Lithuania points out that one of the reasons why goals are not always achieved is that in some cases proposals of establishing tax incentives lack of specific goals of certain tax incentives. Vague formulation of objectives of tax incentives complicates evaluation of objectives implementation (National audit office report on tax incentives 2013).

Summarizing, Hungerford (2006) notes that establishment of tax incentives can be considered as justified if tax incentives:
1) adjust market failures;
2) are targeted;
3) do not reduce income tax progressivity;
4) introduces no additional complexity in tax laws;
5) help to avoid economic interferences;
6) are more economically effective than direct spending programs.

In the design of tax incentives the variety of forms of tax incentives plays very important role. Properly selected and applied form of tax incentive enables to achieve intended goals more effectively. Some scientists provide sufficient narrow approach to the forms of tax incentives distinguishing only such forms as tax concessions and tax exemptions (Sudavičius 2010), while others name more forms of tax incentives. In addition to forms mentioned above Klemm (2009) also distinguishes tax holidays, special zones, investment tax credits, investment allowance, accelerated depreciation, reduced tax rates, financial incentives.

In practice forms of tax incentives are applied in different methods. Incentives that reduce tax rate or increase tax-exempt amount of tax object are widely used to enforce objectives of social policy, while tax incentives that extend deadline for tax payment or eliminate taxation of certain object are usually used to stimulate economic activity of certain businesses or regions. On the other hand, the implementation of social and economic goals using various forms of tax incentives has a direct impact on budget revenues called tax expenditures or unearned revenues. Tax expenditures are usually defined as the government’s projected revenue loss that is resulted by tax incentives for certain groups of taxpayers or activities (Guide... 2012). In other words, it is a deviation from the standard tax rate. It is a loss of revenues or the government tax expenditures, while for the tax payers it is reduction of tax liabilities (Tax expenditures...2010). Intrinsic characteristics of tax expenditures are following (Malinina 2010):
• reflects the loss of tax revenues, i.e. leads to the reduction of budget revenues;
• arises from tax incentives and tax exemptions compared to the basic tax system;
• contributes to implementation of social and economic policy objectives;
• is direct alternative to public spending.

From fiscal point of view, tax expenditures formed on the basis of tax incentives are treated unambiguously in scientific literature. Many theorists criticize tax expenditures and, as states Jacobsen et al. (2010), the main criticism is directed towards concept of tax rates of tax system as the concept of tax expenditures itself has not sufficiently rigid formal basis and is more or less subjective result of pragmatic choices. Criticism also involves hidden reforms related to reports of tax expenditures and analysis of these expenditures, which means transparent and apolitical tax policy and idea of social decision making (Jacobsen et al. 2010). Another criticism is directed to lower efficiency of tax expenditures in comparison with direct expenditures with the following reasons:
• tax expenditures may generate incorrect distribution among taxpayers because more sophisticated taxpayers can easily take more advantages of tax incentives;
• interest groups can be created especially when expenditures are narrowly defined – it can lead to a very broad political lobbying (Guide... 2012).

OECD agrees with this attitude (2010), stating that
tax expenditures are tend to decrease the transpar-

ty and clarity of budget process because they are 

more difficultly identified and examined compared 

with direct expenditures. Nevertheless Burto, Stew-
art (2011) identifies key advantage of tax expendi-

tures in comparison with direct expenditures – gov-

erment, giving certain incentives to a wide range 

of taxpayers without identifying each recipient of tax 

incentive, is able to reduce costs of tax administra-

tion as well as costs of benefit for taxpayers.

According to Lithuania Free Market Institute (2000), 
tax incentives have no impact on the budget. Since 
the budget depends only on the sum of revenues that 
is possible to adjust according tax rules, by legalizing 
tax incentives government voluntarily determines the 
part of revenues that is required to meet its needs.

Hungerford (2006) systemizes criticisms on tax ex-
penditures and identifies following approaches: 

• identifies the budget process as a source of the 
growth of tax expenditure; 

• argues that tax expenditures are less efficient than 
direct expenditures while trying to achieve social and 
economic objectives; 

• indicates that tax expenditures increase the complex-
ity of tax administration and decrease the justice of in-
come tax, which is detrimental to entire tax system.

Though tax expenditures are criticized by many sci-

teists, they are widely used in tax systems of the 
countries. After comparing tax expenditures in some 
EU countries it can be stated that in practice there 
are significant differences in the level of expenditures 
as well as in forms of tax incentives (Table 2).

Table 2. Personal tax expenditures in some countries of EU

<table>
<thead>
<tr>
<th>Country</th>
<th>Tax expenditures</th>
<th>Expenditures (% of GDP)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>Increased exemption of basic pension</td>
<td>0,70</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Increased basic exemption after the birth of second</td>
<td>0,14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>child</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mortgage interest deductions</td>
<td>0,10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education expense deductions</td>
<td>0,08</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>Work-related benefits</td>
<td>1,00</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Housing investment deductions</td>
<td>0,18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Benefits related to overall taxation</td>
<td>0,17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social security benefits</td>
<td>0,11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exemptions for revenues from lotteries, betting, etc.</td>
<td>0,09</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>Tax deductions for household employees</td>
<td>0,18</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Tax relief on pensions</td>
<td>0,16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Activities from a credit</td>
<td>0,12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relief for kindergarten services</td>
<td>0,09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax benefit related to saving payments</td>
<td>0,07</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>Tax benefit for self-employed</td>
<td>0,31</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Exemption for capital payments</td>
<td>0,15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax incentive for donations and gifts</td>
<td>0,06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax incentive for school expenditure</td>
<td>0,04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax incentive for housing borrowers</td>
<td>0,06</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>Tax credit for work income, self-employed income and</td>
<td>2,41</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>pensions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax credit for dependent family members</td>
<td>0,67</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>Exemption for income from shift work</td>
<td>0,08</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>Tax subsidy to housing owner</td>
<td>0,05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax reduction for private renovation</td>
<td>0,06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax incentive for investments to private pension</td>
<td>0,05</td>
<td></td>
</tr>
</tbody>
</table>

Source: compiled by the authors according to Tax reforms in EU member states (2013)
In summary, it must be stated that level of tax expenditures in the national budget is very important measure; therefore government’s decisions must be highly weighted and assessed. Tax incentives, creating budget disposals, imply that tax expenditures must ensure implementation of objectives sought. Otherwise tax expenditures lose their essence and purpose and bring colossal budget losses that affect all country’s residents and businesses.

3. Tax incentives for individuals and tax expenditures in Lithuania

Taxes are of great importance for public finance; therefore the tax policy which is implemented by the government is of crucial importance and compliance with the main principles of taxation. In the program of the Government of Lithuania (years 2012-2016) the creation of welfare state is anticipated that will be implemented by reforming tax system in order to reduce social exclusion, strengthen public solidarity, develop public finance. The essence of this transformation – more equal tax burden distribution between labor and capital, higher income and wealth taxation progressivity, application of socially relevant and targeted tax incentives only.

National Audit Office of Lithuania (National audit office report on tax incentives 2013) concludes that content and objectives of tax incentives are associated with impact and benefits to business and society; however, from 70 tax incentives, evaluated by National Audit Office of Lithuania, even 18 affect the society directly. It shows that tax system in Lithuania is characterized by extremely large number of tax incentives, but the real benefits to individuals are still questionable. It should be noted that tax incentives are not constant – they vary depending on changes of government policy, country’s economic potential and opportunities. Therefore it is very important to analyze existing tax incentives and examine the impact of their changes to national budget.

One of the key aspects of public finance is government revenues. In recent years, the relative share of tax revenues is more than 65 percent of the total national budget revenues (Table 3).

### Table 3. Structure of national budget revenues in 2008-2013, percent

<table>
<thead>
<tr>
<th>REVENUES (% of total revenues)</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxes</td>
<td>80.45</td>
<td>68.30</td>
<td>67.50</td>
<td>65.65</td>
<td>66.20</td>
<td>68.70</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>18.90</td>
<td>15.70</td>
<td>14.90</td>
<td>13.70</td>
<td>14.00</td>
<td>15.50</td>
</tr>
<tr>
<td>Corporate income tax</td>
<td>10.70</td>
<td>7.10</td>
<td>4.10</td>
<td>4.40</td>
<td>4.60</td>
<td>5.90</td>
</tr>
<tr>
<td>Value added tax</td>
<td>34.10</td>
<td>28.60</td>
<td>31.30</td>
<td>30.80</td>
<td>32.10</td>
<td>31.90</td>
</tr>
<tr>
<td>Excise duties</td>
<td>12.40</td>
<td>13.70</td>
<td>13.00</td>
<td>13.00</td>
<td>11.80</td>
<td>12.30</td>
</tr>
<tr>
<td>Other taxes</td>
<td>4.35</td>
<td>3.20</td>
<td>4.20</td>
<td>3.75</td>
<td>3.70</td>
<td>3.10</td>
</tr>
<tr>
<td>Other revenues</td>
<td>6.05</td>
<td>6.40</td>
<td>9.10</td>
<td>8.15</td>
<td>8.30</td>
<td>7.20</td>
</tr>
<tr>
<td>Revenues from wealth</td>
<td>1.70</td>
<td>2.20</td>
<td>4.20</td>
<td>2.70</td>
<td>4.50</td>
<td>3.40</td>
</tr>
<tr>
<td>Revenues from goods and services</td>
<td>3.65</td>
<td>3.40</td>
<td>3.90</td>
<td>4.85</td>
<td>3.20</td>
<td>2.80</td>
</tr>
<tr>
<td>Revenues from fines and confiscations</td>
<td>0.50</td>
<td>0.35</td>
<td>0.50</td>
<td>0.40</td>
<td>0.40</td>
<td>0.60</td>
</tr>
<tr>
<td>Other unlisted revenues</td>
<td>0.20</td>
<td>0.45</td>
<td>0.50</td>
<td>0.20</td>
<td>0.20</td>
<td>0.40</td>
</tr>
<tr>
<td>Revenues from realization of tangible fixed assets and transactions of financial assets</td>
<td>0.60</td>
<td>0.30</td>
<td>0.40</td>
<td>0.40</td>
<td>0.60</td>
<td>0.90</td>
</tr>
<tr>
<td>EU funds</td>
<td>12.90</td>
<td>25.00</td>
<td>23.00</td>
<td>25.80</td>
<td>24.90</td>
<td>21.80</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: compiled by the authors, according to data of Lithuania Ministry of Finance (2014)*

In fiscal terms (by the share in total budget revenue), the most significant taxes are value added tax and personal income tax and their percentage in national budget revenues in 2013 accounted respectively 31.90 % and 15.50 %. Since the fiscal value of these taxes is the greatest, their role in tax expenditure structure is certainly significant.

Tax incentives for individuals are usually grouped according to the tax base – VAT, PIT, social insurance, etc., according to the form of tax incentives – tax exemptions, tax deferrals, etc., according to the purpose – for low income individuals, housing, vocational training and studies, etc. (Figure 1).
Tax incentives for individuals are defined by Lithuanian tax legislation (Table 4).

Table 4. Taxes paid by individuals and incentives of these taxes in 2013

<table>
<thead>
<tr>
<th>Tax</th>
<th>Object</th>
<th>Rate</th>
<th>Tax incentives for individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social security contributions</td>
<td>Work-related income</td>
<td>3%</td>
<td>statutory exhaustive list of income exempted form tax</td>
</tr>
<tr>
<td>Compulsory health insurance contributions</td>
<td>personal income</td>
<td>6%</td>
<td>statutory exhaustive list of income exempted form tax</td>
</tr>
<tr>
<td>Personal income tax</td>
<td>personal income</td>
<td>5 % - income from individual activity; 15 % - all other income; fixed amount tax for business license</td>
<td>tax-exempt amount, applied to work-related income; incentive for special payments (PIT returns)</td>
</tr>
<tr>
<td>Value added tax</td>
<td>goods and services</td>
<td>21%</td>
<td>5 % and 9 %</td>
</tr>
<tr>
<td>Excise duties</td>
<td>spirits, tobacco, energy products, electricity</td>
<td>depends on product group</td>
<td>statutory exhaustive list of goods exempted form excise duties</td>
</tr>
<tr>
<td>State duty</td>
<td>services provided by institutions</td>
<td>not less than 3 LTL and not more than 270 thousand LTL</td>
<td>duty reduction by 50 % for passport and ID for individuals provided by law; duty reduction or exemption from duty at the expense of municipal budget; exemption from duty (statutory exhaustive list)</td>
</tr>
<tr>
<td>Land tax</td>
<td>private land</td>
<td>from 0,01 % to 4 % of land value</td>
<td>untaxable subjects and objects provided by law; tax reduction or exemption from tax at the expense of municipal budget</td>
</tr>
<tr>
<td>Real estate tax</td>
<td>real estate</td>
<td>individuals owned housing, garden, garages and other buildings for part total value over 1 million LTL - 1 %; other real estate – from 0,3 to 3 % (determined by municipality councils)</td>
<td>statutory list of tax-exempt real estate (therein - individuals owned housing, garden, garages and other buildings with a total value up to 1 million LTL); tax reduction or exemption from tax at the expense of municipal budget</td>
</tr>
</tbody>
</table>
Inherited wealth tax: when value of inherited wealth is not bigger than 0.5 million LTL – 5%; when value of inherited wealth is bigger than 0.5 million LTL – 10%.

Customs duties: in accordance with EU legislation depending on group of goods.

Stamp duty: depending on the case.

Consular fee: not less than 2 EUR and not more than 500 EUR.

<table>
<thead>
<tr>
<th>Tax</th>
<th>Object</th>
<th>Rate</th>
<th>Tax incentives for individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inherited wealth tax</td>
<td>inherited wealth</td>
<td>when value of inherited wealth is not bigger than 0.5 million LTL – 5%; when value of inherited wealth is bigger than 0.5 million LTL – 10%</td>
<td>exemption for wealth inherited by spouse, first order heirs, as well as inherited wealth with a value up to 10 thousand LTL; tax deferral; tax reduction or exemption from tax at the expense of municipal budget</td>
</tr>
<tr>
<td>Customs duties</td>
<td>imported and export-ed goods</td>
<td>in accordance with EU legislation depending on group of goods</td>
<td>cases provided by EU regulation</td>
</tr>
<tr>
<td>Stamp duty</td>
<td>proceedings in the court</td>
<td>depending on the case</td>
<td>exemption from duty (statutory exhaustive list); partial exemption depending on financial circumstances; deferral of duty depending on financial circumstances; reduction of duty by 25 % for e-document submission</td>
</tr>
<tr>
<td>Consular fee</td>
<td>services provided</td>
<td>not less than 2 EUR and not more than 500 EUR</td>
<td>statutory exhaustive list of exemptions</td>
</tr>
</tbody>
</table>


Further analysis in this section involves most significant in fiscal terms taxes – VAT and PIT, incentives of these taxes and their significance.

**Value added tax.** In accordance with generated revenues, indirect taxes (where the most important is value-added tax) dominate in the tax structure of Lithuania. Since VAT is easily administered and comprehensive, it often becomes a control center by changing tax rate and nature of tax incidences in order to reach specific objectives. VAT incentives are particularly prevalent in the EU countries and regarded as suitable way to redistribute income by charging a lower rate (*de facto* subsidizing – Ashta 2007) food, goods and services of culture, education and health-care. Basically, in the forefront of taxation dispute there is the question of VAT system and its incentives.

Taking into account the experience of the EU countries, it should be noted that in all these countries VAT incentives are widespread and application on them within the limits of EU directives is considered to be more the rule than the exception. Moreover, it is noted that the most commonly applicable tax incentives are related to motives of social justice (pharmaceutical products, food, transport), education (books, periodicals); in the old member states culture is very important motive as well (Bikas, Saikevičius 2010).

VAT rate from introduction of this tax in 1 May 1994 till now has changed several times: in 1994-2008 VAT rate was equal to 18 percent; in 2008 the rate was increased by 1 percentage point to 19 percent; in 2009 rate of 21 percent was set. 2009 year changes of VAT incentives were especially complicated. Since 1 January 2009 all ever applied tax incentives were eliminated. Thus a precedent have been created in the EU when all VAT incentives were eliminated for the first time. Since 1 July 2009 some tax incentives were reintroduced: there were extended validity of reduced 9 percent rate for books and periodical publications; restored reduced 5 percent rate for pharmaceutical and medical care as well as 9 percent reduced rate for heating (Table 5).
Table 5. Changes of reduced VAT rates in Lithuania

<table>
<thead>
<tr>
<th>Area</th>
<th>Period</th>
<th>till 2009.01.01</th>
<th>since 2009.07.01</th>
<th>since 2010/2011</th>
<th>since 2012 till now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>Not applied</td>
<td>Not applied</td>
</tr>
<tr>
<td>Heating</td>
<td></td>
<td>9</td>
<td>Not applied</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Pharmaceutical products</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Passenger transportation</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Books and periodicals</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Culture and sports events</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>Not applied</td>
<td>Not applied</td>
</tr>
<tr>
<td>Writers and composers activities</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>Not applied</td>
<td>Not applied</td>
</tr>
<tr>
<td>Agricultural services and products</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>Not applied</td>
<td>Not applied</td>
</tr>
<tr>
<td>Hotels</td>
<td></td>
<td>5</td>
<td>Not applied</td>
<td>9</td>
<td>Not applied</td>
</tr>
</tbody>
</table>

Source: compiled by the authors, in accordance to Lithuania law of value-added tax with amendments and supplements

Such government’s manipulation of tax incentives demonstrates indecision, lack of purposefulness, instability and lack of goals of tax system. Since VAT is a consumption tax, incentives of this tax decrease tax burden, and budget disposals of this tax expenditure is offset by an increase of consumption.

However, the analysis of VAT revenue in 1999-2009 in Lithuania shows that the impact of standard VAT rate on VAT revenues was positive and large of all independent variables. The difference between standard and lowest not zero reduced tax rates had a significant positive impact. Government revenues from VAT were bigger in periods than certain goods and services were charged by lower rate than in periods when VAT incentives were eliminated (Bikas, Raškauskas 2011). In addition, study of Mexico case examined the impact of the number of reduced VAT rates on VAT revenue. The results of this study showed that the number of reduced tax rates is statistically significant and the greater number of them increases VAT revenues (Tijerina-Guajardo and Pagan 2000).

Emphasizing fiscal significance of VAT incentives, it should be noted that budget disposals due to applicable VAT incentives substantially increased in 2009-2013 and amounted to 481 million LTL in 2013. In addition, budget disposals due to applicable VAT incentives represent a significant share of total budget disposals due to all tax incentives which in 2009, 2010 and 2012 accounted for about one-fifth, in 2011-2012 – more than one-third of all disposals (Table 6).

Table 6. Budget disposals due to VAT incentives in 2009-2013

<table>
<thead>
<tr>
<th>VAT disposals, million LTL</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT disposals, percent in total tax disposals</td>
<td>20.42</td>
<td>21.05</td>
<td>34.33</td>
<td>37.38</td>
<td>19.39</td>
</tr>
</tbody>
</table>

Source: compiled by the authors, according to data of Lithuania Ministry of Finance (2014)

Personal income tax. Hussey, Lubick (1996) describes personal income tax as multifaceted tax that includes all types of income and involves capital gains as well as any other income allowing very few deductions. The incentives of this tax are directed to ensure social justice. The purpose of such tax incentives is to decrease tax burden for low income individuals in order to reduce their social exclusion and improve quality of life. Lithuania’s personal income tax law provides various tax incentives which can be grouped as following:
1) tax-exempt income;
2) income taxed at reduced rate.

Diversity of personal income sources is quite large (wages, self-employment income, income in kind, income from capital gains, etc.). However, a key component of this tax is a tax rate. Standard PIT rate for wages and work-related income till 1 July 2006 was gradually reduced from 33 percent and now stands at 15 percent (Table 7). Consistent reduction
of PIT rate can be attributed to government’s social policy and one of its goals — personal income increase.

Table 7. Changes of PIT rate in Lithuania

<table>
<thead>
<tr>
<th>Since</th>
<th>Till</th>
<th>Tax rate</th>
<th>Taxable income</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003 01 01</td>
<td>2006 06 30</td>
<td>33% all income except income taxed at reduced rate</td>
<td>15% income from distributed profit, performing artists income, professional fees, income from copyright contracts, property rental income, etc.</td>
</tr>
<tr>
<td>2006 07 01</td>
<td>2007 12 31</td>
<td>27% all income except income taxed at reduced rate</td>
<td>15% income from distributed profit, performing artists income, professional fees, income from copyright contracts, property rental income, etc.</td>
</tr>
<tr>
<td>2008 01 01</td>
<td>2008 12 31</td>
<td>24% all income except income taxed at reduced rate</td>
<td>15% income from distributed profit, performing artists income, professional fees, income from copyright contracts, property rental income, etc.</td>
</tr>
<tr>
<td>2009 01 01</td>
<td>now</td>
<td>15% standard income (wages, other benefits)</td>
<td>5% self-employed income</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>fixed amount tax for business license</td>
</tr>
</tbody>
</table>

Source: compiled by the authors, in accordance to Lithuania law of personal income tax with amendments and supplements

It should be noted that personal taxation system applicable in Lithuania is proportional. As it is mentioned by Teather (2005), in practice there are several aspects that are common to “flat” tax systems: there are many exemptions and deductions eliminated and personal allowances and benefits increased. Many “flat” tax systems provide a significant increase in tax-exempt amount. Paulus, Peichl (2008) agrees that “flat” tax system is useful for very rich as well as very poor, but in this system individuals from middle-income group lose, because this group of people does not have any tax incentives or benefits, or they are very symbolic. PIT incentives in Lithuania have been changed depending on government’s goals and policy implemented (Table 8).

Table 8. Tax-exempt income and incurred expenditure in Lithuania

<table>
<thead>
<tr>
<th>Tax-exempt income</th>
<th>Deductible expenditures till 2009</th>
<th>Deductible expenditures since 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>benefits and compensations; insurance benefits; pension benefits and retirement annuities; interests; income received as a charity; gifts received from spouses, close relatives or not exceeding 8000 LTL per year; inherited income, charged by inherited wealth tax; income from property sale; income from agricultural activities; amounts adjudged by court; scholarships; trophies, prizes and lottery winnings; gifts and donations received and used in political campaign; clergy maintenance; income received for services funder a voucher; tax-exempt amount and additional tax-exempt amount.</td>
<td>Expenditures for one personal computer with software purchased in 2004–2009 and (or) installation of internet access; interests for one housing mortgage loan; life insurance premiums; contributions to pension funds; sums paid for vocational training and (or) studies.</td>
<td></td>
</tr>
</tbody>
</table>

Source: compiled by the authors, in accordance to Lithuania law of personal income tax with amendments and supplements

PIT law provides that total amount of deductible expenditure cannot exceed 25 percent of total resident’s taxable income taxed at rate of 15 percent. Among PIT incentives tax-exempt amount and additional tax-exempt amount applicable to work-related income are considered to be the most important. Tax-exempt amount (TEA) depends on received income, number of children (additional tax-exempt amount, ATEA), level of working capacity. Since 2014 January TEA calculation procedure has been changed: for resident whose monthly labor income does not exceed 1000 LTL monthly the size of tax-exempt income is 570 LTL. TEA is not applicable to persons whose monthly wage is 3192 LTL or more; thus changes of TEA calculation procedures are significant for employees those income is lower. Individuals who receive a minimum monthly wage since 1 January 2014 this amount was increased by 21 LTL or 2.54 percent. It shows very negligible increase of wage for individuals with lowest work-related income.

Analysis of TEA and its impact on society and public finance showed that as much as 65 percent Lithu-
anian employees earn only up to 2000 LTL, while only about 10 percent earns over 3500 LTL, the remaining salary range is in between 2001 LTL – 3500 LTL. Moreover, the results show that in 2011 this exemption was used by only 20.8% of the working population; it can be argued that TEA fully implements the principle of social justice. While assessing the real value of the TEA in different taxable income groups, a common TEA real value, which represents 42,448,454 LTL, was set. This is 1.13 percent of overall PIT revenue; it can be said that the practical application of TEA has no significant influence to the national government PIT revenues. Assessment of fiscal effect of PIT incentives revealed that budget disposals due to applicable PIT incentives significantly increased in 2013 (tax expenditures account 3.81 percent of total revenues or 934 million LTL) and represent the largest share of total tax expenditures, as application of TEA determines even 37 percent budget disposals due to applicable PIT incentives.

4. Research methodology

The main purpose of this research is to determine expediency and impact of selected tax incentives, uncovering their social, fiscal and economic nature and effects.

Factor analysis was selected for the main research method with following arguments:

1) accumulates all variables to more general factors characterizing the origin of variable (social, fiscal, economic) and its effect;
2) facing with a lack of data to investigate the latent factors which are not known but may be of significant influence in the model;
3) to create orthogonal (mutually uncorrelated) factors, which can be used in subsequent studies for regression analysis avoiding the problem of multicollinearity.

Limitations of the analysis were identified: 
- short series of available data;
- not evaluated, not measured, and not public variable data.

In order to eliminate impact of these limitations statistical methods including the trend of data series and relative data were used. The main task of factor analysis is depending on the correlation between observed variables to classify them into groups with some unifying directly unobserved factor (Čekanavičius, Murauskas 2002). The phases of factor analysis are following:

I. Verification of data compliance to the method based on the Kaiser-Meyer-Olkin (KMO) measure.
II. Indication of the factors – determination of the number of factors used.
III. Rotation and interpretation of factors.

Variables used and their economic assumptions are shown in Table 9.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Assumption/relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_1</td>
<td>PIT expenditures investment into education</td>
</tr>
<tr>
<td></td>
<td>It is assumed that PIT expenditures are invested in higher education: PIT expenditures/ Costs of one student’s place at university</td>
</tr>
<tr>
<td>X_2</td>
<td>Share of university places created due to PIT expenditures</td>
</tr>
<tr>
<td></td>
<td>University places created due to PIT expenditures / Total university places</td>
</tr>
<tr>
<td>X_3</td>
<td>PIT expenditures investment into new workplaces</td>
</tr>
<tr>
<td></td>
<td>It is assumed that this amount of PIT incentives is used to create new workplaces with an average wage in the country: PIT expenditures / Average wage</td>
</tr>
<tr>
<td>X_4</td>
<td>PIT expenditures investment into employment</td>
</tr>
<tr>
<td></td>
<td>Jobs created due to PIT expenditures / Employment</td>
</tr>
<tr>
<td>X_5</td>
<td>Share of PIT, VAT, excise duties and real estate tax expenditures in GDP</td>
</tr>
<tr>
<td></td>
<td>Selected tax expenditures / GDP</td>
</tr>
<tr>
<td>X_6</td>
<td>Share of PIT, VAT, excise duties and real estate tax expenditures in assignations to State Tax Inspectorate</td>
</tr>
<tr>
<td></td>
<td>Selected tax expenditures / Assignations to State Tax Inspectorate</td>
</tr>
<tr>
<td>X_7</td>
<td>Ration of PIT, VAT, excise duties and real estate tax expenditures and corruption</td>
</tr>
<tr>
<td></td>
<td>Assume that tax incentives encourage corruption, because they are applied to possibly favored goods or services as well as groups of individuals: Selected tax expenditures / Index of corruption</td>
</tr>
<tr>
<td>X_8</td>
<td>Share of VAT expenditures in export</td>
</tr>
<tr>
<td></td>
<td>VAT expenditures / Export</td>
</tr>
</tbody>
</table>

| X₉ | Share of VAT expenditures in changes of Consumer price index | VAT expenditures / Consumer price index |
| X₁₀ | Share of excise duties expenditures in export | Excise duty expenditures / Export |
| X₁₁ | Share of excise duties expenditures in changes of Consumer price index | Excise duty expenditures / Consumer price index |
| X₁₂ | Share of real estate tax expenditures in activity of real estate market (transactions) | Assume than real estate tax incentives increase the number of transactions in the market: real estate tax expenditures / number of real estate transactions |
| X₁₃ | Share of PIT, VAT, excise duties and real estate tax expenditures in revenues of national budget | Selected tax expenditures / Revenues of national budget |

Source: compiled by the authors according to data of Transparency International, Lithuania Ministry of Finance, Department of Statistics and authors’ calculations

| \( X_i \) | Share of VAT expenditures in changes of Consumer price index | VAT expenditures / Consumer price index |
| \( X_{10} \) | Share of excise duties expenditures in export | Excise duty expenditures / Export |
| \( X_{11} \) | Share of excise duties expenditures in changes of Consumer price index | Excise duty expenditures / Consumer price index |
| \( X_{12} \) | Share of real estate tax expenditures in activity of real estate market (transactions) | Assume than real estate tax incentives increase the number of transactions in the market: real estate tax expenditures / number of real estate transactions |
| \( X_{13} \) | Share of PIT, VAT, excise duties and real estate tax expenditures in revenues of national budget | Selected tax expenditures / Revenues of national budget |

The problem of factor analysis – knowing the values of \( X_i \) to draw conclusions about general factors, that determine the behavior of variables \( X_i \), i.e. to estimate the values of factor weights \( \lambda_{ij} \), characteristic dispersions \( \tau_i \), characterizing \( \tau_i \), the value of KMO measure is low, the factor analysis will be inefficient. Low value of this measure shows that correlation between pairs of variables is not explained by other variables. It is considered that the value of KMO should be not less than 0.7, in borderline case – not less than 0.6 (Čekanavičius, Murauskas 2002).

In the second phase of analysis the factors are indicated according to the analysis of fundamental components. Variables are arranged in descending order of dispersions, and then coefficients (weights) (vectors of initial variables covariance matrix) are calculated. Linear relations identified are called the components of variables. The more general dispersion of variables can be explained by general component, the more this component is important accumulating information about its variables. Factor \( F_j \) is related to that variables \( X_{ij} \), \( X_{i2} \) ..., \( X_{ik} \), those weight values \( \lambda_{ij} \) ..., \( \lambda_{ik} \) in absolute sizes are not lower than 0.4. Positive value of weight indicates positive correlation between variable and factor, negative value shows that correlation is negative. Variables are equally important regardless the sign of weight (Pukėnas 2009).

In the third phase of analysis orthogonal linear com-
Combinations of factors are concluded. The aim of this procedure that is called orthogonal rotation is to simplify the structure of factors weights matrix and to achieve that every variable would have only few non-zero factor weights. In this research Varimax method of orthogonal rotation was used (Pukėnas 2009). Orthogonality is verified by the matrix of correlation coefficients that is calculated as following (Janilionis 2014):

\[ r = \frac{x_1x_2 - x_1^*x_2^*}{\sqrt{x_1^2 - (x_1^*)^2} \sqrt{x_2^2 - (x_2^*)^2}} \]  

(3)

where \( r \) – correlation coefficient, \( x_1x_2 \) – variables.

Analysis was performed using SPSS software tool.

5. Empirical results

Table 10 shows communalities of primary variables – variations of shares of primary variables which can be explained by general factors. It is noticed (Čekanavičius, Murauskas 2002) that general components contains sufficient information about variable if its communality is at least 0.20.

Table 10. Communalities

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_1</td>
<td>1,000</td>
<td>.998</td>
</tr>
<tr>
<td>X_2</td>
<td>1,000</td>
<td>.998</td>
</tr>
<tr>
<td>X_3</td>
<td>1,000</td>
<td>1.000</td>
</tr>
<tr>
<td>X_4</td>
<td>1,000</td>
<td>.999</td>
</tr>
<tr>
<td>X_5</td>
<td>1,000</td>
<td>1.000</td>
</tr>
<tr>
<td>X_6</td>
<td>1,000</td>
<td>.998</td>
</tr>
<tr>
<td>X_7</td>
<td>1,000</td>
<td>.992</td>
</tr>
<tr>
<td>X_8</td>
<td>1,000</td>
<td>1.000</td>
</tr>
<tr>
<td>X_9</td>
<td>1,000</td>
<td>1.000</td>
</tr>
<tr>
<td>X_10</td>
<td>1,000</td>
<td>1.000</td>
</tr>
<tr>
<td>X_11</td>
<td>1,000</td>
<td>1.000</td>
</tr>
<tr>
<td>X_12</td>
<td>1,000</td>
<td>.989</td>
</tr>
<tr>
<td>X_13</td>
<td>1,000</td>
<td>.978</td>
</tr>
</tbody>
</table>

Source: compiled by the authors, according to authors’ calculations

Data in Table 10 shows very high (close to 1) usability of selected calculated variables in conclusion of factorial components. This indicates feasibility of analysis aims and results.

Table 11. Total Variance Explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>9,424</td>
<td>72,489</td>
<td>72,489</td>
</tr>
<tr>
<td>2</td>
<td>2,278</td>
<td>17,520</td>
<td>90,009</td>
</tr>
<tr>
<td>3</td>
<td>1,249</td>
<td>9,604</td>
<td>99,613</td>
</tr>
<tr>
<td>4</td>
<td>0,050</td>
<td>0,000</td>
<td>.387</td>
</tr>
<tr>
<td>5</td>
<td>2,338E-16</td>
<td>1,799E-15</td>
<td>100,000</td>
</tr>
<tr>
<td>6</td>
<td>1,791E-16</td>
<td>1,378E-15</td>
<td>100,000</td>
</tr>
<tr>
<td>7</td>
<td>9,025E-17</td>
<td>6,942E-16</td>
<td>100,000</td>
</tr>
<tr>
<td>8</td>
<td>5,221E-17</td>
<td>4,016E-16</td>
<td>100,000</td>
</tr>
<tr>
<td>9</td>
<td>3,632E-17</td>
<td>2,794E-16</td>
<td>100,000</td>
</tr>
<tr>
<td>10</td>
<td>-4,522E-17</td>
<td>3,478E-16</td>
<td>100,000</td>
</tr>
<tr>
<td>11</td>
<td>-1,227E-16</td>
<td>9,437E-16</td>
<td>100,000</td>
</tr>
<tr>
<td>12</td>
<td>-2,035E-16</td>
<td>1,565E-15</td>
<td>100,000</td>
</tr>
<tr>
<td>13</td>
<td>-2,740E-16</td>
<td>2,108E-15</td>
<td>100,000</td>
</tr>
</tbody>
</table>

Source: compiled by the authors, according to authors’ calculations
Data in Table 11 indicates what part of general dispersion of variables is explained by each general component (in column “Extraction Sums of Squared Loadings – % of Variance”), as well as what part of cumulative general dispersion of variables is explained by general components (in column “Extraction Sums of Squared Loadings – Cumulative %”). As can be seen from results in Table 11, the first component explains variables the most accurately (up to 72 percent of variables included). Around 17 percent of variables are explained by the second component, and only 9 percent – by the third component.

Data in columns “Rotation Sums of Squared Loadings – % of Variance” and “Cumulative %” shows, what part of general dispersion of variables is explained by each general component as well as what cumulative part of general dispersion of variables is explained by general components in the final result after rotation of components matrix. It should be noted that after rotation proportions between components equalize: 53 percent of variables are explained by the first, 24 percent – by the second and 22 percent – by the third component. Table 12 enables to entitle the components.

By the data in Table 12 components are characterized by values and direction (sign) of coefficients. The first component is characterized as following:

- strong positive impact on education (PIT incentives impact on creation of new university places with coefficient value 0.971; PIT incentives impact on expenditures for education with coefficient value 0.976); assuming that funds which become available due to PIT incentives are used to create new university places, tax expenditures have strong positive impact on creation of university places; assessment of share of potential university places created due to PIT incentive in all university places, presupposes that PIT expenditures have strong positive impact on the component; it can be concluded that PIT incentives for education have positive impact on the component;

- strong negative impact on employment (-0.987) and jobs created (-0.992); assuming that PIT incentives (funds saved) are used for creation of new jobs (with average gross wage), it can be noticed that negative impact of variable is explained by unearned and unused funds due to PIT incentives applicable; without distinction of public and private sectors, negative general impact on the component is observed;

- positive tax incentives impact on assignations to State Tax Inspectorate (0.984); higher tax expenditures result higher volume of employment in State Tax Inspectorate due to higher assignations to this institution; positive impact of workload exceeds negative fiscal impact (higher budget expenditure) on this component;

- significant positive tax incentives impact on national budget (0.975) is observed showing indirect impact due to the sign of coefficient (+), what contradicts to economic logics of tax expenditures; due to this fact, it is concluded that the first component and

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_1</td>
<td>.976</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X_2</td>
<td>.971</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X_3</td>
<td>-.992</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X_4</td>
<td>-.987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X_5</td>
<td>.744</td>
<td>-.491</td>
<td>.454</td>
</tr>
<tr>
<td>X_6</td>
<td>.984</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X_7</td>
<td>.890</td>
<td>.420</td>
<td></td>
</tr>
<tr>
<td>X_8</td>
<td>-.682</td>
<td>-.731</td>
<td></td>
</tr>
<tr>
<td>X_9</td>
<td>-.651</td>
<td></td>
<td>.650</td>
</tr>
<tr>
<td>X_10</td>
<td>.947</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X_11</td>
<td>-.677</td>
<td>.410</td>
<td>.612</td>
</tr>
<tr>
<td>X_12</td>
<td></td>
<td>.932</td>
<td></td>
</tr>
<tr>
<td>X_13</td>
<td>.975</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: compiled by the authors, according to authors’ calculations*
tax incentives applicable in this area has a positive (likely indirect) impact on national budget, though bigger than direct expenditure;

- average positive impact on tax expenditure share in GDP (0.744); this coefficient shows positive tax incentives relation with economy in the country, that results in positive impact on the component.

The nature and abundance of variables presuppose that the first component should be entitled “Tax incentives impact on labor market”. Tax incentives encourage the development of qualified labor force, but negatively affect the number of jobs created. Jobs created due to applicable tax incentives positively affect GDP and budget revenues. Larger number of tax incentives applicable encourages the expansion of bureaucratic apparatus (job creation) as well.

The second component is characterized as following:

- weak positive affect on corruption (0.420); positive sigh of relative size of tax incentives and corruption index shows tax incentives positive impact on corruption;
- strong positive impact on real estate transactions (0.932); assuming that real estate tax expenditures are used for new transactions, impact on the component is strong and positive;
- average negative impact of VAT incentives on export (-0.731) shows that VAT incentives applicable do not encourage export (conclusion is based on the fact that preferential rate is not included in accounting of tax expenditures).

Number, direction and value of variables presuppose that the second component should be entitled “Tax incentives impact on consumption”. Tax incentives create preconditions to higher income remaining after consumption; promote economic growth and growth the rate of inflation. It should be noted that the authors have decided not to involve variables with weak and moderately weak values to the components analyzed. The results of analysis are adjusted by the procedure of rotation (Table 13).

**Table 13. Rotated component matrix and three-dimensional contribution**

<table>
<thead>
<tr>
<th>Economic</th>
<th>Social</th>
<th>Fiscal</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>X₁</td>
<td>.863</td>
<td>-.482</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td>X₂</td>
<td>.826</td>
<td>-.545</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₃</td>
<td>-1.885</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₄</td>
<td>-1.897</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₅</td>
<td>.944</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₆</td>
<td>.914</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₇</td>
<td>.584</td>
<td>.728</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₈</td>
<td>-.422</td>
<td>-.906</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₉</td>
<td>.941</td>
<td></td>
<td>.962</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₁₀</td>
<td></td>
<td></td>
<td></td>
<td>.950</td>
</tr>
<tr>
<td></td>
<td>X₁₁</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X₁₂</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td>X₁₃</td>
<td>.788</td>
<td>.485</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: compiled by the authors, according to authors’ calculations

Table 13 shows the weights of factors after the procedure of rotation. It can be seen, that the first factor is correlated with variables which could be summarized as variables of labor market, the second factor is correlated with variables which mean exclusivity of tax incentives, the third factor can be identified as a factor of consumption. No significant changes in distribution of variables in the components are observed; therefore preliminary entitlements of factors (components) are acceptable.

Table 13 also shows contribution of variables according to the nature of impact – economic, fiscal and social. It can be noticed that variables examined widely involve tax incentives impact on economics (impact of PIT expenditures on jobs creation and employment, tax expenditures ratio to GDP, VAT and excise...
The second component comprises corruption, real estate tax incentives impact on real estate transactions, as well as VAT incentives impact on export. This component reflects specificity of tax incentives and low degree of applicability (prevalence). Since VAT incentives are regulated by the law of the EU, incentives of real estate tax can be adjusted by national authorities.

The third component concerns consumption – incentives of VAT and excise duties lower prices of domestic commodity, but do not guarantee competitiveness in foreign markets (negative impact on export volume).

Factor analysis revealed economic impact of tax incentives applicable in Lithuania.

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Evaluation of social, economic and fiscal impact on incentives of personal taxation in Lithuania


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Abstract and Keywords should be printed single spaced, in 9 pt typeface, in one column and after the institution address and space of three lines below the institution address should be left. Words Abstract and Keywords must be printed in bold. The size of the abstract cannot be less than 600 typographic signs. There should be a space of one line between the abstract and keywords. 6-10 keywords should be provided and selected according to Thesaurus, e.g. http://www.esds.ac.uk/search/hassSearch.asp.

Introduction, main text and conclusions should be printed in 11 pt type single interval in one column at the distance of 1 line from keywords.

Figures or tables should be mentioned in the text and the place should be indicated in the separate line. The numbers of figures and tables and inscriptions below are written in 9 pt regular typeface. Figures and tables are separated from the text by one-line space.

The titles of chapters and sub-chapters are printed in small letters, 11 pt bold-regular type and aligned left. The introduction, titles of chapters and conclusions are numbered. The titles of chapters and sub-chapters should be separated from the text by one-line space.

The name of the author of the source, the year of publication and pages should be presented in the text in brackets. The list of references is given after the conclusions. The word References is spelled in small letters, 11 pt bold-regular type, left ranged and the list of references in 9 pt. The references are to be presented in the alphabetical order, in the original language; translation into English is given in square brackets. References according to the Harvard citation style, e.g. http://libguides.library.uwa.edu.au/harvard.
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