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PROFESSIONAL ROLES AS THE STRUCTURAL COMPONENT OF PROFESSIONAL IDENTITY OF HIGHER EDUCATION TEACHERS IN SAMPLES OF RIGA AND SMOLENSK

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Abstract. The strengthening of professional identity (PI) of teachers of higher education institutions (HEI) is one of the ways to improve the quality of educational process. Performance of professional role(s) can be identified as the key component of PI. The contemporary university teacher performs many professional roles: she/he is a lecturer, researcher, supervisor of students' research works, expert, and so on. Multi-role activity of a teacher is considered as a characteristic feature of the profession by the colleagues in Latvia, Russia and other countries. This research is based on the data obtained during the implementation of the Project 'Professional Identity of Contemporary Pedagogue' in 2014–2016 by the researchers from Riga (Latvia) and Smolensk (Russia). In the realization of the project, the six-component structural model of the content of HEI teacher's PI was created and the survey was carried out using the questionnaire 'HEI Teachers' Professional Identity' developed by the project participants. Overall, a total of 198 teachers were surveyed in Riga and Smolensk. The aim of this article was to analyze and compare the data obtained for the PI component 'Professional Roles' in the samples of HEI teachers of both the countries. The data were analysed using statistical methods. The results showed that teachers of both the countries perform their professional roles at a high level. Overall, the answers of teachers of the two countries were well agreed. However, some peculiarities in the data of Riga and Smolensk were observed, and some problems of PI of HEI teachers were identified, which require attention of executives of the education reform and teachers.

Keywords: professional identity (PI); teacher of higher education institution (HEI); professional roles.

JEL Classification: I23

Introduction

The strengthening of professional identity (PI) of teachers of higher education institutions (HEI) is one of the ways to improve the quality of educational process. In the scientific literature on problems of PI, there is still no precise definition of this concept. As it was shortly formulated by H. R. Woo, PI is a state of mind that categorizes an individual as a member of a selected profession and develops over time (Woo 2013, 30). In general, PI refers to a core set of beliefs, values, and assumptions about the distinctive characteristics of an individual's chosen profession that distinguishes it from other professions (Weinrach *et al.* 2001) as well as to the corresponding knowledge, abilities and skills that allow carrying out professional activities (Красникова 2013). PI helps the teachers to orient themselves in the world of professions and realize their personal professional potential. To achieve a certain level of PI identity is one of the most important tasks of personal development (*ibid*).

Clarification of the content of the teacher's PI was one of the main objectives of the Latvian-Russian project 'Professional Identity of Contemporary Pedagogue'. The project was implemented in 2014–2016 by the researchers of the Riga Teacher Training and Educational Management Academy (Latvia) and the Smolensk State University (Russia), including the authors of this paper. This article continues a series of studies of teachers' PI based on the data obtained in the course of the project realization.

In the framework of the project, a hypothetical model of the content of HEI teacher's PI was created based on the works by C. H. Emerson (2010), D. Beijaard et al. (2004), A. C. Healey & D. G. Hays (2011), and H. R. Woo (2013). The model includes six major structural components of the content of

PI: Philosophy of the Profession, Professional Knowledge, Professional Roles, Professional Attitude to Work, Cooperation with Colleagues, and Professional Engagement Behaviours (Spona *et al.* 2015).

The aim of this article is to analyse and compare the data obtained for the HEI teachers' PI component 'Professional Roles' in the samples of Riga and Smolensk.

The results of the study have shown that the teachers of both the countries perform their professional roles at a high level. According to the Mann-Whitney coefficient, the differences of indicators for the PI component 'Professional Roles' between the two samples of respondents are not statistically significant. This confirms the relevance of the proposed model of teachers' PI and indicates that it reflects the essential and stable characteristics of the professional identity of HEI teachers. However, there are some peculiarities in the data of Riga and Smolensk samples. In the Riga sample, there are much stronger correlations between the indicators of Professional Roles and the other components than in Smolensk. This demonstrates the key role of component in the structure of the Riga teachers' PI and a certain disorientation of the Smolensk teachers in this issue.

The analysis and interpretation of the data obtained allows one to conclude that in the pedagogical systems of both countries, there is a lack of feedback between educational reformers and practitioners. To improve the educational process, executives of the reform and teachers should pay due attention to this problem.

Methodology

The methodological base of the empirical research was developed using the Professional Identity Scale in Counselling by H. Woo, which was proposed for the profession of psychologist-counsellor (Woo 2013). This technique was modified to investigate the contents of HEI teachers' PI. As a result, a questionnaire 'HEI Teachers' Professional Identity' was created by A. Shpona, M. Vidnere, and J. Jermolajeva (Сенченков, Шпона 2016, 191), and a survey of university teachers was carried out. Each of the 6 blocks of the questionnaire consisted of 10 statements. In total, 198 teachers were surveyed in Riga and Smolensk. In Riga, 118 teachers from Riga Teacher Training and Education Management Academy, Latvian Academy of Sport Education, Latvian Academy of Music, and Riga Technical University participated in the survey; 80 respondents from Smolensk State University, Smolensk State Medical University, Smolensk State Agricultural Academy, and Smolensk Academy of Physical Culture, Sports and Tourism in Smolensk were tested in Smolensk. The survey was anonymous. By Cronbach's alpha method, the indicator of reliability of the questionnaire was 0.84, which implies that the questionnaire can be recognized as reliable.

The data obtained in the survey allows one to analyse and interpret the indicators for all the 6 components of PI and examine the relationship between them. This article is devoted to the PI component 'Professional roles'. Performance of professional role can be identified as the key feature of professionalism. The contemporary university teacher performs many professional roles. He gives lectures and, at the same time, he may be a researcher, tutor, supervisor of students' research works, expert, administrator (the head of the department, faculty or other structural subdivision), and so on. Multi-role activity of a teacher is considered by the colleagues in Latvia, Russia and other countries as a characteristic feature of the profession. In the implementation of many roles carried out by a teacher, there are positive and negative aspects. The comprehensive, all-round and harmonious development of teacher (and, consequently, of students he teaches) is one of the most important positive aspects of multi-role activities of lecturer. Superficial attitude to some activities and lack of time for full and conscious immersion in the subject taught can be mentioned as one of the negative aspects.

Statistical methods have been used in the research to analyse the data. For all the components of PI, mean rates, dispersion, standard deviation, statistical mode, and coefficient of variation (CoV) were calculated for both the samples. The hypothesis testing method (the Mann-Whitney U test) was used to compare the two groups of respondents.. The Spearman rank correlation analysis was used to reveal the relationship between parameters within the block 'Professional Roles', and between them and the indicators in the other blocks.

Results

The general data obtained for the component 'Professional Roles' are presented in Table 1. There are small differences between the samples of PI component 'Professional Roles'. The average value is close to 5 in both the samples; the mode in Riga is 6 (the highest possible score) and in Smolensk, it is 5. These figures show that the teachers of both the samples perform their professional roles at a high level.

Table 1. General statistical indicators for the PI component 'Professional Roles' in the samples of Riga and Smolensk

Samples	Mean value	Dispersion	Standard deviation	Coefficient of variation (%)	Mode
Riga	4. 93	1. 34	1. 16	23. 46	6
Smolensk	4. 87	1. 30	1. 14	23. 45	5

When answering questions in this block, at first the respondents had to indicate their professional roles by selecting them from the list: lecturer, researcher, tutor, curator of students' group, supervisor of students' research works, expert, administrator (the head of department, faculty or other structural subdivision); and/or by specifying a different role. Then they evaluated the following statements by using the appropriate rating from strong disagreement (1 point) to complete agreement (6 points):

L1. My professional role(s) is (are) important in the functioning of the university.

L2. A professional teacher wants the students to be consciously and positively involved in the learning process.

L3. I perform two or more professional roles at the university.

L4. I am convinced that my work at the university has a positive impact on society.

L5. I realize the need to improve the performance of my professional role(s).

L6. I constantly assess the results and achievements of my work.

L7. In the university teacher profession, the definition of priorities is crucial.

L8. I always fulfil my professional duties on time.

L9. I have the necessary diplomas and certificates that give me the right to fulfil my professional role(s).

L10. My professional self-esteem is not affected by individual negative evaluations of colleagues and students.

The data obtained in the survey for each statement of the PI component 'Professional Roles' are presented in Table 2.

Table 2. Data for the items of PI component 'Professional Roles'

		Number of item									
		L1	**L2**	**L3**	**L 4**	**L 5**	**L 6**	**L 7**	**L 8**	**L 9**	**L 10**
Riga	**Mean rate**	4.72	5.13	4.83	4.58	5.27	5.28	4.97	4.96	5.28	4.31
	Mode	5	6	6	6	6	6	6	5	6	5
	Coefficient of variation (%)	22.82	17.95	32.85	30.69	16.58	14.63	21.21	16.97	18.01	32.32

Smolensk	**Mean rate**	4.45	5.28	4.69	4.58	5.29	5.01	4.59	5.00	5.59	4.20
	Mode	5	6	6	5	6	5	4	5	6	5
	Coefficient of variation (%)	25.26	13.14	34.55	25.02	21.53	15.71	21.85	14.93	11.63	32.46

The results of the two samples are very similar to each other (Fig. 1.). In response to the questions of the block 'Professional Roles', the maximum approval of both the samples is reached at items L2, L5 and L9. Despite the fact that the teachers have diplomas and certificates confirming their qualifications, they strive to improve the performance of their professional roles; here, their main aim is the development of the subject-subject pedagogical process.

Both in Riga and Smolensk, the ratings on the statements L1, L4 and L10 are among the lowest scores. In general, the survey participants react quite sensitively to 'individual negative evaluations of colleagues and students'. They do not really believe in the importance of their contribution to the functioning of not only the society as a whole, but even their own university, despite more or less declarative recognition of the importance of their profession, which is demonstrated by the data from the block 'Philosophy of the profession' (see the paper by J. Jermolajeva and T. Bogdanova in this book). Thus, in the minds of contemporary teachers of the two countries, a cognitive dissonance is identified. Teachers fully realize their professional mission, but since the leadership of the state and the education institutions do not pay due attention to them and their initiatives, they feel that their position is basic, but the lowest in the hierarchy of educational system, without the possibility of influencing this system. It can be said that there is no feedback between the education reformers and the team realizing the reforms.

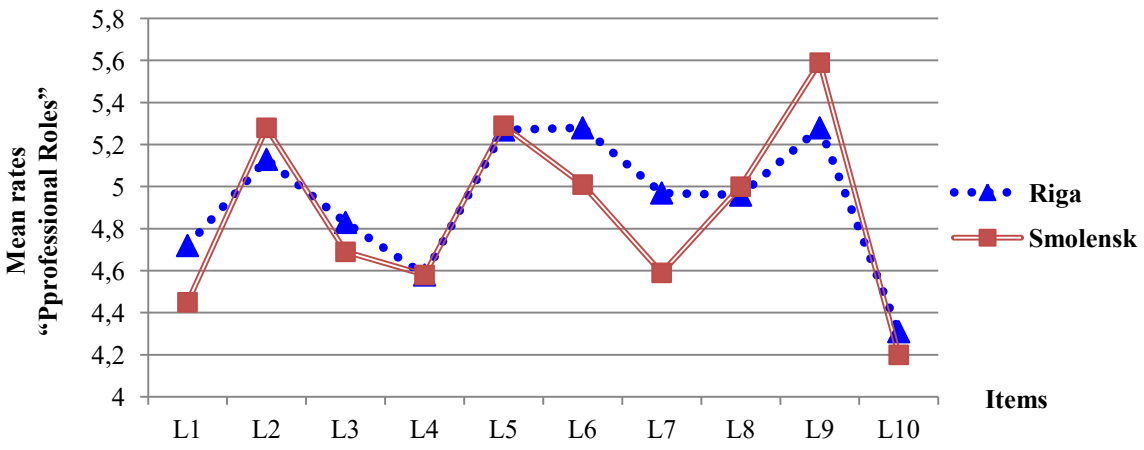

Fig. 1. Mean rates of the statements of the component 'Professional Roles'

The greatest disagreement between the responses in the two samples is found in items L6, L7 and L9. The teachers from Riga pay more attention to the professional reflection and the definition of priorities than the teachers from Smolensk. In Smolensk, more teachers feel safe in the profession because they have corresponding diplomas of high quality, which gives them the right to work at HEI (see the mean rate and CoV of item L9 in the Smolensk sample). Therefore, it can be concluded that professional disorientation of the Smolensk teachers does not come from their personal inadequate preparedness to work, but is due to the fact that the system of higher education in contemporary Russia does not give clear guidelines on the hierarchy of professional roles and makes conflicting demands on teachers, which does not allow professionals to determine priorities in their work consistently. The same is largely true for the Latvian educational system.

Disorientation of the Smolensk teachers in the issues of professional roles and their priority is indirectly reflected in the absence of strong and moderately strong correlations of the items of the block 'Professional Roles' with the other components of PI. Numerous professional roles performed by the Smolensk respondents do not correlate with their perception of the professional attitude towards work, the professional engagement behaviours, and so on.

This is especially surprising in comparison with the great number of correlations in the answers of the Riga sample: 28. There are 14 correlations with the PI component 'Professional Attitude to Work', 11 correlations with the component 'Professional engagement behaviours', 2 correlations with the component 'Philosophy of the profession', 1 correlation with the component 'Cooperation with Colleagues'. By the number of rank correlations with the other PI components, the key items are L4 and L5 (Table 3).

Table 3. Spearman's rank correlations of Professional Roles with the other PI components (Riga sample)

Statements from the block 'Professional Roles'	Correlating statements in the other PI components	No of the PI component*	Correlation coefficient
'My professional role(s) is (are) important in the functioning of the university'	'The teaching profession is unique and valuable for the development of society'	6	0.54
'A professional teacher wants the students to be consciously and positively involved in the learning process'	'I think I have good cooperation with students'	4	0.54
'I am convinced that my work at the university has a positive impact on society'	'Teacher should promote a holistic physical, mental and social development of student's personality'	1	0.53
	'I love my profession and would recommend it to young people'	4	0.66
	'I am satisfied with my work and professional role(s)'	4	0.58
	'I think I have good cooperation with students'	4	0.64
	'I feel comfortable when working with people'	4	0.62
	'I can inspire others with my ideas and set them an example'	4	0.58
	'Even in unexpected situations, I do not have problems in dealing with people'	5	0.50
	'The teaching profession is unique and valuable for the development of society'	6	0.68
	'I try to acquaint the society with interesting novelties and achievements in my profession'	6	0.53
	'I defend my profession in public discussions'	6	0.53
'I realize the need to improve the performance of my professional role(s)'	'Teacher should promote a holistic physical, mental and social development of student's personality'	1	0.51
	'I love my profession and would recommend it to young people'	4	0.58

	‘I am satisfied with my work and professional role(s)’	4	0.53
	‘I think I have good cooperation with students’	4	0.53
	‘I feel comfortable when working with people’	4	0.56
	‘I can inspire others with my ideas and set them an example’	4	0.52
	‘The teaching profession is unique and valuable for the development of society’	6	0.58
	‘I participate in socially significant events: in elections, city and state holidays, etc.’	6	0.51
	‘If necessary, I will gladly consult pupils, students and other people who may need my professional help’	6	0.52
	‘I defend my profession in public discussions’	6	0.52
	‘I believe that the teacher's duty is to make the behaviour of people in the social environment more civilized’	6	0.65
‘I constantly assess the results and achievements of my work’	‘I love my profession and would recommend it to young people’	4	0.55
	‘If necessary, I will gladly consult pupils, students and other people who may need my professional help’	6	0.54
	‘I believe that the teacher's duty is to make the behaviour of people in the social environment more civilized’	6	0.54
‘I have the necessary diplomas and certificates that give me the right to fulfil my professional role(s)’	‘I am satisfied with my work and professional role(s)’	4	0.523
	‘My personal life is in balance with my work’	4	0.592

* Numbers of PI components in Table: 1 – Philosophy of the Profession, 2 – Professional Knowledge, 3 – Professional Roles, 4 – Professional Attitude to Work, 5 – Cooperation with Colleagues, 6 – Professional Engagement Behaviours

The professional roles performed by the teachers of Riga are closely intertwined in their minds with the social mission of the teacher, his involvement in the process of positive social changes. The variety of roles not only influences the student’s cognitive sphere, but also contributes to the holistic development of the student’s personality.. The main tool of the teacher’s influence is the pedagogy of cooperation with students, public organizations, and those who need pedagogical assistance and education. The survey data show greater social activity of the Riga teachers.

The data obtained in the study show that the satisfaction with the chosen profession depends, to a large extent, on the number and nature of the professional roles performed. Even the communicative field, satisfaction with the quality of communication, awareness of the balance of personal life and professional activity is connected, to some extent, with satisfaction from the performance of professional roles. The importance of this component in the structure of the Latvian teachers’ PI is difficult to overestimate.

Conclusions

The results of the study show that the teachers of both the countries perform their professional roles at a high level.

The differences between the indicators of the component 'Professional Roles' in the two samples of respondents are not statistically significant (by the Mann-Whitney coefficient). This indicates that the proposed model of HEI teachers' PI is relevant and reflects the essential and stable characteristics of teachers' professional identity.

However, there are some peculiarities in the data of Riga and Smolensk samples. In the Riga sample, numerous correlations between the Professional Roles and the other components of the teacher's PI (Philosophy of the Profession, Professional Knowledge, Professional Attitude to Work, Cooperation with Colleagues, Professional Engagement Behaviours) have been revealed (by the Spearman rank correlation analysis). Thus, for the Riga HEI teachers, professional roles are the key component of PI that regulates their professional field and social activity.

Numerous professional roles performed by the Smolensk respondents do not correlate with the indicators in the other PI components (there are no moderately strong and strong correlations). This indicates disorientation of the Smolensk teachers in the issues of professional roles and their priority, which is possibly due to the fact that the system of higher education in contemporary Russia does not give clear guidelines on the hierarchy of professional roles and makes conflicting demands on teachers, which does not allow professionals to determine priorities in their work consistently. To some extent, the same is true for the Latvian educational system.

In the pedagogical systems of both the countries, there is a lack of feedback between educational reformers and practitioners. Higher education teachers are aware of the reforms being implemented and are included in them; however, they have no tools to participate in the assessment, analysis and correction of the reforms. To improve the educational process, executives of the reform and teachers should pay due attention to this problem.

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PROFESSIONAL DEVELOPMENT OF SCHOOL PRINCIPALS IN THE PILOT PROGRAM OF 'PEDAGOGICAL FLEXIBILITY': THE ISRAELI CASE

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Abstract. The past decade constitutes a significant turning point in the orientation of policy makers in the Israeli educational system. This period is characterized by comprehensive structural and pedagogical reforms intended for the promotion of the system's achievements. 'Pedagogical Flexibility', a reform in the professional development of teaching staff implemented in 2015, constitutes a significant breakthrough in the perception of development and learning in Israel. The school principals play a main role in leading the reform and in the development of a new organizational culture in the staff as well. This led to the creation of focused learning frameworks for school principals who sought to improve their knowledge and skill in the leadership of the reform. The article presents the main points of the first pilot program implemented in the North District for the training of 20 school principals in the reform and the main findings from the evaluation of the program, data from a questionnaire, and a focus group. In addition, the article proposes a critical look at the program effectiveness and indicates further focuses for future learning. The article presents a view of the role of the school principal in the leadership of the professional development in Israel and reviews theoretical aspects that arise from the research regarding this issue.

Keywords: Professional development of school principals; professional development of teachers; pedagogical leadership

JEL Classification: I280

Introduction and Literature Review

The immanent connection between students' 'good learning' and the professional competence of teachers is gaining ground in many studies (McKinsey *et al.* 2007). The psychological and organizational conditions that promote the professional development of teachers strengthen and emphasize the principal's role in the leadership and professional development of the staff (Gold *et al.* 2003; Leithwood *et al.* 2006). Distributed leadership (Spillane *et al.* 2004), collaborative leadership (Southworth, 2011), and leadership focused on teaching and learning (Hattie 2012) were found to promote a reflective discourse of teachers and to empower and promote the teachers' development and efficacy. This leadership is distant from role-based perceptions and adopts distributive approaches. The importance of reflective discourse is attention in a safe environment (Hattie 2012), which − most of the researchers maintain − promotes the teacher's learning. The models of Drago-Severson (2000) indicate that the development and learning of teachers range on an axis of skills and personal development. Good principals must promote these two phases of learning. On the one hand, they must allow the teachers to professionalize in areas of knowledge and to improve skills of teaching and learning in an ongoing and regular manner (Feiman-Nemser 2012). On the other hand, they must promote a language of dialogue and reflectivity on their work and emotions. In addition, the methodology of active learning (Noonan 2014) and the quality of instruction (Poekert 2011) are of decisive importance. Only this constellation may promote teachers and allow schools to lead significant changes in the learners' achievements (Hattie 2012; Stoll *et al.* 2006). However, a constant improvement in the teacher's capacity and work setting is not a simple task considering the pressures exerted on the school principals by the community (Murphy *et al.* 2013). Sometimes principals are forced to concentrate their effort on the school 'politics' and are not available to engage in processes of staff development. An in-depth review of the professional literature indicates that it is possible to formulate several guiding principles for the optimal development of the staffs.

'Good learning' focuses on 'internal' and 'self' development. The basic assumption is that the development of staff is the creation of internal knowledge, beyond the extension of vocabulary or skills. It is possible that changes will be required in a way in which they know things and not only in the things themselves (Murphy *et al.* 2013). Moreover, many of the models formulated in the past lack the observation of people to process their experiences (Bredeson 2000; Drago-Severson 2015; Mathibe 2007). They maintain that most of the models appear as if all the teachers are one unit or they are too easily labelled as innovating or opposing the change that the principal wants to lead (Brookfield 2010). A profound change in the learning theories is vital to the increase of the staff's efficacy in every school (Wenger 2006). This assertion reinforces the need to penetrate the barrier 'behind the door of the classroom' and focus the impact on teachers' learning. In doing so, it is important to know that an effective learning of teachers requires an effective learning of principals, so that they can support dialectical learning practices, as Kegan (2000) suggests in the following professional development model.

Table 1. Professional development model (Source: Kegan (2000))

The Principal's Role Is to Encourage	Practice
Development of critical thinking	The teachers ask themselves meaningful questions that inspire thinking about perceptions and basic beliefs.
Dialogue in a safe and supportive environment	The teachers share an equal, participative, and collegial discourse.
Challenge to see things from different perspectives	The teachers dispute the fundamental assumptions, encounter different opinions, and share different teaching practices.
Collaborative and experiential learning	The teachers experience learning through experience and observation simultaneously of their learning.
Personal reflection	Documentation of experience, writing a learning journal, personal observation of the process and accumulated knowledge

Main Tenets of the 'Pedagogical Flexibility' Program

The last decade of the Israeli education system is characterized by far-reaching reforms that gradually expand school autonomy in the management of pedagogy. At the same time, Israel instituted reforms in various arenas of the education system, such as the structure of learning, curricula, budgetary management of schools, and flexible management of the professional development of teaching staff. As a result of these processes, decision makers face new challenges in the training and professional development of school principals. Therefore, the professional development program for school principals in the reform of 'pedagogical flexibility' is the first pilot in Israel that attempts to address the new requirements from school principals. Flexibility, as the reform defines it, is the ability to make decisions and to act independently on pedagogical and organizational issues in professional development. It can be expressed in the planning of needs in the school and teaching staff, in different settings and methods of learning, and in the use of teaching resources and economic resources. The granting of pedagogical and administrative flexibility to the school stems from the basic assumption about the ability of the principal and staff to best identify the professional development needs of the school staff as a whole and of each of the teachers as individuals, in order to facilitate meaningful learning and advancement of students. The training program for school principals in the 'pedagogical flexibility' reform rests on a solid foundation of guiding principles for effective learning; it combines the principle of *experiential learning, peer learning, and the implementation of learning*, as a basis for strengthening the pedagogic leadership and the professional capacity of the school principal in the program, as shown in the Figure 1.

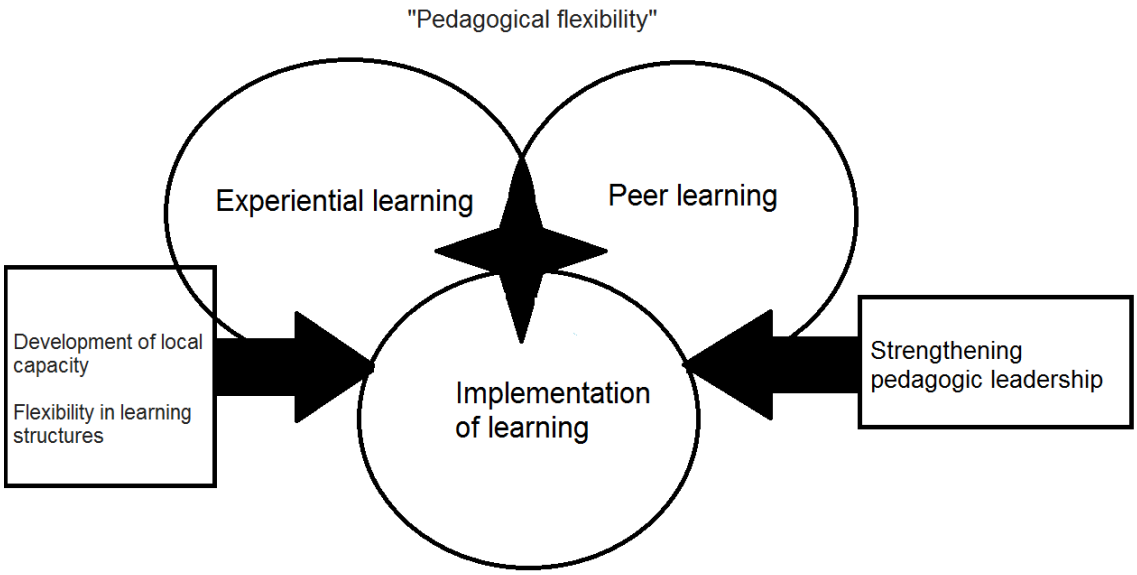

Fig. 1. 'Pedagogical Flexibility' Model

The reform allows full school autonomy in the management of teachers' professional development program. The processes of professional development will be managed inside and outside the school according to the teachers' needs in a variety of frameworks: in professional communities, personal learning, learning in the framework of academic institutions, observation of the lesson, online learning, simulation centre, photographed lessons, and so on. The program encourages the use of diverse methodologies. For example, peer learning, setting questions, conducting observations, holding feedback conversations, professional support groups, analysis of testimonies, reading and discussing the professional literature, learning from successes, action research, and discussion of dilemma, open space, non-formal learning, learning from filmed lessons and analysis of scenarios in learning-teaching processes through simulations.

The Israeli pilot program in the Northern District

The Ministry of Education based the pilot on clear guiding principles that served as a content and methodological platform for the pilots' training program of 20 school principals in the Northern District. Therefore, it was expected that:

'The school principals in the North District are expected to implement in their school a process of professional development in the 'Pedagogical Flexibility' Model', which includes the characterization of the school needs, the recruitment of the school staff to the process, the identification of difficulties, the choice of areas of learning, the building of a work program, the choice of teaching workers who are expert in their field from the staff for the leadership of the processes of professional development, and pooling of resources…' (Administration of Teaching Workers, 2014 pp.12-13).

The professional development program was formulated as a supportive network for the reforming schools. The selected school principals were in the range of four-five years on the job. The prerequisites for admission to the program included the examination of appropriate pedagogical infrastructures, a dialogic organizational culture, and proven managerial qualities. These parameters were examined in a report submitted by the inspectors in the district from their professional and personal acquaintance with the schools and the principals.

Methodology

The course included 40 hours of group learning annually, for five months. The meetings were held once every three weeks. The evaluation sought to achieve two goals: general satisfaction of the school principals from the learning in the program and the degree of application of the learning in the field. Two tools were used in two different stages. A questionnaire that was passed immediately after the learning to all the principals and a focus group that was held with 10 principals from the group, six months after the end of learning.

The group of school principals in the pilot was heterogeneous and was chosen according to the parameters of professional competence for the program. It included principals from different ethnic segmentation, with different seniority in management, from large and small schools and belonging to different age groups. The group included a majority of eleven Jewish school principals and nine from the non-Jewish sector. Among the principals from the non-Jewish sector, one was from the Bedouin sector, five from the Arab sector and three from the Druze sector. On experience in management, there were a majority of eight principals with a seniority of 5-9 years, a minority of three school principals with over 10 years of experience in office and four principals with a short tenure of 3-5 years. The group included a majority of eighteen elementary schools, one junior high school and one high school. The group also included a majority of thirteen large schools with 30−50 staff members, four school principals with 20−30 staff members, a minority of two small schools and one high school with more than 50 staff members (Figure 2).

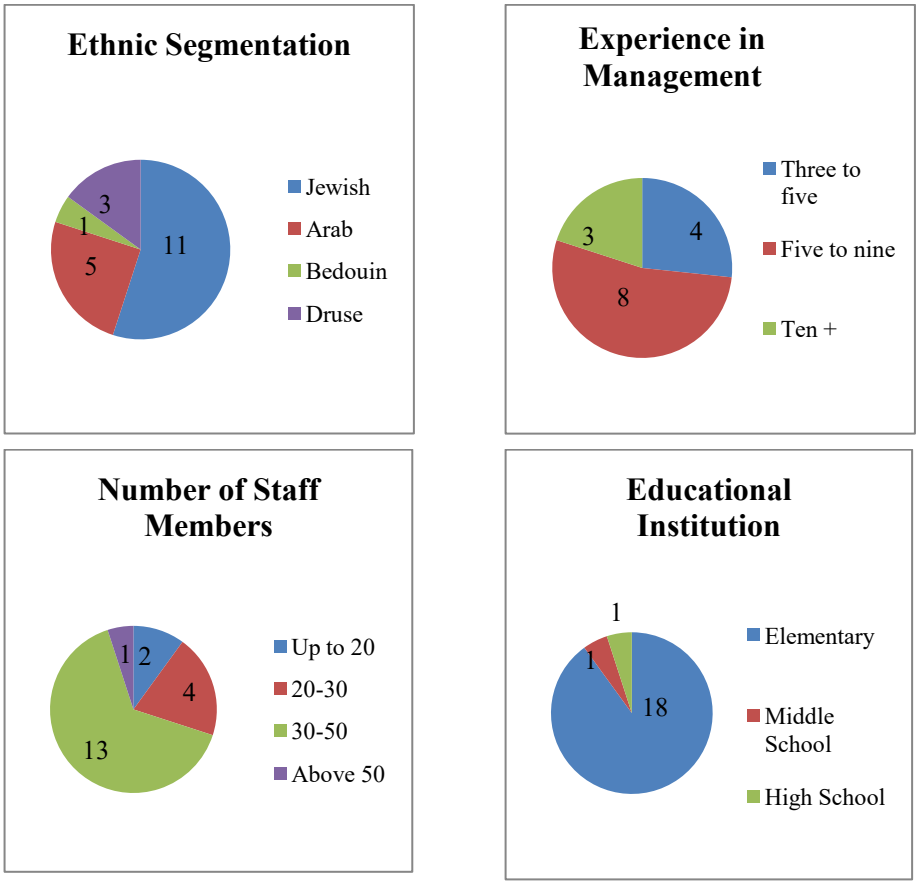

Figure 2: Characteristics of the assessment group (Source: Author's compilation)

Results

Stage 1: The Evaluation Questionnaire

Part A of the questionnaire included background data. Part B consisted of 24 statements in which the respondents were asked to indicate the degree of their agreement with o the statements on a scale of 1to 5 (where 1 is 'not at all' and 5 is 'to a large extent'). The questions focused on content, learning processes, guidance and application. Part 3 included two questions that allowed examples of application and place for general comments or suggestions.

Table 2 presents the school principals' general agreement regarding the learning in the course. The statements referred to the planning and actual implementation of learning. It shows that the principals' rating of the compatibility between the methodologies and course content as well as the appropriateness of the course's objectives and their relevance to their work in the field was relatively similar and high (average of 3.80 out of 5).

Table 2. General Agreement regarding the Learning in the Course

Statement	Mean of Participant Agreement with the Statement 1−5
The course goals are clear to me	4.0
The goals and the actual implementation corresponded	3.75
The course contents were relevant to my role	4.0
In the learning process, there was a combination between the theoretical and the practical material	3.58
Mean	3.83

Table 3 presents general agreement regarding the quality of instruction in the course. These statements were also rated relatively high with an average of more than four out of five. The principals were positive about the facilitator's ability to create a supportive learning environment and to collaborate with the participants. The principals also ranked their ability to share difficulties and dilemmas relatively high.

Table 3. Degree of Satisfaction with the Quality of Instruction in the Course

Instruction in the Course	Mean of Participant Agreement with the Statement 1−5
The instructor encourages reflective thinking on my work	4.17
The instructor encourages the bringing up of difficulties from my work	4.08
The instructor used the learning time effectively	4.08
The instructor adjusted the learning methodologies to the content	4.25
The instructor encourages high order thinking	4.17
The instructor encourages peer learning	4.33
Mean	4.18

Table 4 presents the degree of satisfaction with the process of learning in the course. This set of statements referred to several aspects of learning. The highest rating (over 4 out of 5) was given to the

quality of the course's tasks, as well as the statement regarding the reference to the differences between the participants. A relatively good score was found (close to 4) in the use of advanced learning technologies. It can be seen that this cluster of statements combines the general aspects of learning and does not hold one organizing axis, as opposed to that presented in the statements in Tables 2 and 3.

Table 4. Degree of Satisfaction with the Process of Learning in the Course

Learning Processes in the Course	Mean of Participant Agreement with the Statement 1−5
The learning process contributed to my professional development	4.0
The tasks in the course had applied components	4.25
There was reference to the participants' differences	4.08
I felt free to express my opinions	4.17
Use was made of the participants' field knowledge	4.17
Use was made of innovative learning technologies for knowledge management	3.83
I produced knowledge meaningful to my work	4.17
Mean	3.99

Table 5 presents the opinion of school principals relating the Implementation of the Learning in the Field. This cluster of statements shows a high rating (above 4) of the principals for improving their management capabilities in implementing the program. Most of the principals testified that as a result of learning, they improved their management skills. In addition, most of them testified that they promoted work processes following the course. Generally, these statements attest to the high satisfaction of the principals in the contribution of the course to improving their management practices in the reform.

Table 5. Implementation of the Learning in the Field

Implementation of the Learning	Mean of Participant Agreement with the Statement 1−5
I implemented the learned contents during the learning process	4.0
I practiced the learned skills during the learning process	3.92
Following the learning, I improved the quality of my management	4.42
Following the learning, I promote processes in my work environment	4.42
The learning process influenced the planning of my work in the field	4.0
I shared with my peers my learning in the course	4.17
Mean	4.15

Table 6 presents a cluster of open statements in which the principals were asked to present an example of applications in the field and add additional comments. Only one principal responded with an open comment. In addition, only four examples of practical changes in the field were given without extensive detail.

Table 6. Open Statements

Statements: Add a Comment	Statements: Give Examples of the Implementation of the Learning in the Field
The learning was effective * Only one comment	Setting the schedule for the teachers' professional development Feeling of a positive approach Development of initiatives of teachers Meetings planned ahead of time with staffs

Stage 2: Focus Group

A request to participate in the focus group was sent to all the principals who attended the course six months after the end of the learning. The first ten principals who responded were selected to participate in the focus group. There was no deliberate preference for selecting certain managers. The selection was made from the first group that agreed to participate. The principals were asked to address a number of questions presented throughout the meeting with the group and to provide concrete examples to establish the statements. Table 7 shows a representative set of statements given by the principals during the open discussion in the focus group.

Table 7. Select Statements of the Principals in the Focus Group

Questions for Reference	*Select Responses from the Principals' Statements*
I form a personal perception for the professional development of the teachers in my school?	'I understand that flexibility is required … I listen to the needs of the teachers and plan accordingly. They choose from the supply of the office. I do not intervene generally …' 'I feel very confused sometimes … the way is not always clear to me…'
I acquire new knowledge on the professional development of teachers?	'I understand more … I know that they must change but the way is still long…' 'I have in the team excellent teachers, they all the time develop and learn. The knowledge all the time flows to the system.'
I know the methodologies of the professional development of teachers better?	'Our pedagogical instructor engages in the planning of the teachers' learning. I give her absolute autonomy.' 'I decided that I am not taking upon myself beyond the informing of what happens … I rely on my teachers.'
I plan a general strategy for the professional development of the teachers in my school?	'This is the hardest part in the system. The flexibility is only an idea in the office … we encounter many difficulties.' 'I sit with the vice [principal]… we build together the program, taking into account all the constraints in the field…' 'I allow them almost all that they sought as long as there will be no harm in the learning of the students …'
I implement new models for the professional development of the teachers in my school?	'My teachers learn from one another, they attend the lessons and analyse them … we did this also before but now they understand what they do … they know concepts.' 'This year we introduced an interesting course for teachers in special education … I invited the lecturer from the program funds.'

Study of the representative quotes from the focus group indicates a vague picture of knowledge that the principals acquired in the learning process. The language that the principals chose to use does not include professional terminology (although this appeared in the learning syllabus). Examples of theories of learning anchored in new knowledge were not given. The principals primarily indicate their motivational parts and the feelings that accompany the process of implementation in the field. There is a reference to the 'change of the atmosphere' in the school, but these statements are not anchored in routines and mechanisms that will indicate the establishment of a new learning culture. The principal's leadership in the leadership process is not sufficiently clear. The principals indicated partnership and support but did not present a clear agenda of their action strategy regarding the teachers' professional development. Their role, as arising from the quotes, was to support the system and direct the different factors. There was no use of the words like vision, perception, or cohesive educational agenda. It was expected that the examples that were presented in the open conversations in the focus group would be based on the statements that received high values in the assessment questionnaire. Thus, for example, not one clear answer was given illustrating the statement that received a high percentage of agreement: 'Following the learning, I promote processes in my work environment'. It was barely possible to find innovative learning practices. The reference to 'change' was measured in the diversification of the learning contents but not in the way in which the teachers learn. The principals see the program to be an opportunity for enrichment and diversification, and for the increase of teachers' motivation. It was difficult to identify any expression of recognition in the statements given by the principals with the theoretical perceptions of optimal professional development, concrete strategy of assimilation, or clear conceptualization of the nature of the program and its pedagogical significance in the professional development of teachers and schools as learning organizations.

Conclusions

The main findings from the evaluation data indicate significant gaps in the effectiveness of the training program. The gap is evident mainly in comparing the data from the evaluation questionnaire that the school principals filled with the data from the focus group. There is a high degree of satisfaction in the data from the evaluation questionnaire, whereas almost no support could be found in the focus group, regarding the questions of implementation of learning in the field, and its impact on the ability of school principals to design innovative and ground-breaking learning among teachers. The principals respond at a high rate to the relevance of the course contents to their work. They also display satisfaction with the processes of learning given in the course and characterize the quality of instruction as high and effective. However, the open statements present eclectic statements that make it difficult to coherently understand the degree of effectiveness on the actual activity of the school principals. The report of improvement and practical change in the field was reduced to reference to vague concepts such as 'teacher motivation' or 'change of atmosphere' and 'a sense of partnership with the teachers'. A possible explanation for this discrepancy is the result of significant limitation and bias in understanding the data from evaluation process that relies entirely on subjective reporting of the participants. The process lacks any factual basis that attests to a significant change in the school culture regarding the professional development of teachers in the reform.

Furthermore, from this review, possible conclusions emerge for three guiding principles in learning. First, learning in an organic environment: effective professional development must occur in the participants' organic environment. Learning in this context creates opportunities for building inter-school abilities and for better assimilation of learning (Patton, Parker, & Tannehill 2015). The training program in the Northern District took place in the traditional framework of courses outside of schools, whereas professional learning in the workplace contributes to personal development (Drago-Severson 2004; Kelley & Peterson 2012; Lieberman & Miller 2001).

Second, leading their own learning: through peer training and tasks that require leadership as part of the learning process (Hattie 2012). For this empowerment to occur, it is necessary to have a change in the perceptions and attitudes of the principals regarding the professional development, which is not only imparting knowledge and skills, but also enabling and promoting the thinking about the practice (Hord & Tobia 2012). The learning is, therefore, a network of knowledge, skills, social relationship,

and shared problem solving (Castagnoli & Cook 2004; Vetter 2012). It is important to allow school principals a good opportunity to practice this skill within the training process, within the reform.

Third, engaging in paradigms and personal philosophy: it is important to enable participants to clarify attitudes, perceptions, and beliefs regarding the proposed change. Learning of knowledge and skills does not guarantee a sustainable implementation of high order change (Elmore 2000; Leithwood & Mascall 2008; Leithwood & Sun 2012). It is important to keep in mind that the development of people is not a technical act but an experience of cooperation and reciprocal growth (Gold *et al*. 2003; Lewis & Murphy 2008; Tannehill 2016). The basic assumption is that development of staff is far more than what is expected or required. This is the creation of internal knowledge, beyond the extension of vocabulary or skills (Gold *et al.* 2003; (Wenger 2006). It is reasonable to assume that the use of vague and comprehensive terms will be replaced by a more coherent pedagogical agenda, anchored in professional terminology. A more reliable assessment may be obtained as a result of a learning environment that upholds these principles.

As can be seen in this short review, the effective learning challenge has not yet been resolved. The assimilation of learning knowledge and transfer of learning will not be possible as long as there is a gap between learning objectives and the traditional and conservative structures of courses that take place outside the organic work environment. There needs to be a closer alignment between the principal's and the teacher's learning in order to strengthen the principal's role in shaping the environment supporting the professional development of teachers.

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COMPENSATION FOR THOSE INDIRECTLY AFFECTED BY THE DEATH OF A HOUSEHOLD MEMBER

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Abstract. This article demonstrates the size of the budget gap that arises in a household after the death of that member who was the breadwinner of the family. It also describes how this gap can be covered by motor vehicle liability insurance. One source of funding for this gap could be, for example, an annuity for indirect victims. In many EU countries, people who are members of the household of the deceased are considered to be affected as a result of his death. Those indirectly affected will include the family members and relatives of the deceased (spouse, parent, child, sibling, and cohabitant). The person responsible for the death should pay compensation to the family members of the deceased. One of the elements determining this compensation should be the loss of income to the family of the deceased. The second element is compensation for the lost personal contribution. This paper presents the study of literature as an introduction to the relevant issues. The problem of compensation for lost income will be illustrated by legal regulations and calculations based on the account actuarial-term annuity. The study focuses on the selected EU countries. This article is part of a broader study by the author on the material consequences of personal injury and sources of their financing.

Keywords: indirectly injured, personal injuries, compensation, provision for capitalized value of pensions

JEL Classification: G22, G28, J17

Introduction

The term 'personal injury' has not been clearly defined. This might arise from its multifaceted scope, that is, it is related to economics, law, economic analysis of law, and mathematics. However, there are scholarly publications that provide an understanding of this notion (Czchórski 1994, Green 1995, Karaś 2007, Wigmore 1895). For the purpose of this paper, the definition developed by Ilona Kwiecień (Kwiecień 2015) has been invoked: 'Hence, personal injury may be treated as one of the forms of loss consisting of infringement of personal interests (in broad terms) or violation of bodily and health integrity (in narrow terms), or as a set of related adverse consequences.' The legal grounds for determining the compensation for this type of loss are mainly the Civil Code in Poland – Articles 444–447. Similar provisions can be found in other European Codes, such as in the German Code: § 249-254, § 842-846 BGB (Burgerliches Gesetzbuch of 18 August 1896); the French Code: Articles 1382 of the Civil Code of 21 March 1804 and the British Code: the document 'Fatal Accident Act' and Article 8 of the Human Rights Act of 1998.

The financial significance of personal injury for the insurance sector will be demonstrated here, since − in particular − the damages and compensation for pain and suffering disbursed from the third-party liability insurance of motor vehicle owners are the most common source of funding for any incurred financial losses. The number of claims related to bodily injury currently constitute fewer than 13% of all claims in respect of the third-party liability insurance of motor vehicle owners (Insurance Europe 2015, Chart 19*)*, whereas the value of such claims is nearly half of the total benefits and damages disbursed in this type of insurance in Europe; it was 48.4% of the total amount of benefits and damages in respect of the third-party liability insurance of motor vehicle owners in 2013, similar to that of 2012, yet 5 pp. lower than that in 2008. The highest levels of damages were recorded in France, Spain, and Italy. The average claim value in European countries in 2013 amounted to circa EUR 16,000 compared to EUR 15,500 in 2012, EUR 14,500 in 2011, and EUR 13,800 in 2010. The average value of loss arising from MTPL insurance in Europe increased by circa 20% (Insurance Europe 2015, p. 33*)*. The average claim value differs considerably between various countries and, most importantly,

it is continuously growing. When studying the relevant literature, one can encounter publications indicating the sources (legal, social, and economic factors) of such trends, for example, in the study by Holzheu, Lechner (2009). At the same time, it has been emphasised that among the various factors, social attitudes are the most significant factors (Furedi 1990, Enz, Holzheu 2004, Schmit 2009, Carmignani, Giacomelli 2010).

The greatest levels of growth in that period were recorded in Greece (55%), Italy (45%), and France (25%) (Scor Global P&C, p. 34). The highest average claims were recorded in Greece (ca. EUR 33,000), France (ca. EUR 22,000), and Norway (ca. EUR 19,000) in 2013. The lowest average payment amounts were recorded in the Czech Republic (ca. EUR 1,500), Turkey (ca. EUR 4,000), and Estonia (ca. EUR 5,000). When considering these values, it should be noted that the personal injury damages systems differ significantly in individual European countries. This considers, among others, the limits on damages or the possibility to submit new claims if circumstances such as an increase in the costs of claims arise. However, benefits in respect of personal injury are not uniform. The main components are care costs (they constituted almost 54% of all payments made in the period 2010−2011), medical costs (16.4% of all payments), loss of earnings (9.36%), and compensation for pain and suffering (7.32%). This aspect of damage amount still varies between countries. The highest general payment level can be noted in Great Britain, where EUR 15 million per person can be achieved. This is nearly 9 times higher than in the Netherlands and Spain, and 4 times higher than in Italy (Scor Global P&C 2015, p.12). In the Polish insurance market in 2008, roughly 37% of the amount of benefits paid related to large claims (over EUR 100,000), which accounted for only slightly more than 1% of the number of all personal injury claims (to know more regarding this tendency in the Polish market in this area, see Monkiewicz, Monkiewcz 2017, Kwiecień 2011 and Monkiewicz, Monkiewicz 2016).

Compensation should restore the financial situation and the quality of life that the injured persons enjoyed before the accident and take into account the realities of economic and social environment. Such calculations entail a few assumptions (discussed in the section concerning the methodology). Annuities are paid for many years, and they should cover the financial damage that has affected the relatives of the deceased after his death. Most of the amount is determined in relation to the income that the household of the deceased requested. According to the actuarial methodology, losses of earnings are calculated factoring in life expectancy, and in any such analysis, the value of annuity should be divided by age categories and inflation and then methods based on the Net Present Value (NPV) should be employed (for further information, see Jędrzychowska, Poprawska, 2016a).

This article will focus on:

1. annuities for indirect victims. Payments that compensate for lost income.
2. compensation for significant deterioration in the quality of life for family members of survivors.

The purpose of this article is to describe the factors that need to be taken into account when determining the value of economic losses associated with the death of one household member. Theoretical considerations will be illustrated by a computational example showing the scale of the problem.

List of 'close relatives' – indirectly injured

There are three models in which the list of persons entitled (close relatives) to compensation is defined differently.

In a closed model, the list of eligible individuals is closed and those not on the list are excluded. Such a system exists, for example, in England.

In the indirect model, close relatives are considered to be only the closest family members. Such models apply in Poland, Greece and Sweden.

In an open model, there is no complete definition of who is or is not a close relative. Compensation can be received by anyone whose emotional bond has been destroyed as a result of the victim's death. This does not have to be a close relative in the sense of a family member. France, Belgium and Spain employ the open model.

In each legal system, the list of relatives includes spouse, parents and children (own and adopted). Often the list of relatives includes the unborn child, siblings, grandparents, grandchildren, cohabitees, and same sex partners. Therefore, the main criterion for who is a 'close relative' of the victim is − if the victim formed a household with this person or these persons.

Methodology

Loss of income – annuity

With the death of the person providing financial resources to the household, the relatives of the deceased experience a loss of income. Therefore, the natural consequence is compensation for this lost income. It is, therefore, necessary to determine the size of this loss. This is not a homogeneous factor and in part consists of several smaller cash flows.

The most natural connection is parental support for children (own children, adopted children and children who have been granted maintenance). Different countries have different regulations. The differences relate to the time and extent of financial obligations of individual family members to each other. For example, parents have a responsibility to ensure their children continue to be adults (until they reach the age of 18 years), except when a child is unable to work because of a disability. In addition, the parent's obligation to provide parental care for a child does not expire when the child reaches the age of majority, if the child is still in high school, studying at a college or studying at a vocational school. The age up to which parents should support education varies from country to country. For example, in the Netherlands it is 20 years, in Ireland 23 years, in Lithuania 24 years, and in Poland 25 years. For example, Luxembourg does not have extended parental responsibilities over the age of 18 years, and in Germany and Italy, this time is unlimited (i.e., parents must support children both minors and over-aged children, until they become financially independent).

The second natural financial relationship is the property union between spouses. Here there is no time limit.

Another relationship is the support offered to parent by children as they become older. In this situation, the relationship is informal and it is also not time-limited.

There may also be other financial relationships of a voluntary nature, where such financial profit is to be compensated. However, these cannot be potential; rather, they must have existed prior to the occurrence of personal injury or the death of the payer.

The most common way to compensate for lost income is to grant a term-annuity (for children) or an all life annuity (for spouse, parents and disabled child). The amount of such an annuity is dependent on the form (legally or voluntarily determined) and size of the loss. If this was alimony, it remains at the same level. On the other hand, if it was a benefit from living in the same household, there is no clear answer as to what the proper amount to be paid should be.

Before determining the amount of lost income, the net income of the deceased person must be reduced by that part of the income that he himself consumed (self-maintenance cost). In insurance theory, it is assumed that self-consumption or self-maintenance costs amount to about 30% of one's own net income. In Polish social law, this level is between 5 and 15%. For the simulation in this article, a 20% level was assumed. The author of this article is currently working on defining the level of this category of costs for households in Poland and more generally, in the EU countries.

It is possible to adopt a model to calculate the present value of annuity for the two main categories of compensation – spouse (PV_M with payment in the amount A_M) and child (PV_C with payment in the amount A_C).

Payments for a spouse and children (if they are not of a judicial amount) are equal and amount to:

$$A_M = A_C = \frac{0.8 \cdot loss\ net\ income}{N_C + 1} \quad (1)$$

where:

N_C − number of children.

A simulation of several typical annuity payment variants is presented in this section. The simulations were conducted with several groups that had mixed age and gender, and that received different remuneration levels. The analysis was conducted for the Polish economy and for fifteen other countries: Austria, Belarus, Belgium, the Czech Republic, Denmark, France, Hungary, Ireland, Latvia, Luxemburg, Portugal, Slovakia, Slovenia, Spain, and Sweden. This choice of countries was determined by the access to consistent data. These are the EU countries (+ Belarus) for which mortality.org lists the life tables for 2014.

The calculation of the present value of annuities can be done using a life annuity, which is created with the actuarial method using data about the probability of survival and death in the subsequent periods.

As mentioned above, there are no legal regulations determining the level of a single annuity for a victim's close relatives. Thus, the present value of future benefits for an annuity in the amount of EUR 1 payable annually in advance can be expressed as the sum of the product of discounted payments and the probability of survival to the next payment date. This formula can be expanded by supplementing it, for example, by a factor that reflects the future growth of benefits taking into account inflation, and other such factors (in this paper, a geometrical growth has been assumed).

The present value of the surviving spouse's annuity can thus be determined as follows. This is a whole life annuity. However, the model takes into account the fact that, after retirement, the deceased person would transfer the income to the household at a lower rate. So, in the calculation, it was assumed that after the retirement age, the person had an income appropriate to the country's replacement rate (Eurostat data).

$$PV_M = \sum_{k=1}^{x_a} (1+i)^{k-1} v^k {}_k p_{x_m} A_M + \sum_{k=x_a+1}^{\omega} (1+i)^{k-1} v^k {}_k p_{x_m} (r_{rep} A_M) \quad (2)$$

where:

PV_M – the present value of the living spouse's annuity

A_M – the amount of one payment for a living spouse

$x_a = retirement\ age\ in\ the\ country - x$ – lost years of work activity of the victim

x –the age of the victim at the time of death (at the time of accident)

x_m –the age of the living spouse at the time of accident

${}_k p_{x_m}$ – probability of survival by the living spouse to the next payment of annuity

ω – maximum life time

r_{rep} – replacement ratio in the country

i – inflation rate

$v = \frac{1}{1+r}$; r − discount rate

The present value of the living child annuity can thus be determined as follows. This is a term life annuity.

$$PV_{C_i} = \sum_{k=1}^{x_{o_i}-x_{c_i}} (1+i)^{k-1} v^k {}_k p_{x_{c_i}} A_C \tag{3}$$

where:

PV_{C_i} – the present value of the living child annuity

A_C – the amount of one payment for a living child

x_{o_i} – the age of the child up to which he or she should receive benefits from parents

${}_k p_{x_{c_i}}$ –probability of survival of the child to the next payment of annuity.

However, in the case of a child with a disability, the benefit is for the whole life and in this case, it should be similar to that of a spouse's annuity − to take into account the retirement time of the deceased.

$$PV_C = \sum_{k=1}^{x_a} (1+i)^{k-1} v^k {}_k p_{x_k} A_C + \sum_{k=x_a+1}^{\omega} (1+i)^{k-1} v^k {}_k p_{x_k} (r_{rep} A_C) \tag{4}$$

So, the present value of capital needed to cover the total (for all members of household) loss of income (assuming the spouse and children come from one household) can be expressed as:

$$PV = PV_M + \sum_{i=1}^{N_C} PV_{C_i} \tag{5}$$

Compensation for significant deterioration of the living situation

In addition to losing the income of a deceased family member, the family also loses this person's non-pecuniary contribution to the household. Some of these things are measurable and can be replaced by buying them from the market, while some of them are neither measurable nor distinguishable.

Examples of measurable and potentially substitutable contributions (suggestions for replacing them are given in parentheses):

- housework (employment of housekeeper)
- childcare (employment of nanny)
- bring children to school or other activities (hire taxis)
- doing homework with children (buying tutoring)
- psychological support for children via personal interaction (meetings with a psychologist)
- free work according to occupation, for example, car mechanic for free repair of family car, doctor free treatment (buy outside service, but only the labour; that is, about 40% of the price of the service is a loss because any materials would have to be bought anyway).
- affiliation to a social security or medical insurance package as a work benefit (buying such health insurance)

– teaching a child certain activity that he himself knows how to do: swimming, skiing, playing instruments (buying a course).

The costs associated with the worsening of living conditions also include those costs that can occur in the household as a result of the death of a relative, such as depression medications or psychological treatment and counselling. This should also be recognized in terms of the financial consequences of personal injury. This is an additional financial burden for the household.

In this calculation, it is possible to use a rising term annuity with annual payments at the beginning of the period.

$$PV = \sum_{i=1}^{K} PV_{N_i} \tag{6}$$

$$PV_{N_i} = A_i q \frac{q^{n_i} - d^{n_i}}{q - d} \cdot \frac{1}{q^{n_i}} \tag{7}$$

where:

K – the number of categories of services that a household purchases to replace a personal contribution to a deceased person,

A_i – the amount of capital needed to buy the service (number *i*) in the first year (in the following years, the capital will increase by inflation)

n_i – the number of years the household will buy the service (number *i*)

PV_{N_i} – present value of capital needed to purchase the service (number *i*)

$q = 1 + r$; *r* – discount rate

$d = 1 + i$; *i* – inflation rate

Results

To illustrate the scale of the problem of lost income, we will present an example.

As a result of an accident, John (35 years old) dies. John's income is equal to the national average. John was supposed to work until the age of 70 years.

John’s family members eligible for compensation for lost income are:

– 32-year-old Mari – wife

– 7-year-old Tom – son

– 5-year-old Mark - son (disabled)

– 2-year-old Victoria - daughter.

The following assumptions were made in the calculations:

– The annuity is paid once a year, at the beginning of the year (this assumption will slightly overestimate the obtained values, but greatly simplify the calculation);

– The probability of survival is calculated using life tables for each country (the most recent available tables are from mortality.org from 2014; calculations have been made for men and women separately). The upper limit of the sum is the value equivalent age, which was attained by the oldest person accounted for in the creation of the cohort life tables, that is, 110 years.

- It was assumed that since the annuities relate to a long period of time, the economies will stabilise and their development will normalise. Therefore, discounting was based on the EU average rate of return on 10-year treasury bonds (2.86%).
- The level of inflation (according to Eurostat) adopted was i = 1.7662%. This value was determined as the average inflation rate based on the average annual rate of inflation calculated on the basis of ten-year data (from 2004 to 2014) for the countries (excluding Belarus) that adopted the analysis (Eurostat data).

Calculations were made for selected countries. They were made in 2 variants: variant A – compensation up to 18 years of age; variant B – compensation up to 25 years of age for children. As one of the children is disabled, the pension for him is a whole-life one. The average national net salary and replacement rates are set for 2014 (according to Eurostat) and the life tables are for 2014 (according to mortality.org).

Table 1. Present value of annuities - for individuals and total, according to the example (Sources: Author's calculation)

	PV- Mara	PV Tom*	PV Mark	PV Victoria*	PV total*	Related for average
AU	172 192.81	53 618.41 81 792.93	191 289.80	73 980.70 100 696.66	491 081.72 545 972.20	20.37 22.65
BE	180 188.88	55 808.53 85 132.49	201 375.5	77 020.46 104 840.48	514 393.37 571 537.35	20.50 22.78
BY	25 433.78	8 268.88 12 605.44	28 532.82	11 410.70 15 528.09	73 626.18 82 100.13	19.80 22.07
CZ	67 680.45	21 136.75 32 236.65	76 541.92	29 168.52 39 704.42	194 527.64 216 163.44	20.47 22.74
DK	269 122.74	82 616.61 126 072.96	306 080.93	114 013.29 155 207.09	771 833.57 856 483.72	20.78 23.06
ES	165 995.00	45 857.79 69 976.95	187 678.30	63 283.36 86 147.74	462 814.45 509 797.99	22.45 24.73
FR	193 666.40	57 569.05 87 830.33	213 710.79	79 445.51 108 144.24	544 391.75 603 351.76	21.03 23.31
HU	54 350.13	16 330.39 24 910.08	64 356.11	22 540.11 30 682.52	157 576.74 174 298.84	21.46 23.73
IE	197 640.50	65 069.13 99 268.29	215 847.17	89 782.56 122 204.36	568 339.36 634 960.32	19.43 21.70
LU	286 423.66	80 278.91 122 475.23	326 559.12	110 780.78 150 794.75	804 042.47 886 252.76	22.27 24.54
LV	57 862.52	18 745.44 28 582.93	65 237.14	25 878.33 32 219.97	167 723.43 183 902.56	19.88 21.80
PL	87 865.79	28 448.34 43 382.61	97 048.37	39 252.79 53 422.48	252 615.29 281 719.25	19.75 22.02

PT	93 304.22	26 258.87 40 060.47	106 332.72	36 240.64 49 333.36	262 136.45 289 030.77	22.20 24.48
SI	85 349.37	26 662.23 40 677.45	94 637.95	36 800.53 50 094.08	243 450.08 270 758.85	20.31 22.59
SK	66 724.78	20 143.04 30 718.87	77 202.13	27 802.63 37 839.45	191 872.58 212 485.23	21.18 23.45
SE	210 321.05	65 798.06 100 387.24	233 637.85	90 794.60 123 589.05	600 551.56 555.19	20.30 22.58

* Calculated in two variants: children up to 18 and 25 years old, respectively

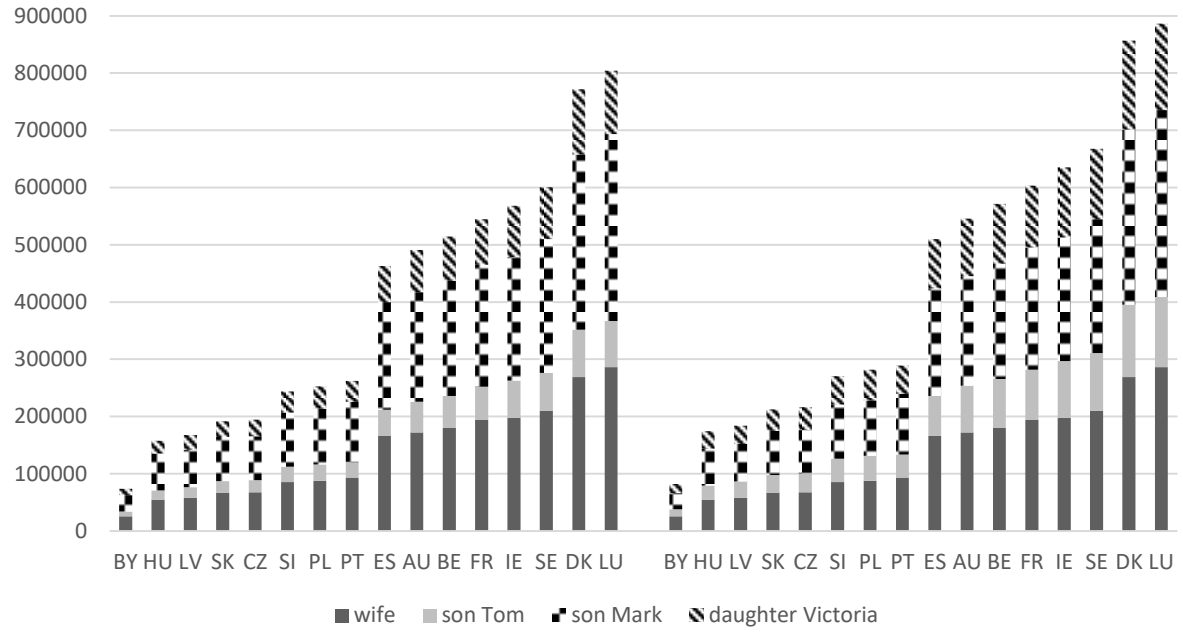

Fig. 1. Present value of annuities in two variants, according to the example (Sources: Author's calculation)

As can be seen from the calculations (Table 1 and Figure 1) for a four-person family with one disabled child, the lost household income is about 20 times the annual income of the deceased. In the author's opinion, this is a significant loss of property, which should be calculated with diligence. Knowing the size of the damage enables a search for ways to fund this loss. The nominal value of this loss differs considerably between the individual countries because it is shaped by two different factors: average salary and life expectancy.

As an illustration of the second part of the compensation, I present an example. This is an initial tentative list of services that can replace the loss, as well as the time and money needed for them. This is a development of an example from the earlier part of the article. Calculations will only be carried out for Poland. These are intended to show the possibility of calculating the size of loss to the household of the non-financial contribution of the victim.

Let us assume that John had his own car workshop. So, he repaired for free 2 of the family's cars. He did not go to work (the workshop was at home). He took the children to school and provided them with after-school care. He also did some housework. He also did gardening. The family was covered by John's company health insurance.

Table 2. List of substitutes for lost victim's non-financial contribution, time range and valuation (Sources: Own work)

Service	Hours a week	Weeks in a year	Number of years	Cost per hour (PLN)
Nanny up to 12 years old the youngest	25	40	10	40
Housekeeper up to adolescence of the youngest (Victoria)	15	40	16	30
Tutoring to 18 years old for Tom	6	40	11	50
Tutoring to 18 years old for Victoria	6	40	12 (after 4 years)	50
Psychological consultations for children	15 10 5	52	11 +2 +3	100
Work in the garden until the age of 60 − John	10	25	25	20
Work on cars up to 60 years old − John	2	52	25	20
	Items per week	Period in a year	Number of years	Unit cost
Transport to school for Tom up to 12 years	10	40 weeks	5	30
Transport to school for Victoria up to 12 years	10	40 weeks	6 (after 4 years)	30
Health insurance: First 15 years for everyone Later, for 30 years only for wife and Mark		 12 months 12 months	 15 +30	 250 150

Taking into account the above assumptions (as well as the inflation and the value of money over time), we receive the present value of capital that would allow you to buy lost services in the market. The present value of this capital is determined as the sum of a rising term annuity. This is an amount of PLN 2 237 605.70, equivalent to about 545 757.49 Euro. This is twice the amount of benefits for lost income (according to the example for Poland).

There are also non-measurable aspects, which should be taken into consideration while measuring the impact of personal injury. In order to set the proper level of compensation, suffering and pain should also be included. The starting point will be the risk of a worsening life situation and decreasing quality of life.

The risk can be reflected by:

- broken family relationships
- lowered self-confidence of orphaned children and other psychological results of being part of a broken family
- possibility of unemployment on the part of the remaining family provider (i.e., due to more parental responsibilities or losing professional credibility as a result of being a single parent)
- losing social position by a lowering of ‘caste’
- lack of time for self-development
- lack of time for rest
- change of residence.

As mentioned above, it is not possible to arrive at a valuation of these damages. The amount of compensation is therefore decided in accordance with the case law of the courts in the country.

Conclusions

The above considerations show that personal injury has a significant impact on a household, including financial implications. Lost income equates to about 20 times the annual salary of the deceased. Non-financial losses, which consist of lost personal contributions, are a loss that can be estimated only in part. The assessable part of personal injury can be measured by the price of services that need to be bought to replace the victim's contribution. The example presented in the article shows that the present value of this damage may be even higher than the loss related to lost income. The second part of personal injury is non-measurable and this should be repaid to the family as part of the compensation referred to as 'compensation for pain and suffering'.

Finally, I will point out several sources of coverage for this loss. They may include:

- social security (in Poland, this is a survivor's pension for the members of the deceased's family but this represents only a fraction of any lost income),
- funds from the perpetrator (employer, driver, medical offender or other guilty party),
- from the insurance policy of the perpetrator (part of this insurance is obligatory. It is worth mentioning here the adequacy of guaranteed sums from such insurance (see Jędrzychowska et al. 2015, Jędrzychowska, Poprawska 2016b),
- from own insurance (e.g., accident insurance, life insurance),
- from own resources and loans from family members and friends,
- from the funds of associations and collections of money.

The article relates to financial losses in households in which one member has died. However, it should be mentioned that this loss may be even greater if the victim has survived, but is in a coma or is completely paralyzed. In such a case, the household not only loses the victim's income and intangible contribution to the household, but also incurs the costs of medicines, and treatment, nursing, and hospital visits.

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BY DISOBEDIENCE TO SUCCESS: WHEN BRAND VALUE SHOULD BE MEASURED IN A DIFFERENT WAY THAN HOW THE THEORY RECOMMENDS

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Abstract. Brand value building and managing is an interdisciplinary issue with serious impact on company's effective market performance. Knowing this, more and more companies try to extract the competitive advantage of a valuable brand. But there are a lot of practical restrictions that result from universal application of formulated theory without respecting national specifics and which often lead to company's activities in scope of branding and brand value measuring not being successful. This is the reason for scepticism towards the implementation of brand management activities, especially in former socialistic countries where the tradition of brand is not so developed due to the long-term application of principles of planned economy. So, the undesirable spiral mechanism is evident – domestic companies apply inconvenient methods of branding and brand value evaluation – brand value decreases – companies rather do not build and manage theirs brands – brands lose their competitive potential in comparison with foreign competitors and the market deforms –only strong foreign brands applying their national branding mechanisms survive – the impression of the so called 'good practice' is created – the domestic companies apply inconvenient methods of branding and the circle starts again. According to this, the aim of this paper is to critically discuss the applicability of selected brand valuation methods in the specific conditions of Slovak republic and to verify its applicability in the context of framework conditions of their applicability. To achieve this aim, after the application of selected criteria, we applied the following methods of brand value measurement: royalty savings and brand value added.

Keywords: brand; brand value; brand valuation.

JEL Classification: M21, M31, M40.

Introduction

Accelerating trend of globalization is now an essential attribute that affects the saturation of competitive environment of each sub-market. So, the attention of managers is focused on the increase of emphasis on effective building of a competitive advantage that will provide companies with the required consumer preferences conditional for the fulfilment of specified aims of a company. Concerning the increase of brand importance as a selected tool of a company marketing mix, not only in an international environment but also in domestic market, the activation of marketing activities of the business entity in the field of building value of this marketing mix tool seems to be a promising way to build a solid competitive advantage.

However, taking into account the historical development of traditions of targeting, positioning and building of brand value in the Slovak Republic, it can be stated, that, despite the prolonged exposure of market economy mechanisms, the experiences of domestic enterprises in marketing activities in the field of brand are deficient. Based on the growing need for implementation of an effective system for building of brand value as a selected marketing mix tool with important competitive potential, thus creates a space for the development of relevant brand value metrics with a positive impact on decision-making processes of marketing managers in the field of building the brand value in domestic enterprises. In order to tackle the existing deficient situation of the solution of this issue and out of the need for creation of integrated model of building of a brand value, it is extremely important to also

consider the impacts of global economic crisis, that has undermined the previously stable market positions of many enterprises.

Due to this fact, it has created not only a market gap and related new business opportunities, but also an opportunity for the modification of previously applied marketing concepts, whose weaknesses and problematic aspects were revealed by an exposure to the economic crisis of global proportions. Brand problem has become one of those concepts that opens new perspectives for further development, not only at the level of brand building by uprising companies that fill up a created market gaps, but also at the level of brand management in those enterprises that have managed, despite the crisis, to stay in the marketplace. Just emphasized timeliness of creation of comprehensive methodology usable in domestic enterprises that builds a brand value, as a prospective source of stable competitive advantage, is the primary impulse to critically discuss the applicability of the selected brand valuation methods in the specific conditions of Slovak republic and to verify its applicability in the context of framework conditions of their applicability.

To do this, we used the standard scientific methods applied in the context of the provided case study of the selected Slovak company and its brand value measurement using the recommended metrics and detecting convergences and divergences between them and the obtained results. Based on the application of the selected criteria (theoretic concepts and recommendations, access to the data, common practice of Slovak companies and character of the method), we applied these methods of brand value measurement: royalty savings and brand value added (BVA^{TM} method).

Literature Review

Past experience shows that the implementation of marketing concepts without adequate consideration of the specificities of the environment does not lead to the achievement of the set objectives; on the contrary, many times the market position of the company weakens as a consequence of such an action. These conclusions are based mainly on the studies realized by Beleska-Spasova et al. (2016) and Heine and Gutsatz (2015), who have consistently identified significant convergences between the predicted and realistically achieved impacts of marketing activities implemented in a general version. It has been detected, that the main reason of this situation was that the theoretical concepts were applied without regard to the specifics of the brand environment. Sydoruk (2016), Lizbetinova and Weberova (2016), Weberova and Lizbetinova (2016) and Starchon et al. (2016) developed this theory and focused their research on the specifics of brand management activities across marketing tools and sectoral belonging. But there appropriate attention has not been paid to the need of modification of brand value measurement approaches in the scope of environmental specifics. So, it is vital to find convergences and divergences in these methods and the results obtained by their implementation if the brand should be managed effectively.

The models for brand value measurement can be divided into financial, behavioural and cross-sectional. Financially oriented approaches can be categorized as static and dynamic, which are then, in both cases, internally differentiated on the basis of cost, market and income orientation. (Salinas 2009). From the chronological point of view, the most used financial models are income oriented, especially Kern' model in 1962 (Zimmermann *et al.* 2001), Herp's model in 1982 (Herp 1982), Damodaran's model in 1994 (Damodaran 1996), Sander's model in 1995 (Raboy, Wiggins 1997), Feltham-Ohlson's model in 1996 (Feltham, Ohlson 1999), model of Sattler in 1997 (Sattler *et al.* 2002), Leo's model in 1999 (Lev 1999), Hirose's model in 2002 (Beccaceci *et al.* 2006), Fisher's model in 2007 (Fischer 2007), and so on. We can identify these metrics as traditional and these are subsequently replaced or eventually modified according to the evolution of specific needs of practice.

So, in addition to the financially-oriented models, there are the behaviourally oriented models that fulfil the need for building and managing the brand value evolved. The best known among these models are the model of brand barometer (Zimmermann *et al.* 2001), Vazquez´s model (Vazquez *et al.* 2002), McKinsley's model (Riesenbeck 2000) or so called CBBE model (Keller 2007). Emnid/Horizont Brand Barometer is a model based on the scale assessment of individual universal predefined parameters of brand by consumers (Zimmermann *et al.* 2001). Vázquez et al. (2002) based their model on a combination of rewards of the product and the brand within the categorization of

symbolic and functional benefits, while they quantify the brand value, within the mentioned, in the context of these basal categories: functional benefit associated with the product, symbolic benefit associated with the product, functional benefit associated with the brand and symbolic benefit associated with the brand. Although this model worked out in detail the perceived benefits to customers arising from the use of the brand, but the brand value concentrates only on the mentioned categories and like the previous model, it does not take into account its other possible determinants. McKinsley's model is based on the analysis of three key attributes of the brand, and hence its performance, personality and the perception of the consumer. These attributes are considered to be absolutely quantifiable (Riesenbeck 2000). The basic premise of the latest behavioural model for brand valuation, model CBBE, is that the real power of the brand corresponding with its value lies in what customers know about the brand, what they have indirectly heard about it and the type of relationship they have had with it during their long experiences. The brand value based on the customer's perspective, in the context of this model, according to Keller (2007), is methodologically defined as a differential effect that knowledge of the brand has on consumer response to marketing of the brand.

Not even this approach for the quantification of brand value has been suitable for the need of practice. But in contrast to the evolutional progress between the financial and behavioural approaches, when cross-sectional is discussed, first of all, the deficiencies have appeared simultaneously with the creation and development of behavioural approach. Then, the dominant idea for the measurement of the brand value has become a need to use the full strength of research techniques and processes that capture the greatest possible richness and complexity of the brand value (Keller 2007).

Similarly, according to Moisescu (2007), the reason for such an evolution was the necessity of implementation of the cross-sectional financial-behavioural approach to the determination of the brand value a prerequisite for obtaining reliable and valid data forming a platform for quality management decisions and full excerpted competitive potential, which optimally built and managed brand features. Representative of cross-sectional approach to analysis of brand value is a model presented by D. A. Aaker (2003), based on the assumption that the value of the brand is a set of assets and liabilities connected to the name and symbol of the brand, which increase or decrease the value of the product or service deliver to the enterprise or consumer, while the main categories of this value are the knowledge of the brand´s name, brand loyalty, perceived quality and associations connected with the brand.

A similar approach to the analysed issue poses the majority of the world's market research agencies, while synthesizing the financial and consumer-oriented approaches to brand valuation, they use the so-called Multi Scoring Model, which combines both approaches. The total value of the brand is expressed on the basis of its financial value and in the alternatively quantified marketing factors. So, the dominant idea for the measurement of the brand value has become a need to use the full strength of research techniques and processes that capture the greatest possible richness and complexity of the brand value (Keller 2007). But the existing methods for the quantification of the brand value are still lacking in the approach that would take into account the specificities of the brand environment. The transition from universally designed postulates to generically categorization approach to brands is being increasingly referred to as an imperative to maximize their competitive potential.

The need for implementation of a differentiated approach to tackle the issue of building and managing the brand value was pointed out also by Moisescu (2007), Kapferer (2012) and Veloutsou and Guzman (2017). Krizanova et al. (2014) and Chailan and Ille (2015) also mentioned Moisescu (2007) in the case studies and partial questionnaire surveys through which they detected the sectoral and national characteristics of brand management in the automotive and fishing industry.

In the current market conditions of the Slovak Republic, the issue is the quantification of brand value and detection of its resources mainly analysed by Stensova (2006), according to her the brand value represents an asset for the enterprise and a representative example of its possession is a consequent increase in turnover, leadership within the pricing policy or gains from the sale of licensing rights. Author also considers the brand value important for the needs of the exact calculation in the case of purchase or sale of the enterprise, disposing of with a strong brand and also in the case of verification

of reasonable amount of damages if there was a so-called brand piracy. In the classification of models dealing with the brand value, this approach can be included in the financially oriented. However, the author does not elaborate the prevenient method of quantification of the brand value given by the specifics of the Slovak environment.

Attention to the issue of the brand value was also partially paid as a part of the own research activities of the workplace submitting this factual intent (Salamovska, Todorovska 2016), but these researches were primarily focused on the assessment of the applicability of traditional marketing models to specific conditions of brand management, which similarly as in the previous case don't resulted in a creation of a model suited to the specifics of Slovak Republic. In comparison with the traditional school of brand management that are evolving in the USA (Wharton School University of Pennsylvania, Vincent C. Ross Institute of Accounting Research New York University, Kellogg School of Management at North western University), Singapore (Nanyang Polytechnic), Spain (Spanish business school EOI), France (HEC School of Business), Germany (Technological University of Dresden), Sweden (Chalmers University of Technology) or in the Czech Republic (University of Prague), the current state of the Slovak Republic is disappointing.

The resulting situation causes that building and managing the brand value in the conditions of the Slovak Republic is realized by the implementation of models inconvenient to specificities, consideration of which is a fundamental premise for achieving an optimal state. Those, in the context of the need to take into account the national environment, correlate not only with the subjective perception of resources of the brand value that influences the consumer´s behaviour, but also with the uniqueness of Slovak accounting and reporting system.

The need for modifications of the existing methods of brand valuation for their full utilization in the context of building and managing the brand value in terms of specific markets is pointed out by Cizinska and Krabec (2014). According to them, the evaluation of intangible assets of companies, whose shares are not listed, and which operate on emerging markets, is a problem because of lack of empirical data or because of their inferior quality. Authors put in doubt the reliability and validity of data obtained by the use of models for quantification of the brand value obtained from foreign sources and propose their own model — the so-called VIM model (Verifiable Interdependent Model), consists of the quantification of the brand value as a specific component of an intangible asset of the company on the basis of determination of the brand value as a whole.

Methodology

As mentioned above, there are a lot of significantly different approaches to brand value measurement that invokes the need of the developed managerial skills to implement them appropriately in the way that brand value will be managed effectively.

Because of the range of the paper, we focused only on the comparison of financial methods of brand value evaluation. The reason for such a limitation is that the financial methods are the pillar of the preferred cross-sectional approach. To fulfil the aim of this paper, we decided to provide the case study of a selected Slovak company. This company operates at the insurance sector and provides its services at the international level. It has been established in 1996, which indicates its successful market performance and valuable brand existence. We decided to choose this company to verify the applicability of methods generally recommended by theorists in specific sectoral and national conditions. Slovak republic is representative of the future implications of findings in the former post socialistic countries of central and eastern Europe. The reason is similarity of market characteristics of these countries – lack of continual evolution of brand management practice (due to the centrally planned economy), specifics in accounting practice and financial statements and their difference from US GAPP standards which is the commonly used base for financial brand value determination, lack of scientific literature and theory adequate to the specific socio-psychographic regional profile in scope of brand value sources perception, specifics in perception of the essence of brand value (quality in former 'eastern' countries on the one hand and the image of traditionally 'western' countries on the other hand).

We applied selected metrics of brand value quantification (an essential criterion for its selection has been set as the access to the data in the scope of Slovak accounting standards and the practice of Slovak companies) and we critically compared the obtained results.

Based on the application of selected criteria (theoretic concepts and recommendations, access to the data, common practice of Slovak companies and character of the method), we applied these methods of brand value measurement: royalty savings and brand value added (BVA^{TM} method). The advantages and disadvantages of these models are shown in Table 1 and Table 2.

Table 1. Advantages and disadvantages of royalty savings method (Source: author's compilation)

Advantages	Disadvantages
It calculates the brand value by reference to the documented third-party transactions	Very few brands are actually comparable
The value yielded by the application of this method is industry-specific	The royalty rate generally includes more than just one brand and the problem lies in determining what part of royalty derives exclusively from the brand and what part from the set of obligations outlined in the contract
It is also theoretically appealing as it removes the intrinsic difficulty of estimating the differential profitability attributable to the brand	The royalties estimated through this method may represent only a portion of a profit attributable to the brand
It has been accepted by many fiscal authorities as a suitable model	It provides a 'floor' or a 'minimum value' for the brand that does not consider the 'upside value' of having a total control of the brand

Table 2. Advantages and disadvantages of BVA^{TM} method (Source: author's compilation)

Advantages	Disadvantages
It provides an explicit distinction between the added value a brand offers to customers/consumers, and the added value offered to the brand owner, and lists a market share as a brand equity component	Originally developed as an index that applied to EVA
Useful for understanding the demand drivers in a particular sector in order to ultimately enhance decision-making and strategic analysis	It is not suitable for the calculation of fair value
It can be applied to different 'income or profit bases' because there is no existing theoretical or empirical argument that justifies the relationship between BVA® and EVA	The numeric results yielded by this approach are generally dispensed with and greater emphasis is put on demand driver analysis itself

Royalty savings model determines the brand value with respect to the royalty rate that would be payable for the use of the brand, if it had to be licensed from a third party.

The royalty rates are set on the basis of typical royalty rates charged by competitors who own similar brands operating in the same sector. Brand value according to this model is calculated as follows (Eq. 1):

$$BV = \frac{S \times RR \times FO \times PA}{CR} \quad (1)$$

where

BV is the annual value of intangible assets (brand value);

S is the annual sales;

RR is the royalty rate;

FO is the obsolescence factor;

CR is the capitalization rate;

PA is the proportion of intangible assets to production.

BVA^{TM} method uses Economic Value Added as the basis for calculation and is supplemented by BVA INDEX that enables the EVA-based calculation of earnings attributable to brand. BVA INDEX is produced through demand driver analysis consisting of ten objectively verifiable key brand performance indicators – time on the market, distribution, market share, market position, rate of sales growth, price additional charge, price elasticity, marketing costs, awareness of advertising and brand awareness. Each indicator is rated by a value from 0 to 10 and the final sum is divided by 100. The value of a brand is then calculated according to Eq. 2:

$$BV = \frac{EVA \times BVA\ INDEX - TAX}{(1+dr)^t} \tag{2}$$

where

BV is the brand value;

EVA is the economic value added;

BVA INDEX is the calculated index BVA;

TAX is the amount of tax;

dr is the discount rate;

t is the individual time period.

Selected models are based on the discounted future income, so the main task was to set the appropriate discount rate, which can be calculated through various methods. The calculation of discount rate in this study was done using the basic interest rate, coefficient Beta and risk premium. Subsequently, the calculated discount factors were substituted to the formulas of brand value calculation in scope of three selected methods. The informational basis for such a calculation were financial statements of company.

The basic interest rate is determined by the Slovak national bank and its main role lies in the refinancing operations. Central bank provides information about the basic interest rate on its website. In essence, it is the rate at which the National Bank provides funds to commercial banks. From 9 December 2016, the base rate of the ECB's interest rate is 0.05%, the main refinancing operation rate.

The calculation of the discount rate is also possible by using the beta coefficient, which expresses the risk of the sector in which the company operates. Average industry-specific beta coefficients are available in professional literature and on the websites dealing with the issue.

The current beta value for the Insurance Industry — Insurance is 2.26%. The total discount rate is then calculated as the sum of the risk-free rate and beta coefficient. The risk-free interest rate was set as the average of the risk-free interest rates — the yield on government bonds at 4.2%. So, the discount rate calculated by using the beta coefficient is 6.46%.

The use of the risk premium serves to calculate the discount rate, with the resulting discount rate being achieved, similar to the previous methods, to the sum of the risk-free rate and the risk margins. Benchmarking of individual BrandBetaTMs takes place on a scale of 1 to 10, the values being determined on the basis of internal business information, annual reports, expert estimates and management consultations (see Table 3).

Table 3. Brand value calculated by method of royalty savings (Source: author's compilation)

Attribute	Score (1-10)
Existence on the market	9
Distribution	8
Market share	6
Market position	9
Sales growth	7
Price premium	7
Price elasticity	5
Marketing expenditures	6
Advertising awareness	7
Brand awareness	5
Total	69

When substituting to Equation 2, we can state that the discount rate calculated by the risk premium method is 9.408%.

Results

Based on the mutual combination of royalty savings method and BVA^{TM} method with discount rates calculated with the usage of basic interest rate, coefficient Beta and risk premium, the final values of brands of selected company were detected.

When applying royalty savings, the highest brand value was achieved using a discount rate derived from the Slovak national bank's basic interest rate. On the other hand, the lowest brand value was calculated at a discount rate derived from the risk premium (Table 4).

Table 4. Brand value calculated by method of royalty savings (Source: author's compilation)

Year	Sales	Royalty rate in €	Obsolescence factor	Proportion of intangible assets to production	Capitalization rate - basic interest rate	Brand value in €	Capitalization rate - coefficient Beta	Brand value in €	Capitalization rate - risk premium	Brand value in €
2016	432420	4324,2	1,02	1	1,0005	0	1,0646	0	1,0941	0
2017	449716,8	4497,2	1,034	1	1,0005	4647,75	1,0646	4367,91	1,0941	4250,21
2018	467705,5	4677,1	1,039	1	1,0010	4854,61	1,0890	4462,31	1,1080	4385,79
2019	486413,7	4864,1	1,040	1	1,0014	5053,57	1,0950	4621,60	1,1150	4538,70
2020	505870,2	5058,7	1,061	1	1,0017	5359,18	1,1080	4845,03	1,1290	4754,91

2021	526105	5261,1	1,082	1	1,0021	5682,63	1,1170	5098,09	1,3400	4249,67
2022	547149,2	5471,5	1,094	1	1,0026	5967,56	1,1340	5276,08	1,3900	4304,37
Total brand value in 6 years					**31 565,30**		**28 671,01**		**26 483,66**	

When applying the BVA^{TM} method, the brand value reached the highest value using the discount rate derived from the basic interest rate, while the lowest brand value was reached using the risk premium to calculate the discount rate. See Table 5 and Table 6.

Table 5 summarizes the basic data needed to calculate the brand value using BVATM (net turnover, operating profit, used tangible assets, rate on capital, EVA, BVA index, tax value and BVA after taxes).

Table 5. Brand value calculated by method of BVA^{TM} I. (Source: author's compilation)

Year	Net turnover	Operating profit	Used tangible assets	Rate on capital (2,65%)	Economic Value Added	BVA Index (69%)	Tax (22%)	BVA after taxes
2016	432 420,00	3 651,28	24 620,00	652,43	2 998,85	2069,21	455,23	1613,98
2017	449 716,80	3 797,33	25 358,60	672,00	3 125,33	2156,48	474,43	1682,05
2018	467 705,47	3 949,23	26 119,36	692,16	3 257,07	2247,38	494,42	1752,95
2019	486 413,69	4 107,20	26 902,94	712,93	3 394,27	2342,05	515,25	1826,80
2020	505 870,24	4 271,49	27 710,03	734,32	3 537,17	2440,65	536,94	1903,70
2021	526 105,05	4 442,34	28 541,33	756,35	3 686,00	2543,34	559,53	1983,80
2022	547 149,25	4 620,04	29 397,57	779,04	3 841,00	2650,29	583,06	2067,23

Table 6 contains the calculated values of brand according to the used method of discount rate calculation.

Table 6. Brand value calculated by method of BVA^{TM} II (Source: author's compilation)

Year	Capitalization rate - basic interest rate	Brand value in €	Capitalization rate - coefficient Beta	Brand value in €	Capitalization rate - risk premium	Brand value in €
2016	1,0000	1613,98	1,0000	1613,98	1,00000	1613,98
2017	1,0005	1681,21	1,0646	1579,99	1,09408	1537,41
2018	1,0010	1749,45	1,0890	1478,14	1,1080	1427,88
2019	1,0014	1819,14	1,0950	1391,39	1,1150	1317,85
2020	1,0017	1890,81	1,1080	1263,11	1,1290	1171,72
2021	1,0021	1963,11	1,1170	1140,86	1,3400	459,17

2022	1,0026	2035,27	1,1340	972,10	1,3900	286,62
Brand value to 2017		**12 752,98**		**8 655,51**		**9 439,56**
Annuity		**12 746,61**		**7 790,73**		**8 866,77**
Total brand value		**25 499,59**		**16 446,24**		**18 306,33**

According to the above written, it is obvious that the highest brand value of €31,565.30 was achieved by applying the royalty savings method using a discount rate derived from the base interest rate. Vice versa, the lowest brand value of €14,957.28 was achieved by applying the BVA method using a discount rate derived from the risk premium (Table 7).

Table 7. Comparison of brand value calculated by royalty savings and BVA^{TM} (Source: author's compilation)

Rank	***Used method of brand value calculation***	***Brand value in €***
1.	Royalty savings – basic interest rate	31 565.30
2.	Royalty savings– BETA coefficient	28 671.01
3.	Royalty savings – risk premium	26 483.66
4.	BVA method – basic interest rate	25 499.59
5.	BVA method – BETA coefficient	16 446.24
6.	BVA method – risk premium	14 957.28

In spite of the highest achievable brand values, using the above discount rate, it is more convenient to use other variants such as a beta coefficient or a risk premium. The central bank's key interest rate does not take into account inflation, and it also does not take market risk into account. Average brand value obtained from the calculated six variants of the brand value is €24,247.20. The spread of the calculated values is significantly different – the difference between extremes of the calculated values is €16,608.2, which indicates a need of the brand value metrics adaptation to the specifics of its environment.

These findings are applicable in theory and practice of brands that meet these framework conditions:

- long term effective market performance,
- international range of business activities,
- core business operated in market of central or eastern Europe.

Conclusions

Although brand value management is a relatively new management discipline, an increasing number of businesses pay attention to this intangible property of the enterprise. The value of the brand significantly influences the success of the business on the market and often reaches values higher than the value of the tangible assets of the company. Increased interest in the value of the brand of the company is reflected in the use of different methods of calculating brand value, each method having its advantages and disadvantages. But currently, there is no method accepting the specific conditions of the Slovak market. Because of this, we realized that a case study focused on the assessment of the usability of selected brand value metrics – royalty savings and brand value added method. We found

that there are significant divergences between the obtained results due to the use of the method of discount rate calculation. The highest brand value is calculated when the method of royalty savings based on the basic interest rate is applied, while the lowest brand value is calculated when the method of BVA method based on the risk premium is applied. Summarizing the findings, we can state that in specific conditions of selected insurance company operating on Slovak market, the BVA method based on the basic interest rate is optimal (due to its approximation to the calculated average brand value); although, the method of royalty savings is the most recommended. The provided case study was the pilot study for the confirmation of research assumptions, which should be verified by a more in-depth study realized in specific national and sectoral conditions.

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CULTURAL ADAPTATION OF ERASMUS STUDENTS IN LATVIA AND HOST UNIVERSITY RESPONSIBILITY

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Abstract. Internationalisation of education and student mobility (incoming and outgoing) has become a significant factor in the sphere of higher education. These processes lead to interaction between local students and exchange students, as well as between exchange students and host universities. Being in the foreign country for a certain period (one or two semesters) requires some cultural and social adaptation that could or could not be problematic for various reasons. In order to maximise benefits for the exchange students and host universities, it is important to identify existing problems and to offer possible solutions. The aim of the current paper is to research the critical aspects of cultural adaptation process of ERASMUS students in Latvia. The international group that consists of a professor of the University College of Economics and Culture and three exchange students from Italy and Spain carried out the research. The empirical methods used were the following: a survey of ERASMUS students (non-probability purposive sampling) and semi-structured interviews with the host university ERASMUS coordinators. The data processing methods were the descriptive statistics as well as the thematic content analysis. On the basis of critical issues identified during the research process, the authors worked a set of practical solutions aimed at the host institutions.

Keywords: internationalisation of education; student mobility; cultural adaptation; social adaptation; university social responsibility

JEL Classification: I23, M14

Introduction

Institutions of higher education face multiple challenges in the contemporary world, such as commercialisation of education, market forces, development of technologies and globalisation. The latter factor involves the student and staff mobility, the growing number of full-time international students, the joint study programmes and the need for training of the academic and administrative staff. However, many international students face challenges as they study outside of their home countries. They face social, cultural and academic obstacles, and possibly, psychological isolation. Still, the concept of internationalisation involves also matters related to cultural and intellectual exchange, human resource development, improvement of teaching quality, university reputation building and so on (Knight 2007, Altbach and Knight 2007). In addition, the process of globalisation also facilitates the internationalisation of curriculum (increasing the number of courses or even the whole programmes taught in English, e.g.). Student mobility may take several forms: longer term in order to obtain the particular degree (BA, MA and PHD), or to study for a full academic year; and shorter term (a few weeks) depending on a range of factors – the ERASMUS mobility support, the host university programmes (synchronicity and similarity with the sending institution), possibility to transfer European Credit Transfer (ECT) points and so on (Richardson and Munday 2013). Not the least, the social and cultural environment factors of the receiving country and institution are to be taken into account (Hofstede 2001, Hofstede *et. al.* 2010). According to the European Commission report, student mobility contributes to individuals' personal and professional development, as well as development of their foreign language skills and intercultural awareness. Students also develop their skills, such as being able to quickly adapt to changes and new situations, solving problems, working in teams, thinking critically, being tolerant of different views and communicating effectively (European

Commission 2015). Bhandari and Blumenthal in their article "Global Student Mobility and the Twenty- First Century Silk Road: National Trends and New Directions" (Bhandari and Blumenthal 2011) pay attention to the changed drivers of the student mobility. The authors mention the following contemporary trends: growing competition for international students because they benefit the host universities in many respects (teaching and learning quality, improvement of curriculum, intercultural awareness, financial and social benefits, etc.); emerging of new mobility destinations (more players in the field of international education) – many of previous largest senders of students have become the receivers of them; growing population of virtual learning and other alternative modes of education delivery; joint and double degree programmes, consortia arrangements, twinning and curricular integration. One of the most important components of the cross-border education is students' movement away from their home countries and adaptation in the host country and host university (Varghese 2008, Gürüz 2008). Many researchers distinguish between the two concepts – internationalisation at home and internationalisation abroad. The first concept refers to internationalisation processes that take place within the local university and, in most cases, signifies the ways in which the curriculum is designed to meet the needs of international students, whilst the latter one generally refers to all forms of education that go beyond the limits of political borders and include the movement of students, scholars, programmes and projects to and from different countries (Larsen 2016).

International students bring with them their home experience in learning, interacting, thinking, reasoning, as well as cooking, dining, travelling and so on. At the same time, they bring the considerable financial benefits to the host universities through their expenditures on tutoring and living expenses (Wu *et al* 2015). The internationalisation drivers of the higher education institutions can be classified as academic (belief that education and research have a worldwide scope) or economic (finding new sources of revenues and growth) (Hwawini 2016). In the overview of ERASMUS student mobility research, Teichler states that almost all participating students are highly satisfied with the ERASMUS experience in another European country. Many students report a substantial progress in their learning and language proficiency. Nevertheless, about 20% of the students experienced financial, administrative and accommodation problems, whilst academic problems are less frequently stated. Thus, the main challenges international students face whilst studying abroad can be divided into three large groups: the academic, the social and the cultural ones (Teichler 2004, 2007).

The current investigation is the collaborative project carried out by the professor of the University College of Economics and Culture and three ERASMUS students representing Spain and Italy. It consisted of the subsequent stages: creating the theoretical framework, formulation of research design and methodology, data processing and result interpretation. The purpose of this study is to research the critical aspects of cultural adaptation process of ERASMUS students in Latvia. The study uses the mixed approach involving the quantitative research – the ERASMUS student survey (non-probability snowball sampling) – and the qualitative one – the semi-structured interviews with ERASMUS coordinators. Data processing methods are the descriptive statistics and thematic content analysis. To reach the purpose of the study, we put forward two research questions: (1) What are the most problematic aspects of ERASMUS students' social–cultural adaptation in Latvia? (2) What are the responsibilities of host universities in ensuring international students' cultural and social adaptation?

Literature Review

In order to systematise the literature devoted to the international students' adaptation to host universities' cultural (and social) environment, we propose to use the acculturation scheme developed by Ward, Bochner and Furnham (2001). The scheme depicts the interdependency of societal and individual level variables.

- Society of origin (social, political, economic and cultural factors) and society of settlement (social, political, economic and cultural factors) influence societal level variables
- Societal and individual level variables: cross-cultural transition (life changes, intercultural contact) → stress and skills deficits → stress coping strategies and culture-specific skills

acquisition → responses (affective, behavioural, cognitive) → outcomes (psychological, socio-cultural)

- Characteristics of the person (personality, language fluency, training and experience, cultural identity, acculturation strategies, values, reason for mobility) and characteristics of the situation (length of cultural contact, amount of intra- and inter-group contact, quality of intra- and inter-group contact, cultural distance, amount of life changes, social support)

This scheme demonstrates that cross-cultural transition involves adaptive change that involves working out stress-coping strategies and acquisition of new social and cultural skills and results in psychological adjustment and socio-cultural adaptation. The individual variables are both the factors of influence (i.e. the personality traits play a prominent role in the formation of coping strategies; the situational aspects that form the background for change – the length of culture exposure, social contacts, cultural distance, etc.). All the elements in the scheme are interdependent. Thus, the theoretical background of the theme of socio-cultural adaptation falls into such broad thematic areas: (1) the role of host universities in the process of ERASMUS students' intercultural adaptation; (2) culture shock and transition difficulties, skills acquisition, stress coping strategies and final adaptation; (3) the impact factor (future employment possibilities).

Owing to the process of globalisation and the advance of transnational education, universities and colleges have to engage in the so-called 'ranking game', namely, rankings are gaining in both popularity and influence (Grewal *et al* 2008), generating a high interest and involvement in finding and applying strategic measures to remain competitive. The significant indicator of competitiveness, amongst others, is one of the attractions of foreign students and offers international curricula. Considering this, the international students' academic, social and cultural adaptation is a part of the university social responsibility that can be defined as the ability of the university to disseminate and implement a set of general principles and specific values through four processes – management, teaching, research and extension following ethical principles of good governance (Giuffré and Ratto 2014, Vevere 2016). Therefore, the responsibility of the host university is to ensure international students' equity treatment (protection of civil and human rights), intercultural competences (such as recognition of one's own cultural and national perspectives, an awareness and respect for other perspectives), integration of international students, opportunity to complete studies (the same rules and regulations are valid for all students – the local and the international ones), portability and continuity of funding (students on grants that cover tuition and expenses whilst studying abroad should be provided with safeguards against arbitrary withdrawal of their funding), student status, visas and formal requirements, information and quality assurance (International Student Mobility Charter). The reputation as the good host university for student mobility programmes is a significant competitive advantage because it can help to attract top students and academicians, as well as research funds and transnational partnerships. Bennett (2004) has worked out the so-called 'Developmental model of intercultural sensitivity' – a correlation between the psychosocial experience of the adjustment process and the national culture dimension. Nevertheless, it should be taken into account that the university social responsibility concept pertains also the sending institutions or home universities, as prospective participants of the mobility programme have to have some preliminary information about the host university and have to be emotionally prepared. This can be done by the means such as social media (such as the students' groups on Facebook and the host university web page), intercultural and language training. Additionally, there is phenomenon such as student self-help (students helping students) or, in other words, the ESN (the ERASMUS Student Network) that publishes 'ESN Student Guidebook' annually (Studying and Training Abroad 2015). The guidebook provides the essential information about students' rights and obligations, the necessary documents as well as the local ESN contacts.

When arriving in the place of destination (traditional placement or rather exotic one), students are immersed in the largely unknown situation – they have to interact with the functional proximity context (the academic experience they are faced with their dominant role as visiting students), especially if they are coming from very different cultural, social and academic background. That can create the situation of the culture shock. There are a great number of publications devoted to this problem. The Swedish anthropologist Oberg (1960) gives the classical description of the culture

shock, admitting that it is precipitated by the anxiety that results from losing all our familiar signs and symbols of social intercourse. He mentions symptoms of the culture shock such as excessive concern over hygiene and eating habits, fear of physical contacts, absent-minded, far-away stare, feeling of helplessness, dependence on diaspora, many minor frustrations and refusal to acquire new habits. Other researchers (Bochner 2003, Pedersen *et al* 2011, Furnham and Bochner 1986, Ward *et al* 2001, Zhou *et al* 2008, Geeraert and Demoulin 2013) believe that the use of the word 'shock' places too much emphasis on the threatening circumstances of contact with novel situations, without acknowledging that such experiences may also have beneficial consequences for the participants. They propose to substitute it with several terms: 'between society culture-contact', that is, psychology of the traveller or sojourner who ventures across cultures; 'sojourner adjustment', a term expanding on the acculturation concept to apply to groups residing temporarily in foreign environments, suggests that engagement, participation, and temporary integration into the host culture may contribute to less psychological and socio-cultural difficulty whilst abroad; and 'acculturative stress'. In general, the researchers distinguish between three and five stages of the culture shock that is often depicted as the U-curve model (Oberg, 1960, Gullahorn and Gullahorn 1963, Mendenhall 1991). This model explains the emotional curve of the emotional stages the students go through during their intercultural sojourns. Beginning with a high level of optimism, students are then facing distrust and despair when the negative aspects of the culture are revealed; experiencing what is known as culture shock. In the next stage – the acculturation stage – the individual gets more and more acquainted with the new cultural medium and he starts to accept the host culture, preparing for the calm waters of the equilibrium stage of belonging. In the context of the student mobility, it is worth to mention also the phenomenon of the reverse culture shock or re-entry shock of students returning from studies overseas, sometimes described also as the W-curve model (U-curve model repeated twice over) (Gaw 2000). This term refer to the adjustments that returnees should make in order to adapt back into their own culture after experiencing a different cultural and social environment.

Finally, the third group of publications deals with the impact of the student mobility (Archer and Davidson 2008, Crossman and Clarke, 2010). The researchers stress that studying abroad could significantly increase their future employability. Thus, for example, the ERASMUS large-scale impact study demonstrates (European Commission 2014) that 'transversal skills' were identified by 92% of employers as essential to employment and subsequent career development. Yet in an another study (Bracht *et al* 2006), the survey of the former ERASMUS students concluded that the ERASMUS participants associated their experience of mobility with improved international competences and facilitated access to the labour market. Apart from the employability, all investigators admit the importance of developing the so-called soft-skills: intercultural communication, teamwork, team leadership, crisis management and so on.

Methodology

Research design. In order to investigate ERASMUS students' perception of their cultural and social adaptation process in Latvia, we chose the mixed methods research that comprised the quantitative research, the formalised survey of respondents, and the qualitative one, a series of semi-structured interviews with ERASMUS coordinators. The students were approached with the request to be questioned about their opinion via Internet (using the Google forms). The questionnaire was developed based on the relevant literature study; it consisted of 16 statements concerning cultural and social issues that students face whilst studying in Latvia. Each statement had five-point value varying from the answer 'strongly agree' and 'agree' to 'neither', 'disagree' and 'strongly disagree'. The ERASMUS coordinators were approached with a questionnaire consisting of 12 open-ended questions. The rationale of these interviews was to find out the key factors that influence ERASMUS students' socio-cultural adaptation in Latvia and what is being done on the part of the university.

Population sampling. Once the research design was established, it was necessary to make a decision about the sampling unit (a unit of population chosen during the sampling process; the unit should contain one or more elements describing the population) and sampling method. The respondents of the survey were chosen according to the principle to include the ERASMUS students studying in Latvia in the first semester of the study year 2016–2017. This procedure can be described as a non-probability

purposive sampling, that is, the single-stage procedure in which sampling unit contains only one element, namely, being in Latvia as ERASMUS mobility programme participant. Altogether 87 students were surveyed. The respondents of the semi-structured interviews were the ERASMUS coordinators of three higher educational establishments (business schools), encoded as universities A, B and C.

Data processing. The participants were asked to rate each statement on a five-point Likert scale. The descriptive statistics was applied to interpret data. The results were grouped according to the aspects of the research, that is, the lifestyle, the living conditions, leisure time, food and restaurant culture and interaction (communication) with the locals. After that, the comparative analysis of the results was performed. The last stage was the thematic content analysis of the interview texts with the aim to see if there is a gap in situation perception by the ERASMUS students and their host organisations.

Limitations of research. As the ERASMUS students mostly spend abroad one semester (with some exceptions), the data was gathered during the first semester of the study year 2016–2017. The questionnaire was distributed through the ERASMUS Student Network Latvia (ESN Latvia), so only those students who were engaged in the network at the time could be reached. Although the ESN Latvia Facebook page has more than 15,000 followers as of today, not all of them are incoming ERASMUS students, amongst them, there are ERASMUS alumni, both international and local. Still, we believe that the results we obtained demonstrate the overall tendency, especially if complemented with the qualitative (interview) data.

The research questions are the following: (1) What are the most problematic aspects of ERASMUS students' social–cultural adaptation in Latvia? (2) What are responsibilities of host universities in ensuring the international students' cultural and social adaptation?

Results

In the beginning of the survey, the ERASMUS students were asked to state their country of origin. The obtained data is rather of the informative character because the varying number of respondents represented the countries (Table 1).

Table 1. Distribution of ERASMUS students by the country of origin (Source: authors' compilation)

Country of origin	Number of responses
Algeria	1
Azerbaijan	1
Belgium	1
Croatia	2
Czech Republic	2
France	2
Germany	17
Greece	1
Italy	6
Japan	1
Lithuania	1
Poland	1
Portugal	2
Romania	1

Slovakia	1
Spain	43
Sweden	3
Turkey	1
Total number	87

This broad dispersion of answers (as high as 43 students from Spain and 17 from Germany, as low as 1 student from a number of countries, including Lithuania, Poland, Slovakia and others), in our opinion, could be explained by two main reasons. The first, two (out of four) research group members were coming from Spain so the response level from their compatriots was higher (a kind of the inner circle phenomenon); the second, because it was the Internet survey, not all students took their time and put in some effort to fill out the questionnaire.

Then students were asked to evaluate 16 statements regarding their socio-cultural experiences whilst residing in Latvia. The questions concerned the lifestyle (differences between the Latvian and the native country ones), the local living conditions (including the adaptation to the local weather), the leisure time and entertainment, the differences between food cultures and, finally, the problems in communication with locals of different age (less than 28, between 28 and 60, more than 60). Figure 1 depicts students' overall evaluation of the Latvian lifestyle, that is, the general impression of the host country (abbreviations: sd, strongly disagree; d, disagree; n, neither; a, agree; sa, strongly agree).

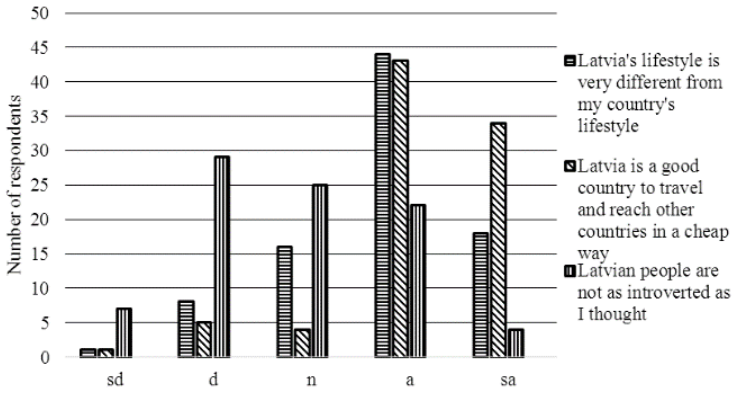

Fig. 1. Attitude to the Latvia's people lifestyle (Source: authors' compilation)

As we can see from Fig. 1, the ERASMUS students in their majority admit that the Latvian lifestyle is quite different from the one on their home countries (out of total numer of all respondents, 44 agreed and 18 strongly agreed to the statement), it pertains intercultural communication and interaction aspects such as keeping distance, greetings, speaking patterns, eye contacts as well as all cultural and social environment. This, of course, is not surprising, because arrival for a shorter or longer stay in any foreign country is almost always related to some culture shock aspects (the first phases of the U-curve) – the unfamiliar conditions and the unknow language can create the sense of loss and disorientation. In our opinion, during this stage, the support of the receiving institution is of a special importance (consulations given by the ERASMUS coordinators, the support by the students' council of the university, etc.). At the same time, almost everobody (77 respondents) agreed or strongly agreed that Latvia is an apealing destination for travelling. Perhaps the most intriguing question of this group for us as researchers was the one related to the stereotype regarding local residents. The statement was formulated in the following way: 'Latvian people are not as introverted as I thought'. The answers were split almost evenly (26 repondents agreed and/or strongly agreed with the statement, that is, they were pleasantly surprised finding Latvians outgoing; 36 respondents stood by the stereotype, whilst 25

students didn't have a definite answer). In our opinion, these results emphasise the necessity of work to be accomplished before the mobility asignment, namely, students have to be informed about the lifestyle of the host country. Although it is virtually impossible to prepare thorough informative materials about each and every destination country, the problem could be solved by creating, for exmaple, Facebook discussion/interest groups in which students from the sending and receiving countries could share their experience and establish friendship already before coming to the country.

The next group consisting of four statements that were related to the general living conditions and students' vision to them (see Fig. 2).

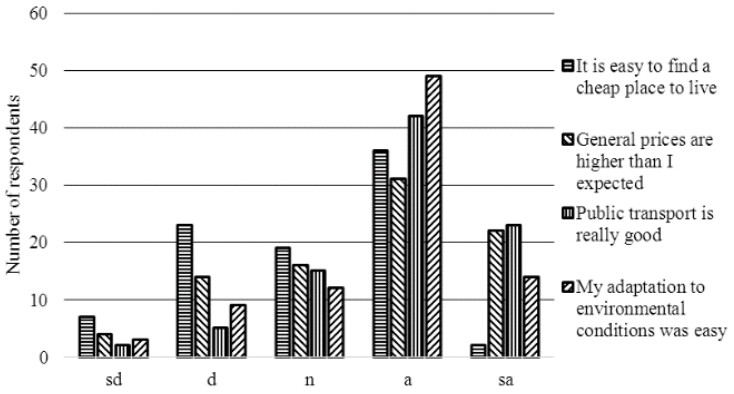

Fig. 2. Evaluation of living conditions (Source: authors' compilation)

The process of social–cultural adaptation, that is, the transition period from home environment to the unknown, the different one, also depends on students' living conditions (to rent an apartment together with friends, to live in the dormitory), readiness to adapt to the Nordic climate conditions (especially if students come from the south of Europe). Then here we have to mention the orientation problems in the city and public transportation structure. The answers to the first question in the group (see Figure 2) are distributed almost evenly; it means that students did not think to be too difficult to find relatively (of course, depending on the living standard in the country of origin) inexpensive living place. Also, students positively evaluated the ways of getting around in the city and they were not particularly bothered by rain, snow, coldish summer and so on. At the same time, 53 out of 87 respondents had been unpleasantly surprised by the level of general prices; they either agreed or strongly agreed to the statement number four in this group. This could mean that they did not have the exact information before travelling to Latvia. As majority of the students were from the EU countries, they could naturally assume that the price range would be approximately the same. This again brings forth the need for (1) thorough prior orientation and (2) prior virtual contacts with host university students. The next group of statements concerns students' leisure time activities (see Figure 3).

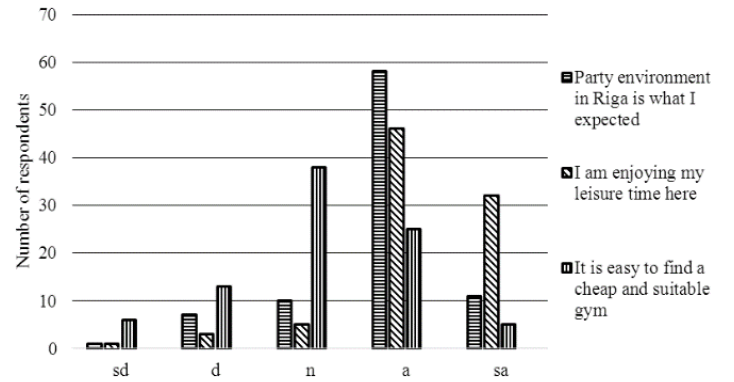

Fig. 3. Students' evaluation of their leisure time activities (Source: authors' compilation)

Without any doubt, students view their time spent in the foreign country as time for exploration of the party scene and entertainment possibilities. It is a natural part of their experience. Therefore, it is not a surprise that the statements received positive votes (69 of 87 respondents agreed or strongly agreed to first statement, and even more, i.e. 78, to the second one). The only disappointment was expressed regarding the inability to find the suitable gym or, rather to say, their attitude was mostly neutral. This could mean that they did not express any interest in this kind of activity or they found it too expensive. In this case, the solution could be organising international hiker/jogger groups.

Food culture and adjustment to the local cuisine is an important aspect. To close the gap, the host universities often organise national food festivals, potluck dinners and so on. Sometimes the comfort food of the native country is necessary to stay afloat in the foreign country. Figure 4 depicts ERASMUS students' attitude to the traditional dishes in Latvia.

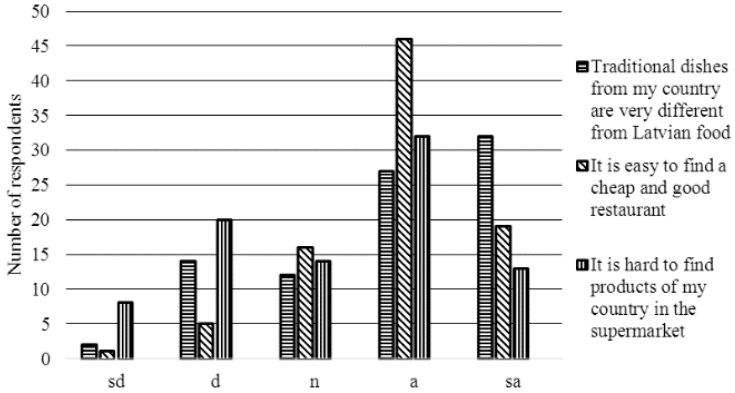

Fig. 4. Attitude to the local cuisine and dining traditions (Source: authors' compilation)

The answers to the first and to the third statement tends to be on the negative side, namely, 59 respondents agreed and strongly agreed that the traditional dishes are very different and 45 regretted inability to find the familiar products in the market or supermarket. Still most of them answered that it was not a problem to find a cheap and good restaurant (usually not serving their host country dishes).

The last group of statements touches upon very significant aspect communication with locals – students and city residents (see Fig. 5).

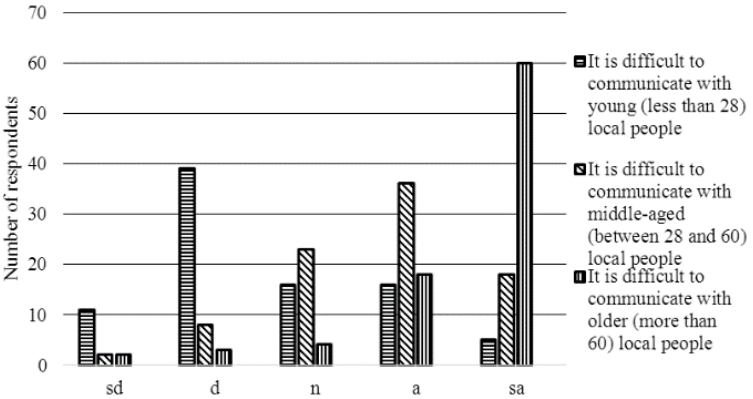

Fig. 5. Communication difficulties with local residents (Source: authors' compilation)

It is not surprising that there exists a direct negative correlation between age of the local residents and the knowledge of foreign language – the younger generation, in general, has no problems speaking lingua franca (English), whereas those aged 60 and more are less apt to have direct contacts with foreign students. The problem could be solved, at least partly, by pairing up international and local students, that is, some kind of mentoring. This approach is used by several universities in Latvia.

However, if there is a compact group of foreign students, they can be satisfied with the intra-group communication. Then the question arises: should the local universities try to break up this circle and engage more in the host university students' life?

In order to see the situation from the different perspective, the authors of the present study conducted semi-structured interviews with the ERASMUS coordinators from three Riga universities. The questions concerned different social and cultural aspects of ERASMUS students' life. The interviews were taped, coded as A, B and C and analysed using the inductive thematic analysis that is, finding the themes relevant for the current topic. In sum, three main themes emerged in the interviews: (1) technical and organisational assistance by the receiving institution; (2) engagement in the local social and cultural activities; (3) students' prior awareness of local conditions and traditions.

According to all ERASMUS coordinators, the incoming students receive all necessary technical and organisational assistance – their prospective 'buddies' (students who would fulfil the role of some kind of personal assistant during all study period in Latvia) are picking them up at the airport. The representatives of the Students Council of the respective universities or volunteers help to overcome the daily difficulties (finding supermarket, explaining the system of public transportation, etc.). All coordinators admitted that the most difficult part of their job was the great amount of the paperwork.

The second common theme in all interviews was related to involving the ERASMUS students into the local (host university) cultural and social activities. All coordinators answered that their schools have organised field trips to beautiful places of Latvia and sometimes abroad, sporting and entertainment events. According to one of the coordinators: 'Yes, there are trips (usually once a month). For sport it is different because, for example, during this period it is difficult to organize something outside because of the weather'. Yet another coordinator admitted that the students' council of the university had an annual tradition – the international gastronomy month, where the students introduced their national dining traditions. This, of course, is possible in the universities that have a large number of foreign students.

The third theme that appeared in all three interviews concerned the problem of readiness of incoming students to adapt to the local social, economic, cultural and academic standards. In other words, many students upon arriving in Latvia exhibit obsolete stereotypes and prejudices. Although it is not always a case, still it seems that some prior practical training would be in place. Similarly, the local students, university staff and professors should be well prepared. The university responsibility would be, first, to work with every international student and, second, to prepare the teaching staff for working within the international environment. In order to accomplish the latter task, the school organises integration and culture training seminars for teaching staff and for those who are involved with international students on the daily basis.

In the end, all coordinators admitted that incoming ERASMUS students have brought to their schools valuable cultural diversity experience.

Conclusions

The purpose of the present study was to investigate the critical aspects of the ERASMUS students' cultural adaptation in Latvia. In order to reach it, the international team of researchers (consisting of the local university professor and three ERASMUS students from Spain and Italy) conducted the survey (the non-probability purposive sampling) and series of semi-structured interviews with the ERASMUS coordinators. There were two research questions: (1) What are the most problematic aspects of ERASMUS students' social–cultural adaptation in Latvia? (2) What are responsibilities of host universities in ensuring international students' cultural and social adaptation?

According to research data, the answer to the first question could be formulated as follows: the most problematic (critical) factors in the ERASMUS students' cultural and social adaptation Latvia were the lack of crucial information about the receiving country and the host universities. It does not mean that they arrive unprepared; still, they can hold some prejudices and stereotypes (of course, depending on their country of origin). They experience the subsequent stages of the culture shock (differences in lifestyle, food and dining traditions, difficulties in communication, etc.). In students' opinion, the

Latvian people are largely perceived as being introverted and there exists the direct negative correlation between the age of the local residents and their ability to communicate in English. This set of problems could be solved by further developing the 'buddy' (or mentoring) system as well as by preparing informative materials about the country and the host university. In addition, establishing the *Facebook* discussion group in which the students could contact their Latvian counterparts before to the actual travelling to Latvia could solve at least some of the initial problems.

The university responsibility would be, first, to work with every international student and, second, to prepare the teaching staff for working within the international environment. In order to accomplish the latter task, the school organises integration and culture training seminars for teaching staff and for those who are involved with international students on the daily basis.

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DETERMINATION OF THE VALUE OF INTANGIBLE ASSETS IN THE COMPANIES OF LITHUANIA

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Abstract. In accordance with generally accepted accounting standards, most intangibles are not accounted for and not reflected in the traditional financial accounting. For this reason, most companies account intangible assets (IAs) as expenses. In the research, 57 sub-elements of IAs were applied, which are grouped into eight main elements of IAs. The classification of IAs consists in two parts of assets: accounting and non-accounting. This classification can be successfully applied in different branches of enterprises, to expand and supplement the theoretical and practical concepts of the company's financial management. The article proposes to evaluate not only the value of financial information for IAs (accounted) but also the value of non-financial information for IAs (non-accounted), thus revealing the true value of IAs that is available to the companies of Lithuania. It names a value of general IAs. The results of the research confirmed the IA valuation methodology, which allows companies to calculate the fair value of an IA. The obtained extended IAs valuation information may be valuable to both the owners of the company and investors, as this value plays an important practical role in assessing the impact of IAs on the market value of companies.

Keywords: intangible assets; financial information; non-financial information; fair value.

JEL Classification: G32

Introduction

The topicality of the research. The pace of economic growth, people's social welfare and sustainable development of the economy are increasingly dependent on the creation of new knowledge and practical application of it. The activities of the company are related to different types of resources, amongst which intangible assets (IAs) are becoming an increasingly important incentive for the company to operate. At the end of the twentieth century, the increased interest in IAs and its impact on the market value of companies encouraged companies to increase their investment in human resources, research and development, new technologies and so on. In order to maintain a competitive advantage and increase the value of shares in the market, the true value of IAs in the balance remains important, as it also determines the value of the companies on the market.

Despite the growing importance of IAs in the process of companies' value creation, most of them are not accounted for and do not reflect in traditional financial accounting. Typically, only some types of IAs are recorded in the balance sheet: goodwill, licenses, copyrights, software, development and research. Issues and uncertainties regarding the estimation of the value of IAs are still not resolved. IAs are only accounted for such resources whose costs meet the definition of IAs and recognition criteria: future economic benefits, value and control. Solving the problems of determining the value of IAs, people encounter with a lack of disclosure of accounting information. Proper disclosure of accounting information is based on fairness and equality of rights. Otherwise, incorrectly disclosed information suggests opportunities to unfair competition in the securities market. The reliability of accounting information in the quality area is ensured by external institutions that are focused on disclosure and publicity.

In principle, researchers are solving different problems: what value of IAs are disclosed in the financial statements; how the structure of IAs is changing in various industrial sectors; to what extent unrecorded IAs value exceeds the fair value of the IAs; what is the relationship between the market value of IAs and companies? what is the gap between the fair and market value of the companies on the securities market? and so on. However, the vast majority of such studies are related to other

countries: the United States, Switzerland, England, France, India, Malaysia, and others. An important role is played by international organisations that, in order to increase the disclosure of financial information and its comparison between economic entities and other market participants, develop and improve common international accounting standards. In Lithuania, this area was explored in a fragmented way. In recent years, there are more studies showing that the topic is relevant in the world and in Lithuania.

The research aim. To estimate the value of IAs in the companies of Lithuania.

The research hypothesis. The value of IAs of non-financial information is higher than the value of IAs of financial information.

Design/methodology: In order to determine the IAs, the data of financial reporting of the period 2009–2015 were analysed. The data of 18 companies of different activities, whose shares are listed on the Stock Exchange, were analysed. IAs value has determined using the financial method of IAs measurement (FiMIAM). Research methods: Elaboration, organisation, collation, integration, comparison, graphical modelling, generalisation. Financial analysis was performed using MS Excel.

Literature Review

Analysing the research, the main scientific approach was revealed on the theme *problem of recognition and evaluation of intangible assets as intangible assets in the accounting.* The recognition of IAs as IAs in the financial statements is considered complicated by the definition of this assets, that is, by identifying it, determining its value, proving future economic benefits and ensuring control. Most researchers (Lev 2003; Volkov, Garanina 2007; Jukaitytė-Sungailienė 2009; Crema, Nosella 2014; Svensson 2014; Kimouche, Rouabhi 2016, etc.) agree that the totality of IAs belonging to the company includes the integrity of the IAs, which is disposed by the need and purpose. However, the incompatibility lies with the possibility of accounting for these resources, using recognition criteria in accordance with generally accepted accounting standards. It is precisely because of conservative accounting standards that most IAs are not accounted for and are not reflected in the financial statements. Only a small part of the IAs account is recognised, measured and disclosed as IAs. Other scientists (Shah, Khedkar 2006; Sofian *et al.* 2011; Stankevičienė, Liučvaitienė 2012; Jaara, Elkotayni 2016) confirm that most companies account IAs as expenses, whilst the costs necessary to form these assets are regarded as spending of that period, resulting in a decrease in owners personal capital. Notation of IAs together with other company's expenses has a direct impact on companies' results: profit and taxes. A similar approach is taken by scientists (Lönnqvist, Tech 2002; Shah, Khedkar 2006; Lin, Tang 2009;. Wight 2009; Sharma 2012; Kimouche, Rouabhi 2016; Ifeanyi, Caroline 2016) who claim that recognition of IAs has not yet been sufficiently investigated, and therefore, the estimation of IAs is considered an even more complex task, resulting in the gap between true and present value. Although various methods are created for valuation of IAs (Surroca, Tribo, Waddock 2006; Shah, Khedkar 2006; Wight 2009; Abhijeet, Richa 2010; Passard, cKenna, Krishnan 2012; Gamayuni 2015, etc.), however, the problem is due to the fact that most methods are difficult to apply in empirical studies.

The concept of IAs is a main subject of scientific discussion. Analysing the definitions and descriptions of the concept of IAs presented by scientists, it was noticed that this concept was interpreted differently, without consideration of the scientific research aspect. IAs can be described as assets that are based mainly on the information and knowledge (Sacui, Szatmary 2015). IAs help to build and to increase a value of company (Andriessen 2005; Garanina, Pavlova 2011; Crema, Nosella 2014). IAs make it possible to expect economic benefits in the future (Blair, Wallman 2003; Volkov, Garanina 2007; Villanueva 2011; Vidrascu 2015). Intangible assets play an important role in maintaining the competitive advantage of a company (Lev 2001; Ipate, Parvu 2016). Intangible assets consist from intangible resource, which belong and used according to the purpose in the company (Crema, Nosella 2014, Svensson 2014; Kimouche, Rouabhi 2016).

Analysis of the definitions of IAs shows that the concept of IAs is related to the period and, therefore, it was interpreted differently. In 1987, IAs were interpreted as knowledge assets. From 1990 to 1997,

these were interpreted as core competencies, absorptive capability, intangibles and so on. In 1997, these were started to be used in the concept of the IAs. In 2000, IAs were implied as an intellectual capital (Table 1).

Table 1. Interpretation of the concept of intangible assets from the field of science

Authors	Science field			
	Finance	**Economics**	**Management**	**Law**
Lev 2003; Mackevičius, Jarmalaitė 2011; Ramanauskaitė 2013; Husnah et al 2013; Gamayni 2015	*Intangible assets*; *invisible assets*; *intangibl*es	*Knowledge assets*; *intellectual assets*; *knowledge capital*; *intellectual knowledge*	*Intellectual capital*; *intangible resources*; *intangible activities*; *immaterial values*; *intangible investment*; *organisation intellectual capital*	*Intellectual capital*; *intellectual property*
Dumitrescu 2012	*Development of intangible assets: 1987, knowledge capital, invisible assets; 1990, core competencies, architectural knowledge, absorptive capability; 1991, organizational memory; 1992, intangible resources, combinative capabilities; 1995, strategic assets, core capabilities; 1997, intangible assets; 2000, intellectual capital*			

The concept of IAs is usually used in the financial science. In economics studies, this concept is often interpreted as knowledge assets. But most scientists identify IAs as a part of intellectual capital in the management science. And this interpretation of the term can also be found in the fields of economics and law. This forms incorrect approach to the using of the concept of IAs. Pursuing to avoid ambiguities, hereby we offer to form the definition of IAs, highlighting the essential exclusivities of such assets: (1) *The content of IAs is formed by intangible resources owned by an enterprise;* (2) *the value of IAs is disclosed recognising or not recognising IAs as assets in accounts;* (3) *the economic benefit of IAs is established by the created added value in the performance of an enterprise;* (4) *the economic benefit of IAs determines changes in the market value of an enterprise.*

In order to maintain a competitive advantage and enhance value of the shares, the real structure of IAs in the company is very important. Shortage of information on IAs and the use of structure of its potential make it possible to manipulate the results of traditional financial accounting, whilst investors and other market participants are not reached by objective information reflecting real state of financial information of organisation. The acknowledgement of IAs and its accounting for the balance sheet is considered to be difficult and complicated. In most cases, the costs incurred by companies that are not accounted as IAs are included in either cost of production or recognised as operating expenses, thus reducing not only the quality of accounting information but also the property of the owners published in the financial statements. Combining traditional historical pricing and fair value pricing systems, it is possible to determine not only the value of IAs but also the flexibly adjustable changes in market prices. The theory of normative accounting is closely related to the general accounting principles, because the estimation value of IA depends on a properly chosen pricing policy that is necessary to disclose the true value of the intangible asset. The requirements of the general accounting principles for determining the value of IA do not always correspond to the real situation and cannot always be applied to the accounts of companies. For this reason, the value of IA involves two main accounting segments: accounted and non-accounted by IAs. The greater part of IAs is non-accounted because most of the IAs are written down to operating expenses. Owing to strictly regulated legislation, the most important part of accounting information remains incomplete information for consumers. The accounting disclosure aspects are analysed by the positive accounting theory, which emphasizes the relationship between accounting information and stock price developments. Publicly disclosed information is regulated by the general accounting principles (GAP) and is, therefore, reflected in the company's balance sheet as the value of the financial information intangible asset (FINT). In contrast, non-public information is associated with the value of non-financial information intangible assets (NINT).

Methodology

Stage 1. Business choice. To determine the research size, the following criteria were chosen: company's market value, date of listing, industry, set of financial statements, annual reports, FINT.

The study uses data from 18 companies' financial statements and annual reports. The financial and non-financial information presented in these reports is considered as the main financial source. The value of IAs of financial information is the main criterion that led to the choice of 18 companies, because it is important for the evaluation of the value of IAs of non-financial information. However, the value of IAs of financial information of others companies was not available, and for this reason, other companies cannot appear in the researches. In order to perform a comparative analysis, different industries were selected for research and grouped into two large groups: manufacturing and services. The size of research was found to consist of nine services and nine manufacturing enterprises. This grouping of companies was not chosen a random because the measurement of the value of IAs is depended on the activities of different sectors. The main activities of the services group are telecommunications, financial, industrial and utilities. The main activities of the group of manufacturing companies include the production and marketing of food and beverages, clothing, textiles, household paper, alcohol and so on.

Stage 2. Components of intangible assets. The second stage of the research shows the way of structuring the IAs (Figure 1).

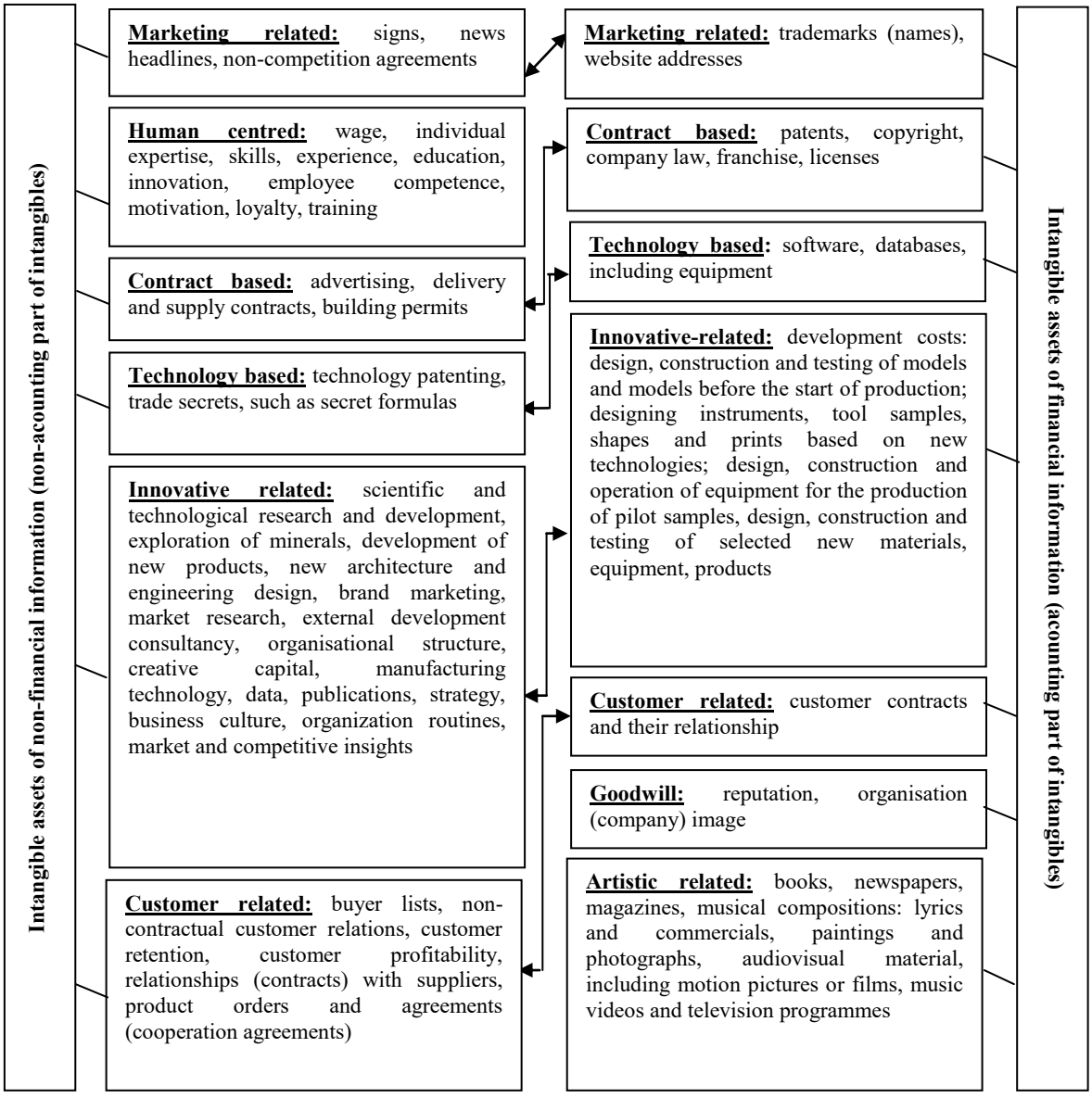

Fig. 1. Classification of the general intangible assets (Source: author's compilation)

Depending on the suggestions of scientists to elements of the IAs and their sub-elements , the randomised sampling method is applied. There were selected 57 sub-elements of IAs, which are grouped into 8 main elements of IAs. According to the principles of general accounting, a classification of IAs has been prepared, which consists in two parts of assets: accounting and non-accounting.

Stage 3. Determination of the value of intangible assets of financial information. In calculating the value of FINT, it was chosen to adapt the historical pricing system. Researchers, using empirical evidence to determine the impact of an IA on the market value of companies, most often used the balance sheet value at the end of the year. The carrying amount is the cost of acquisition of the IA during the period, which is reduced by writing off, liquidation or sale of assets and amortisation amount. The value of FINT that is used in the company's operations during the accounting year is higher and the carrying amount at the end of the year reflects the reduced value of the asset. In the opinion of the author, the amortisation amount represents the part of the value of the IAs that was used during the accounting year, which determined the market value of the company. It is proposed to calculate the value of IAs of financial information in the following sequence:

$$FINT_{it} = NTBV_{\text{it}} + NTA_{it} \qquad (1)$$

where

$FINT_{it}$ is the value of IAs of financial information of the company at the accounting year, in euros;

$NTBV_{\text{it}}$ is the balance value of IAs of the company at the end of the accounting year, in euros;

NTA_{it} is– the value of amortisation of IAs of the company at the accounting year, in euros.

Stage 4. Determination of the value of intangible assets of non-financial information. The financial method of IAs measurement is to calculate the value of IAs of non-financial information (FiMIAM) (Rodov, Leliaert 2002). This method is chosen for the following reasons: (1) *The structure of the method and the logic of its application are clear;* (2) *all IAs are valued at the monetary unit of measurement;* (3) *the results are compared with each other.* This method consists of 6 steps:

Step 1. When seeking to identify the value of non-financial information of IAs in monetary terms, the author proposes a market value (RV) and equity relative index (NK) supplement with the financial information of IAs index (FINT). The value of financial information of IA shows the part of the assets recorded, but it includes the historical price, which varies from time to time on the market. In the absence of an active asset market, it would be difficult to accurately determine the value of non-financial information assets. The proposed relative index allows disclosure of the value of non-financial information on an IA at market value; in other words, it shows the value of an IA that has not been recognised on the market:

$$NINT_{it} = \frac{RV_{it}}{NK_{it}} \times FINT_{it} \qquad (2)$$

where

$NINT_{it}$ is the value of IA of non-financial information of the company at the accounting year, in euros;

RV_{it} is the market value of the company at the accounting year, in euros;

NK_{it} is the value of owners' equity of the company at the accounting year, in euros;

$FINT_{it}$ is the value of IA of financial information of the company at the accounting year, in euros.

Step 2. In accordance with the second step of the method, the quantitative content analysis method was chosen to identify the IAs of the non-financial information (Table 2).

Table 2. Method of quantitative content analysis (Source: author's compilation)

Steps	Indicator	Description
1	The research sample and period	Financial statements, annual reports, additional information for investors of 18 companies. Research period: 2009–2015
2	The object of research of intangible assets of the non-financial information	Elements for the 7 intangible assets, consisting of 46 sub-elements : (a) marketing related, 3; (b) human centred, 10; (c) contract based, 3; (d) technology based, 2; (e) innovative related, 17; (f) customer related, 6; (g) artistic related, 5
3	The units of measurements	1. Text information tools: sentences, phrases, messages and other text; 2. Visual media tools: paintings, graphs, charts and others
4	The scale of assessment of intangible assets of the non-financial information	Nominal scale (qualitative data classification) selected for the assessment of variables: 0, neutral/none; 1, not very important/is; 2, significant/is; 3, very significant/continuously improved and developed
5	The coding system of elements of intangible assets of the non-financial information	According to the coding system of intangibles assets of non-financial information, elements of assets that have been assigned the appropriate scores were identified (in step 4)

Step 3. On the basis of the third step of the FiMIAM method, the weight assigned to the element of IAs of the non-financial information is calculated and expressed as a percentage:

$$\sum X_{it} = a_1 + a_2 .....a_n ; \sum n_{it} = X_1 + X_2 .....X_n ;$$

$$NINTE_{it} = \frac{\sum X_{it}}{\sum n_{it}} \times 100\% \qquad (3)$$

where

$NINTE_{it}$ is the number of elements of the IAs of non-financial information at the accounting year, %

$\sum X_{it}$ is the total amount of the unit of elements of the company at the accounting yeas;

$a_1 + a_2 .....a_n$ is the number of the unit of sub-elements of the company at the accounting year;

$X_1 + X_2 .....X_n$ is the number of the unit of elements of the company at the accounting year;

$\sum n_{it}$ is the total amount of elements at the accounting year.

Step 4. In the dissertation, the coding system is based on existing types of the IAs of non-financial information by the company. The planned data is not included in the contents of the IAs of non-financial information during the time of research. It is suggested to calculate the results obtained according to the assessment scale developed by Janis and Fadner (1965): *f = significant number of units; u = insignificant number unit; r = important number of units = u + f + neutral number unit; t = total number of units = r + unimportant number of units.* On the basis of the stated calculation logic,

the system of points of the IAs of non-financial information, which is evaluated on a scale from 0 to 3 is compiled.

Step 5. This step is designed to calculate the IAs of non-financial information:

$$NINTEV_{it} = NINT_{it} \times NINTE_{it} \qquad (4)$$

where

$NINTEV_{it}$ is the value of elements of the IAs of non-financial information at the accounting year, in euros;

$NINT_{it}$ is the value of elements of the IAs of non-financial information of the company at the accounting year, in euros;

$NINTE_{it}$ is the number of elements of the IAs of non-financial information at the accounting year, %.

Step 6 (Stage 5). Calculation of the value of general intangible assets. The fifth study stage of the theoretical model includes the sixth step of the method, which specifies the calculation sequence for the value of general IAs:

$$BNT_{it} = NINT_{it} + FINT_{it} \qquad (5)$$

where

BNT_{it} is the value of general IAs of the company at the accounting year, in euros;

$NINT_{it}$ is the value of elements of the IAs of non-financial information of the company at the accounting year, in euros;

$FINT_{it}$ is the value of IA of financial information of the company at the accounting year, in euros;

The value of general IAs BNT_{it} consists in two parts of assets: financial and non-financial information. The value of general IAs is calculated using different methods of evaluation. This value is calculated by adding the value of the IAs of financial information $FINT$ to that of non-financial information $NINT_{it}$. The value of general IAs is defined as the fair value of IAs (32 GAP 2014).

The main limitation of this research. This methodology is suitable for listed companies but may also be used by others with certain reservation: for the calculation of non-financial information for IAs, one should choose another valuation method or a relative index, between the market value and the equity value (RV/NK), should be changed to the relative value of the business value and equity value (VV/NK).

Results

On the basis of the analysis of IAs, the elements of recognition of assets were disclosed, which revealed the peculiarities of the structure and value of the IAs of financial and non-financial information of Lithuanian companies. According to the results of research, in most of the companies of Lithuania, the value of IAs of financial information consists of elements that are related to intangibles of technology-based, contract-based and other assets. This includes the most part of IAs of financial information in the companies of Lithuanian. A little less recorded are the marketing related,

customer related and goodwill. As expected, innovative-related assets are recognised and accounted in the balance sheet very rarely (Table 3).

Table 3. The intangible assets of financial information of Lithuanian companies according to the elements for 2009–2015, in thousand euros

Companies	Marketing related		Human centred		Technology based		Innovative related		Customer related		Goodwill		Other assets	
	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015
Telia Lietuva	0.0	0.0	4,651	1,577	7291	8,172	0.0	0.0	0.0	0.0	1,505	3,137	527	3,711
Lietuvos dujos	0.0	0.0	735	468	705	422	0.0	0.0	0.0	0.0	0.0	0.0	1,708	686
Lesto	0.0	0.0	0.0	42	3167	3,115	0.0	0.0	0.0	0.0	0.0	0.0	15	245
Lietuvos energija	0.0	0.0	10,588	16,44	968	523	0.0	0.0	0.0	0.0	0.0	0.0	39	17
City Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16,54	1,086	10,94	9,304	608	3,911
Klaipėdos nafta	0.0	0.0	0.0	0.0	45	1,107	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Invalda INVL	0.0	0.0	0.0	4226	190	36	0.0	0.0	2,845	0.0	0.0	90	25	0
Šiaulių bankas	0.0	0.0	0.0	0.0	294	1,296	0.0	0.0	0.0	0.0	0.0	2,752	0.0	0.0
Kauno energija	0.0	0.0	0.0	148	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,245
Vilniaus degtinė	5,752	2,65	12	0.0	167	172	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pieno žvaigždės	0.0	0.0	0.0	0.0	241	116	0.0	0.0	0.0	0.0	97	0.0	1,011	0.0
Rokiškio sūris	0.0	0.0	0.0	0.0	123	21	0.0	0.0	611	0.0	0.0	0.0	0.0	0.0
Panevėžio statybos trestas	0.0	0.0	0.0	0.0	89	122	0.0	0.0	0.0	0.0	35	31	6	32
Dvarčionių keramika	0.0	1,85 0	0.0	0.0	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vilniaus baldai	0.0	0.0	0.0	0.0	133	41	0.0	0.0	0.0	0.0	0.0	0.0	188	118
Snaigė	0.0	0.0	0.0	0.0	46	121	1,652	1,854	0.0	0.0	0.0	0.0	2,352	0.0
Grigeo Grigiškės	0.0	0.0	659	639	55	2,345	0.0	0.0	0.0	0.0	0.0	0.0	0.58	240
Apranga	0.0	0.0	213	323	310	360	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: 0.0 is no assets.

The results of the research show that it is not complicated to adapt the main criteria for recognising IAs, economic benefits, value and control (International accounting standard, 38 (IAS 38), when it comes to accounting for elements of technology, contract and other assets. The application of the general accounting standards in practice is quite complicated when it comes to accounting for elements of marketing, customer and innovative assets. Goodwill is only recorded when there is a transaction between companies: the price paid by the buyers for the shares of the company exceeds the value of the acquired net assets of the company (National Accounting Standard, 14 (NAS 14 2013)).

The disclosure of components of the IAs of financial information (FINT) of companies in Lithuania contains detailed analysis of the sub-elements of these assets (Figure 2).

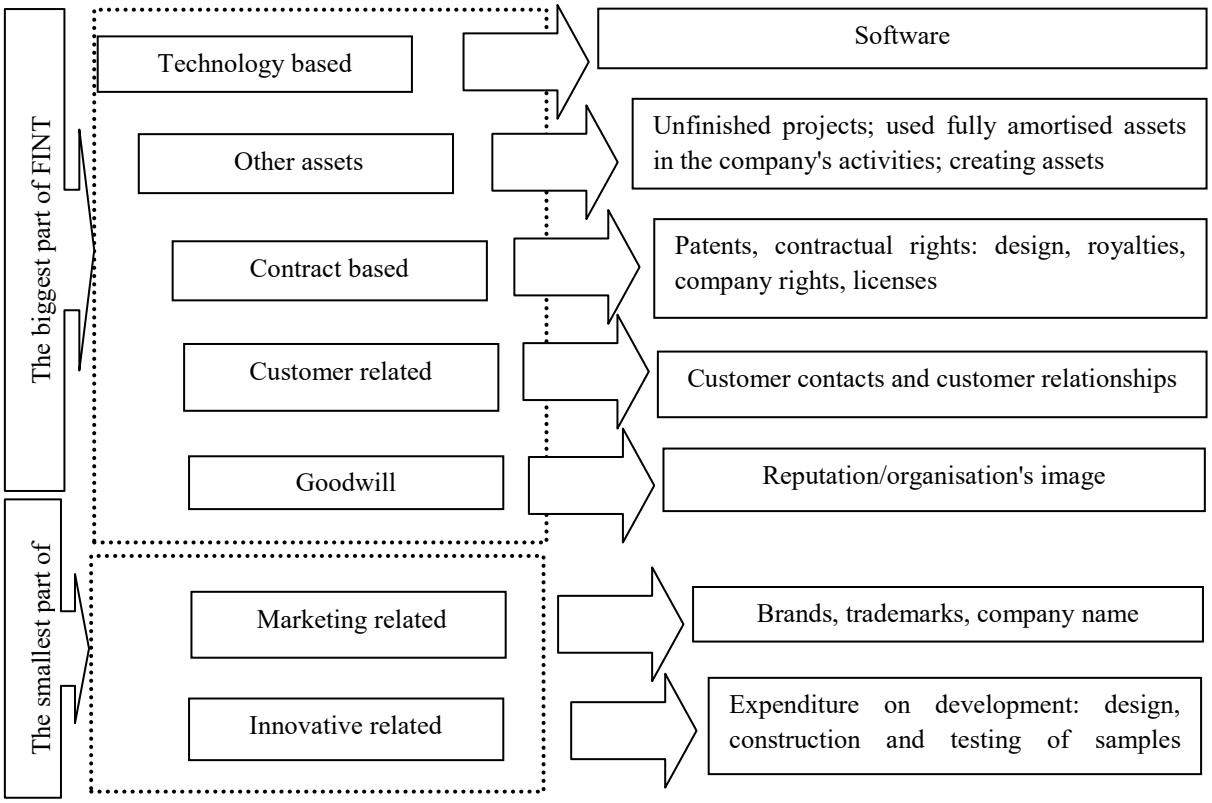

Fig. 2. Sub-elements of the intangible assets of financial information of companies

Most of FINT structures consisted of sub-elements related to the acquisition of software, the implementation of unfinished projects, assets that were fully amortised but still used in the company's activities, corporate rights, patents, licenses, reputations and so on. One of the most important elements of the property is the goodwill. The value of goodwill as assets depends on transactions between companies, their mergers and acquisitions. Practical experience in business, reputation, image, clients, brands and so on, acquired by other companies, also plays an important position in FINT structure. Another important asset element is the customer-related asset. This type of asset increased the volume of FINT when contracts were concluded with customers and suppliers of Lithuanian or foreign companies.

The smallest part of this asset was made up of marketing and innovative assets. Trademarks, company names and development costs are resources that relate to the company's ability to exploit the growth potential of the market.

On the basis of the 4th stage of the research methodology, the value of the IAs of non-financial information was determined by applying the financial method of IAs measurement (FiMIAM) (Table 4).

Table 4. The intangible assets of non-financial information of Lithuanian companies according to the elements for 2009–2015, in thousand euros

Companies	Marketing related		Human centred		Contract based		Technology based		Innovative related		Customer related		Artistic related	
	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015
Telia Lietuva	0.0	2,601	4,511	7,804	0.0	0.0	0.0	0.0	11,27	18,208	4,511	13,006	0.0	0.0

Lietuvos dujos	0.0	0.0	0.0	0.0	87	0.0	0.0	0.0	479	415	479	553	0.0	0.0
Lesto	59.6	0.0	477	1,365	60	227	36	0.0	418	2,047	179	1,137	60	0.0
Lietuvos energija	917	0.0	2,619	9,835	0.0	0.0	0.0	0.0	2,619	6,772	437	1,229	0.0	0.0
City Service	2,658	0.0	13,291	2,347	2,658	1,173	2,658	0.0	15,949	5,867	10,633	1,173	0.0	0.0
Klaipėdos nafta	0.0	0.0	10	251	3	108	3	0.0	6	287	10	144	0.0	0.0
Invalda INVL	0.0	0.0	747	1,327	373	332	0.0	332	933	995	560	332	0.0	0.0
Šiaulių bankas	0.0	138	109	1,107	0.0	0.0	0.0	0.0	62	969	62	554	0.0	0.0
Kauno energija	0.0	0.0	12	46	2	9	0.0	0.0	14	64	9	37	0.0	0.0
Vilniaus degtinė	155	105	1,475	630	738	105	0.0	0.0	738	734	328	210	0.0	0.0
Pieno žvaigždės	0.0	19	627	58	209	19	208	20	418	96	0.0	19	0.0	0.0
Rokiškio sūris	26	0.4	129	2	26	0.0	0.0	0.0	231	5	77	2	0.0	0.0
Panevėžio statybos trestas	0.0	0.0	29	28	7	5	0.0	0.0	29	28	15	14	0.0	0.0
Dvarčionių keramika	0.0	0.0	5	72	1	48	0.0	0.0	6	72	1	24	0.0	0.0
Vilniaus baldai	0.0	0.0	68	250	0.0	0.0	23	0.0	114	374	45	125	0.0	0.0
Snaigė	105	151	526	754	104	149	104	150	631	905	210	452	0.0	0.0
Grigeo Grigiškės	0.0	0.0	363	577	121	192	0.0	0.0	726	962	484	385	0.0	0.0
Apranga	0.0	0.0	532	331	530	330	0.0	0.0	1,329	828	266	497	0.0	0.0

Note: 0.0 is no assets.

The most value of the IAs of non-financial information has been elements that include innovative-related, human-centred and customer-related assets. Companies had less technology-based, contract-based and marketing-related assets. Artistic-related assets are only found in one company (Lesto). Comparing the data from the beginning of 2009 till the end of 2015, it can be seen that the value of IAs of non-financial information is distributed unevenly in Lithuanian companies.

As shown in Figure 3, the sub-elements of the human-centred assets are distinguished from the whole. These assets include sub-elements that are based on the relationship between the employee and the company. Wages, education, experience, motivation and competence are the resources on which the company's prosperity and future depend. Innovative assets relate to (1) the development, updating and upgrading of new products; (2) the development of creative capital, modernisation of technological processes; (3) the strengthening competitiveness; (4) the growth of the company's value and so on. This type of asset consisted of the following main sub-elements: creative capital, organizational structure of business, strategy, market and competitiveness insights, the growth of which is associated with the implementation of innovative processes. However, research and development and its activities included a small proportion of innovative assets. The customer retention sub-element dominated the customer-related asset. Non-contractual customer relations, relations with suppliers, production orders and agreements constituted a smaller part of IAs of non-financial information. The value of advertisements was highlighted in the contract-based asset, and this sub-element remained at a similar level throughout the period under investigation. Technology patents are most distinguished in the technology-based assets. Trademarks dominated in the marketing-related assets. The smallest part of IAs of non-financial information consisted of artistic assets – books and music.

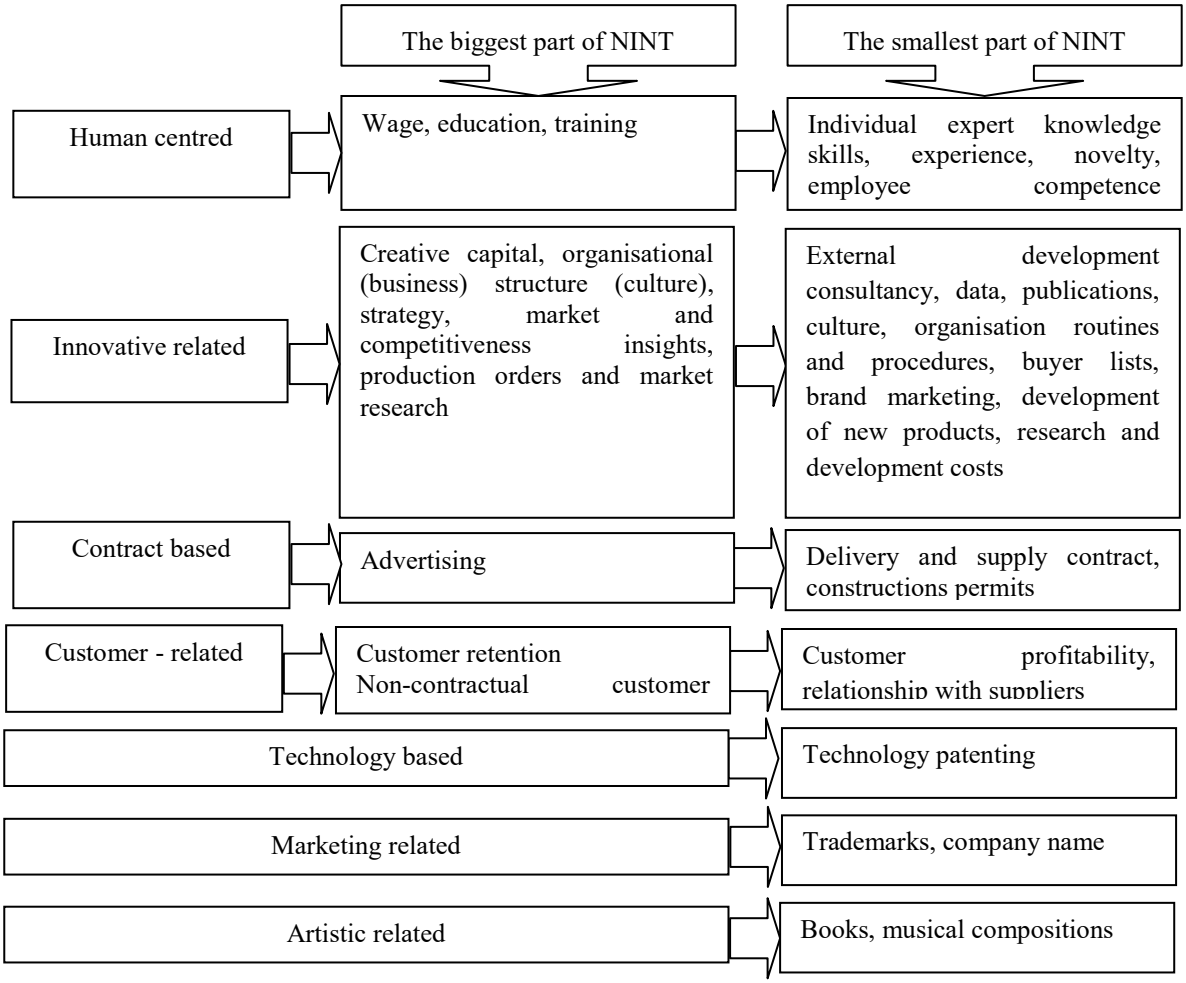

Fig. 3. Sub-elements of the intangible assets of non-financial information of companies

The value of general IAs (in the fifth stage of the research methodology) combines the values of IAs of financial and non-financial information. The analysis shows that the biggest gap between the value of IAs of financial and non-financial information was in the companies, which carried out the service activities: Telia Lietuva, City Service, Invalda INVL, Apranga and others (Table 5).

Table 5. The value of general intangible assets in the Lithuanian companies for 2009–2015, in million euros

Companies	2009		2010		2011		2012		2013		2014		2015	
	NINT	FINT	NINT	FINT	NINT	FINT	NINT	FINT	NINT	FINT	NINT	FINT	NINT	FINT
Telia Lietuva	20.3	14.0	32.5	17.3	23.6	15.3	29.0	14.7	34.1	17.2	37.6	15.6	41.6	16.6
Lietuvos dujos	1.6	3.1	1.8	3.2	1.2	2.6	0.9	2.0	2.1	1.8	1.8	1.6	0.0	0.0
Lesto	1.3	3.2	0.9	1.8	0.7	2.2	1.0	2.7	1.7	3.5	4.8	3.4	0.0	0.0
Lietuvos energijos gamyba	0.0	0.0	0.0	0.0	5.7	11.6	11.0	17.6	5.6	9.2	14.5	11.0	20.9	17.0
City Service	47.8	28.1	80.6	41.4	53.2	44.2	40.0	36.4	25.3	27.1	22.1	27.1	10.6	14.3
Klaipėdos nafta	0.03	0.0	0.2	0.2	0.2	0.2	0.4	0.5	0.3	0.5	0.5	0.7	0.8	1.1
Vilniaus degtinė	ND	ND	3.0	5.9	2.0	3.8	2.0	3.5	3.3	3.2	2.6	3.0	1.8	2.8
Pieno žvaigždės	1.5	1.3	2.9	1.5	2.5	1.2	3.0	1.5	2.3	1.0	1.8	0.9	0.2	0.1
Panevėžio	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2

statybos trestas														
Dvarčionių keramika	0.01	0.02	0.001	0.006	0	0.001	0	0.001	0	0.001	0	0	0.2	1.9
Vilniaus baldai	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.6	0.2	1.1	0.2	0.7	0.2
Snaigė	1.7	4.1	2.8	4.0	8.1	4.0	7.5	4.2	7.9	4.1	8.6	4.7	2.6	2.0
Invalda INVL	2.6	3.1	6.2	3.5	3.6	4.3	3.4	4.0	4.2	3.1	3.1	3.8	3.6	4.4
Šiaulių bankas	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	2.3	3.5	2.8	4.0
Rokiškio sūris	0.5	0.7	0.2	0.2	0.3	0.4	0.2	0.4	0.2	0.4	0.2	0.3	0.01	0.02
Kauno energija	0.04	0.09	0.01	0.09	0.01	0.08	0.01	0.05	0.01	0.07	0.2	1.5	0.2	1.4
Grigeo Grigiškės	1.7	0.7	1.3	0.7	1.3	1.3	2.0	1.8	2.5	1.9	2.7	1.7	2.1	1.4
Apranga	2.7	0.5	1.7	0.4	1.0	0.3	0.4	0.2	1.3	0.5	0.7	0.8	2.0	0.7

Note: 0.0 is no assets.

The value of NINT for most companies is significantly higher than that of the FINT (FINT < NINT). This is due to the fact that the value of NINT depends on the market price, whilst the FINT value reflects the historical price. It goes without saying that this difference arises between historical and market prices. However, the value of NINT may increase and decrease based on the methodology for calculating this asset if the equity value significantly exceeds the market value (NK > RV). Hence, the FINT value may be greater than the NINT value (FINT > NINT). The data presented give a general indication of the true value of the IA, the disclosure of which determines the fluctuation of stock prices in the market.

Conclusions

After analysing the theoretical concepts of IAs, it has been established that the interpretation of this concept is presented and accepted in different directions from the point of view of science. Scientific discussions often arise from the content of the notion of IAs, because in the general sense the concept is perceived superficially, the essential aspects remain unaffected.

The essential differences in the definition of IAs are less significant in practice than their similarities in economic and management science, but they remain significant in terms of economic and financial sciences. As the concept of IAs is inaccurate in terms of content, the article proposes to formulate this definition in the light of the most important explicit features of the analysed assets: the economic significance of IAs, the future economic benefits of the asset, the added-value created and the company's market value growth potential.

The results of the study confirmed the IA valuation methodology, which allows companies to calculate the fair value of an IA, which will increase the market value of the share, remains an important aspect. When comparing firms, it was found that FINT was dominated by customer-related, contract-based and technology-based assets and goodwill. In NINT, innovative-related, customer-related and human-centred assets were relatively large in terms of total assets. The results of the research showed that one company is trying to reveal financial information more and others the non-financial information. This is because the proportion of IAs depends on the composition of the asset, which is related to the company's activities. The general IAs consisted primarily of elements that were innovative related, technology based, customer related and human centred. The results of the study showed the difference in the value of IAs of companies between financial and non-financial information. The value of NINT is higher than that of FINT. The reason is that value of FINT measured at cost price, which reflects the historical cost. The cost price is not competitive or cannot compete in the market. On the contrary, value of NINT has a positive and significant impact on the market value of companies. Value of NINT was measured at price of market, and it characterises the higher growth and effect on the market value of companies.

Further direction of research development is the evaluation of the value of IAs based on the assessment methodology can be applied when researching the impact of IAs on the company's market.

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FACTORS INFLUENCING CUSTOMER TRUST IN MOBILE BANKING: CASE OF LATVIA

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Abstract. The banking sector has developed and extended the use of its services in the past decade. In fact, nowadays mobile banking (M-banking) is the most developing service offered by a bank. In order to encourage customers to use m-banking services, it is extremely important to get clients to trust the M-banking services provided by the bank. This article discusses private clients' trust in mobile banking in Latvia. Hence, the goal of the research is to identify the key factors driving individual customer's confidence in mobile banking. In order to determine the weight of each factor, expert evaluation method based on analytic hierarchy process (AHP) was used. The results showed that the most vital factor affecting private clients' trust in mobile banking is customer characteristics, especially customers' computer literacy. However, after summarizing all the subfactors, it became clear that the most powerful in the trust-building process is convenience/practicality of using a mobile application. However, there is a limitation – the survey was conducted by interviewing experts, which means that the results may differ from the responses of the clients themselves.

Keywords: trust; mobile banking; analytic hierarchy process (AHP); expert evaluation; Latvia

JEL Classification: G21, G41.

Introduction

Trust is considered to be as one of the essential prerequisites for the successful development of relationships. Trust acts as a mediator in building long-term relationships/promoting customer loyalty (Kurt, Yamin, Sinkovics, & Sinkovics, 2016; Picón-Berjoyo, Ruiz-Moreno, & Castro, 2016) and reduces the social complexity, inevitable and growing in modern society (Østergaard, 2015; Tong, Zhang, & Wang, 2016). Some researchers believe that trust is a factor that ensures the quality of cooperation. According to Peek et al. (2016), trust is a component that determines the quality of communication. According to Skačkauskienė and Bytautė (2012), trust creates prerequisites for increasing the effectiveness of a group or organisation. Sekhon et al. (2013) state that trust is an essential component of developing and maintaining customer relationships in the service sector. Trust-based social relations help to successfully implement a business project, facilitate the signing of a cooperation agreement, attract new customers and obtain the necessary information from business partners.

Researchers investigating commercial banking sector agree that trust is a factor determining its success. Trust guarantees cooperation between the bank and the client. In fact, trust allows the bank to maintain/gain a competitive advantage. In other words, trust ensures high-quality social relationships with consumers and business partners of banking services, that is, provides the conditions necessary for the stability of the bank's operations. Thus, with the growing variety of services offered by commercial banks, trust has become a factor encouraging a customer to decide whether to accept innovations or not. One of these changes is mobile banking. Researchers studying mobile banking say that trust is one of the critical factors driving consumers to use mobile banking services (Afshan & Sharif, 2016; Baptista & Oliveira, 2016; Gumussoy, 2016; Malaquias & Hwang, 2016). Therefore, it is crucial to investigate how to build customer confidence in mobile banking.

The raised scientific problem is: what factors stimulate the emergence of individual consumer confidence in mobile banking? The object of the research is trust in mobile banking. The goal is to identify the key factors driving individual customer's confidence in mobile banking. The following

tasks have been set to achieve the goal: to analyse theoretical dimensions of individual clients' confidence in mobile banking, identifying determinants; to develop a methodology for testing trust in mobile banking; to identify critical determinants of individual customer confidence in mobile banking. The methods are a comparative analysis of scientific literature, classification, expert evaluation and analytical hierarchy process.

Theoretical background of trust in mobile banking

Mobile banking is a fast-paced service. Trends in mobile technology development are tied to innovations (Chiyangwa & (Trish) Alexander, 2016). Meanwhile, innovation often leads to consumer frightening, which in turn leads to distrust. For this reason, it is challenging to build consumer confidence in mobile banking. However, as information technology expands, mobile banking becomes an integral part of life. Therefore, it is necessary to identify the factors that determine consumer confidence in mobile banking, as many researchers argue that trust is a factor determining the continued use of mobile banking by consumers (Koenig-Lewis, Palmer, & Moll, 2010; Olouch, Abaja, Mwangi, & Githeko, 2015; Özkan, Bindusara, & Hackney, 2010; Rezaei, Kabiry, & Forghani, 2013; Zhou, 2011b). Kim, Ferrin and Rao (2008) argue that three variables are important for trust formation in mobile banking: relative benefits, the consumer's tendency to trust and structural assurance. Maroofi, Kahrarian and Dehghani (2013) identify the perceived benefits as well as ease of use and structural assurance as primary confidence-building factors. Jammoul (2012), Malaquias and Hwang (2016) argue that the significant impact on initial trust in mobile banking has a relative age of the user, structural assurance, a willingness to trust, social influence, computer literacy, system quality and a reputation of an organisation. Chemingui and Iallouna (2013) argue that the quality of the mobile banking system has a positive impact on consumer confidence. Zhou (2011a) also mentions structural assurance and system quality and points out the quality of information as an essential factor in building customer confidence. Gu, Lee and Suh (2009) in addition to structural assurance as a factor in boosting confidence in mobile banking pays attention to the perceived ease of use, which he claims to be an important factor in building trust. He understood the structural security as the existence of legal technological structures that ensure the safety of payments. Zhou (2011b) examines the factors that, he supposed, could positively affect the confidence in mobile banking, and they are as follows: perceived security, the perception to use it everywhere and perceived ease of use. Zhou (2014) highlights the existence of a mobile communication and contextual offer as factors influencing consumer trust in mobile transactions. He understood the contextual offer as a function that provides the customer with the most relevant information and services based on their (clients') allocation and preferences. Thakur (2014) states that ease of use and excellent customer service influences trust in mobile banking. The factors affecting the confidence in mobile banking were divided into six aggregate factors and their subfactors (Fig. 1) for a better perception.

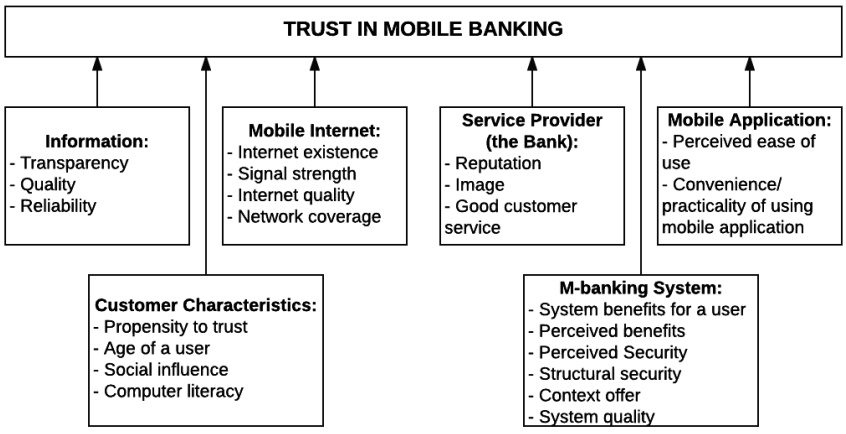

Fig. 1. Factors and Subfactors affecting the Confidence in Mobile Banking (Source: designed by authors based on the literature review)

In order to evaluate the influence of the factors mentioned above and subfactors for the development of trust in mobile banking, they were provided for expert assessment.

Methodology

For research conduction, expert evaluation method was chosen. Expert evaluation is a generalised opinion of specialists, the formation of which is determined by the knowledge, experience and intuition of experts (Sėrikovienė, 2013). One of the most important tasks is to choose the appropriate number of experts. Libby and Blashfield (1978) and Rudzkienė (2009) recommend that the number of experts ought to be between 5 and 9, as in this case, the most precise assessment could be reached.

After determining the optimal number of experts, it is necessary to select a data processing method. In fact, one of the expert evaluation methods that is used to solve socio-economic problems is the analytic hierarchy process (AHP) (Thomas L. Saaty, 2012). The AHP method is used when expert assessments are uncertain (Ahn, 2017). Taking into account an uncertainty is especially important when studying of trust that is difficult to assess accurately.

According to the method, experts compare alternatives $\{\theta_1, \dots, \theta_n\}$ with each other by filling pairwise comparison matrices $A = (a_{ij})_{n\times n}$, where $a_{ij} = \frac{\omega_i}{\omega_j}, \forall\, i,j = 1,2,\dots,n;\ \ \omega_n\ (n = 1,2,\dots n) -$ priority vector; $a_{ij} = \frac{1}{a_{ji}}, \forall\, i,j = 1,2,\dots,n.$

For completing individual comparison matrices, experts were suggested to use balanced scale introduced by Salo and Hämäläinen (1997) having the following approximate values 1, 1.22, 1.5, 1.86, 2.33, 3, 4, 5.67, 9, where 1 means that the alternatives are equal and 9 means that one alternative is extremely more important than another.

After experts complete the pairwise comparison of the factors, all the assessments are written in a standardised matrix form and an arithmetic mean of each line is calculated. In this way, the primary factor is identified. However, before the procedure of weighting the factors, it is necessary to determine whether the individual matrices for comparison completed by the experts are consistent. Pairwise comparison matrix is considered to be consistent if there is a priority vector $\mathbf{w} = (\omega_1, \dots, \omega_n)$ such that $a_{ij} = {}^{=\omega_i}/_{\omega_j}, \forall\, i,j.$

Pairwise comparison method of AHP evaluates the consistency of each expert's answers. The consistency level is indicated by consistency index (Saaty, 1993). In order to determine the consistency index, an eigenvalue of pairwise comparison matrix is calculated: $\lambda_{max} = \sum_{j=1}^{n} \frac{(\mathrm{A}\cdot v)_j}{n\cdot v_j}$, where λ_{max} is the greatest eigenvalue of experts' views comparison matrices **A**, n is the number of independent rows in a matrix, v_j is an eigen value of a matrix. If experts' pairwise comparison matrix A is consistent, then $\lambda_{max} = n$. If there are minor a_{ij} changes and matrix A does not satisfy consistency condition, then the λ_{max} value is close to n. After the value of λ_{max} is computed, consistency index CI can be calculated: $CI = (\lambda_{max} - n)/(n-1)$. For the purpose of assessing the consistency index, it was compared to random index (RI) and consistency ration (CR), which was computed by dividing consistency ratio by random index.

AHP method is considered as appropriate if $CR \in [0; 0.2)$ (Aksenov et al., 2014). For experts' pairwise comparison matrices that fulfil the consistency condition (CR < 0.2), the aggregated experts' assessment is calculated. Aggregated experts' assessment is calculated using geometric mean (Kostin, 2014; Wu, Chiang, & Lin, 2008). The consistency ratio calculation procedure is repeated for the resulting matrix, and if the aggregated matrix is consistent, priorities ω_j are computed using the normalised geometric mean method (2) (Franek & Kresta, 2014).

Empirical Findings

The investigation of individual clients' confidence in mobile banking took place in Latvia in March–April, 2016. Seven experts from Latvia participated in the study. Experts with banking experience were selected for the assessment of trust factors according to the following criteria:

1. occupied positions ought to be linked to banking;
2. education (at least Master degree);
3. work experience in the banking sector (at least three years).

The characteristics of the experts who participated in the study are presented in Table 1.

Table 1. Characteristics of Experts (Source: designed by authors)

Expert	Characteristics (occupation; degree; work experience)
E_1	Head of a bank unit; Master degree in Business management; 10 years
E_2	Investment analyst, professor; PhD in Social sciences; 8 years
E_3	Associate professor of the Department of Enterprise Finance and Economics; PhD in Social sciences; 10 years
E_4	Vice rector for Science; PhD in Economics; 15 years
E_5	Financial controller; Master degree in Business administration; 5 years
E_6	Tax expert; Master degree in Management; 4 years
E_7	Head of a bank unit; Master degree in Management; 6 years

First of all, experts evaluated the factors influencing trust in mobile banking and then estimated their subfactors. By analysing the factors presented, the experts agreed that the customer and client's characteristics are the most important factor creating the trust of individual consumers in mobile banking in Latvia. The weight given to the client's characteristics is 0.226 and confirms that all mobile banking services should be consumer oriented in order to meet all their expectations. The second most important factor, according to the experts, is the mobile Internet (0.225). If there is no Internet connection, it is impossible to use mobile banking, and hence, there is no reason to trust it. Mobile banking system factor weight is not much lower than the weight of the second factor – 0.224. In fact, the m-banking system could be considered as a tool by which consumers can use mobile banking services; hence, the weight of the factor is high. In fact, no factor that is more important than the others are as they all are necessary for trust in mobile banking building process. Therefore, it is expedient to analyse all factors and their subfactors, in order to evaluate trust in mobile banking in Latvia as accurately as possible. The results are presented in Table 2.

Table 2. Weights Given by Experts to Factors and Subfactors Influencing Trust in Mobile Banking in Latvia (Source: author's calculations)

Factor, weight	**Information, 0.078 (6)**	$\lambda^{*} = 6.122, \mathrm{CR}^{**} = 0.002$
Subfactor, sub weight	Transparency, 0.212 (3)	$\lambda = 6.122; \mathrm{CR} = 0.002$
	Quality, 0.420 (1)	
	Reliability, 0.368 (2)	
Factor, weight	**Customer characteristics, 0.226 (1)**	$\lambda = 6.122, \mathrm{CR} = 0.002$
Sub-factor, sub-weight	Propensity to trust, 0.223 (3)	$\lambda = 6.122; \mathrm{CR} = 0.002$
	Age of a user, 0.274 (2)	
	Social influence, 0.203 (4)	

	Computer literacy, 0.301 (1)	
Factor, weight	**Mobile Internet, 0.225 (2)**	$\lambda = 6.122, \mathrm{CR} = 0.002$
Sub-factor, sub-weight	Internet existence, 0.202 (4)	$\lambda = 4.041; \mathrm{CR} = 0.015$
	Signal strength, 0.212 (3)	
	Internet quality, 0.300 (1)	
	Network coverage, 0.286 (2)	
Factor, weight	**Service provider (the bank), 0.098 (5)**	$\lambda = 6.122, \mathrm{CR} = 0.002$
Sub-factor, sub-weight	Reputation, 0.331 (2)	$\lambda = 3; \mathrm{CR} = 0$
	Image, 0.251 (3)	
	Good customer service, 0.418 (1)	
Factor, weight	**M-banking system, 0.224 (3)**	$\lambda = 6.122, \mathrm{CR} = 0.002$
Sub-factor, sub-weight	System benefits for a user, 0.158 (4)	$\lambda = 6.122; \mathrm{CR} = 0.002$
	Perceived benefits, 0.195 (1)	
	Perceived security, 0.180 (2)	
	Structural security, 0.169 (3)	
	Context offer, 0.151 (5)	
	System quality 0.146 (6)	
Factor, weight	**Mobile application 0.149 (4)**	$\lambda = 6.122, \mathrm{CR} = 0.002$
Sub-factor, sub-weight	Perceived ease of use, 0.421 (2)	$\lambda = 1.999; \mathrm{CR} = 0.001$
	Convenience/practicality of using mobile application, 0.579 (1)	

*λ, lambda; **CR, consistency ratio.

In addition to the results of factors evaluated by expert, subweights are presented (Table 1). Whilst analysing the factor information, three sub-factors were addressed: information transparency, quality and reliability. According to the experts, the most important information subfactor for the residents of Latvia that determines the trust in mobile banking is the quality of the information provided. Mobile banking is a relatively new service and people are quite indifferent to innovations; therefore, the use of a mobile bank is only possible when the customer is provided with a relevant and, above all, high-quality information.

Analysing customer characteristics, four subfactors promoting mobile banking trust are analysed: tendency to trust mobile banking, age of the client, social influence and computer literacy. Experts dedicated the first position to the computer literacy of customers, which is a prerequisite for using mobile banking.

By studying the sub-factors of mobile Internet factors (Internet existence, signal strength, Internet quality and network coverage), Latvian experts gave the first position to the quality of the Internet. That is obvious because the low quality of the mobile Internet (which can be understood, e.g. as the frequency of occurrence of an error and the pausing of data flows) reduces the access to mobile banking. Quality mobile work is not possible without the high-quality Internet.

Analysing the subfactors of service provider (the bank) (reputation, image, good customer service), Latvian experts gave the first position to the good customer service. Customer service combines several items: the provision of a proper service in a particular situation, customer support to a client who cannot solve the problems, service speed, the competence of consultants and so on. So, the higher the level of service expressed by the above elements, the more the client can trust the mobile service

provider – the bank, because they believe in the correctness, necessity of the offered services and so on.

Whilst analysing the factor of the mobile banking system, six subfactors are considered: system benefits for the user, perceived benefits, perceived security, structural security, context offer, system quality. According to experts, the benefits of the mobile banking system for the user are most important to Latvian consumers. This means that only when Latvian consumers perceive the benefits of the mobile banking system such as the ability to conduct urgent banking operations or check your account balance at any country-specific point, they can rely more on the mobile banking system.

Experts evaluated two subcategories by analysing the mobile application: perceived ease of use and convenience/practicality of using mobile application. Latvian experts singled out the latter as more important subfactor of using a mobile application. A mobile application is not the main instrument used for banking operations. A mobile application is an ancillary tool that enables users to complete payments and to check account balance. Using a mobile application, a number of payments are limited, that is, transactions with large amounts of money cannot be made.

Summarising all the sub-factors, the most important subfactors from all range is convenience/practicality of using a mobile application – the weight is 0.579.

Conclusions

The article analyses the factors determining the trust of individual clients in mobile banking and their subfactors. On the basis of scientific literature analysis, six factors determining the trust were distinguished: information, service provider (the bank), mobile Internet, the mobile banking system, mobile application, customer characteristics. Most authors highlight M-banking system as the most important factor influencing customer trust in mobile banking. In turn, the most important sub-factors are structural security of M-banking System and Perceived benefits. These factors and their subfactors were presented for expert evaluation. Seven experts from Latvian banking sector conducted the study. The AHP used to process expert judgment evaluations, which has led the experts to assign weight to the factors and their subfactors. It has been established by analysing factor weights that the main factor determining the trust of individual customers in mobile banking is customer characteristics. The key sub-factor in customer characteristics is computer literacy. Unmanaged technologies make it difficult for a person to use mobile banking and cannot benefit from it and, of course, trust this service. The experts to the service provider (the bank) attributed the second position, where the most important sub-factor is the bank's Reputation. In fact, the reputation of a commercial bank is one of the most important criteria for choosing a bank. Reputation is the possession of some positive information that the user believes in unconditionally. To the third position in the formation of individual customers trust, experts attributed the mobile banking factor and the most critical sub-factor the convenience/practicality of using the mobile gadget. Mobile banking is not as secure as electronic, so convenience and usability are the key criteria for a bank to attract customers to use mobile services.

Thus, in summary, trust can be said to be one of the most important social aspects in developing the relationship between commercial banks and their users. It is, therefore, expedient to investigate the manifestations of confidence and its influence on other socio-economic areas.

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