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FOR EMERGING FUTURE**

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FOREWORD

All proceeding papers went through anonymous peer review process by 2 subject experts (in some case – 3) from 8 universities. As a result 11 papers were accepted for publications in the proceedings of RISEBA, Banku Augstskola, Ventspils Augstskola The 7th Annual International scientific conference “Business and Uncertainty: Challenges For Emerging Markets”.

The new issue comprises 3 chapters:

-
1. FINANCE AND BANKING
 2. EDUCATION AND BUSINESS
 3. OTHER TOPICS
-

The first topic focuses on the finance, banking, describe intangible assets of banks as a major factor of dynamic development of credit organizations, fast loans and enforcement of government institutions to protect the interests of consumers. Research how Latvia banks use such popular social networks as *Draugiem*, *Twitter*, *Facebook* to build long-term relationship with customers. The second chapter focuses on education and business, HE of Latvia exportable and what are the main barriers to increase the export, human resource capabilities (HRC) as CSF of R&D in bioethanol industry. The final chapter covers the wide range of research areas from the role of language in assessment of organizational culture's, internationalization strategies to establishing effective partnership of Business and Information Technology representatives for introducing new Information System (IS) at finance institution paying particular attention to business users.

For quality of research papers (language, format etc.) responsible are Authors of research papers. All proceeding papers are safely proof used anti-plagiarism program.

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I

FINANCE AND BANKING

COMPETITIVE RESISTANCE OF A BANK: COMPETENCY BUILDING APPROACH

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Abstract

Purpose: The purpose of the paper is to describe intangible assets of banks as a major factor of dynamic development of credit organizations. Intangible assets have a great impact on creating and offering products and services of banks by providing an additional distinctive value to a customer in a way that potential competitors do not. These assets also provide to credit organizations considerable cost reduction, increase in service quality, customer loyalty and capability to sustain competitive resistance in the long period.

Design/methodology/approach: The paper is based on the following concepts: financial globalization, servicization, discourse of synergetic approach, developmentalism discourse, theory of financial economy, competence-based approach. Argumentation of theses and conclusions were performed on a basis of experimental observation, model building and system analysis application.

Findings: Competitive resistance of a bank depends on its capability of providing competitive banking products and services that is connected with real and potential opportunity to invest in development of an intellectual and human capital, retraining of specialists, enhancement of key business processes, servicization and development of customer equity. Implementation of competitive resistance model of development on the basis of competency building approach allows balancing disadvantages of other competitiveness factors, reducing dependence on market fluctuations, uncertainty of economy and imbalances of financial globalization.

Practical Implications: The results of the undertaken research are of interest for banking industry. The paper has some practical value in banks marketing management and competitiveness ability management of banks.

Social implications: Because of the importance of human potential development, professional training and up skilling of specialists in the conditions of sustainable development and interaction between business and education the paper provide additional sources of credit organizations competitiveness in the sphere of intangible assets development and effective management rather than focusing capital-based factors of competitiveness.

Originality/value of the paper: considers the impact of quality structure of intangible assets on providing of competitive resistance of banks. The paper has the value to business

because of the discussion of possibility of shift to sustainable development of human capital assets in order to provide competitiveness and prevent operation risk. Also, the paper has the value to business schools because of the constantly changing requirements from business to education to fulfill the needed competences of professionals.

Keywords: Banks; Competitive Resistance; Intangible Assets; Competency Building Approach; Human Capital Assets.

Paper Classification: Research paper.

In recent years one could observe profound changes in banking, connected with growing integration and deregulation of international financial markets, fast development of information and communication technologies, competition aggravation and increasing customer requirements to a ratio between quality and prices of services.

Before the crisis of 2008 a bank which implemented some new services faster than others was considered a leader. Nowadays competition in the banking services market became a competitive struggle of strategies/business models of banks.

In global economy changes since crisis of 2008 became really noticeable. It became impossible to do forecasts for medium-term prospect. Earlier experts could say that the industry, for example, will grow for 10-15% a year, and turnover of a bank will be doubled¹. Making such forecasts today became risky nowadays.

“New normal” in banking sector becomes a reality which means that banking can build more or less precise forecasts only for the next quarter, but not further. Today market players fix short-term key performance indicators (KPI) on all industries practically. Such model of planning strongly differs from accepted before long-term strategy.

Unfortunately nowadays just a few Russian banks consider strategic planning of sustainable development actual. Most bankers refuse from it referring to a lot of factors: unpredictability of microenvironment, the lack of qualified experts-developers and the deficiency of resources for advancing their banks. But in reality this situation can be explained by their disability to find the main factors and tools for providing sustainable competitiveness. The most important among them are innovative technologies and availability of high-leveled experts.

One of the main consequences of the global financial system crises shall be the situation when banks have to be more attentive to the classic clients' credit operations and less – to their own speculative ones. The main stress of Basel III has been made on the capital adequacy and the correlation of assets and risks. It is effective when those principles use to the bank's own operations but Basel III seems to make clients' crediting not so easy. Meanwhile, crediting of a final customer provides sustainable competitiveness of a bank. Today the most banks understand crystal-clear how significant for them to be more client-oriented than self-oriented. American banks are here in a more profitable situation because they have attracted much more capital than the European ones. The latter begin just now to speak about the necessity to attract new capital for crediting.

As to Russia, one should say that credits for real sector enterprises are still too expensive. It is critical to make those credits for industry accessible to promote economy development. Comparing interest rates in Russia and in European Union, one can say that in Germany, for example, real credit cost for business (less inflation) during the crises⁷ has reached 4% per

¹ Golubkov V. Banking sector: hope for the best, be ready for the worst // Vedomosti Newspaper, 2012. March, 13. http://www.vedomosti.ru/finance/analytiks/24794/bankovskij_sektor_nadeemysya_na_luchshee_gotovimsya_k#ixzz1p5UtJ600

annum. Presently the credit cost has dropped to 1% per annum (and besides it happens in the situation when since 2010 German savers have had negative investment profitability).²

But meanwhile in Russia a deposit interest rate in a number of banks is twice as big as real inflation and this is a rather unnatural thing for economy. When this big spread between resource cost in Russia and in developed countries will be keeping Russian commercial banks shall lose their sustainable competitiveness. At 2012 year-end this spread between rates in Russia and in Germany has already been 10% per annum.³

Here are the grounds of sharp differences in interest rates in Russia and in Germany:

1. Spread in cost of funds – resources in Russia are much more expensive.
2. Profitability of bank operations are quite big in Russia. Bank margin is in Russia much higher.
3. Difference in operating expenses and in labor efficiency in a bank sector of the countries.

Russian banks can make each of these components less in order to reduce a final cost of credits for the enterprises. For example, implementation of better bank information systems and growth of bank personnel competences will increase potential labor efficiency.

In Russia profitability of bank operations are quite high; a bank system is gradually demonstrating capital growth by means of growing profitability without call for shareholders' funds. This is certainly good for Russian economy in general.

Retail lending is a strategic trend of the bank system in Russia and one can state that retail lending is the main factor of assets' and profitability growth. With slowing down the pace of retail lending, a share of long-term loans, especially of mortgage loans, in overall loan portfolios of banks shall increase. For many banks mortgage loans are even now becoming more profitable than corporate lending. However, Russian bank system faces the following serious problems regarding to sustainable competitiveness.

It is necessary to reduce cost of liabilities, but it is impossible to do so in a sort term period. Second, to increase the volumes of retail lending portfolios banks will have to prolongate average terms of loan granting. Third, one must create a new strategy of employees training.

To guarantee sustainable competitiveness of a bank is to find a reply to the following issues:

1. What services become drivers of growth of a bank system in the coming year?
2. What strategy will allow banks to keep a place in the highly competitive market?
3. What instruments and technologies will allow attracting and maintaining clients?

First of all, strategic cost reduction was a key priority in recent years. One can see a mass wave on centralization and standardization of functions (for example, for customer service in telecom or back office transactions in banking sector). Also a lot of attention is paid to automation of processes, retraining of specialists for new conditions of sustainable development of economy.

Secondly, development strategy differs on various markets. The process of optimization of business models is already completed on mature markets, such as the USA and Europe. The following level of enhancement of business – a choice of competitive strategy depending on external and internal conditions (competences) - started.

As a rule, this stage of development is connected with:

- Creation of a basis for differentiation;

² Interfax.ru

³ Expet.ru/South

- Competitive positioning in the banking services market;
- Focusing on precisely certain client segments.

As a result, it allows banks to:

- Positioning itself concerning preferences of consumers;
- Offering the best service quality or innovative products.

Third, it is important to find out some necessary instruments and technologies to maintain clients' loyalty. High level professional are needed in the following sectors:

- Business strategy and marketing –in order to provide narrow targeted marketing campaigns, to increase efficiency of sales and a market share, and to interact with consumers in the most personalized (client-oriented). It results in large-scale transformation, potential of cost reduction which can be implemented to focus on a key chain of value creation for a customer and to transfer to outsourcing.
- Business processes optimization in modern banking industry when some market players stop recent expansion of retail network developing, and transfer departments to new, more retail oriented format with a small amount of high-class employees. Thus to fulfill the new office business processes there is a need in just 1-2 employees which possess some sufficient set of competences as well as Internet and a call center connection.

In Southern Federal District of Russia we have researched some aspects of managing human capital development in banks based on the competence approach [3]. We have divided the participants – the heads of banks recruiting departments – into three segments. The representatives of the first segment (about 30%) do not consistently control the processes of hiring and training newcomers. This part of employers does not deal with the universities and they are not ready to do with training their own professionals and let alone - to pay for that. As a result – 19% of banks from this segment cannot find proper employees with necessary skills and 27% confess that problems with human resources have a negative influence on business results.

In the second segment were 45% of employers who usually take care of newcomers: 70% of them keep in touch with universities, 49% of them are ready to agree that there are skills' deficiency problems but just in 20% of all the cases they can influence business negatively.⁴

32% of respondents among bank employees – the representatives of the third segment – train young professionals either in corporate training centers – corporate Universities – (70%) or with the help of external providers. 70% instructors of this group closely cooperate with universities and business schools. As a result, only 15% of them complain on deficient skills of the new employees. The reason is that the participants of the process do not communicate with universities and have no authentic information on job market concerning necessary competences.

Failure in finding on labor market requested professionals with necessary skills reduces sustainable competitiveness of a bank. Cooperation between universities and credit organizations, development of strategic programs at the joint of education and business can give an efficient result with highest possible efforts of financial, organizational and time investments. The first step to this direction is to create a system of informing universities on expected competences demands for the perspective bank employees.

Professors and employers have not learnt yet to work together. Providers of education services are oriented to qualifications corresponding to educational standards, university programs and ministry regulations. Professional qualification is a result of cooperation between

⁴ Expert.ru/South

universities and a state. But employers need effective competences – not qualification which they cannot however clearly determine especially in a long-term (3-5 years) perspective.

The best practices in education sphere demonstrate that education and professional training of bank employees are quite different. Educational establishments give their graduates just the base for their future profession – a set of approaches to making a wide range of decisions. Professional training must fill a gap between education and future job on a constant basis.

The most important part of competitive resistance of a bank is a competency building approach or modeling of competences as a method of marketing management of personnel. Competency is researched here in the tideway of the unity of knowledge, professional experience, and ability to think on fit when doing and some behavioral patterns of a human aimed at current business situation. Education helps banking personnel to gain high performance on a basis of knowledge development as well as know-how and personal characteristics.

There are three types of competences in order to estimate a level of competent ability of an employee: managerial, professional and corporate, the complex of which serve as a basis of a competitive ability.

Competency building approach⁵ offers development of special master programs oriented to a particular employer and he/she takes part in its making directly. The most unusual situation for newcomers is that they have no idea about their future workplace and work conditions, for example in a store or in a bank office. They are also not prepared to reach particular components of the plan.

Sustainable competitiveness management on the basis of the competency building approach is the process of coordinating analysis, choice, realization and control of human capital development and elements of marketing communications which have the most efficient influences on all connections between the bank and present and future customers of its products and services.

Competitive resistant sustainable bank is a bank which has developed intangible assets which have different significance in providing competitiveness of the bank at various stages of its progress. In conditions of information-network development the first place can be occupied with technological assets (various know-how and technological innovations, patents, copyrights). In the conditions of highly competitiveness on the market of human resources (employees) there can dominate trained people, whose professionalism gives them special advantages in the sector; reputation assets – it is a bank image among different target groups; organization culture of the bank – this is the vision by its employees the whole business as a unified process of making and promoting the brand as the main corporate value and mission.

Universities shape national identity, create middle class for a country, ingrain culture in general which is learned by osmosis, and direct the young to get oriented in a modern-day reality [2]. Meanwhile, the modern education system is passive and it does not always meet the needs of labor market. University graduates are quite good at natural sciences but they need better so called “soft skills”. One of the possible decisions in providing competence-based approach is in close cooperation between banks and universities. For instance, it could be the good idea to form

⁵ Development of the theory of marketing management on a basis of competency building approach is closely connected with formation of the knowledge-based economy. The following researches have devoted their papers to the scope of it: Amidon D., Baudrillard J., Brooking A., Brenson R., Doyle. P., Bookovich U., Drucker P., Koveni M., Machlup F., Williams R., Emil Michel Cioran., Hayek F., Schumpeter J. and others.

several base departments of universities direct in the offices of some big employers among business. Then students will have an opportunity to see bank internal business processes on their own and the employers can test newcomers in the near-real conditions and can choose those who will pass it.

The objects of strategic communications, while keeping strategy of competitive sustainability, become both the bank personnel and external audiences.

*Table 1*⁶
Object of strategic communications and their expected reaction

Object	Predicted Response
Employees	Increasing Corporate Culture
Customers	Brand Preference of a Bank's Services
Intermediaries	Mutually Beneficial Cooperation
Universities	Mutually Beneficial Cooperation
Competitors	Implementation of Regulations
Responsive group of consumers	Collaboration
Contact audiences (administration, mass media, local people, public organizations)	Assistance, no antagonism

Next, we offer an example of typology of competitive sustainable banks and banks with low level of competitive ability. Failure companies and companies using integrated marketing communications approach efficiently.

*Table 2*⁷
Non competitive and competitive sustainable banks comparison

Non Competitive Bank	Competitive sustainable bank
One dissatisfied customer usually informs up to 9-10 people about his dissatisfaction	Loyal customers allows having prices on services higher on 5-10%/
13% of dissatisfied customers shares their opinion approx with 20 people	Business growth rate
Approximately 96% of customers never complain, but a bank loses its market share (2% a year)	Annual share growth - 6%
For 1 customer which compliance was acknowledged and fixed, There are 26 customers which experience problems and complains	Medium Annual Rate of Return – 12%
There are 68 customers among 100 who change a bank because of cursory attitude of employees of a bank	Loyalty of employees + high level of employees competences increase customers loyalty

Thus, competitive ability of a bank is based on loyalty and mutual dependence of the forms of contract with customers. It includes equalization of marketing strategy with a real state of things in the bank. If the bank declares: “We work for You!” but in reality it does not take care of the customers, loyalty of the latter starts fast dramatically decreasing. Practice shows that

⁶ Determined by the author

⁷ Determined by the author

if a bank does not fulfill its liabilities just for three months, it leads to its competitive ability reduction [4].

The attitudes of bank employees in fulfilling its branded liabilities declared through marketing communications are immediately given to the clients. Needs of employees and customers are mostly similar that is why there is an indirect connection between external advertising slogan and bank mission.

The main aspects that should be taken into account by the management for providing competitiveness are the following:

- Employees would like the bank to be booming;
- Loyal employees need to be respected by the management and are interested in strong feedback;
- Loyal employees need some emotional contact and acknowledgements for their work from the management;
- Moral encouragement and material stimulations promote loyalty and development of the personnel.

If the statement that positive image makes bank's reputation stronger is true, it becomes evident the growth of competitive sustainability of a commercial bank thanks to new customers and partners as well as with more easier access to information, financial and human resources.

Meanwhile it means that image can be always corrected adapting to the environment but as to the reputation that is of great demand for competitiveness sustainability, it is a long-time matter.

The word "reputation" means people's opinion – fully established or just forming – about a credit organization based upon its previous activities. It is expressed in acceptance (or nonacceptance) of its authority, merits and etc.

Using a wide range of connections between bank competent employees and its loyal customers, reputation management helps the bank to find balance between information policy and commercial activity.

The well-known American author of strategic planning I. Ansoff [1] discovered a specific "formula" of management potential which can be used to estimate main factors of competitiveness sustainability. It connects competence of management, business climate conditions and management competences' level of the bank in a unified system.

I Management

(Necessary characteristics below)

1. Attitude:
 - 1.1. Comparative disposition to solving external (internal) problems;
 - 1.2. Orientation to the past (future);
 - 1.3. Risk appetite;
 - 1.4. Reality model specific to this leader: what is for him/her the most important success factor and which corresponding behavior should be demonstrated;
 - 1.5. Values, regulations and personal goals of the manager.
2. Powers:
 - 2.1. Power strength in the proper power hierarchy;
 - 2.2. Ambitions and modesty in using one's power.
3. Competences:

- 3.1. Abilities (personal characteristics);
- 3.2. Ability to make decisions;
- 3.3. Personal style (leader skills based on policy, traditions, inspiration, initiative and personal charisma);
- 3.4. Meaning of the bank and its environment.
4. Opportunities:
 - 4.1. Personal efficiency;
 - 4.2. Working style (for example “typical workaholic”).

II Climate

(Necessary characteristics below)

5. Culture:
 - 5.1. Attitude of employees to the changes: antagonistic, neutral or enthusiastic;
 - 5.2. Risk appetite: preferences of management – avoid risks, tolerant risk attitude or risk drive; does it prefer familiar kinds of risk or is ready to try new ones;
 - 5.3. Time perspective in which the management sees the problems: it relies upon previous experience, prefers to deal with the present or strongly orients to the future;
 - 5.4. Perspectives of activity: what is the subject-matter of strengths and attention concentration for the bank – internal business or the environment;
 - 5.5. Behavior goals: tendency to stabilization of technical-economic efficiency or to the growth of industry and to innovations;
 - 5.6. The ground for changes: crisis, unsatisfied results for a long time or just permanent pursue of renovation;
 - 5.7. General concept of reality: which success factors are considered by the management as the most significant.
6. Powers:
 - 6.1. Distribution of powers between employees' groups with different kinds of corporate culture;
 - 6.2. Degree of stability of powers' structure;
 - 6.3. Attentive behavior of the management. Group characteristics which determine corporate culture of the organization are similar criteria of individual behavior of the executive management.

III Competences

(Necessary characteristics below)

7. Method of solving problems in the bank: use of previous experiences, trial-and-error method, optimization of available alternatives and creating new ones;
8. Procedure of solving problems: separately in each division, right now in the whole bank;
9. Administrative process (formal and informal systems): orientation to the previous indexes, familiar and new future characteristics;
10. Information using to manage: it is taken on the base of factual data through their extrapolation, from the wide-range observation of external environment;

11. Organization structure: the type of the structure and the degree of its complexity, flexibility and adaptively;
12. Prizes and economic motivations: management activity is paid according to the given results, criteria of growth, initiative or creativity;
13. Determination of job duties: tightly restricted or open – stimulating research and initiatives;
14. Technical resources facilitating decision making (calculative procedures, rules, models, programs and so on): oriented to routine repeated operations or to innovations and changes;
15. Organization potential: total opportunities of line and functional managers expressed in the concepts of volume of work which can be fulfilled by the general management.

Failure in finding at the labor market necessary professionals with competences in demand reduces competitiveness sustainability of a bank.

To conclude, it is necessary to underline that competitive sustainability of a bank depends on the following main factors:

- Financial Stability of a Bank;
- Convergence of services, strategy, necessary instruments of marketing management and IT;
- Intangible assets as development of human capital assets;
- Professionals developing “soft skills” (internal marketing for employees);
- Reputation Management.

Management of a bank’s competitive ability and sustainable development on the basis of competence-based approach represents the process of coordination of the analysis and control of management process by development of human capital elements of marketing communications.

In conclusion, it is necessary to underline that competency building approach assumes convergence between business and education with formation of specific education programs which are aimed on developing precise competences demanded by business.

Formation of the knowledge-based economy demands diffusion of innovations in the national educational system and educational market nowadays. To an increasing degree the system of education in Russia is accepted by business community as a life-long process. Also the knowledge-based economy does have an impact on changes in a paradigm of modern marketing.

Marketing management of a bank is aimed at not only on winning a rival with competitors but on creating some joint customer-unique value. In order to fulfill it there is a need in new market knowledge, customers’ insights, and skilled staff capable to master cognitive technologies.

The most important part of competitive resistance of a bank is a competency building approach or modeling of competences as a method of marketing management of personnel. Competency is researched here in the tideway of the unity of knowledge, professional experience, ability to think on fit when doing and some behavioral patterns of a human aimed at current business situation. Education helps banking personnel to gain high performance on a basis of knowledge development as well as know-how and personal characteristics.

Summing it all up, one of the key problems for future development of the Russian economy is quality of institutions, first of all, the financial ones. It is hard to conduct some reasonable economic policy without overcoming institutional challenges. In addition, it is almost impossible to expect some real modernization of the economy and sustainable development of pace of economic growth in the long run. Without realization of institutional reforms (the necessity of which is quite obvious in conditions of stagnations), some steady rise in oil prices,

so-called free market price, will remain as one of the main development factors of ongoing performance of the national economy. This development factor doesn't seem to be a sustainable one, thus institutional reforms are extremely vital for the large part of economic growth in the domestic economy sectors.

The high priorities of the mentioned challenges are the ones in a financial sector, precisely, in banking sphere, because of the high importance of financial resources. The education system is under the same significant importance because it brings out human capital assets as a main sustainable factor of production.

Universities help to shape national identity, create middle class for a country and a society, ingrain culture in general which is learned by osmosis, and direct the young to get oriented in a modern-day reality.

The basis of a competency building approach in a system of marketing management of a bank in order to ensure its competitive resistance in the long run are joint educational programs with universities and business schools aimed at educating, training and retraining of hi-skilled employees which fit the most the mission of competitive positioning of a bank in a market.

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BANKS AND SOCIAL NETWORKS – NEW DIALOGUE OPPORTUNITIES WITH CUSTOMERS

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Abstract

Purpose: Many companies and banks have started to use actively social networks. The aim of the paper is to research how Latvia banks use such popular social networks as Draugiem, Twitter, and Facebook to build long-term relationship with customers.

Design/methodology/approach: The aim of the analysis of scientific publications was to clarify global tendencies how banks use social networks. Activities of Latvia Banks in social networks were researched. In particular which networks are used, contents and the frequency of publications, how the feedback from customers is obtained. Bank customers were surveyed to determine their attitude as regards bank activities in social networks and their readiness to enter into a dialogue.

Findings: Latvian banks are only now trying to build communication with their clients with social media intercession. The banks should learn to construct such contents of social media which encourage people to re-publish and share the contents thus facilitating identification and

popularity of the bank. Therefore banks should create such contents and carry out activities that would foster customer engagement as well as encourage them to engage in a dialogue.

Practical implications: The paper identifies requirements for the adoption of social media in bank marketing and offers insights into other enterprises how to enter into a dialogue with customers in social networks.

Originality/value: The paper reflects how Latvia banks use social networks in their marketing activities and recommends how to improve marketing of financial services and dialogue with customers using social networks

Key words: banks, corporate communications, WEB 2.0, social networks, content marketing,

Introduction

Today Web 2.0 technologies and social media have become an essential part of the contemporary business world. Modern businesses using Web 2.0 technologies and social media have reached a new level in the development of communication with customers (Andriole, 2010). Companies are acquiring new possibilities provided by new technologies to increase profit (Constantinides and Fontain, 2008).

There are enterprises which have already used the opportunities provided by social media for several years. Banks and other financial institutions follow this trend. Social media is a digital or electronic and interactive tool of communication which enables the users of this media to build new as well as to maintain the existing relationships and to establish different types of remote communication. It is known that there is a continuous communication and information exchange in social media and its velocity is high. Due to the existence of social media every user can ensure the development of personal identity in these media thus communicating and ensuring the dissemination of different information. Consequently it results in the responsibility and reputation of each user which can be established rapidly or on the contrary - destroyed.

More frequently companies launch "Facebook" pages, create "Twitter" accounts and "YouTube" channels, and write blogs with the aim to engage users (Chu and Hu, 2009). Social media have become an essential part of contemporary customers' life. Usually information about new products and offers is quickly and efficiently disseminated in social platforms. Customers can both communicate with companies and share this information with other customers. Social media have transformed the web from being a one-way information tool to a two-way collaboration mechanism. Using social media, customer preferences for products or services are influenced by experiences provided by other users. Customers can easily follow peer reviews, referrals, blogs, tagging, social networks, online forums and other forms of user-generated content.

The brand image, which an enterprise might have, is no longer defined by the enterprise itself, but is instead created by what its customers are saying to each other. Such customers are seen to place more value on the knowledge and experience of other customers in these networks (wisdom of the crowds), rather than the one-way marketing messages and controlled brand statements and advertising sent out by firms.

Banks and social media

Banks also use social media to build relationship marketing activities (Bonson and Flores, 2011). The objective of banks is to restore consumers' trust in their banks through increased

transparency, interactivity, and involvement. Active usage of social media can increase loyalty among the existing customers and attract new ones.

“Air Baltic”, “Samsung Latvia” and telecommunication companies “LMT”, “Tele2” and “Bite” are among Latvia entrepreneurs who take opportunities provided by social media. The banking sector differs from other sectors of economy as regards its consulting and sales functions limited by specific products and services characteristic only of this sector and restricted by a high level of responsibility because they involve personal assets and reputation of the customer.

Integration of social media influences banks non-financially and financially and they get the opportunity to demonstrate their brand and become known as innovative companies. Using social media banks can have the following financial gains:

- Reduction in the costs of retaining and attracting customers
- Increase in deposits
- Increase in return on marketing investments
- Reduction in the costs on investment in the process of customer administration (Bearing Point, Management & Technologies consultants, 2011).

Besides, evaluating the opportunities and benefits of integration of social media marketing in company business some important facts could be taken into account:

- Customers in social media speak about their needs and desires, what they like and what they cannot tell in the real world. When the company has joined this flow of information, it moves to a new personalized level with its customers. The company can grasp immediately any word related to the company activities.
- If the company is located in several regions (e.g. bank branches) it is able to react quickly to customer experience described in social media much faster than any conventional communication channel would allow. Marketing researches show that on average one person tells three other people about their positive experience, but ten people about his / her negative experience related to the company activities. Social media marketing enables to monitor personally the quality of customer service (Strategic direction, 2012).

However, it should be taken into account that besides benefits social media marketing can also involve risk factors. The use of social media by banks can involve the potential risk of negative customer references which can damage the bank’s reputation if they are left without response. Another risk is the insufficient ability of bank employees to use professionally the potential of social media (KPMG, 2012).

It must be noted that banks can use customer data available in social media to understand their customers. By analysing this data banks may be able to gain valuable insight into customer investment patterns, market trends and value propositions, etc. It is vital to understand customers, their motivation, likes and dislikes, their friends, social influence and preferences. Certainly it is known that banks have substantial amount of customer data. Although the majority of banks are trying to gather really valuable information and get insight into the advantages of their customers, it is important for banks to gather wide information and synchronise bank customer data with that available in social media continuously updating and interpreting it in a common way to differentiate customer experience and develop relationship with customers. Thus banks can use the customer opinion expressed in social media as their business asset. Besides banks can analyse valuable information and insights into the customer's lifestyle to make decisions more successfully and to determine marketing strategy in social media.

Banks have to develop the strategy of the use of social media that would not only include the social media strategy into the company marketing strategy, but also envisage how to analyse the use of social media events, namely how these ‘followers’, ‘likes’ or ‘retweets’, etc. correlate

with the key performance indicators such as the number of transactions and customers, the market share increases, loyalty metrics, the number of enquiries and so on.

Banking communications with customers have traditionally been either one-way (advertising, direct mail, statements, etc) or one-to-one (customer service, branch banking, telephone banking, etc). As a result, many banks may be unprepared for two-way communications through social media.

The fact that bank professionals have formed the Facebook group “Social Media and Banking” proves that for banks it is important to use social media for contemporary communication with customers. (Facebook, 2013).

What does an average customer expect from the bank? First, as many researches show, the customer expects an immediate reply to his question, comment or opinion. It means that banks need employees who reply immediately in social media. Second, customers expect transparency of bank operations in social media – not only more information related to bank operations, but also the reaction of the bank to criticism expressed in social media. By employing social media banks can create different images. More active social network users may also welcome a ‘community’ aspect and become the bank’s offerings active promoters and advocates. Banks are able to listen in on their customers’ public conversations, identify complaints and – where appropriate – make contact in an effort to resolve the issue. Using social media banks now have the opportunity to seek out actively dissatisfied customers and resolve their issues before they turn into full-blown complaints.

However, the use of social media involves certain risks. Social Media pages are endangered by such security risks as phishing attacks (Horn. 2010). Besides insufficient professionalism of bank employees can threaten both banks and their customers. Bank employees can unintentionally publicize customers’ confidential information in social media. Whereas the reputation and the corporate image of the bank can be damaged if the employees provide poorly prepared information about banking products and services, etc. as well as incompetent communication with customers. For instance, delay in replying to complaints. There is the risk of disclosing confidential information in social media. It must be strictly differentiated when the bank employee expresses his personal opinion or that of the representative of the bank. (Torres, 2011)

Research

Twenty commercial banks have been registered in Latvia. *Table 1* illustrates how Latvia banks use social media. It can be concluded from the information the table contains that the usage of social media by banks in Latvia is in its initial stage because they are used only by nine banks. The most popular social media with Latvia banks are internationally well-known Facebook and Twitter as well as Draugiem.lv.

Table 1
Social Media Usage in Latvia Banks

No.	Bank	Facebook	LinkedIn	YouTube	Twitter	Draugiem	Flickr
1.	Baltikums Bank	■	■	■			
2.	Citadele	■			■	■	
3.	DNB	■					
4.	Latvijas Hipotēku un zemes banka	■				■	
5.	Nordea Bank Latvia	■		■	■		■

No.	Bank	Facebook	LinkedIn	YouTube	Twitter	Draugiem	Flickr
6.	Norvik	■		■	■		
7.	PrivatBank					■	
8.	SEB	■		■	■	■	■
9.	Swedbank	■		■	■	■	

Though, if we analyse more in detail bank followers in different mass media (see *Table 2*) then we can notice that in most popular mass media, like Facebook and Twitter, their number is not that large.

Table 2
Bank Followers in Facebook and Twitter

No.	Bank	Facebook Likes	Twitter Followers
1.	Baltikums Bank	113	
2.	Citadele	623	1198
3.	DNB	175	
4.	Latvijas Hipotēku un zemes banka	111	
5.	Nordea Bank Latvia	378	2435
6.	Norvik	28	288
7.	SEB	2498	3454
8.	Swedbanka	6028	11400

According to the data presented by Socialbakers (Socialbakers 2013), the number of Facebook users has reached 19.7 % anent population of Latvia and 27.28 % anent all internet users in Latvia. The total number of active Facebook users has increased to 436 840, i.e. the number has increased by 43 200 users over the period of last 6 months.

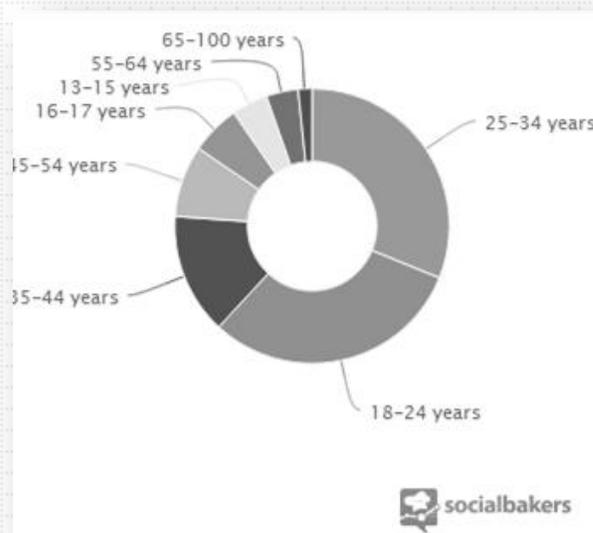


Figure1. Facebook users age distribution in 2012

The *Figure 1* shows the division of age structure among Facebook users, which in its turn proves that the mass media marketing activities should be directed to the related age groups which are the main users of social mass media.

Identical distribution has been observed among age groups 18 – 24 and 25 – 34, which constitutes 31 % from the total number in each age group. In order to clear up the opinion about bank activities in social media the questionnaire was published in the internet to study the attitude of social media users in Latvia about bank activities in social media. 219 valid questionnaire forms were received. 107 of which were women and 112 were men. 79.9 % of all respondents were ranked in the age group up to 35 years, thus we can observe that this group has been most active users of social media. This group of people was asked whether they consider themselves to be active users of social media, i.e., whether they use social media at least once a day and if they follow any social media profiles of Latvia banks.

Table 3
Coherence between users/followers of bank social media with regard to social media usage frequency of the respondents

		Have you followed/used social media profiles of any banks in Latvia?		Total
		Yes	No	
Do you use actively social media? (At least once a day?)	Yes	105	54	159
	No	11	49	60
Total		116	103	219

The *Table 3* shows that 105 respondents who use actively social media at least once a day, have used/followed social media profile of some Latvia banks. This number of respondents constitutes 91 % who have used social media profile of some Latvian banks. In its turn, 9 % from those who have used social media profile of some Latvian banks during the last year do not use social media daily. This means that this group of people have used bank's profile due to the definite goal or they have been involved as a result of spontaneous action, or due to the result of active bank's marketing communication.

Whereas, 34 % of the respondents who use social media actively, during the last year they had not used any of Latvian bank social media profiles. This number constitutes 52% who have not used any of Latvian banks' profiles. In its turn, 82 % of the respondents who do not use social media actively every day constitute 48 % of those respondents who had not used social media profiles of any Latvian bank over the last year.

Table 4 points out how respondents assess application of transaction system in social media marketing of banks. It is possible to conclude from the acquired data that the majority or 59.8 % respondents might agree to use such kind of marketing encouragement instrument. This could enable the clients to form frank and on mutual confidence based relationships. It means that banks have the possibility to survey already existing CRM systems and, maybe, the solution exists how to integrate social media profiles in these systems, synchronising clients' data mutually – on the bank's side and on clients' social media profile.

Table 4
Assessment of the respondents about the possibilities to use transaction system in social media marketing of banks

Bank	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Don't agree more than agree	13	5,9	5,9	5,9
Neutral position	26	11,9	11,9	17,8
Do not agree	20	9,1	9,1	26,9
Agree	131	59,8	59,8	86,8
More agree than disagree	29	13,2	13,2	100
Total	219	100	100	

The respondents were asked about their experience in relation to applying crowdsourcing for marketing purposes, where the client has been involved interactively and the client himself has the opportunity to define the final result. 73 % of the respondents have never participated in such kind of activities. This proves that banks have a wide scope of target audience as regards marketing solutions of that kind. Only 27 % of the respondents have experienced such activities and have been themselves a part of marketing activities and, perhaps, have received some loyalty benefits from the institutions. This also proves that this solution has not been widely applied in social media marketing of banks. Hence, this could serve as a springboard for further solutions and possible ways of creating benefit for both - the institution itself at the same time not investing large amount of resources and the clients who could gain some loyalty benefit.

If we proceed with the question about respondents' experience in relation to applying crowdsourcing in social media, 76 % of them are ready to participate in such activities in the next 12 months, 24 % of the respondents are of opposite opinion and are not ready to do it.

The *Table 5* reflects the coherence between respondents who have/have not participated in some crowdsourcing activities before with regard to those respondents who might be ready/not be ready to do it in future.

Table 5
Respondent's ability to participate in crowdsourcing activities

		Are you ready to participate at any group crowdsourcing campaign where you have the possibility to express your ideas and thus obtaining some loyalty benefit (free-of-charge product/service)		Total
		Yes	No	
Have you ever been involved in any marketing activity of the bank related to offering your idea and thus, gaining some benefit (free-of-charge product/service)	Yes	45	15	60
	No	121	38	159
Total		166	53	219

On the whole all the above mentioned allows to conclude that banks have the opportunity to create marketing content which foresees active involvement of the clients with the aim to retain attention of not only the existing followers, but to involve new potential followers and clients.

Conclusions, limitations and further research

The main conclusion from this research can be drawn that banks in Latvia are only now trying to build communication with their clients with social media intercession. The banks should learn to construct such contents of social media which encourages people to re-publish and share the contents thus facilitating identification and popularity of the bank. Speaking about Latvia, which is not a large country, its banking sector could expand its activities in such social media as draugiem.lv, Facebook, Twitter and YouTube which could be regarded as the most important and popular social media marketing solutions.

As regards the banking sector, its social media marketing activities are advisable to form so that the client could be involved interactively and could obtain added value. At present the client does not need unilateral communication. It is vitally necessary for him to be involved in different activities, being a part of marketing formative totality.

Banks of Latvia should provide purposeful marketing communication focusing more on the market segment of younger generation, i.e. the age group from 18 up to 34 years because this group is the most active social media segment group.

Banks of Latvia should try to attract just these users of social media who use them actively and regularly (at least once a day), though, during the last year, they had not followed or used any of social media bank profiles. In this case, there is a possibility to use some of the offered progressive and modern marketing solutions, which could enlarge the flow from the total social media space on social media profiles of definite banks.

It is obvious, that the research is restricted due to the restricted number of respondents who filled in the questionnaire. The reason could be insignificant popularity of bank profile in social media.

In the following research work it is advisable to investigate which activities of the banks could attract more clients in social media, as well as to pay more attention to the content more interesting for the client.

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II

EDUCATION AND BUSINESS

EXPORTABILITY OF HIGHER EDUCATION IN LATVIA

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Abstract

Purpose: One of the most widespread forms of internationalisation of higher education (HE) is export augmentation and attraction of foreign students. Despite the fact that the issue has been discussed very often, still there is a lack of research made, as well as, no research-based strategic plan has been developed as yet. In order to prepare the plan, it is first of all necessary to answer the following questions: is the HE of Latvia exportable and what are the main barriers to increase the export volume? The aim of this paper is to analyse the exportability of Latvian HE by addressing these questions.

Design/methodology/approach: The article is fully based on a scientific discussion. It employs general research methods, including monographic and logical construction tools. Two opposite views on the exportability of the Latvian HE are represented and elaborated on.

Findings: As a result of the scientific discussion a unified conclusions and suggestions to overcome the identified problems are provided. Despite multiple problems, the Latvian HE is already being exported, but its present status is weak due to the numerous barriers. Most of the obstacles are tied with the regulatory issues, whereas the government is a key player to foster positive changes. HEIs themselves should be taking active steps towards improvement of internationalisation and strengthening own brand recognition, as it may not be viable to rely solely on the governmental support.

Originality/value: The authors prove that by increasing the export of HE, universities can achieve a synergetic effect of attracting substantial resources, increasing self-financing, restructuring study programmes and improving quality through more intense collaboration with foreign professors and industries.

Keywords: higher education export, education quality, internationalisation, Latvia.

Introduction

On-going globalisation process fosters internationalisation of education and science. One of the most widespread forms of internationalisation of higher education is export of higher education services – attracting foreign students to studies in local universities. The international trade of education services is becoming increasingly important for national economies of exporting countries (Cheung et al., 2010), and in many countries education export is becoming a profitable business.

In 2010/2011, Australia's education export was the largest service export industry in this country, providing approximately 16.3 billion dollars (Australian Government, 2011). At the same time, the foreign students in USA provided 18.8 billion dollars for USA economy (1.2 million dollars, or 6% more than in 2009) (United States International Trade Commission, 2011). In the study commissioned by the British Government and published in 2011 on the value of education exports to the UK, it is estimated that in 2008/2009 the volume of British education exports was 7.87 billion British pounds, planning to increase it by 16.90 billion British pounds in 2025 (Department for Business Innovation & Skills, 2011). Between 2000 to 2009, the number of students worldwide studying abroad as part of their degree or full-time has increased by approximately 77%, or over 1.6 million, mostly the students from Asia and Oceania, and this number continues to grow (Cheung et al., 2010; Huang, 2007).

In addition to economic benefits gained from the HE export, a host country is also interested to admit outstanding, talented and motivated students, researchers and young leaders for their studies or research work (Cheung et al., 2010, Shive, 2010). On the one hand, governmental programmes provide an opportunity for foreign students to acquire new knowledge and skills so that they can successfully participate in the economic, political or social life of their home country, but, on the other hand, these programmes aim to attract highly qualified workforce – the best brains – for their national companies to provide its competitiveness in the global world market.

Students are the symbol of quality and recognition for an educational institution. It is used as a criterion for both – evaluation of study programmes of higher educational institution (ESF Project, 2011) and ranking of universities (Kuzmina, 2012). But for now universities of Latvia manage to attract European students mainly for short-term exchange programmes, due to the ERASMUS exchange programme. Unfortunately, these students are not the target audience of HE export, because they are not paying for their studies; whereas Asian students are left out because of complicated immigration rules, as well as, due to the law that limits the use of foreign languages in the public higher institutions (Balticexport, 2012). In spite of that, statistics show that the number of foreign students in Latvia has increased gradually from 1.1% in 2006/2007 to 3.7% in 2012/2013 (Central Statistical Bureau of Latvia, 2013).

Until now, the economy of Latvia was supported by the speculations of real estate property and domestic consumption which reinforced the possibility of acquiring loans. However, over the last few years the possibilities of Latvia's export (also educational export) have become a debatable and pending matter. Although in the Latvian legislation the term “education export” is not defined, it is used in some strategic documents like “The Latvian Strategic Development Plan 2010-2013”, where one of the main tasks is “to develop higher education export” and “Action Plan for Higher Education and Science development for the time period from 20 November 2013 to 31 December 2014” where according to the third objective it has been stated that it is necessary to develop and organise Latvian higher education internationalization and institutional coordination (Cabinet of Ministers, 2013).

Motivation to re-evaluate the possibilities of public and private sectors for Latvian politicians and entrepreneurship representatives comes from recently experienced crisis of the world economics. It has also been confirmed by the Prime Minister of Latvia, Valdis Dombrovskis, who has acknowledged the fact that export increase was the key element for economic recovery in Latvia. At this moment the main development driving forces in Latvian economics are production and export (Balticexport, 2012). Implementation of the new politics has given an opportunity not only for Latvian companies but also for educational institutions to increase budget for exporting their service. Thus far, export of education is the unused asset that requires very little investment but can give considerable financial efficiency.

As a result of globalisation, educational institutions must react to the students' desire for international environment and study process. Since Latvia has joined the European Union, Latvian students have even more significant opportunities to study abroad, as well as, the process of application has become easier. Hence, the process of internationalisation in Latvia is a logical method for ensuring study environment that is even of a higher quality, internationally acknowledged and up-to-date than elsewhere. Taking these needs into account, a Higher Education Law was improved (HEL Project, 2006) and the European Social Fund's project "Evaluation of Higher Education Study programmes and Proposals for Quality Improvement" was implemented from 2011-2013. One of the project's criteria was based on the plans of internationalisation, evaluation of sustainability and cooperation (ESF Project, 2011). In addition, considering the elevated concern regarding education export, a wide scope research "Higher Education Export Capacity Assessment and Development of Recommendations" was conducted on the request by the government (KPMG Baltics SIA, 2011). The authors would like to believe that these researches are the foundation for the development of ulterior plans.

Realising the benefits that could be obtained from HE export, as well as, understanding the intense competition in this field, questions arise whether the HE of Latvia is exportable and what are the main barriers to increase the export volume. This topic has been raised quite often in the public discussions and in light of the on-going initiatives to reform the higher education system in Latvia by the Ministry of Education and Science. The paper is based on the materials prepared for a scientific discussion on exportability of the Latvian HE between two groups of doctoral students and attempts to gather the available data from diverse sources in order to prove the presented arguments.

The aim of the paper is to analyse exportability of HE in Latvia from several aspects: policies, laws and regulations, quality, etc. It presents two opposing views on exportability of HE in Latvia that emerged as a result of a scientific discussion, points out to the most salient problems in the field and attempts to provide ensuing recommendations. The research methods used to achieve the aim are general scientific – monographic and logical construction.

The following chapter discusses regulatory, marketing and quality problems pertaining to the HE export that are visible in the Latvian market. Thus, it advocates the viewpoint that the local HE is not exportable at present. The second chapter highlights arguments in favour of exportability of the Latvian HE addressing the main points raised in the previous chapter. The last chapter brings together conclusions and recommendations to the government and HEIs to overcome the existing problems.

1. Higher education in Latvia is exportable

Irrespective of the existing problems highlighted in the second chapter, the Latvian HE is already being exported, on the one hand, and has to be exported, on the other. In most cases, it

requires deliberate attention and support from the government, and in the rest of cases – initiative of the local universities themselves to boost the HE export.

1.1. On the negative aspects of internationalisation

Despite the strong criticism from various stakeholders that arises as a response to the inclusion of education into the GATS, by paying for HE, students not only receive service, but also invest into their future (Psacharopoulos, 2009). As a service, HE includes knowledge and a set of other competences (according to the European Competence Framework). Thus, students do not buy a diploma, but rather the outcomes, which the diploma can ensure, e.g. employability, social status, lifestyle, etc.

Any export activity is an indication of a country's competitiveness. Strictly speaking, Latvia has to export its HE, while creation of new traditions takes time (Natale and Doran, 2012). At the time, when country is lacking financial resources across knowledge-intensive industries, it becomes of an utmost importance to generate the necessary profit to be forwarded into R&D, increase of competitiveness and quality of education.

Referring to Etzkowitz (2008), it can be disputed that standardisation and privatisation of knowledge could lead to an increasing erosion of the collective knowledge base, since the HE export does not require standardisation and improves competitiveness. Likewise, it is hard to support the thesis that growing internationalisation leads to inequality between the well-established, rich and powerful universities and the poorer and less-well-resourced universities, because as a result of internationalisation more opportunities arise and the overall HE level increases.

Profit-orientation of the WTO, WB and OECD policies concerning internationalisation of HE accords with the model of entrepreneurial university, which is now being developed and highly supported in the leading European universities (e.g. Finland, Sweden, Great Britain, Netherlands) (Etzkowitz, 2008).

Reduction of public funding makes it necessary to seek other sources of financing. In 2010, the state financing of HE decreased by 41% in comparison to 2008 (Chapleo, 2010; Delfi, 2011; ZRP, 2011). Therefore, increase of the financing volume from foreign students as a result of internationalisation is not an argument against exportability of HE in the case of Latvia.

1.2. The HE export development policy

HE has always been and always will be Latvia's state priority. The necessity to elaborate the new model of financing for the local HE, as stressed in the current Declaration (Cabinet of Ministers, 2012), can be interpreted as a prerequisite for the intended export activities and raising the international recognition of the local HE. Education is warranty of national growth and foundation of social and economic development. Most of the Latvian development and planning documents are given extra attention and formed sections and subsections of education issues in the country, for example, Assessments of Latvia's competitiveness, the Latvian Sustainable Development Strategy until 2030, as well as the Latvian National Development Plan 2007-2013 mentioned in the previous chapter. For these reasons the Ministry of Education and Science of the Republic of Latvia is not planning to develop the education export promoting strategy – it is already included in the informative report "On the Necessary Structural Reforms in Higher Education" (Saeima Chancellery, 2010).

By joining the European Union, Latvia has committed to encourage internationalisation of HE and to fulfil obligations that are accepted in the rest of Europe, such as The Bologna Declaration (1999). In addition, acquired education in Latvian universities is one of our country's export products with the most significant potential, which should compete with foreign universities (Miezaine, 2011). It is noticed by the Latvian government that looks at students' mobility and internationalisation of HE as a support base for economic development (Indrans, 2010).

It must be noted that the Latvian government allocates insufficient funds for education, which is also highlighted in the forthcoming National Development Plan 2014-2020 (Jankovskis et al., 2012) and financial shortage is mentioned as one of the threats to the future development of the country. However, first of all, in the last seven years the number of students studying for the state and local government funds has grown (from 23.3% in 2006/2007 to 36.9% in 2012/2013) (Central Statistical Bureau of Latvia, 2013). Secondly, there is a motivation by the Latvian government in cooperation with the European Union to financially support projects such as "Compass for Living in Latvia for Students – Third-Country Nationals: Education and Integration" implemented by the association "Workshop of Solutions". As a result of the project, the informational material was published responding to the most common questions about foreign students' study life in Latvia. Thirdly, the Export Association of Higher Education was established with the main aim to jointly participate and represent each other in educational exhibitions, and to raise the European Union's funding (KPMG Baltics, 2011:19). These are only few examples that prove that HE is a national priority, and not only the government, but also the society itself can take part in defining objectives, support development of strategy and seek additional funding for the progress.

1.3. On the governmental support

Services, including HE, has much lower capital-output ratio (does not require so many fixed assets) as compared, for instance, to manufacturing, which is a great advantage considering limited resources (and lowers taken risks). In addition, HE does not require low-skilled labour, but stimulates preparation of highly-skilled specialists, which a knowledge-based economy producing goods and services with high added value features (Etzkowitz, 2008). Notwithstanding the low financing at present, the number of foreign students in Latvia continues to grow: from 1433 in 2006/2007 to 3505 in 2012/2013 (see Table 1), or 145% increase, most of them being enrolled into social sciences programmes (33%) or medicine (23%) and coming from Russia (18%), Lithuania (12%), Ukraine (11%), Germany (8%) and Georgia (5%), but overall students from the EU account for over 45% of the total (Matisane, 2011). Hence, the local HE is already being exported.

*Table 1
Number of students in the Latvian HE by academic years*

	2006/07	2007/08	2008/09	2009/2010	2010/2011	2011/2012	2012/2013
Total number of students	129497	127760	125360	112567	103856	97041	94474
Foreign students	1433	1475	1591	1760	1979	2716	3505

Source: The Central Statistical Bureau of Latvia (2013)

It has been calculated that one foreign student brings in about EUR 5000 a year (KPMG Baltics SIA, 2011). The present foreign students contribute into the Latvian economy over LVL 4 million per year (Matisane, 2011). A simple calculation: if Latvia increases the number of foreign

students to 10 000, assuming they spend LVL 5 per day, $10\,000 * 5 = \text{LVL } 50\,000$ additional income per day, or LVL 18 million per year, not counting other advantageous spending. The benefits are vividly clear – new job vacancies to meet the demand, increase of production, transport costs and other budget income sources. Not only economically developed countries focus on HE export, but also economies in transition, e.g. Russia, Estonia, fighting for inflow of foreign students, related income and reputation (Peskov, 2011).

By increasing the HE export volume, the HEIs can reach the synergy effect attracting considerable resources, strengthening self-financing, restructuring study programmes and improving its quality, establishing and maintaining international cooperation with other representatives of academia and industries alike, employing talented international students and fostering their employability in Latvia upon graduation, thus contributing to the development of innovative economy and internationalisation.

Consequently, the country and HEIs has to invest into the HE export development (for instance, using EU funds), which comprises market research and planning, so that to reinvest the generated resources into the HE development and research, as well as to cover the associated costs. The entrepreneurial university always possesses a higher degree of financial freedom (Etzkowitz, 2008).

Centralisation of the HE export function with on responsible institution is truly one of the government's tasks at present, in order to ensure implementation, control and manage the export process as per the plan of actions, which is currently being developed.

1.4. Laws and regulations

One of the most sensitive topics in Latvia is the national language and its preservation. A large part of society believes that Latvian language must be kept as the sole language of education implementation, while norms in the “new” law of HE are more favourable to foreign languages.

Article 56 of the Law on Institutions of Higher Education of the Republic of Latvia (2006) currently in force stipulates that in state-founded HEIs curriculums are implemented in the national language. This law also explains the order, in which cases foreign languages can be used in curriculums. It can be stated that according to the law, HEIs of Latvia can export studies of language and culture.

Over a half of foreign students in Latvia acquire curriculums in English, while the other half studying in private HEIs, acquire curriculums in Russian. This has forced Latvian HEIs to position themselves for specific target audience. However, students who are willing to study in Russian are one of the main target audiences of Latvia HE export. Latvia has exciting study environment for residents from the East. One of the solutions to form a sufficient sized study groups is to allow usage of Russian in the first study year, but switch to English later (Lulle, 2010).

The Law on Institutions of Higher Education (2006) emphasises that foreign students must take a course of state language, if studies in Latvia are planned for more than six months or exceeds 20 credits. This secures the Latvian language and gives additional possibilities of its preservation.

The Ministry of Foreign Affairs continues its work on creating a diplomatic missions' network. It has drawn a development plan up to 2015 and shows interest to open embassies in Brazil and India, which have been appointed as priority countries for the Latvian economic development and stimulation of education export (Ministry of Foreign Affairs of Republic of Latvia, 2011). Opening of the Latvian embassy in India is important because of India's role

growing globally. In recent years, bilateral relationship between Latvia and India has become more active (LETA, 2012). Opening of the embassy would give a chance to offer study places to the Indian students in Latvia. A number of Latvian HEIs sets this collaboration as their goal, for example, Riga Technical University. During the last two years several meetings and discussions have taken place concerning this topic, for example, in 10.04.2012 a meeting of universities' representatives took place in the Stockholm School of Economics in Riga and the talks were devoted to the question of attraction of students from India. This was the second meeting of universities' representatives with the employees of state institutions responsible for these questions in 2012 (see also Balticexport, 2012). Also in 2013 a couple of conferences have been organised concerning this matter, for example, Conference about Asian students' attraction to Latvian higher education sector. Currently it has been decided by the Ministry of Foreign Affairs to cooperate with the Ministry of Finance and work on the budget plan for trying to find additional funds for the development of diplomatic network of Latvia. As a temporary solution, appointments of consular official to India for a defined period of time have been stated as an option (LETA, 2012).

The Immigration Law of Latvia (2003) is also in the process of being improved, allowing the students to request a residence permit with the help of a representative. This means that the documents could be submitted by a representative authorised by a university and a student would only be required to visit the Embassy of Latvia only once for receiving the immigration visa. A connection between the migration and internationalisation regarding HE is mutual. The migration strategy enables and eases the internationalisation of HE. The visa policy regarding students and university personnel has a great role in the internationalisation process of HE (Indrāns, 2010).

1.5. Marketing of HE services

Marketing is a well-known tool to influence the human perception and create new values and needs. HE is a service, and it is harder to maintain competition while selling services instead of products, because services are not tangible. In order to attract foreign students and elevate creation of the Latvian HE brand, the education marketing can be developed on the basis of the already existing image of Riga – the capital of Latvia among tourists.

Latvia and Riga can attract potential students with its moderate climate, which to some of the foreign students may even become an exotic experience, the possibility to enjoy all four seasons and their seasonal activities (swimming, skiing), visiting a country of untouched nature by the Baltic sea with lower living costs than in Great Britain, USA, Canada or any other developed country. Acquisition of a diploma acknowledged in Europe may be coupled with a unique gain of the Latvian folk traditions. Students might also find information about diverse opportunities for entertainment in Riga and Latvia attractive.

In order to export education, a change in attitude and understanding of the society is necessary, because it is important to create a positive image of the country as a place, where it is safe to come and study, as well as, to obtain a high quality education. The main aim is to show that it is possible to study here and those, who already did, are successful leaders of businesses and founders of new scientific finding (Bergs, 2010).

Foreign students and teaching staff are urging the interest of Latvian youth to study in Latvia. Firstly it elevates quality as the latest materials in English language are used; secondly – it creates an international environment. The lack of internationalisation is one of the causes, why Latvian youngsters decide to study abroad.

The development and export of tourism is also continued by the government of Valdis Dombrovskis, who has stated “the elevation of Latvian image in the international picture: Latvia

– safe, ecologically clean country with successful national economy and politic reforms; Latvia – the destination of international tourism; Latvia – solitaire member of the EU open to new ideas; Latvia – trusted cooperation partner of the Euro-Atlantic relations” (Regulation of the Cabinet of Ministers No. 84, 2012: article 167).

As stated in the KPMG Baltics research (2011) an important pre-condition for the attraction of foreign students is the overall image of the country and a well-developed tourism industry. A part of foreign students come to study in a country as a brand instead of a particular university, as already mentioned in the previous chapter. For this reason it is necessary not only to keep exporting the tourisms possibilities in Latvia, but also to popularise the name of Riga in the aspect of HE tourism. Students’ surveys and interviews with the representatives of private universities show that Riga could be turned into a powerful brand of HE among the CIS countries, on the basis of the existing tourism.

Recently the agreement between the Ministry of Education and Science of the Republic of Latvia and the Ministry of Education of the China People’s Republic was signed, concerning qualifications of HE and mutual acknowledgement of degrees granted upon completion of study programmes; collaboration agreements with Czech Republic, Estonia and Lithuania were prolonged (ibid, 2011). Still Latvia is the only country in the Baltic States, which does not have a cooperation agreement in education and science with Russia, despite the high ratio of Russian students in Latvia.

The argument regarding the lack of common state internationalisation strategy and absence of the clear aim in education export, resulting in under-developed state-scaled marketing strategy for entries in different markets can be related to the Law of HE that is still under construction. This law will help to elevate internationalisation of the Latvian HE, establish an opportunity to attract foreign teaching staff and ensure studies in foreign languages, resulting in the rise of innovative economy. Consequently, unified development of the action plan with defined goals and strategies will be set in motion, according to Cheung et al. (2010); market research and maintenance of a qualitative information website, as stated in Mazzarol et al. (1998, 1996), overseen by one responsible institution/organisation.

1.6. Grants and financial support

HE can be both – paid and free service, depending on the country’s policy. Education export, in its turn, is a way for education institutions to gain additional funds for development and competition. Export is a tangible value of the amount of sold goods or performed services abroad (Dictionary of Economic Terms, 2000), meaning that education export is not based on issuing grants for foreign students, but rather (in the case of Latvia) an opportunity to offer foreign students a higher quality education for a lower price. When looking at the education export, it is essential to choose paid education, because exactly this option elevates the economic income, as well as, the interest in studies and reception of higher grade education (Bergs, 2009).

Professor of Economics Andrejs Jaunzems (2010) in his blog has stated an opinion that in order to properly employ university lecturers and use the resources to the full extent, it is suggested to offer paid courses in foreign languages, at the same time paying corresponding taxes to the Republic of Latvia that, in turn, can be used to fund studies in Latvian.

Providing grants, gives an opportunity for everyone to have a chance to study abroad. Latvian students receive information about possibilities to study abroad on a regular basis offered by the respective countries. The opportunities of receiving grants undoubtedly elevate the attraction for international students. The state-issued grants have to be provided taking into

account the main directions in order to train better professionals for Latvia with the help of the grants.

Regarding to the order of issuing grants for the foreign students, accepted on January 24, 2012 by the Cabinet of Ministers, the Latvian government is elevating the export of HE by issuing additional grants for the students. This could be continued if, for example, local governments would issue a single grant for foreign students (KPMG Baltics, 2011) or universities would offer a chance for the foreign students to receive the study grants (Balticexport, 2012). One of the solutions could also be calculation of grants in a certain amount from the tax income per student obtained, as well as issuing tax incentives for HEIs, thus favouring attraction of foreign students. This would not only motivate the students, but also the educational institutions to take more active part in the attraction of foreign students.

1.7. Quality of educational programmes

Export readiness of the local study programmes is a distinctive theme in this discussion, which also includes the question of teaching methodology and technological equipment, as well as, readiness of teachers to be modern and competitive. Further advertising and marketing activities largely depend on the quality of teaching processes.

Conclusions of the EC's report (2009) concerning the methodology of teaching suggest that changes in the methodological paradigm, especially in social sciences, are necessary not only to boost export, but these changes are about to become the main driving force in the local market, as posited in the new "Europe 2020" strategy (WEF, 2010). As a result of natural competition between the local universities, they will either strengthen their positions by changing the paradigm and approach to teaching, or cease to exist. Hence, the quality problem is not the exporting problem per se, but rather the local HE as such.

Although due to the language issues, the prospective students may opt for English-speaking countries, e.g. the United Kingdom or Ireland, or the innovation-driven countries, e.g. Finland, where the level of English is high; these countries are considerably more expensive to be educated in. Therefore, at the moment, as a short-term solution, Latvia could gain the niche of the average quality education in English, where the living costs and European diploma compensate the absence of academic excellence. In addition, the interest of CIS countries and high satisfaction level from learning in the Russian language among the CIS students is a clear indication of a vitality of this market for the Latvian HE, unless this language becomes the issue of another national debate.

To evaluate the quality of study programmes in Latvia, the ratio of incoming and outgoing students and teaching staff is taken into account, as it is the key component to assess the sustainability and cooperation of the institution (ESF project, 2011). Hence, the rise of this indicator would help to boost the HE export, too.

The fact that the educators in many universities are not ready to teach in the English language suggest the necessity to fix this problem on a state level. Programmes that are delivered in English certainly require accreditation, which is a challenge itself to adhere to the European level provided the local expertise. However, it is also necessary to increase the number of students, who choose Latvia within Erasmus programme. Irrespective of the fact that exchange students are not the target audience of HE export, they stay in the country and bring extra income.

Higher quality can also be achieved by hosting joint study programmes with foreign universities, as it already happens in BA School of Business and Finance, Riga Teacher Training and Educational Management Academy, Riga Business School, Stockholm School of Economics Riga and Riga International School of Economics and Business Administration, for example.

These universities are equipped with qualitative study materials in English, and its' educators take part in international exchange programmes on a regular basis.

HE is the key factor for an innovative economy. While financing of innovations is administered and limited by the Ministry of Education and Science only, including target programmes (in contrast to such countries as Israel, Russia, South Korea, USA), Latvia is lagging behind in the Innovation Union Scoreboard 2010 (the last in EU-27), including its growth indicator (7.3% below average in R&D, 24.6% in registration of licenses and patents, 14.3% in SMEs collaboration) (IUS, 2010). The export approach will help to solve the financing problems, to improve university-industry cooperation, to increase the entrepreneurial activity, and also to meet the new technological wave in the next 10-20 years (according to the Theory of Long Cycles) through preparing HEIs and speeding up innovation processes, knowledge and technology transfer in Latvia (Peres, 2012; Glazyev, 2012). It has to be implemented by HEIs with the governmental support (Etzkowitz, 2008).

2. Higher education is not exportable

In order to export any product or service, firstly, it has to be ready to be consumed and/or used, i.e. to be exportable. Secondly, in the case of HE, it requires favourable regulatory and quality conditions on a state level. However plenty of arguments against exportability of the Latvian HE can be found. There are various reasons for that, ranging from language policy to branding issues.

2.1. HE is a service – threat to social values, traditions and equality

Education falls under the General Agreement on Trade in Services (GATS), adopted by the World Trade Organization. In line with the GATS, education is a service that is marketable worldwide and to which the regulations of export and import applies (AIC, 2012). The fact that education was included in GATS met with strong opposition from various stakeholders. Very strong criticism emerged especially from labour unions in public services, teachers' unions, students associations and civic movements (Vlk A. et al., 2008).

Some authors consider that HE cannot be treated as a product or service because knowledge is not a commodity and will never be. Internationalisation of HE is not free from the influence of globalisation and knowledge-economy processes. Such representatives of neoliberalism as the World Trade Organisation (WTO), the World Bank (BW) and the Organisation of Economic Cooperation and Development (OECD), have narrowed the conception and benefits of the internationalisation of HE. The policies of these organisations are profit-oriented; profit has become the major target and motivation, leading to increasing trade in education services (Jiang X., 2008).

Standardisation and privatisation of knowledge could lead to an increasing erosion of the collective knowledge base. Besides, growing internationalisation leads to inequality between the well-established, rich and powerful universities and the poorer and less-well-resourced universities. Under unequal market conditions they are, in fact, deprived of the right to express their opinion on curriculum, quality standards and other educational issues. Thus, in HE economic rationales begin to dominate over political, academic, cultural and social rationales. HE is seen as a new source of profit – “a multi-billion dollar industry”. It is essential to retain the ability of HE institutions to serve the wide range of social aims, to maintain social values and traditions (ibid, 2008).

2.2. Regulatory problems

2.2.1. HE in Latvia is not determined as the priority for export

Such leading HE exporting countries as United Kingdom and Australia possess not only historical traditions and successful experience of exporting HE services, but, more importantly, evidence-based planning and unique strategies that are critical to their success (Cheung et al., 2010).

Although the Sustainable Development Strategy of Latvia until 2030 sets the target of increasing the proportion of foreign students in the Latvian HEIs to more than 10% by 2030, a clear strategy and more rapid increase in the HE export volumes is needed in the coming years to achieve this target.

In 2009, the Declaration of the Intended Activities by the Cabinet of Ministers defined the task to “promote export of the Latvian HE”. However, such a task is not included in the current Declaration, where the priority is “to draft and prepare a fundamentally new model of financing for HE institutions until 2014 that would promote the highest possible accessibility of the HE and objectively measurable growth of its international competitiveness and fairness” (Cabinet of Ministers, 2012).

The Ministry of Economics considers that over the next few years the economic development of Latvia will rely on export, which was the basis of previous growth (Ministry of Economics, 2011). Currently international transit services account for approximately a half of the service export in Latvia (Bulis et al., 2012). The Ministry of Economics continues to focus on transit, transport/logistics and tourism, which have been the main drivers of growth until now, but the local HE is not determined as the priority for export. In contrast, the leaders of the countries exporting HE today, realised the value of this activity long ago, and therefore determined it as the major economic growth area.

Although the necessity to encourage export of the Latvian HE is increasingly being highlighted, so far the promotion of HE export has been an initiative by the Ministry of Education and Science of the Republic of Latvia, but not a cross-sectorial priority of the national government with the participation of the Ministry of Economics of the Republic of Latvia and Investment and Development Agency of Latvia. The fact that three institutions – the State Education Development Agency, Academic Information Centre and Higher Education Quality Evaluation Centre (KPMG Baltics SIA, 2011) deal with the HE export issue could suggest that the work between these institutions may be insufficiently coordinated.

Estonia is the only one of the three Baltic States, which has a HE internationalisation strategy, approved in 2006. Neither Latvia, nor Lithuania has equivalent policy planning document (KPMG Baltics SIA, 2011). However, in August 2010 the Cabinet of Ministers of the Republic of Latvia approved “The Action Plan for Necessary Reforms in Higher Education and Science” (2010-2012), and one of the key activities was “internationalisation of higher education and increasing export incentives”. Lack of joint strategy for HE internationalisation in Latvia hinders growth of the HE export, because main export marketing prerequisites are not defined and not fulfilled on a regular basis – target market is not defined and researched, segmentation is not provided, market penetration strategies are not developed, as well as, competitors’ strategies and policies are not carefully evaluated. Moreover, a number of questions remain unanswered – will the growing proportion of foreign students ensure the achievement of planned targets, and what is the target: direct or indirect income from foreigners, enhancement of academia

competitiveness, promotion of Latvia's visibility, more qualified workforce for Latvian enterprises in future or other.

Carrington et al. (2007) note that government can support the HE export by providing information, giving advice or supporting other assistance. Although one of the functions of the Latvian Investment and Development Agency is "to encourage foreign trade of Latvian entrepreneurs", and the agency offers entrepreneurs a wide range of services: provision of information, organisation of trade seminars and foreign trade missions, consultancy and foreign market studies, assistance at international exhibitions etc. (IDAL, 2011), no information is available on such services provided for HE institutions.

The largest HE exporting countries have central agencies, government units or other public bodies that are financed by the national government in order to encourage export of education service. The main function of these institutions is to support national interests (Cheung et al., 2010), to employ highly qualified employees and to have other necessary resources (Mazzarol, 1998). These institutions help to establish and develop cooperation, by promoting dialogue and opening negotiations with the national governments on the improvement of cooperation agreements/memorandums in the field of education; provide consultations on the recognition of diplomas and qualifications; have direct contacts with HEIs; work on the target market research and develop educational service export; organise seminars and conferences, etc. (Cheung et al., 2010).

Since 2010 the Latvian State Education Development Agency has been providing attraction, selection, funding of international students for studies, research and participation in international summer schools at HEIs or science institutions under international agreements (Cabinet of Ministers, 2010). Advice on study opportunities in Latvia, recognition of education documents and qualifications, opening negotiation on development of cooperation agreements/memorandums are provided by various Latvian institutions, in some cases involving Latvian embassies abroad, foreign ministries of education and other institutions. The role and responsibilities of these institutions are not clearly distinguished. Latvia has no central agency, state structural unit or other institution that possesses required human and financial resources to advance the HE export and provide support for the national strategic interests (KPMG Baltics SIA, 2011).

2.2.2. Scholarship policy has several major flaws and loans are not available for all

Scholarship programmes for international students have an important role in attracting international students to study or to do research at local HEIs. And during the last years exchange of students within various scholarship programmes and financial instruments is being promoted. Such scholarships allow HEIs to provide themselves with talented students, which significantly increase the scientific potential of HEI, and thus enhance its visibility (Benell and Pearce, 2003).

The experience of Hong Kong shows that in the 1990s, thanks to generous scholarships, excellent students were attracted to study at Hong Kong's HEIs. Scholarships developed an interest and helped to build a good reputation of Hong Kong's HE on the whole. Therefore, currently with a well-deserved reputation HEIs attract excellent students both with good achievements and with financial resources for their studies. Besides that, successful scholarship policy was accompanied by Hong Kong's ability to provide qualitative study process (Shive, 2010).

Scholarships for international students are usually a part of the HE internationalisation strategy. For instance, the aim of Australian scholarship programme is to attract outstanding students, researchers and leaders to study, research and develop professionally (Cheung et al.,

2010). However, in the HE internationalisation and export policy making one should see the difference between the aim to raise the number of foreign students and the aim to increase export incomes (Carrington et al., 2007).

The question arises what the aim of Latvian scholarships for foreigners granted under intergovernmental and interdepartmental agreements is. Despite the fact that in 2011 funding for the aforementioned Latvian scholarships was substantially increased, only 51 scholarships were granted for academic year 2011-2012 (SEDA, 2012) as a result of small competition. Application round for Latvian Government scholarship competition for studies and research for the academic year 2013/2014 has already completed. The number of applications received for scholarships for studies is 157, for fellowships for research – 10. Total number of approved scholarships is 61 (VIAA, 2013). Therefore, if Latvia wants to promote HE export, it is necessary to set a purpose of the Latvian scholarships and to develop appropriate strategy to achieve this purpose, giving the chance to receive the scholarships for majority of interested.

Another opportunity is to secure funding for the studies in Latvia and to receive a loan for covering the tuition fee or student's social needs. The loans are available for students who are the citizens of the Republic of Latvia or who have the Latvian so called "Alien's passport", as well as, to the citizens of other EU country with permanent or temporary residence permit. Despite the fact that a number of students coming from the CIS countries is high, these students do not have the possibility to receive the aforementioned loans.

Estonia is the only one of the Baltic states, which gives an opportunity for foreign students on master and doctoral level to apply and receive scholarships funded by the EU (the DoRa programme), while Lithuania intends to invest EUR 226 million into modernisation of HE and to attract international students (KPMG Baltics SIA, 2011).

2.2.3. International agreements are not always the basis for closer cooperation

HE exporting countries actively seek opportunities to engage in a dialogue with the countries which are their target market. Indeed government leaders play a significant role in this process (Cheung et al., 2010).

The Latvian state has signed more than 30 intergovernmental and interdepartmental agreements on cooperation in the field of education and science, but these agreements do not form the basis for further marketing activities (KPMG Baltics SIA, 2011). The dialogue between both contracting parties is mostly fragmented and formal. It is hardly possible to develop fruitful cooperation in order to promote exchange for students and teaching staff and HE export with all, over 30, contracting parties at the same time, as Latvia is a small country with limited resources. Currently the concluded agreements are rather as the evidence of goodwill and friendship, but they do not serve as a basis for further cooperation development. In addition, the cooperation with other countries in the field of HE has been developed also within the framework of inter-HEIs cooperation agreements, projects or other activities.

In 2010 two joint visits (the first to Azerbaijan, the second to the People's Republic of China) of senior officials of the Ministry of Education and Science of the Republic of Latvia and rectors of HEIs were organised in order to promote export growth of HE service. Statistics show that in 2011 compared to 2010 the number of students from Azerbaijan has doubled (from 22 students in 2010 to 44 students in 2011). However, further study is required to determine whether the number of students has risen because of the aforementioned international visit or other national level cooperation promotion activity. The number of students coming from the People's Republic of China in 2010 compared to 2011 has not changed, despite national efforts.

2.2.4. Complicated immigration procedures

Immigration procedures are one of the key factors influencing the choice of study destination (Cubillo, 2006). Also the Review of the Assessment of Latvian HE exportability (KPMG Baltics SIA, 2011) identifies problems in the procedure of gaining visas and residence permits, by indicating the need to simplify the procedure, to make appropriate amendments to regulations, as well as, to address an issue on diplomatic representations within the HE strategy.

The Republic of Latvia has 44 diplomatic representations and consular missions, 15 of which are outside the EU/EEA. It has been repeatedly acknowledged that an absence of Latvian diplomatic missions in those countries from which international students come to study in Latvia (for example, India) impedes the increase of international students. At the end of 2010 the Foreign Affairs Committee of the Saeima of the Republic of Latvia emphasised that despite the provisions of the Schengen Agreement and a variety of safety concerns, we should become more flexible and applications of prospective students should be examined on the substance supporting them as much as possible (Saeima Commission of Foreign Affairs, 2009). Currently, examination of submitted documents, including statement of assurance that the prospective student has obtained the necessary education for starting studies, and obtaining of permanent residence permit takes over several months, and it often does not allow international students to begin their studies on time.

On the contrary, in Latvia there are 37 foreign embassies, 11 international organisations, 22 honorary consulates and 3 consulates general (Ministry of Foreign Affairs, 2013) that all together develop a net of international cooperation that can be used for achieving better results in the exportability of Latvian HE.

2.2.5. Language barriers

Benell un Pearce (2003) assert that one of the factors contributing to the export growth, is the language of instructions at HEIs, and the English language is continuing to consolidate its status as the dominating HE exporting language, thus providing an advantage to English-speaking HEIs. Besides that, students coming from non-English speaking countries prefer to study in an English speaking country (Cubillo, 2006). In this context, Latvia cannot compete with such countries as United Kingdom, USA, Australia, etc.

One of the legislative barriers to HE export is related to language policy. The knowledge of Latvian language is a prerequisite for undertaking permanent staff position in the Latvian state HEI (Higher Education Institutions' Law, 1995) which locate Latvian private higher education institutions in more advantageous position. Due to this prerequisite and the limited financial resources of HEIs the proportion of foreign professors in the Latvian HEIs is low.

In addition, the language of instruction is seen as one of the obstacles to the Latvian HE export growth; therefore, solutions are sought during the time of the adoption of the "new" Higher Education Law. Amendments to the Law on Institutions of Higher Education accepted in 2011 state that the Latvian state HEIs can provide a study programme in the languages of the EU, if this programme is being carried out jointly with another accredited HEI in the EU.

If the programmes that are accredited in Latvian can be offered in the foreign language without any additional accreditation or other assessment, then such practices may endanger the quality of study programmes, due to the fact that it is not guaranteed that the teaching staff will be able to carry out the study programmes also, for example, in English (KPMG Baltics SIA, 2011).

The data of KPMG Baltics SIA (2011) survey indicates that in Estonia, comparing with Latvia and Lithuania, legislation on language usage in HEIs is the most liberal; besides, Estonia also uses more active marketing approach and provides scholarships for foreigners, and thus Estonia establishes itself as a regional education and research centre attracting the majority of international students.

2.3. Marketing problems

2.3.1. Underdeveloped image and visibility of the country

Cubillo et al. (2006) considers that the country's image is crucial when it comes to HE exportability, as the attitude of customer towards the product or service is influenced by the stereotypes about the country of origin. Although more studies have been done regarding the exportability of products, still they can be applied also to the service sector. Political stability, low criminal activity and quality of life positively affect the choice of the prospective student (Mazzarol, 1996; Cubillo, 2006). Although living expenses in Latvia is lower than in most of the other EU countries, the health care system in Latvia is weak and health care services for foreign students are available on the same basis as for tourists and not as for permanent residents (KPMG Baltics SIA, 2011).

In a globalised world, the prestige, recognition and visibility of HE are also playing an increasing role (Bennel and Pearce, 2003) for developing visibility of country. Thus the choice of a student may also be influenced by international rankings of state or HEI. None of Latvian HEIs is included in the Times Higher Education World University Rankings (KPMG Baltics SIA, 2011).

Shive (2010) note that brand name "Hong Kong" has already become well-recognised in the growing Chinese marketplace. Similarly, some students come to study in Latvia because of the brand name "Latvia" or "Riga" rather than the assessment of the particular HEI performance. However, the name of Latvia and Riga is not sufficiently promoted in the framework of HE. Latvia lacks a unified image and strategy for attracting foreign students. It is evident also in a comparison to Riga's close neighbour city in the North – the Estonian town Tartu, where the university hosts over 600 international students per year and actively markets itself worldwide. International students come to the University of Tartu from more than 30 countries; over 100 international staff members teach and work at University of Tartu every year (Dreamfoundation, 2012).

2.3.2. Costs of exporting, insufficient public funding to HE, and lack of performance analysis

Development of the HE export market is tied not only with benefits, but also considerable costs (Carrington et al., 2007). Potential exporters have to familiarise themselves with a new political and legislation system, language and culture, as well as, customers' preferences and other characteristics of the market. They should ensure that their provided activities meet the requirements, customs and business practices of a local market (ibid, 2007).

Such HE exporting countries as UK and Australia invest considerable amount of resources in their HE, in order to develop human resources and to raise national prosperity as expenditure on science and development positively impact development of technologies and HE sector (Cheung et al., 2010).

When comparing public funding for HE in Latvia with other countries, it can be seen that public expenditure on HE is very low in Latvia by comparison to the EU and OECD countries. In 2008, public expenditure in Latvia was 0.99% of GDP, while the European average was 1.14% (Reis and Ghoerghiu, 2011), but the OECD average – 1.5% (OECD, 2011). In addition, currently public expenditure on HE is reduced, despite the fact, that in 2010 it was already 0.54% of GDP (Ministry of Education and Science Report on Latvian Higher education, 2011).

Total funding for research and technology is critically low in Latvia – in 2010 at 0.6% of GDP (Development of Science and Technology in Latvia, Ministry of Education and Science, 2011), while one of the EU headline targets of the EU-2020 Strategy is to invest 3% of the EU's GDP in R&D/innovation (the Europe 2020 Strategy, 2010). Invested financial resources and actions taken by HEIs for attract foreign students to Latvia indicate that the Latvian HEIs have limited resources for marketing; therefore, EU funding can be used for this purpose (KPMG Baltics SIA, 2011).

Several researches have been conducted to analyse the HE export efficiency and methodology has been developed for the performance measurement. Mahmood and McKay (1999) have analysed the export efficiency of the Australian HE export sector, by comparing the social benefits, expressed in terms of export earnings, with the social costs of HE exports measured in terms of domestic resource costs. The Ministry of Education of New Zealand in 2008 provided a study “The Economic Impact of Export Education”. In this study the contribution of HE's export to Gross Domestic Product was analysed, in particular, tuition fees, living expenditure by students, offshore education earnings, and flow-on effects through the wider economy (Commissioned by Education New Zealand, 2008).

According to the Eurostat data, contribution of education export to Latvian economics in 2007 was 0.054 million Latvian lats. However, these data are not analysed in detail neither to identify main trends nor for policy planning purposes. No other national-level surveys on the financial and non-financial benefits of Latvian HE exports have been performed.

2.3.3. Export marketing prerequisites are unfulfilled

Although international marketing requires detailed approach, in Latvia the main export marketing prerequisites are not defined and not fulfilled on a regular basis.

Increased government support in various forms is required to ensure the development of HE export (Cheung et al., 2010). The responsibility to attract foreign students has been extended to the local governments (Cubillo, 2006; Mazzarol, 1996), but this cannot be said about Latvia. The survey of HE Exportability of Latvia in 2011 found out that local governments in Latvia do not show enough initiative for attract foreign students to local HEIs (KPMG Baltics SIA, 2011).

Cheung et al. (2010) argues that in order to succeed in becoming an HE exporting country one of the major tasks should be a careful examination of competitors' strategies and policies, as well as the analysis of relevant information on a regular basis. However, the first national level analysis of competitors' strategies was carried out in 2011 and only partly analysing situation in the Baltic States (KPMG Baltics SIA, 2011).

Deliberate marketing and market research is necessary in order to promote export of education services. Marketers should know the factors influencing the choice of the prospective students to survive in the highly competitive environment (Cubilo, 2006). International market of HE consists of different consumers with various characteristics – geographical location, needs, culture and traditions, available resources, etc. Recognising differences between various markets and its segments, different market penetration strategies should be developed (Mazzarol, 1996).

Cubillo (2006) argues that HE service will probably begin when the prospective student contacts institution by requesting information on a study programme, institution and its entry requirements. In addition, website is a source of information, which is most often used by prospective students for receiving information. Thus, HE exporting countries use it as an important tool for promoting their HE export. International students can find lots of useful information on appropriate websites, such as information about HE institution, living expenses, study programmes, scholarships etc. Those websites are often available in different languages to suit the needs of prospective students (Cheung et al., 2010) and to provide more individualised approach.

The website www.StudyinLatvia.lv was launched in 2011 to increase visibility of the Latvian HE, as well as, to promote internationalisation of the Latvian HE. Examination of this website and websites of the Latvian HEIs indicate that most of the websites are available only in the Latvian and English languages. Websites of the governmental institutions are less “welcoming” and they often lack dynamism, information is insufficient, and in some cases the pages in English offer links to information in Latvian.

Necessity to develop customer-focused service culture is often discussed in literature (Mazzarol, 1998), emphasising the importance of qualitative information (ibid, 1996). However, in Latvia necessary information in foreign languages is not always available and leisure and entertainment opportunities are not advertised; although these factors affect students’ choice of study destination (KPMG Baltics SIA, 2011). In addition, for instance, Australian HEIs with its government’s support have tried to improve their curriculum and develop study programmes especially for Asian students, thus supporting distribution of these Australian offers in the Asian and Pacific Regions.

Finally, Mazzarol & Hosie (1996) refer to a study, which shows that the choice of study place is also influenced by its proximity to home. This argument could cause difficulties, if Latvia decided to focus on, for example, the Asian market. Also climate/weather conditions play a significant role in choosing the final destination for studies. Unfortunately, in Latvia autumn and winter periods are the longest ones.

2.4. Quality problems

According to the European Commission’s report “Students in Higher Education Reform” (2009), current HE system in Latvia lacks innovative teaching methods, e.g. learning by doing, business and investment games, industrial research, etc., as well as, distance learning and interdisciplinary projects are rare. It would be naive to suppose that foreign students will choose Latvia as its destination of studies only because of the chance to receive European diploma, without considering its quality substance. Due to this, quality of HE has been a very topical issue in Latvia during the last years.

In 2011 the ESF project “Evaluation of Higher Education Study Programmes and Proposals for Quality Improvement” was started with the main goal to evaluate HE study programmes’ quality, their overlapping, sufficiency of resources and sustainability and assess the international competitiveness of HE programmes. The overall aim of the project was to come up with proposals for future improvement, development, consolidation, promotion of international competitiveness, efficient use of resources and state budget funding of study programmes grouped in 28 study directions (CHE, 2011). Despite the international experts’ efforts during the Project implementation, the Minister of Education and Science came up with concerns that the project lacked precise theoretical methodology, experts could have conflicts of interest etc. and due to this, Ministry of Education and Science carried out its own alternative evaluation (Ir,

2012) which opened a new wave of discussions about the quality of HE in Latvia. This shows that quality of education is a topical issue in Latvia. In addition, it has to be admitted that rough discussions extremely influence the image of Latvian HE. This opinion has been attested by many involved stakeholders of the Latvian HE, for example, by the members of the Latvian Student Association (LSU, 2013) which proves that all involved stakeholders are interested in the developments of the Latvian HE.

Language is another quality factor influencing decision-making of prospective students and their parents. The situation analysis shows that the level of English language knowledge among the majority of local professors is below average thus creating a threat to the export growth of HE. Educators in many Latvian universities are not ready to teach in English language. This certainly indicates low competitiveness of the local educators and flaws in personnel policies of the universities, which does not favour the export development of HE. The survey of KPMG Baltics SIA (2011) indicates that only 23% of the students coming from the EU countries are satisfied with the English language proficiency of the teaching staff. However, the Russian language proficiency is valued higher, and about half of the CIS students studying in Latvia are satisfied (KPMG Baltics SIA, 2011).

Despite the numerous problems, we can find respective arguments in favour of exportability of the Latvian HE pertaining to every problem area, be it regulation, marketing or quality. Table 2 illustrates the arguments that oppose and favour exportability of the Latvian HE.

To conclude, the existing regulatory, marketing and quality problems significantly hinder exportability of the Latvian HE. Therefore they rather suggest that the local HE is not exportable at present, but allow assuming that it can be exported once the problems are solved or eliminated.

Table 2
Exportability of the Latvian Higher Education

	Contra	Pro
Regulatory problems	HE cannot be treated as a product or service, because it is crucial to maintain the ability of HEIs to serve the wide range of social aims, to maintain social values and traditions in contrast to focusing on profit making.	Once students pay for studies, HE is a service. They get not only services, but invest into own future primarily. Profit-orientation accords with the model of entrepreneurial university, whilst any export activity reflects competitiveness of a country.
	The initiative to concentrate on HE export is driven only by the Ministry of Education and Science or HEIs themselves; hence it is not an interdisciplinary priority supported by the Ministry of Economics and the Investment and Development Agency; the value of HE export is not admitted and supported centrally.	Most of the Latvian development and planning documents are given extra attention to the HE export, e.g. the Latvian Sustainable Development Strategy until 2030, the Latvian National Development Plan 2007-2013. Absence of centrality does not mean the HE export is not a priority, but rather indicate on regulatory problems.
	There is no clear scholarship policy for foreign students. Although the EU students are eligible for study loans in Latvia, they are not sufficiently informed of these options.	Since January 2012 the government elevates the export of HE by issuing additional grants for students. It can also stimulate the HE export by providing extra allowances for students, possibly, calculated as a percentage of tax income per student, providing tax discounts for HEIs for attracting more students, tax credits, etc. The rest pertains to marketing and scientific tourism development.

	Contra	Pro
Regulatory problems	Latvia has signed over 40 inter-governmental agreements about collaboration in the field of education and science, but further marketing and student attraction initiatives are not taking place.	Recently, Latvia has signed agreements with China on admittance of the HE diplomas; collaboration agreements with Czech Republic, Estonia and Lithuania were prolonged. The state agreement with Russia is on the agenda.
	Procedures for issuing of visas and residence permits are complicated and take a lot of time. Absence of diplomatic missions in such countries of interest, as for example, India.	The Ministry of Foreign Affairs continues its work on creating a diplomatic mission network. It has drawn a development plan up to 2015 and plans to open new embassies. The Immigration Law of Latvia is also in the process of improvement.
	Knowledge of Latvian is a prerequisite for undertaking permanent staff positions in the local universities, which does not attract foreign professors.	Language is a sensitive topic, but norms in the draft law of HE are more favourable to foreign languages. One of solutions to form bigger study groups is to allow usage of Russian in the first study year and switch to English later.
Marketing	The name of Latvia and Riga is not sufficiently promoted for HE. Latvia lacks a unified image and strategy for attracting foreign students.	Marketing of the local HE can appeal to the Latvian calm climate, proximity to the sea, lower living costs, European diplomas, scientific tourism, night life, etc.
	The main export marketing prerequisites are not defined and not fulfilled on a regular basis: target market, its research, segmentation, development of market penetration strategies, as well as, competitor analysis and policies.	The law of HE that is still under construction will help elevate internationalisation of the Latvian HE, establish an opportunity to attract foreign teaching staff and ensure studies in other languages. Consequently, unified development of the action plan with defined goals and strategies will be set in motion.
	Development of the HE export market is tied with considerable costs, while public expenditure on HE is very low.	One foreign student brings in about EUR 5000 a year. If Latvia increases the number of foreign students to 10 000 from the current 2000, it will result in EUR 40 million of extra capital inflow. These resources can be reinvested into marketing activities.
Quality	The current HE system in Latvia lacks innovative teaching methods. In R&D the country is lagging behind its Baltic neighbours. The level of English among the majority of local professors is below average.	As a result of natural competition between the local universities, they will either strengthen their positions by changing the paradigm and approach to teaching, or cease to exist. Hence, the quality problem is not the exporting problem per se, but rather the local HE as such. The set of reforms in HE by the Ministry of Education and Science targets this issue directly.

Conclusions and recommendations

During the discussion sessions the authors of the article came to the conclusion that HE is a service with a social aim to maintain social values and traditions. Still HEIs management is profit-oriented therefore creates the model of entrepreneurial institution.

It is clear that one central force for lobbying the HE export is needed, which takes action based on the market analysis and named priorities expand the HE of Latvia. This central force (an agency, department, union) which should work together with the Ministry of Education and Science, Ministry of Foreign Affairs and Ministry of Economics tries to eliminate the barriers that influence the export efforts of Latvian HE – naming clear strategy, coping with the language policy, forwarding the new law projects, solving the problems with financing, loans, scholarships etc.

It can be concluded that the HE in Latvia can be exportable; however, taking into account the many obstacles and insufficient planning, the current situation is rather weak. The parties suggest the government to form a certain HE export plan, provide coordinated interdisciplinary policy planning and funding, and point out the necessity to set the law of HE in order to elevate the internationalisation of HE in Latvia, as well as, to support the possibility to attract foreign teaching staff and study courses' or programmes implementation in foreign languages, resulting in promoted innovative profit- and quality-oriented internationalisation. On the basis of the initial market research, it is necessary to indicate the target market where to focus the available resources and actions, establish quantitative and qualitative targets to be achieved. For example, if one of the state priorities is tourism, it opens a chance to look at HE as an education-based tourism export, in that way attracting additional EU funding. By elevating the HE export in Latvia, the government has to establish a closer cooperation with the HEIs, investing in the HE quality. The research by KPMG Baltics performed in 2011 has established the basis for further development that should be analysed by the respective institutions, carrying out new research and granting action. The authors have to admit that concrete actions have already been taken, for example, a new action plan for Higher Education and Science development has been developed and according to that cooperation between HE institutions, Ministry of Education, Science and Ministry of Foreign Affairs and other involved institutions has started.

Most of the obstacles, however, are tied with the regulatory issues, even development of the HE export market strategy. This suggests that the government is a key player and it should be pro-active in solving these problems, if the country is aiming for a quantitative breakthrough in the mid-term. In reality, HEIs themselves should be taking active steps towards improvement of internationalisation and strengthening own brand recognition, as it may not be viable to rely solely on the governmental support.

Positive developments are noticeable in the project of the new HE Law, which allows more flexibility in choosing the language of instruction; the number of foreign students in Latvia is growing steadily; extra study grants are being issued, new international agreements are signed and diplomatic representatives are to be opened. As a destination, Latvia has huge potential to develop its scientific and general tourism market, thus strengthening the international image. However, most of the good developments are still maintaining the status of plans. Now the main challenge is to convert them into actions, which is a time-demanding process.

To conclude it has to be admitted that clear definition of target market would allow focusing available public resources and resources of HEIs on more result-orientated activities of Latvian HE export promotion. Due to that the main task for all involved parties would be to increase the quality of higher education in Latvia by this ensuring the competitiveness of Latvian HE – its openness and ability to integrate in international education system.

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CRITICAL SUCCESS FACTORS IN ENSURING SUSTAINABLE TECHNOLOGICAL INNOVATIVES IN BIOFUELS INDUSTRY

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Abstract

Purpose: Innovation is one of the most important driver's in achieving company sustainable competitiveness within industry. Research and Development (R&D) as company's structure unit is a key driver of technological innovation. There are key critical success factors (CSF) of R&D management which have direct impact on ensuring company's innovativeness. The aim of this paper is to identify Human resource capabilities (HRC) as CSF of R&D in bioethanol industry and to determinate relationships with particular strength of impact between identified CSF of R&D activities and determinants of technological innovativeness in bioethanol industry.

Design/Methodology/Approach: The required data to determine HRC as CSF in R&D management is collected through survey results in EU bioethanol industry consisting of 39 companies at the moment of making this research (2012). The questionnaire was completed by 14 respondents, which accounted for 36% from the total number of bioethanol producers and represented more than 30 % of bioethanol production market in EU, with a total revenue around 1 700 million €/year, only from product sales related to bio-ethanol. Identification of the variables, which have direct influence success of R&D, was up to respondents who were responsible for the R&D strategy, mainly top managers occupying positions such as - Directors, Plant managers, R&D director, Director engineering, Managing director, Chairman of the board, Science Innovation and administration manager and etc. For claim verification study includes analyses of activities of European bioethanol producers, descriptive statistics methods, econometric analysis and data evaluation.

Findings: Research has shown that interrelations between HR capabilities and success of R&D activities are not accidental, they are identifiable and are having a certain impact on company's technological innovativeness in bioethanol industry.

Research limitations/implications: The study limits partially closed data of companies' innovative activities within bioethanol industry. The research was carried out at EU level, which can be expanded further to other international markets, like Latin America, USA, etc.

Practical implications: Research results are useful for executives and managers who are responsible for company's innovation strategy and management of R&D in bioethanol industry. The paper focuses on specific R&D management aspects which can ensure long term competitiveness in bioethanol industry.

Social implications: The social impact of technological innovations in bioethanol industry was not analysed in this study.

Originality/value: This study is the first attempt to describe HRC as CSF of R&D management which have direct impact on company technological innovativeness.

Keywords: R&D, technological innovation, management, bioethanol industry, key success factors.

Introduction

Population growth, unbalanced economic development, CO₂ quotas, new and emerging technologies – are main key factors, affecting the growing demand of energy in the world outlook. According to the future estimations on energy consumption, the growth of consumption can range from 0,7% to 1,4% per year (IEA, 2010). In other words, the growth of the demand for energy by the year 2035 will reach approximately 16 750 million tons of oil (Mtoi) equivalently. For example, now the level of energy consumption is equivalent to 12 500 Mtoi of oil. Such a rapid growth in a relatively short period of time will cause the consequences that will dramatically influence availability of energy carriers. Emissions with harmful leave effect on environment, rapid decrease of conventional energy sources and energy dependence gave a powerful push for development of renewable energy sources. The transportation sector produces about 25% of global energy-related CO₂ emissions and accounts for roughly 50% of global oil consumption currently (IEA, 2008). Biofuels are seen as one of the most feasible options for reducing carbon emissions in the transport sector.

As the demand for biofuels grows, more and more new producers enter this market and particularly the producers of bioethanol. To date, plants producing bioethanol are designed and constructed so that they are able to produce a single main product - bioethanol. According to that, the producers of ethanol considering its strategy for company development in the long run are mainly following the cost leadership strategy.

The European bioethanol market is controlled by large groups and/or large agricultural cooperatives from the sugar and alcohol industry. The main actors are shown in the Table 1 below.

Table 1
The main producers of bioethanol in Europe, 2012 (MI/Yr)

Company	Country	Production capacity, MI/Yr
Abengoe Bioenergy	Spain	1265
Tereos	France	857
Crop Energies	Germany	850
Cristal Union	France	540

Company	Country	Production capacity, Ml/Yr
Ensus	UK	400
Verbio AG	Germany	355

Source: ePure, 2012

According to the data provided by ePure (2012) Abengoa Bioenergy, a biofuels subsidiary of the Abengoa group, is the European leader of fuel-bioethanol production (and is part of the main producers in the United States). The company owns three production facilities in Spain. Since 2008, it also owns a production facility in France, Abengoa Bioenergy France (ABF, 250 Ml/yr), located in the petrochemical complex of Lacq (Pyrénées-Atlantiques). A fifth facility located in Rotterdam. Two other units of identical capacity, currently in development, are to be set up in the United Kingdom in Immingham and in Germany in Rostock. The group also has significant production capacities in the United States (750 Ml/yr) and in Brazil (130 Ml/yr). In addition to bioethanol is active in other sectors of the power industry and the environment - solar energy, descaling of sea water, recycling industrial waste. 7.1 billion €/year turnover, over 22 thousand workers.

The French industrial group Tereos converts sugarbeet, sugarcane and cereals, into sugar, starch-based products, alcohols, bioethanol and by-products for the animal feed industry and electricity production. By way of its Brazilian subsidiary Guarani, Tereos also produced about 500 Ml of bioethanol in Brazil. It has 40 production sites (in different industrial and agriculture sectors) 8 of which are producing bioethanol in the EU. It consists of 12,000 farmers and 26,000 permanent and seasonal staff with turnover of 5 billion Euro/year (Tereos, 2013).

In 2008, the German group CropEnergies (member of the sugar group Südzucker) increased its fuel-bioethanol production capacities significantly, with a total of 850 Ml/yr out of four sites. The group's largest facility, located in Zeitz (360 Ml/yr) in Germany, is operated by its German subsidiary CropEnergies Bioethanol GmbH (formerly Südzucker Bioethanol GmbH). Operational since the end of 2008, the facility of Wanze (300 Ml/yr) in Belgium is operated by its Belgian subsidiary BioWanze. Finally, CropEnergies had developed its activities in France through the acquisition of the French industrialist Ryssen Alcools and Saint Louis Sucre thereby adding a fourth production site. Group revenues exceed 5 billion Euro/year, with more than 17,000 employees (Suedzucker, 2013).

Theoretical background of the research

A firm has a cost advantage if its cumulative costs of performing all value activities are lower than competitors' costs in the given industry. The strategic value of cost advantage hinges on its sustainability (Porter, 1998). Sustainability will be achieved if the sources of a firm's cost advantage are difficult for competitors to replicate or imitate. Cost advantage is sustainable if there are entry or mobility barriers that prevent competitors from imitating its sources. Sustainability varies for different cost drivers and from one industry to another. Economies or diseconomies of scale, learning, capacity utilization, linkages, interrelationships and policy choices to create proprietary product or process technology are the main drivers, imitation of which is the most complex processes (Sargautis & Volkova, 2011)

A deeper study of bioethanol industry has shown that innovations are almost the only factor the least prone to imitation. Johannessen's (2009) study shows that beside imitation, a

large number of international case studies have pointed out the connection between innovation and the competitive ability on the part of companies (Freeman, 1982; Dosi, 1984; OECD, 1984). The authors will not argue in favor of these connections in this paper, but regarding the statement that economic growth and competitive ability presuppose continuous and radical innovations as a postulate (Scott, 1989; Verspagen, 1992).

There are different types of companies and industries where the source of technological innovation differs in a great extent. Pavitt (1984) identified five major technological innovation sources in different industrial sectors:

1. Science based (electronics, chemicals, pharmaceuticals, etc.)
2. Information intensive (finance, retailing, publishing, travel, telecommunication, logistics, etc.)
3. Supplier dominant (services, agriculture, traditional manufacture, etc.)
4. Scale intensive (civil engineering, bulk materials, consumer durables, etc.)
5. Specialized suppliers (machinery, instruments, software, etc.)

Different sources of technology can be combined. In case of bioethanol industry, source of technological innovations mainly comes from specialized suppliers, production engineering and R&D, as the industry may be classified as scale and science intensive, as well.

Due to the growing competition in the bioethanol industry on global scale in order to sustain company competitiveness the innovations in bioethanol industry are needed more than ever today. The production of 1st-generation biofuels is characterized as mature and well understood technology. While most analyses continue to indicate that the 1st-generation biofuels show a net benefit in terms of GHG emissions reduction and energy balance, they also have several drawbacks, like contribute to higher food prices due to competition with food crops, or are an expensive option for energy security taking into account total production costs excluding government grants and subsidies (Sims, et al., 2008). The first-generation bioethanol produced today, will be gradually replaced by the second-generation bioethanol (Eisentraut, 2010) produced mainly from non-food raw materials containing cellulose and hemicelluloses (wood, sawdust, straw, etc.). Enormous investments in the research and construction of experimental plants, government support and promotion shows that already within 5-10 years, the second-generation bioethanol can be economically beneficial. Development of new innovative technologies requires enormous amount of knowledge and resources in the particular field. This leads to a need for a specialized R&D centres, performing as a foundation for invention of new innovative technology contributing to sustainable development of economy and a company. Successful commercialization of new technology is needed to achieve technological innovation which requires different set of competencies from management team.

Schumpeter first argued that modern firms equipped with R&D laboratories have become the central innovative actors. Many researchers agree with that and have seriously discussed on this dependence (Chandler, 1962; Nelson & Winter, 1982; Cohen & Levinthal, 1990; Prahalad & Hamel, 1990; Pavitt, 1990; Patel & Pavitt, 2000). Although nowadays understanding of innovation has expanded and many different non technological kinds of innovation are discussed (f.e. eco innovations, social innovations, brand driven innovations, users centred innovations, open innovations, management innovations, etc.), but in science based industries the technological innovations are crucially important as a source for differentiation or cost reduction in order to stay on the market. Both kinds of innovations could be combined for successful commercialization of inventions leading to technological innovations and successful management of technological innovations.

Even if the research takes place outside the company, there is a need for specialized knowledge from inside of a company, in order to adopt and implement such complex technologies. Therefore, the creation of R&D centre within the company would allow companies to develop and as well successfully implement new technologies leading to technological innovations, otherwise companies will not be able to sustain the competition in long run.

Since there is no commonly agreed definition of technology and technological innovation in scientific literature, in this research the following definitions of technology and technological innovation given by OECD will be applied. Technology can be interpreted broadly as the whole complex of knowledge, skills, routines, competence, equipment and engineering practice which are necessary to produce a product or service. A new product requires a change in this underlying technology. Technological innovation occurs when a new or changed product is introduced to the market, or when a new or changed process is used in commercial production based on new technology applied. The innovation process is the combination of activities - such as design, research, market investigation, tooling up and management - which are necessary to develop an innovative product or production process (OECD, 1997).

Whereas, R&D plays a major role in all the phases of the process of innovation (Chiesa, 2001) therefore the activities of such a centre it is difficult to organize and manage. As noted by Dodgson, et al. (2008) this difficulty reflects the broad range of objectives of R&D management, the different kind of skills and personnel involved in it and the difficulties regarding measuring its outcomes. As Brown, et al. (2002) noted, even the best structured company with the most effective processes will not be successful in R&D without the brilliant ideas of scientists and engineers, the organizational talent of good managers, and the hard work of employees. Research by Brown et. al, (2002), Chiesa (2001) of the success factors studies towards innovativeness of company extensively assessed the influence of human factors, analysing not only variables that relate to the characteristics of the personnel in the organization, but also variables that describe the way personnel are selected, trained, and treated - that is, variables relative to human resource management.

There are many internal and external factors influencing outcomes of R&D management. The paper focuses on Human resource as a CSF directly influencing R&D outcomes and identified as an essential part of further technological innovations. In the paper and the definition of critical success factors (CSF) according to Rockart (1979) is applied. CSF for any business, according to Rockart "are the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization. They are the few key areas where "things must go right" for the business to flourish. Critical success factors are those variables which management can influence through its decisions that can affect significantly the overall competitive positions of the various firms in an industry. These factors usually differ from industry to industry".

Human resource as CSF

Top managers

Carter and Williams (1957) have noted that "high quality" managers can to be characterized by an "ability to attract talented people and bring out the most in managers". The research shows that those managers who have high motivation, (Rothwell, 1977), are open-minded with respect to new ideas (Lilien and Yoon, 1989; Rothwell, 1977) and have

"considerable experience" (Szakasits, 1974) are considered to be the most valuable ones. Brown et. al (2002) studies generally showed that when management had formulated a corporate or technological strategy this strongly correlated with R&D success. Management which provides guidance, supports the R&D efforts, accepts risks, and allocates sufficient amounts of resources, leave positive effects on the R&D success. Failure occurred when the importance of technologies was misunderstood, which is perhaps having managers with a technological background on the board has a significant positive impact on success.

Project managers

Brown et. al (2002) analysis specifies that there is a significant influence of the project managers on innovation success. In the research has been noted, that the positive characteristics of a successful project manager that have a direct correlation with innovation, are as following: good technical qualifications, sufficient experience, adequate management skills, and sufficient authority within the organization, as well as "soft skills".

Employees

The studies show that the scientists who are intellectually independent and self-reliant correlated with success; they interact vigorously with their colleagues and pursue own ideas (Pelz and Andrews, 1966, Allen, 1977).

Factors relating to the knowledge and experience of employees were generally validated as success factors (Brown, et al., 2002). Katz and Allen (1982) showed that experience increased performance only during the first one and a half years. Job rotation of key personnel was shown to help transfer knowledge and promote innovation success.

Creativity was mentioned as a highly desirable factor. It has been noted that there are few reliable and valid tests for this driver (Jain, et al., 2010). It seems that the creativity is a good precondition of future inventiveness. However, according to Judge et al. (1997) managing research to encourage creativity involves resolving 'the dialectical process of synthesis between multiple dilemmas (e.g., freedom and control, flexibility and focus, differentiation and integration, incrementalism and discontinuity).

The Jain et al. (2010) research shows that successful R&D personnel have not to be overspecialized. They should be interested in several different topics as well.

R&D management

Composition of the project team

The composition of the project team, defined by Hogl and Gemunden (1999) as "its members' social and methodical competence, preference for teamwork, and heterogeneity in terms of knowledge and skills," was also shown as factors influencing project success. R&D success correlated with equal distributions among scientists and engineers or among technical and administrative staff (Kuhlmann & Holland, 1995). Effective group and team management is essential for creativity and the success of R&D projects, but it is also important to manage key

individuals. Narin and Beitzmann (1995) identified the importance of key employees. It is common that one or two 'stars' of a team are responsible for a laboratory's productivity.

In most R&D organizations, a number of highly visible individuals, such as 'champions', entrepreneurs, gatekeepers, project leaders, coaches and public relations people play key roles in the innovation process (Roberts & Fusfeld, 1978). Project managers, entrepreneurs should be allowed to select their own team with whom rewards are shared (Johne & Snelson, 1988).

Jain et al. (2010) noted, that successful entrepreneuring or marketing requires individuals with the ability to sell or market new ideas to others and obtain resources for R&D projects. These individuals should be technically competent, possess a wide range of interests, and be energetic and willing to take risks.

An important function in a research laboratory is a key communicator (Chakrabarti & O'Keefe, 1977), which reads the research literature in the field, particularly the "hard" papers, and talks frequently with outsiders and insiders in the laboratory.

Similarity in ability is important because it is undesirable for people to look at their co-workers as being intellectually too different (Jain, et al., 2010).

Hauschildt and Gemunden (1999) noted the importance of promoters of innovation.

Research groups with supervisors which had high technical skills were the most innovative. On the other hand, those groups that had supervisors who did not possess high technical skills, but were in turn rated highest in administrative skills, were least innovative (Farris, 1982).

Levi and Slem (1995) found that corporate culture affects the overall success of teamwork.

Management styles

When the situation for getting a task accomplished by group effort is either very favourable or very unfavourable an "autocratic, task-controlling management style" determined as best, on the other hand a "nondirective, permissive leader" works better in situations of intermediate difficulty (Fiedler, 1965). Baker, et al. (1988) however, found a participative management style to be correlated with success. Certain other types of behaviour were also found pertinent for project success, such as involvement and commitment to the project. Baker, et al. (1988) found that having the project manager on-site affects perceived success and failure.

Keller study of R&D project groups found correlation between transformational leadership and higher project quality in research projects (Keller, 1995). Berson and Linton (2005) study of 511 research engineers and scientists concluded that transformational leadership is important for a high-quality environment, improving both the job and employees satisfaction in an R&D setting. To bring a scientific employee on board requires using multiple leadership styles (MacCoby, 2006). Based on mutual influence, Farris (1982) suggests four styles of leadership or supervision: collaboration, delegation, domination and abdication. Studies clearly indicate that the collaborative style is most conducive to higher performance in innovation. There are, however, situations in which other styles of leadership and supervision have to be used (Jain, et al., 2010).

Research methodology

Science based company innovativeness and its Measurement

The authors of the study have investigated the factors influencing the successful activities of R&D containing a large number of variables. Despite this fact, it is rather difficult to apply the same variables to every particular case. Lack of common methodology and a great amount of influencing variables to effective R&D management do not allow the direct use of the given literature.

The research discovers the role HR and the degree of its influence on bioethanol companies' overall level of technological innovation capacity. The research is divided into two parts: 1) qualitative variables of HR characteristics; and 2) R&D management. Additional parts of the research are divided into subgroups of HR, containing characteristics of top managers, project managers, employees, team composition and management styles and their role in contributing towards technological innovation capacity of a firm.

Taking into consideration the CSF definition mentioned above for identifying their role and the level of their influence on company's ability to innovate in frame of bioethanol industry, the two hypotheses were developed:

H1: R&D personnel with some certain personal characteristics have the influence on technological innovation ability in bioethanol industry.

H2: In frame of bioethanol industry, the chosen approach of managing R&D has the influence on company's technological innovation ability.

First of all, the variables must be measured in order to assess the degree in which the chosen variables influence the technological innovativeness. However, as noted by researchers (Dodgson, et al., 2008, Smith, 2005) one of the greatest challenges to managing innovation is its measurement. According to Souitaris (2003) nowadays there is no such approach which would allow to measure the innovation. Furthermore, there are known to be controversies about the correlation of variables and their relation to the rate of innovation (Downs & Mohr, 1976; Wolfe, 1994).

Innovation is difficult to measure for a number of reasons. Dodgson, et al. (2008) points out the 4 main reasons: 1) some time is necessary for benefits appearing, 2) term of innovation, 3) some measurement systems measure inputs to the innovation, while others only measure outputs the benefits of an innovation often do not appear until sometime after its introduction, 4) ascertaining the source of an innovation may be complex. At the same time the researchers suggest number of indicators which would allow measuring the innovation. The main indicators used to measure innovation are R&D statistics, patent data, innovation surveys, and product announcements (Dodgson, et al. 2008, Smith, 2005).

Tidd (2001) draws attention to the fact that other attributes are frequently measured also, such as research funding budgets, number of researchers, number of significant inventions, number of new products, amount of published research, etc. Nelson and Winter (1982) point such factors as increased productivity and growth or lower costs. Andrew et. al (2007) provide a range of common measures related to technological innovation. These include inputs such as financial resources and people; processes such as resource efficiency, actual versus planned time

to market, and milestone compliance; and output measures such as number of new products and services launched, market share growth, new product success rates, number of patents filed and publications written.

In the Carayannis, et al. (2003) publication is presented a rather wide scope of variables that are aimed to measure the innovation. Apart from identification of the variables, the publications also suggest the typology and classification of these variables.

According to Smith (2005), there are three other important classes of indicators: 1) techno metric indicators, which explore the technical performance characteristics of products 2) synthetic indicators developed for scoreboard purposes mainly by consultants 3) databases on specific topics developed as research tools by individuals or groups.

The variables that measure the degree of company's innovativeness are presented in the *Table 2*.

Table 2
Variables of innovativeness

Source	Variables	
Oslo manual, 1997	R&D, Performance, new and improved products and processes	
Souitaris, 2003	Number of incrementally innovative products introduced in the past 3 years; Number of radically innovative products introduced in the past 3 years; Number of innovative manufacturing processes introduced in the past 3 years; Percentage of current sales due to incrementally innovative products introduced in the past 3 years; Percentage of current sales due to radically innovative products introduced in the past 3 years; Expenditure for innovation in the past 3 years over current sales. Number of patents acquired in the past 3 years.	
E. G. Carayannis, et al. 2003	Hard measurables	Patents, R&D Budget, New Products, R&D Staff, Publications, R&D, Incentives, New Features, Inventions, New Markets, Product Extensions, Conferences, CRADAs, Partnerships
	Soft measurables	Productivity, Growth, Lower Costs, Flexibility, Supply/Demand, Firm Size, Market Influence, User Benefits, Lower Prices, Social Enablers, Time Savers
Dodgson, et al., 2008	R&D statistics, patent data, innovation surveys, product announcements	

As some authors of empirical research often underestimate the complexity of innovation, it is reasonable to stop measuring company's innovativeness only upon a certain variable. The authors consider that technological innovativeness of a company is the company performance level leading to technological innovations and influenced by many interlinked internal and external variables forming company innovation ecosystem which requires effective management.

Taking into account the specifics of innovations in bioethanol industry, would be logical to take into consideration the variables that are typical for this industry and that indicate the degree of innovativeness in comparison to other companies of the same industry.

Dependent variables

There are number of reasons why the bioethanol industry cannot be evaluated by commonly accepted variables, which were mentioned above. For example, many authors suggest to measure innovativeness by the output of products for a certain period of time. However, in bioethanol industry, like in many other large-scale industries, competition occurs on the scale of economy as a whole and is based on cost leadership strategy. More reasonable in bioethanol industry would be measuring the technological processes developed leading to the technological innovation.

Nevertheless, the speed of implementation of those technological processes is still a question. Bioethanol production process involves many interrelated technological processes. Trying to improve the process in the event of failure must stop the entire plant indefinitely. According to this, development and testing of new processes take a long time, because there have been cases where this turns company in a bankruptcy. Therefore, evaluating the number of the patents implemented in a certain period, would be a doubtful approach.

The authors of the article as the most reasonable, consider the approach for technological innovativeness measurement in science based industries where the number of the patents (variable is coded as *Patent* in results) would be measured regardless of the fact whether the patent is actively implemented already or not, the knowledge acquired during the period of invention phase can be efficiently applied in practice on later stage of technology development. At the same time the number of patents that belong to Y02E50/00 class (coded as *Patent_c*), according to CPC classification, as well as the patents that have direct relation to the bioethanol industry (coded as *Patent_b*) will be measured.

Distinguishing the patents is an important aspect, as the total number of patents shows all the ongoing activities of the company, but the patents chosen according to the classification mentioned above will directly reflect the R&D activities in a particularly chosen industry's sector.

Certainly, the presence of *R&D activities* is by no means the most important innovation input, which definitely should be included (coded as *Lab_YN*) in the bioethanol industry organizational structure. Presence of R&D was chosen as dependable variable as it precedes the innovativeness within the company.

The suggested factors that are aimed to estimate what percentage of the company's turnover is invested into R&D, does not seem to be applicable: a) Data is confidential; b) R&D, often, is a rather general field where, among those related to bioethanol, are researched very diverse technologies.

This study also includes such term as company's performance expressed in production capacity (Coded as *Volume*). This variable distinctly reflects company's innovation capabilities.

Next variable is – degree of innovations complexity (coded as *Techn*), which is expressed in three degrees: standard, improved or second generation.

Other variables were eliminated been identified as not appropriate for this study, not available because of data confidentiality or evaluated as not significant. As noted by Iarossi (2006) questions on taxes, profits, and names of suppliers or clients could be the subject of distorted answers or out- right refusal.

Independent variables

The variables presented in chapter Human CSF are the independent variables. Human factors that lead to success in R&D have been divided into two groups: personnel qualities and R&D management. Additionally, the groups were split into subgroups, allowing to classify variables according to business titles of the employees (top manager, project manager and other employees) and according to composition of the team and leadership styles. Each subgroup had a range of CSF, from which to choose and respondent could make a chose regardless of the number of variables represented in a subgroup.

Identification of the variables, which have direct influence success of R&D, was up to respondents. After pointing out the variables that, in their view, had a positive influence on R&D the respondents had to identify the importance of each particular variable in every subgroup. The weight of every subgroup was measured according to Likert scale, results ranging from the unimportant to the very important. Measured Human CSF of R&D are presented in table 7 and can be found in Appendix I.

Research design

Our study covers all bioethanol industry in Europe. The list of the companies and the data were gathered from the database of an organization ePURE (ePURE, 2012). ePURE represents and supports companies that produce renewable ethanol in the EU for all end-uses, i.e. fuel, potable and industrial uses. ePURE also represents companies that have an interest in ethanol production. Currently, ePURE's membership accounts for 80% of the installed renewable ethanol production capacity in Europe. This information implies that the data presented in the databases of ePURE is a reliable source.

The data was collected by means of the survey. The survey was delivered by *E-mail URL embedded* – a respondent was invited by e-mail to the survey site, and the e-mail contains a URL address on which respondents click (Bradley, 1999). Respondents were redirected to the webpage *formscentral*, where was placed a questionnaire. This form of questionnaire was chosen because Web-based questionnaires have the same strength as paper self-completion questionnaires in that, in theory at least, respondents can complete the questionnaire in their own time, going away from it if they are interrupted and returning to it later. Of course, the major disadvantage is not having an interviewer on hand to clarify questions or to repair misunderstandings. Therefore the open-ended questions were included in the end of the paragraphs. These questions were aimed to reveal personal thoughts of respondents.

Generally, the questions were closed (or multiple choices), because using this format the respondents are restricted to a set of responses. Beside that respondents permit the inclusion of more variables in a research study because the format enables the respondent to answer more questions in the same time required to answer fewer open-ended questions (Siniscalco & Auriat, 2005).

Since the questions concern selection of the personnel responsible for R&D and innovation strategy, the target respondents were those who actually are responsible for R&D and innovation strategy. However, in practice identification of such individuals was highly complicated by companies' confidentiality policy. The number of companies producing bioethanol in Europe is relatively small and all the technology that can possibly serve as a competitive advantage for a company is thoroughly safeguarded. Moreover, some of the

companies belong to multinational corporations (e.g Cargil, where the number of employees exceeds 150 000) and have a strict internal policy and strict regulations on security and communication at all levels. These policies along with no willingness of the companies to cooperate in the research process have created additional constrains and delayed completion of the research for more than a year. Reaching out for respondents was also complicated by organizational structures of bioethanol producing companies. Employees responsible for R&D strategy range in their business titles from business development manager till R&D executive manager and even company's owner.

The survey was conducted in 39 companies producing bioethanol in Europe in 2012. The questionnaire was completed by 14 respondents, which accounted for 36% the total number of bioethanol producers. From the capacity point of view, it represented 32% of the bioethanol industry in Europe, at the moment of survey.

For measurement of the level of significance of the variables was utilized a linear regression model, which in the form of a standard deviation looks like follows:

$$Y_i = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k + \varepsilon_i \quad (1)$$

where, as in the simple linear regression model, Y_i is an observed value of the dependent variable, α is the population intercept, β_1 is the partial regression slope parameter for predictor x_1 , β_2 is the partial regression slope parameter for predictor x_2 , and ε_i is the error associated with predictions of Y_i (Denis, 2011).

Since utilization of all the independent variables during the process of modeling did not prove to have any significant effect on the result, the variables were used utilizing *backward deletion*, there the equation starts out with all the independent variables entered (Ho, 2006). Each variable is then evaluated one at a time, in terms of its contribution to the regression equation. Those variables that do not contribute significantly are deleted.

Taking into consideration not numerous respondents, only the modules ranging from $p < 0.1$ can be accepted. To test the presence of serial correlation among the residuals the *Durbin-Watson* test was used (Carver & Nash, 2012).

Results

The data gathered from correlation and descriptive statistics are presented in table 8 (see Appendix II). Some of the variables presented in this table were not chosen by respondents and consequently do not have a significant role and in the table are marked as *b*.

Examining the characteristics of top managers it should be noted that the greatest respondents' attention in this group was paid to the variable, which is designated as "Ability to attract talented people and bring out the most in managers". This variable has the highest mean value that indicates characteristics of top managers. "Open - minded with respect to new ideas" is the second variable, which is particularly important for respondents in the group of variables characterizing top managers. It is a quite interesting fact that this variable has strong negative correlation in relation to the size of companies and patents respectively. This type of managers is well perceived by little companies only, with low primordial potential for innovation. At the same time the correlation between patents and "Open - minded" managers has a negatively expressed coefficient. Interpreting this index, it is possible to say that free-thinking of top managers negatively affects the production of patents, i.e. productivity of R&D.

It should be also noted a variable “Allocation sufficient amounts of resources”, which has significant relations with patents in bioethanol industry and meet CPC classifications. This characteristic of top managers also positively affects the presence of R&D center in enterprises.

Estimating characteristics of project managers can be marked out one of them - “good technical qualifications”. This value among respondents has the highest estimation from all the block of describing human factors. It can be emphasized that from this group no correlation coefficient did show a meaningful interrelation with determinants of innovation.

“Experience of employees, Creativity” these two basic characteristics of employees are highly demanded in R&D center. These indexes are based on high arithmetic means among respondents. The correlation coefficient between “Intellectually independent” and patents in the bioethanol group became the most significant from this group besides having $p < 0.01$.

From a group describing influence of command composition on successful work of R&D center the ability “effective group and team management” got the highest estimations among respondents. This characteristic does not especially affect determinants of innovation, what can not be said about such indexes as “Individuals with the ability to sell or market new ideas, Key communicator, Supervisors with high technical skills”, which show a narrow interrelation, as with bioethanol patents and classification of CPC. This interrelation has a high coefficient of significance, but it is not necessary to focus on this value because of a low arithmetic mean.

The last group, which describes the management style of R&D stands out by a high correlation coefficient between “Autocratic, task - controlling management style” and a size of a company, and by the amount of general patent amount accordingly. The research shows that autocratic style of management which is presented in large companies stimulates new developments.

Modeling by using Human CSF variables should identify the factors that facilitate the innovation in bioethanol industry. As the list of the variables is quite diverse, they were sorted out into subgroups. In order to acquire the most adequate results the linear regression was applied to each group. The results gathered are presented in the *Tables 3-5*. Variables that have proven to have no statistical influence were eliminated.

Table 3
Model of regression estimating the effect of top managers' characteristics on innovation

Variables	Techn	Volume	Patents_b	Patents_c	Patents	Lab_YN
AH1	n.s.	32.231	n.s.	n.s.	10.661	-0.087
AH2	0.115	34.827	n.s.	n.s.	n.s.	-0.235
AH3	-0.157	-153.510	n.s.	0.226	-22.213	0.053
AH4	n.s.	-124.828	n.s.	n.s.	-14.399	0.344
AH5	0.138	52.053	-0.251	-0.303	11.532	0.125
AH6	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
AH7	n.s.	43.884	n.s.	n.s.	n.s.	0.143
AH8	0.124	7.253	0.600	0.312	n.s.	-0.162
AH9	n.s.	n.s.	1.130	0.926	n.s.	n.s.
AH10	0.079	25.064	-0.523	-0.384	n.s.	-0.109

Source: by authors. n.s.- not significant influence

Examining the obtained coefficients of multiple linear regression, which reflect the impact of variables related to characteristics of top managers on innovation determinants, it is possible to assert that this model is significant, because many factors can be predicted based on obtained results. Almost all variables describing characteristics of managers have a certain power. It should be noted that such variables as “Open - minded with respect to new ideas” has a strongly expressed negative indication in relation to innovation potential. Relatively negative influence on innovation potential of an enterprise has also “considerable professional experience”. It can be argued that the ability of managers to accept new ideas reduces innovation potential.

The influence of top manager characteristics on technology does not have strongly expressed coefficients.

Prognostication of results of patents as in bioethanol industries and according to CPC classification specifies that this result mainly depends on “Allocation sufficient amounts of resources”.

In the group of all patents, as well as in the group of R&D, interconnections are present, but the intensity of the influence has no particular importance.

It should be mentioned that the model describing the factors belonging to the group - project managers were not significant, and was excluded from this study.

Table 4
Model of regression estimating the effect of employee's characteristics on innovation

Variables	Techn	Volume	Patents_b	Patents_c	Patents	Lab_YN
CH1	0.077	n.s.	0.319	n.s.	n.s.	n.s.
CH2	n.s.	n.s.	1.237	0.991	n.s.	n.s.
CH3	-0.238	n.s.	0.383	n.s.	n.s.	n.s.
CH4	0.169	n.s.	0.541	0.322	n.s.	n.s.
CH5	n.s.	n.s.	0.333	0.218	n.s.	n.s.
CH6	-0.062	n.s.	-0.986	-0.974	n.s.	n.s.
CH7	0.254	n.s.	n.s.	0.357	n.s.	n.s.
CH8	-0.078	n.s.	0.218	0.215	n.s.	n.s.
CH9	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Source: by authors. n.s.- not significant influence

Some variables characterizing employees of R&D indicate the influence on innovativeness of the company. For example, influence on a dependent variable describing technology of factors is rather significant, but is not the great. However, a variable - “Intellectually independent” has a strong coefficients of regression in a given equation (patents for bioethanol and related to SPC classification). The analysis shows that it would be necessary to avoid personalities with characteristic “Individualist”. The equation “Volume, Patents” and presence of R&D center were not significant.

Table 5
Model of regression estimating the effect of composition of R&D team on innovation

Variables	Techn	Volume	Patents_b	Patents_c	Patents	Lab_YN
DH1	-0.208	-185.707	n.s.	0.522	-41.957	n.s.
DH2	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
DH3	-0.979	-133.746	0.550	n.s.	-46.330	n.s.
DH4	0.109	-62.808	-2.398	-1.044	1.304	-0.078
DH5	n.s.	0.908	-0.444	-0.186	0.123	n.s.
DH6	-0.099	n.s.	-0.994	-0.497	0.381	n.s.
DH7	n.s.	-241.309	-3.174	-1.270	-43.534	n.s.
DH8	0.164	153.805	0.361	0.126	44.961	0.053
DH9	0.987	297.145	n.s.	n.s.	91.188	n.s.
DH10	0.196	27.707	-1.299	-0.830	-1.500	-0.220
DH11	-0.369	-74.704	7.130	3.919	-42.347	0.249
DH12	n.s.	-16.553	-3.892	-2.050	2.431	-0.272

Source: by authors. n.s.- not significant influence

It should be noted that in this model many coefficients were significant and are presented in all regression equations. In the equation, which describes a degree of technological novelty (Techn), a factor that describes “Individuals with the ability to sell or market new ideas” became the most influential. The same factor was also found as the most influential in the equation indicating the innovation potential expressed in terms of production volume and in the equation with the general amount of patents.

Table 6
Model of regression estimating the effect of style of management on innovation

Variables	Techn	Volume	Patents_b	Patents_c	Patents	Lab_YN
EH1	n.s.	193.084	0.218	0.172	56.483	n.s.
EH2	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
EH3	n.s.	3.156	0.210	0.167	1.082	n.s.
EH4	n.s.	20.148	3.910	2.425	5.087	n.s.
EH5	n.s.	17.459	3.299	2.114	3.700	n.s.
EH6	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
EH7	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
EH8	n.s.	50.764	4.575	3.011	5.647	n.s.

Source: by authors. n.s.- not significant influence

The last model, describing the module “Human” shows that the equation, which indicates the influence of factors of the module “Style of management” on technology (Techn) has no significance. Similarly as well as on existences of R&D center (Lab _ YN). It is interesting to

notice that negative coefficients of regressions are absent in this model. “Autocratic, task - controlling management style” became an important coefficient in the equation “Volume and Patents”. The influence of the remaining coefficients was distributed with a low spread.

Summary

This research contributes to the literature dedicated to R&D management and HR management in bioethanol industry of European Union in order to find out the CSF influencing technological innovativeness capacity. As the large scale chemical production is very much similar in its specifics to bioethanol industry, would be fairly to state that this research is equally important for these industries.

The research has proven some of the primary hypothesizes of the authors. First, was proven that human resource capabilities have significant influence on companies’ technological innovativeness. Research results obtained by the authors, showed that the first hypothesis which states the existence of significant relations between characteristics of the personnel and technological innovativeness of the companies in bio-ethanol industry of EU, was proven only partially (see *Table 3-4*), because not all groups which characterize personnel appeared to be significant. Second hypothesis, which is proposed by the authors, presumes the existence of certain kinds of effects on technological innovativeness of the companies, depending on the way R&D centre is being managed – confirmed. This confirmation of the hypothesis indicates (see *Table 5-6*) that it is very important composition of R&D team, as well as how this team is managed, for an alleged opportunity for creating innovations.

Second, different HR capabilities have different roles and also different degree of the influence from the cumulative point of view. Some variables from certain groups have a much more important influence on certain determinants of the company’s innovativeness in comparison to other ones (see *Table 3-6*). Results show, that there is an opportunity of modelling the components of the companies innovativeness. Thus for example, innovativeness of the company can be assumed, and expressed in volume, by being based on the top manager’s characteristics or patents and technologies on their employee characteristics. Also this research points out that besides the positive relations there are also negative CSF, which impacts companies’ innovativeness in an undesirable way. In order to enhance innovativeness of companies, all CSF having a negative impact should be eliminated.

Third, when analysing models of the regression analysis, some unexpected results were obtained. It appeared that not all HR variables have the significant influence on technological innovativeness. Thus the independent variables from the group, which describes manager’s characteristics, appeared to be insignificant during data modelling. These models are pointing out an impact on individual components of companies’ technological innovativeness. This result indicates that when defining technological innovation of the companies’, characteristics of R&D project managers should not be taken into account.

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Appendix I

Table 7
Independent variables of People CSF in R&D

Group	Code	Independent variables
Characteristics of the top managers	AH1	Ability to attract talented people and bring out the most in managers
	AH2	High motivation
	AH3	Open-minded with respect to new ideas
	AH4	Considerable professional experience
	AH5	Possibility to formulate clear corporate and technological strategy

Group	Code	Independent variables
Characteristics of the R&D project managers	AH6	Provide guidance
	AH7	Support the R&D effort
	AH8	Accepting risks
	AH9	Allocation sufficient amounts of resources
	AH10	Managers with technological background on the board
	AH11	Other
	BH1	Good technical qualifications
	BH2	Sufficient experience
	BH3	Adequate administrative skills
	BH4	Sufficient authority within the organization
	BH5	"Soft skills"
	BH6	Other
Characteristics of the employees	CH1	Experience of employees
	CH2	Intellectually independent
	CH3	Self-reliant
	CH4	Interacted vigorously with their colleagues
	CH5	Creativity
	CH6	Individualist
	CH7	Is not overspecialized
	CH8	Interested in several topics
	CH9	Other
Composition of R&D team	DH1	Equal distributions among scientists and engineers
	DH2	Equal distributions among technical and administrative staff
	DH3	Possibility to select own team
	DH4	Effective group and team management
	DH5	Key employees (one or two 'stars' that are responsible for a laboratory's productivity)
	DH6	Presence of champions (person within the project who pushes the effort ahead, despite the inevitable difficulties)
	DH7	Presence of entrepreneurs
	DH8	Presence of gatekeepers (individual who links the project to external information sources)
Composition of R&D team	DH9	Individuals with the ability to sell or market new ideas
	DH10	Key communicator (reads the literature in the field, particularly the "hard" papers, and talks frequently with outsiders and insiders in the laboratory)
	DH11	Supervisors with high technical skills
	DH12	Other
Style of management	EH1	Autocratic, task-controlling management style
	EH2	Nondirective, permissive leader
	EH3	Transformational leadership (leads to positive changes in those who follow, enhances the motivation, morale and performance of followers through a variety of mechanisms)
	EH4	Collaboration style (Both the supervisor and the employees have a great deal of influence in making decisions)
	EH5	Delegation (The employees are given considerable responsibility for the decisions, and the supervisor has little influence)
	EH6	Dominant (The supervisor has a great deal of influence, and the employees have very little input)
	EH7	Abdication (The supervisor neglects to assign a particular task to the employees and neglects to work on it himself.)
	EH8	Other

Source: by authors

Appendix II

Table 8
Descriptive statistics and correlations

Variable	Min	MaX	Mean	Std. Dev.	Techn	Volume	Patents_b	Patents_c	Patents	Lab_YN
Techn	0.0	2.0	.357	.6333	1					
Volume	5.4	850.0	168.600	221.541	.086	1				
Patents_b	0.0	14.0	2.000	3.961	-.031	-.016	1			
Patents_c	0.0	8.0	1.357	2.590	.057	-.073	.967**	1		
Patents	0.0	226.0	20.214	59.503	.310	.884**	-.086	-.088	1	
Lab_YN	0.0	1.0	0.643	0.497	.192	-.038	.273	.286	.208	1
AH1	0.0	5.0	3.500	1.990	-.031	-.095	.244	.276	.100	.272
AH2	0.0	5.0	1.357	2.240	.391	-.266	.173	.361	-.155	-.153
AH3	0.0	5.0	3.214	2.155	-.117	-.495	.027	.027	-.420	-.138
AH4	0.0	5.0	0.929	1.900	.534*	-.306	.276	.428	-.109	.378
AH5	0.0	5.0	1.929	2.336	.435	.128	.324	.335	.279	.374
AH6	0.0	0.0	0.000	0.000	b	b	b	b	b	b
AH7	0.0	5.0	2.000	2.418	.000	-.225	.233	.209	-.236	.000
AH8	0.0	5.0	1.857	2.282	.411	-.271	.374	.361	-.216	.019
AH9	0.0	5.0	1.643	2.307	.305	.216	.623*	.692**	.343	.551*
AH10	0.0	5.0	1.857	2.248	.039	-.101	-.285	-.268	-.229	-.256
BH1	0.0	5.0	4.000	1.301	-.280	-.039	.104	0.000	-.017	.357
BH2	0.0	5.0	1.857	2.248	.147	-.339	.328	.326	-.225	.364
BH3	0.0	5.0	2.214	2.326	-.108	.332	.376	.280	.218	.138
BH4	0.0	5.0	2.500	2.279	-.240	.318	.102	.007	.163	-.034
BH5	0.0	5.0	2.286	2.091	.033	-.185	-.371	-.333	-.328	-.338
BH6	0.0	3.0	0.214	0.802	-.162	-.050	-.145	-.151	-.020	-.372
CH1	0.0	5.0	3.571	1.989	.314	.095	.371	.405	.062	-.089
CH2	0.0	5.0	1.571	2.209	-.432	-.045	.571*	.540*	-.191	.270
CH3	0.0	5.0	1.000	2.000	-.304	.189	.447	.312	-.135	-.309
CH4	0.0	5.0	1.286	2.128	.147	-.098	.438	.357	-.164	.104
CH5	0.0	5.0	3.429	1.910	.118	.153	.030	-.002	.102	-.069
CH6	0.0	4.0	0.571	1.453	-.239	.070	-.160	-.222	-.140	-.122
CH7	0.0	5.0	1.000	2.000	.304	-.006	-.087	-.059	-.145	-.309
CH8	0.0	5.0	2.286	2.400	-.325	-.153	.413	.453	-.239	-.166
CH9	0.0	0.0	0.000	0.000	b	b	b	b	b	b
DH1	0.0	4.0	1.071	1.774	.318	-.219	.164	.346	-.112	-.230
DH2	0.0	0.0	0.000	0.000	b	b	b	b	b	b
DH3	0.0	5.0	0.714	1.816	-.239	-.093	.535*	.432	-.094	.304

Variable	Min	MaX	Mean	Std. Dev.	Techn	Volume	Patents_b	Patents_c	Patents	Lab_Y N
DH4	0.0	5.0	2.929	2.303	-.034	.226	.245	.211	.243	.043
DH5	0.0	5.0	2.000	2.418	-.251	-.287	.377	.319	-.243	.320
DH6	0.0	5.0	2.143	2.282	.015	.322	.162	.108	.357	.387
DH7	0.0	5.0	1.214	2.045	-.004	-.250	.427	.377	-.152	.459
DH8	0.0	5.0	1.857	2.248	-.015	.400	.466	.485	.454	.088
DH9	0.0	5.0	0.929	1.900	.087	-.178	.542*	.490	-.109	.378
DH10	0.0	5.0	0.643	1.646	.058	.030	.708**	.646*	-.075	-.074
DH11	0.0	5.0	0.357	1.336	-.162	.080	.872**	.738**	-.030	.207
DH12	0.0	4.0	0.571	1.453	-.239	.184	-.160	-.222	-.083	-.548*
EH1	0.0	4.0	0.286	1.069	.292	.885**	-.145	-.151	.995**	.207
EH2	0.0	0.0	0.000	0.000	b	b	b	b	b	b
EH3	0.0	5.0	1.571	2.209	-.157	-.255	-.299	-.267	-.208	-.360
EH4	0.0	5.0	2.857	1.916	-.018	.015	-.111	-.206	.170	.104
EH5	0.0	5.0	1.214	2.045	.293	-.160	.389	.406	-.145	.081
EH6	0.0	0.0	0.000	0.000	b	b	b	b	b	b
EH7	0.0	0.0	0.000	0.000	b	b	b	b	b	b
EH8	0.0	5.0	0.643	1.646	-.237	.113	.248	.321	-.104	-.074

*. Correlation is significant at the 0.05 level (2-tailed).

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

b. Cannot be computed because at least one of the variables is constant.

III

OTHER THEMES

ROLE OF LANGUAGE IN ASSESSMENT OF ORGANIZATIONAL CULTURE'S EFFICIENCY: ASSESSING AN EXAMPLE OF A BANK IN LATVIA

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Abstract

Topicality: Issues of culture and language have become very topical concerning enterprise competitiveness in multicultural environment of Latvia; moreover, within the context of globalisation and European integration. The role of language as a means of communication is increasing. The internal communication of staff and management's opinions at subculture levels has been researched in the article. Research plays an important role in the increase of efficiency in entrepreneurship. Any research instrument is a certain language.

Purpose: The aim of the paper is to analyse an example culture of one of the leaders in commercial banking sector in Latvia, its regional branch which has efficient performance.

Restrictions of the research:

1. The article researches organisational culture from the point of view of management science which consequently determines the choice of primary sources and literature.
2. Research results could not refer to all the sector of commercial banking as a whole and to other industries. The banks which have been analysed in this article could be considered as a suggestion to carry out a research about banking sector in general.

Methodology: Questionnaires for evolution of Organizational Culture:

Organizational culture Assessment Instrument (OCAI) and Organizational Culture Index (OCI). These instruments are two different languages.

Main conclusions of this research are:

1. Strong or efficient organisational culture refers to the performance of an efficient bank.
2. Similar language of employees and management (similarity in opinions concerning the basic values of the organisation) regarding cultural issues of the organisation proves internal efficiency of the bank's culture.
3. Results of different instruments of research (different languages- the versions of OCAI and OCI) but which are characterised by contextual similarity, show similar results.
4. Similarity of OCAI and OCI version results proves validity and credibility of the research.

Introduction: Culture and Language

Culture is a polysemantic phenomenon which characterises a certain society, a certain environment. A great number of definitions prove this polysemy. There exist approximately 250 definitions of culture. In general culture could be defined as "the collective programming of the mind that distinguishes the members of one group or category of people from others. Culture is learned not innate." (Hofstede, G., Hofstede, G.,J, 2005). The nucleus of culture is formed by the certain system of values. Such cultural theories as the theory of the cultural 'onion', the theory of the cultural 'wheel', theory of whole system approach to cultural transformation for building a values – driven organization etc. (Hofstede, G., Hofstede, G.,J, 2005; Kets de Vries, 2001; Baretts, 2008). Language is pointed out as the most actual sign of the language in all theories- language (including jargon, e.g. business jargon, the jargon of bank employees etc.) is the form of cultural existence. Polysemy of culture is revealed in its universality: there are no such spheres of human existence, such forms of activity where the word culture could not be attached. (Kūle, Kūlis, 1998).

Organisational culture is a significant issue of research in the science of management. The essential indication of culture and organisational culture is a language. The language is a system of definite signs which could be expressed in different forms- verbal, mathematical formula, calculations and different non-verbal forms of the language. The authors of the article emphasize that any research is carried out in a form of language but these forms might be different.

1. Organisational Culture

The internal environment of an organisation is formed by:

- Resources (the main being human resources);
- Processes;
- Strategy;
- Organisational culture.

Effective organizational culture ("know how") together with purpose ("know why"), strategy ("know what, when, where") and execution ("know who") produce innovation values (Heskett, 2012).

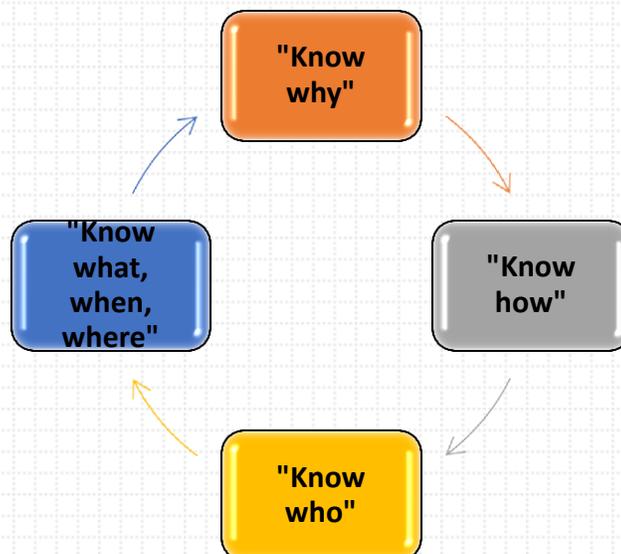


Figure 1. Relationships between organizational culture, purpose, strategy, execution (Authors modified version of J.Heskett, 2012)

Culture reflects internal environment and strategy of an organisation. (Heskett, 2012). A great number of definitions for organisational culture exist in the field of entrepreneurship research. E. Schein is the author of the most popular organizational culture definition: Organizational culture is „[...] a pattern of basic assumption – invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration – that has worked well enough to be considered valid and therefore, to be taught to new members as the correct way to perceive, think, and feel in to those problems” [Schein, 1985]. Most of the authors of management science define organizational culture as a value system, which determine attitude (Vanaerde, Jownree, 2003; Schein, 1985, 2009; Kets de Vries, 2001; Barets, 2008, Peters, Watermann, 1982; Taormina, 2004) Values are expressed in a language but the language itself is a cultural artefact. (Schein, 2009). Strong, adaptive or efficient organisational culture is one of the indicators of the efficiency of organisational culture. The most significant criteria of the efficiency of organisational activity are both- the results achieved and the way they had been achieved. Organisational culture is the way of achieving results (Wallach, 1983). One of the first and still existing definitions of organisational culture is: the way of doing things in an organisation (Heskett, 2012). Organisational cultures are not homogenous but they consist of subcultures. Any organizational culture consists of subcultures. Subcultures are relatively independent systems of values, norms and behavioural stereotypes that exist in a cultural context and are not in a sharp conflict with it. (Zepa, 1997). Each subculture has its own language – values but, in general, they do not differ in efficient cultures.

Each organisation has two main subcultures:

1. Employee subculture,
2. Management subculture (Schein, 2009).

Most famous bipolar classification of organizational culture is: strong /weak or efficient/ inefficient. One of the research issues is to investigate similarities and differences in languages of subcultures. Both the methodology of OCAI as well as of OCI allows to investigate them. Strong or efficient organisational culture is characterised by similarity of subcultures language.

Weak organizational cultures are characterised by a high level of cultural entropy – a proportion of energy wasted on non – productive activities by a group of people (Barets, 2008). One of its causes is the mutual discrepancy of the existing and preferred organisational cultures (Barets, 2008). The higher the degree of approximation between existing and preferred organisational culture, the more efficient it is. The language of OCAI – the instrument of research measures the degree of mutual compatibility or incompatibility.

2. Typology of organisational culture

Any theory is the concept of thinking and language. The authors of the article are using two theories to base on in their research:

1. Organizational culture typology theory by K. Cameron and R. Quinn. This theoretical model is called Competing Values Framework (Cameron, Quinn, 2006). It is one language of research.
2. Multidimensional subculture theory by E. Wallach (Wallach, 1993). It is another language of research. Both theories are very similar.

The authors of these theories emphasize that culture is not a monolith, but a multidimensional value system.

Competing Values Framework theory determines four basic types of organizational culture:

1. Hierarchy (bureaucratic) type;
2. Market type;
3. Clan (family, supportive) type;
4. Adhocracy (innovative) type.

There are two dimensions of the efficiency of organisational culture at the basis of typology:

1. Flexibility and discretion versus stability and control;
2. External focus and differentiation versus internal focus and integration.

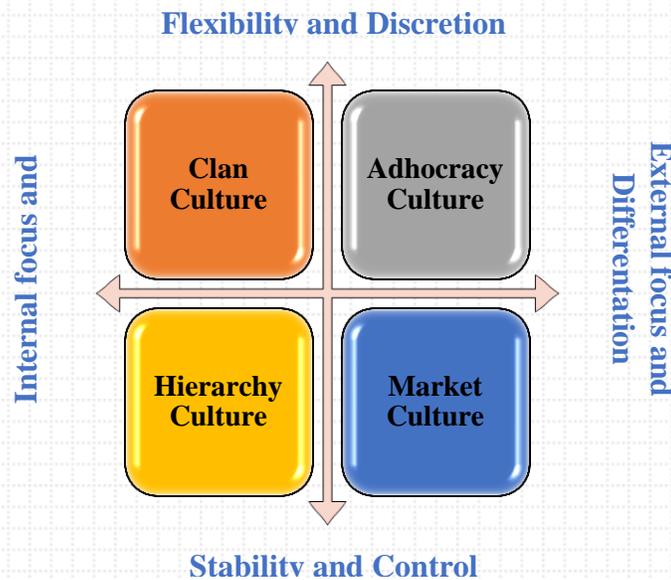


Figure 2. The Competing Values Framework theory (Cameron, Quinn, 2006)

E. Wallach determines three main cultural dimensions (she uses the term „cultural dimensions”) Similarity of these theories is revealed by *Table 1*.

Table 1
R. Quinn's, K. Cameron's and E. Wallach's culture theory's comparative table
(Dubkēvičs, Barbars, 2011)

Organisational culture types by R. Quinn and K. Cameron	Values	Dimensions of organisational culture by E. Wallach
1. Hierarchical culture	<ul style="list-style-type: none"> • Formal, structural environment; • Hierarchy of power; • Goal oriented; • Stability; • Competitiveness. 	1. Bureaucratical culture
2. Clan culture	<ul style="list-style-type: none"> • Positive microclimate • Consciousness; • High selfmotivation; • Respect for traditions; • Esteem of personality 	2. Supportive culture
3. Adhocracy culture	<ul style="list-style-type: none"> • Creative environment • Freedom; • Change oriented; • Risk oriented; • High inner motivation. 	3. Innovative culture

E. Wallach does not isolate a separate market dimension in organisational culture. In general culture in entrepreneurship should be market oriented.

Participants:

All 56 respondents (19 male, 37 female) were working adults aged from 23 to 54. Majority (66%) are female. All the respondents who participated in the research were divided into two groups – staff and management. Results are also shown in each group separately. Majority (66%) of respondents represent staff, while 34% represent middle level managers. All the respondents present a sufficient level of confidence.

Measures:

1. The main instrument used for measuring organizational culture was Organizational Culture Assessment Instrument (OCAI) by K. Cameron and R. Quinn. The questionnaire contains 6 questions. There are four answers for each question. Respondents have to divide 100 points among 4 alternatives. The questionnaire allows to determine the dominant organizational culture type, the degree of approximation of the existing and preferred culture and hence its effectiveness.
2. Organizational culture was also measured by using 24 – item Organizational Culture Index (OCI). Using a four – point scale (1 = Does not describe my organization, to 4 – describes my organization most of the time), respondents were asked to assess how well the adjectives describe their company. This instrument was used for the assessment of the existing culture as well to assess credibility of the research! The authors carried out linguistic adaptation of this instrument in 2010. It has been socially adapted in several publications concerning research of banking sector's culture (*Dubkēvičs, Barbars, 2011*).

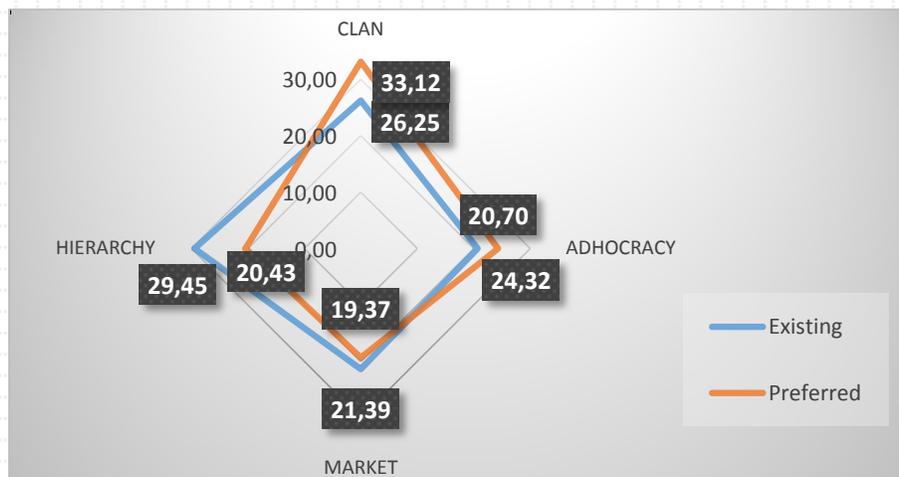
Research questions and assumptions:

1. Is the organisation culture of this bank branch characterised by similar subculture (the language of staff and management) at the existing and preferred level? Thesis: similar language of subculture acknowledges efficiency of the organisational culture.
2. On condition that different research instruments are used (different languages) which are based on similar theoretical concepts (the contents of languages is similar), do we achieve similar results? Thesis: similarity of results confirms assumption about efficiency of organisational culture.
3. Is efficient activity of a bank branch characterised by efficient organisational culture? Thesis: Efficient entrepreneurship is characterised by efficient organisational culture.

Results:

The bank where the research was carried out is one of the leaders in the banking sector which confirms efficiency of its performance. One of the biggest regional branches of a bank was analysed. It could be assumed that results of the research as well reflect existing and preferred organisational culture in other branches of this bank and in general in the bank because basic values which form the nucleus of culture are the same- the bank has a common language. Efficiency of performance of any organisation is characterised by the chosen language in internal and external entrepreneurial environment.

The existing organisational culture of the branch of the bank in assessment of the staff subculture in OCAI version is shown in *Figure 3*.



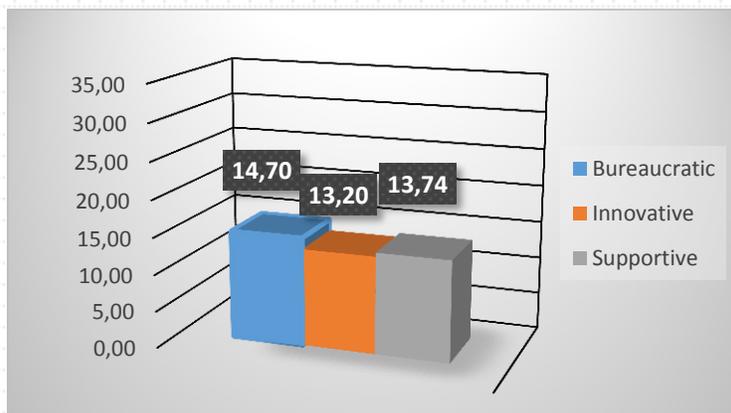
Source: Own

Figure 3. The existing organisational culture of the branch of the bank as assessed by staff subculture in OCAI version

Results of OCAI questionnaire reveal both- existing and preferred culture of the branch of the bank. The article first of all analyses existing organisational culture. *Figure 3* proves that values of hierarchical culture dominate in the culture of the bank's branch which are characteristic of strictly structured, formal internal environment. On the whole they correspond to the specifics of the banking area.

The least vivid of existing organisational culture is external orientation and differentiation – the branch of the bank is the least characterised by market and adhocratic values. However, their share is rather big if compared with dominant values.

Similar results are shown in percentage frequency distribution by results of OCI questionnaire (see *Figure 4*).

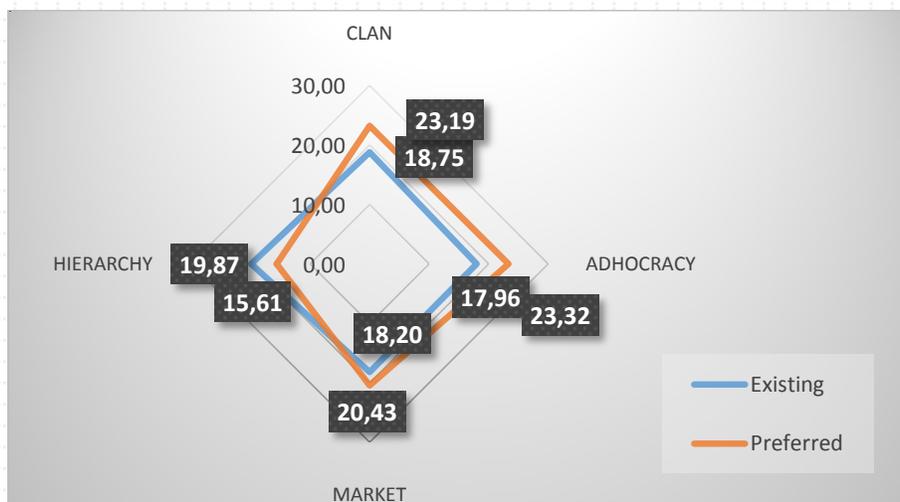


Source: Own

Figure 4. Existing organisational culture of the bank branch as assessed by staff subculture in OCI version

Figure 4 confirms results of OCAI questionnaire. Dominants of organisational culture are not vivid (dimensional percentage frequency of bureaucratic, supportive and innovative culture is correspondingly 14, 70%, 13, 74%, 13, 20%. OCI results acknowledge validity and credibility of the research.

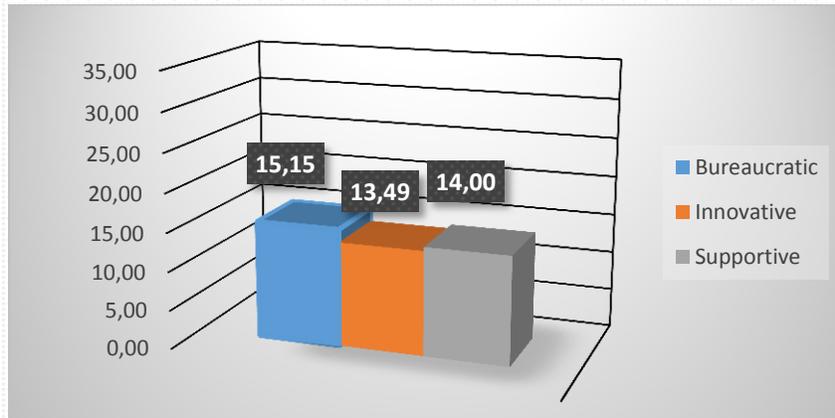
Similar situation is observed in organisational culture as assessed by the management of the bank's branch (see *Figure 5*)



Source: Own.

Figure 5. Existing organisational culture of the bank's branch as assessed by management subculture in OCAI version

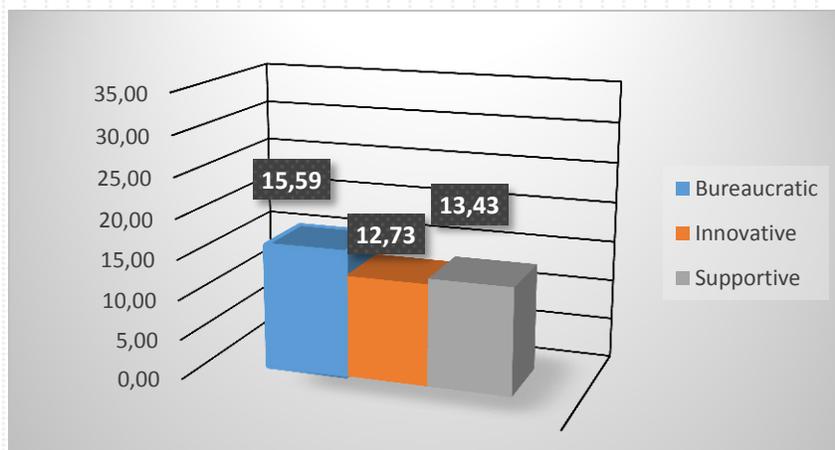
Validity and credibility is confirmed by the language of retesting- OCI version. Its results are reflected in percentage frequency distribution in *Figure 6*.



Source: Own

Figure 6. Existing organisational culture of the bank's branch as assessed by management subculture in OCI version

Bureaucratic culture is the dominating one also in OCI version, leaving supportive culture as the second and innovative one as the third. Percentage frequency distribution consequently is 15, 15%, 13, 49%, 14,00%. Languages of both subcultures are similar. Similarity of languages allows to make an assumption about efficiency of existing organisational culture. Efficient organisation is characterised by orderliness of the internal environment, balance between vertical and horizontal flow of information, orientation towards human resource development (HRD). Culture is a significant factor of internal environment of an organisation. [Cameron, 1980]. Similarity of languages is even more confirmed by assessment of the existing organisational culture of both subcultures in general as well as in OCAI and OCI versions. OCI results are depicted in *Figure 7*.

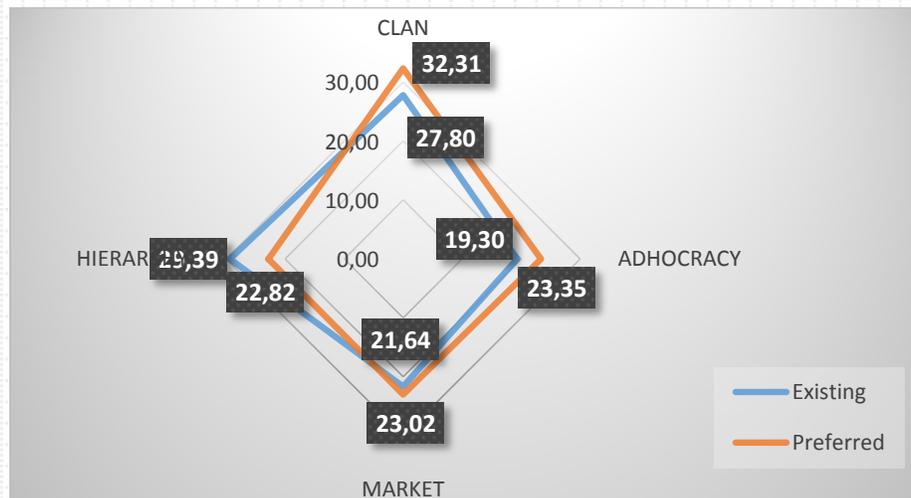


Source: Own

Figure 7. Existing organisational culture of the bank's branch as assessed by management and staff subcultures in OCI version

Results of the questionnaire concerning index of organisational culture reveal that the dominating ones are bureaucratic organisational culture values but at the same time supportive and innovative cultural values play a significant role (percentage frequency distribution correspondingly 15,59%, 13,43% and 12,73 %) Culture of the branch of the bank is evaluated as a balanced one and thus efficient.

OCAI questionnaire was used for the research of preferred organisational culture. Results of both subcultures as a whole have been reflected in *Figure 8*.



Source: Own.

Figure 8. Existing and preferred bank's branch assessment by management and staff subcultures in OCAI version

Figure 8 shows, that both subcultures see the clan culture type as dominant in the preferred organizational culture model, culture orientation to innovations is increasing substantially (Adhocracy culture type), to the market – external orientation. Such a tendency also appears in staff and management assessment (see *Figure 3* and *Figure 5*). It could be explained objectively with a growing competition in the banking sector, though within the framework of this paper it is an assumption, but with a high level of confidence.

High proportion of clan culture values in the preferred organizational culture type might be explained by the following: strongly structured, tightly formalized internal work environment provokes “family” culture values. Changes of the preferred model are based on proportional decrease of hierarchical values.

Strongly structured organisational culture (hierarchic) provokes at least at the level of expectations- clan or family culture values. It should be considered that the group of respondents is mainly comprised of women. Furthermore, this issue should be discussed and researched in future.

By analysing existing and preferred organizational culture we can conclude that:

1. essential difference between existing and preferred bank's branch culture does not exist;
2. preferred organizational culture model is an ideal type and by changing the existing organizational culture model it will increase the performance efficiency of the bank's branch ;

3. Research results correspond to similar research of banking sector's organizational culture (Dubkēvičs, Barbars, 2011).

Issues of the further research:

1. Strongly structured organisational culture (hierarchical) provokes at least at the level of expectations – clan or family culture values. It should be considered that the group of respondents is mainly comprised of women. Furthermore, this issue should be discussed and researched in future.
2. Do results of the research refer to all the sector of commercial banking?
3. Are results of organisational culture research similar in other industries?

Conclusions:

1. Organizational culture as a competing value system exists in a linguistic form. The language itself as well as the slang is organizational culture's artefact.
2. Results of the both research instruments OCAI and OCI coincide which proves the coincidence of two different research languages.
3. The researched bank's branch staff and management opinion – languages about existing organizational culture are different, however they are not valued as significant, therefore the specific bank's branch culture can be considered as efficient.
4. Culture efficiency of the bank's branch is characterized by a comparatively high exposure level between existing and preferred organizational culture – existing and subjectively ideal language in the staff and management subculture overall.
5. Research results allow to assume, that efficient organization (bank and its branch) is characterised by efficient organizational culture.
6. Result similarity of different research instruments – languages (OCAI and OCI versions) in existing culture assessment in the bank's branch certifies high research validity and credibility.

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THE IMPORTANCE OF PROFESSIONAL COMPETENCIES IN THE HUMAN CAPITAL EFFECTIVE USAGE

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Abstract

The article consists of

- Insight into the development history of the concept of human capital;
- Development of human capital theory in Latvia;
- The study of the Latvian banking sector employees' qualifications and skills compliance with the requirements.

The article discusses the problem of human capital as the importance of country economic growth key element, its evaluation and productivity. In the context of limited resources and adverse demographic trends, rationally evaluated investments and productive exploitation of human capital is the main way to overcome the economic downturn and financial stress long-term.

The research was done on how the effectiveness of human capital exploitation is influenced by the relevance of skills required by employer.

The research problem: the mismatch of employee skills to employer's requirements gives cause to an inefficient use of human capital, causing damage to both employers and employees.

Study objective: To ascertain employees, working in the banking sector, skills, education and qualification compliance with industry requirements and determine how discrepancies affect employee motivation. The research was done using the methodology applied in Portugal in bank employee testing, based on employees' self-esteem.

The ability to make impartial self-appraisal of own activities and competences, is particularly important, because only a man who is able to impartially assess may plan the future, choose the right career directions, evaluate own characteristics, and identify cumbersome obstacles.

Key words: Human capital, labour market, qualification compliance, skills mismatch, unemployment.

Introduction

At the beginning of the new millennium, Europe and the world undergone rapid changes influenced by the technology, science and globalization processes. Ever increasing development of information in the gross domestic product, and in the development of hi-economic sectors, advance new requirements in human resource development.

The labour market requirements for the employees are changing rapidly. Therefore there are increasing issues within the skilled employee sector as well as the concern that human capital is being inefficiently used. Both are important at a national level for employers and employees.

1. The Development of the Concept “Human Capital”

The traditional economic theory states that the resources necessary for the production process are – “nature, labour, capital” and the entrepreneurial abilities on which depend the management of these resources. However, in the early 1960s the USA economists begun to develop the theory of human’s fundamental importance in the use of production resources. “A human being is the only element capable of creating new values, other variables – money and its “relative” credit, raw materials, equipment and energy are in an inert state and function on a human being’s wish”⁸. A USA economist, Theodor W. Schultz, recognizes that a human being is the most complex stage in the human resources management. The diversity and often unpredictability of human behaviour makes difficult the evaluation process of this resource. Schultz admits that in the early 60s it was not easy to refer the concept “capital” to the human beings, though he associated this theory with the investments in human beings. He compared the acquisition process of knowledge and skills to the costs for the purchase of production means. By investing in people, the employers can also control this aspect of means of production and to ensure the increase of production”⁹

Besides T. Schultz mentions the importance of human capital in the growth of national economics. In societies where the main concern is not the satisfaction of basic needs, the long-term investments in education, health, migration (Migration here is understood as activities focused on helping people to adjust themselves, to find work, to learn, to improve their skills). In the long terms these investments strengthen the national economics, raise the standard of living.¹⁰ Here the author of the work points out that the concept of “people’s migration” in Latvia is understood as other processes, namely, the manpower drain from the country, as well as from rural to urban areas. These trends are based on the implemented policy as for human capital.

Gary S. Becker in his turn notes that every human’s activity outside the marker has a rational justification. The investment of means in education, health protection and other activities is based on rational justifications - in order to obtain higher returns in future. The expenses related to these activities are regarded as investments in human capital.

A human capital is understood as an aggregate of knowledge, skills, abilities, motivation and energy possessed by a human and which can be used in a certain period of time with a goal

⁸ Schultz, T. W. (1961). Investment in Human Capital. The American Economic Review 1(2), 1-17

⁹http://www.oise.utoronto.ca/legacy/research/edu20/moments/1961schultz.html?cms_page=edu20/moments/1961schultz.html

¹⁰ Ibidem

to create the new material values or to provide services.¹¹ It is regarded as a capital because it has an impact on human's future income and quality of life. The human's working capacity and its utilization skills is a special form of capital and its development requires substantial time and material resources investments.

Thus, any activities capable of generating human's further flow of income may be regarded as human capital.

The concept developed by these authors is called "Chicago School" in the circles of theorists of economics.¹²

Further both these, and many other authors, which have developed the theory of human capital, substantiated its importance in the development of corporations, regions and state.

"Chicago School" theory defines the expected return from investments in human capital. They are;

- a higher income level throughout life;
- a higher degree of satisfaction working in a chosen profession throughout life;
- a higher standard of life;
- an ability to evaluate and to participate in various activities outside the market.

The issues of development and use of human capital were raised in 2000 when the Lisbon Strategy¹³ was adopted, which aimed to solve the problems associated with slow development of European Union, technological backwardness, insufficient growth of labour productivity. In accordance with its main aim the European Union was to become in 2010 the most competitive and dynamic knowledge-based economics in the world¹⁴.

During the implementation of Lisbon Strategy several (10+Cyprus and Malta) Central and Eastern Europe countries joined the European Union in 2004 whose history of economic development was different. Studying the course of Lisbon process, several researchers (Peer Ederer, Philipp Schuller, Stephan Williams) admit that the massive transformation of these countries from economic and political dictatorship type to social market economics and pluralist democracy-type countries requires great effort, special attitude and additional funding¹⁵.

The researchers admit that an adverse demographic development and insufficient utilization of human capital, as well as a constant brain drain and inadequate investments in education, began to threaten the prospects of the regions. The problems mentioned may cause "domino" effect on Western Europe and Europe's place in the world economics unless urgent measures are taken. There is a risk that in the next decades the Central and Eastern countries could become the sparsely populated territories with insufficient manpower. There is a question about the long-term support of these countries, which have given so much to the European history, economics and changes.

In 2006 Lisbon Council issued a statement to identify and assess human capital trying to calculate numerically how this value has changed throughout human life in different countries¹⁶. The project was undertaken to determine an important public opinion in many economic and social spheres which are important for the development of human capital – starting with how much time parents spend together with their child and in long-term – expenses for high level

¹¹ Becker G. S. Human Capital / G. S. Becker. – NY. : Columbia University Press, 1964.

¹² Becker G. S. Human Capital / G. S. Becker. – NY. : Columbia University Press, 1975.

¹³ http://ec.europa.eu/education/focus/focus479_en.htm

¹⁴ <http://www.em.gov.lv/em/2nd/?cat=30510%5D>, seen on 18.08.2011.

¹⁵ <http://www.lisboncouncil.net/publication/publication/45-the-european-human-capital-index.html>

¹⁶ Ibidem

manpower preparation to the devastating effects of the decrease of number of people on state's human capital. In conclusion human capital index defined the concrete result for countries on the basis of their ability to develop and support its human capital and then to rank the states by this performance. In particular it showed the state's ability to develop and nurture its human capital in four different categories – human capital, use of human capital, productivity of human capital and demographic perspectives, determining the results for each state in each category. When these results are put together to form a common view, it is possible to compare the categories of development of human capital in different countries and regions.

2. The Development of Theory of Human Capital in Latvia

Taking into consideration the attitude of European Union towards development of human capital, several researches were carried out in Latvia. In the Human Development Report of 2006/2007 “My Gold is my People” it is marked that human capital is person's abilities and skills set on which depends their potential of economic and social activities.¹⁷

In 2006 in Bank of Latvia a research “The Role of Production Progress and Human Capital in the Economic Growth of Latvia”¹⁸ was carried out aiming to estimate the importance of human capital in the growth of national economy, modelling the production function where one of its components would be human capital value.

In strategy “Latvia's Sustainable Development Strategy until 2030”¹⁹ developed in 2010 it is defined that “Human capital of the state is an average amount of the knowledge, talents and skills of inhabitants multiplied by the number of economically active people. Value of human capital is characterized by the base, use and productivity of its knowledge, skills and talents. The investments in human capital are education, health care, professional training and other activities making people economically more productive and emotionally richer.”

Human capital itself cannot create the values, cannot ensure the social and economic development, i.e. people do not operate in isolation from society. Social networks and institutions determine the individual's economic value - their motivation and opportunities to develop and use this capital in order to create goods and services, which can be sold. Thus, human capital is contextual and to measure accurately its value is difficult. In order it would be possible to measure human capital, it is necessary to find out which skills and abilities are required in a corresponding social context.²⁰

It is true that human capital plays a decisive role in each country's growth, but its value is largely determined by the opportunities to use it.

In different political, institutional and legal circumstances there are different possibilities to realize human capital and also social capital.²¹

The main message of the report is a conclusion that human capital has a decisive role in Latvia's growth; therefore the objective of state, local governments, non-state institutions and

¹⁷ http://petnieciba.lv/materiali/publik/2007_Latvija_Parskats_par_tautas_attistibu_2006_2007_Cilvekkapitals_mans_zelts_ir_mana_tauta.pdf

¹⁸ http://m.bank.lv/public_files/images/img_lb/izdevumi/latvian/citas/progress_un_cilvekkapitals.pdf skat.21.07.2012.

¹⁹ http://www.latvija2030.lv/upload/latvija2030_saeima.pdf

²⁰ Ibidem

²¹ Ibidem

communities, as well as individuals, is to care for human capital, so it would increase and would be realized of full value as much as possible.

On skill inadequacy research was carried out at Stockholm School of Economics in Riga in Latvian manufacturing sector²².

The research showed that at the beginning of the recession in 2008, unemployment rate showed a dangerous trend in Latvia. Theoretically, workplaces had to be fully occupied, but at the same time, the vacancy rate systematically increased. The authors explained this fact as direct expression of skills inadequacy. Skills required by employers, differed from those inherited by potential employees. The research analysed skills of 201 employees. It was carried out in 30 Latvian manufacturing companies. The research concluded that only 24% of employees surveyed have the appropriate skills to carry out their job.

3. The Role of Matching Professional Competences in the Use of Human Capital

In the context of limited resources and adverse demographic trends, rationally evaluated investments and productive use of human capital is the main way how to overcome a fall of economic growth and financial stress in long-term.

With the growth of global economics and competitiveness, rapid technological development, the employees have to learn ever more new skills to be able to exploit the technology opportunities and to compete in the world markets. Consequently, the employees' competence is changing and its matching to the position. An issue of concern in Europe is the aging of society which in its turn creates the aging of work skills and the question about the matching of existing manpower skills to the requirements of the labour market becomes increasingly important and threatens the level of public employment. Skills development and skills matching to the demands of the employers is a major issue for all inhabitants, but in particular, for policy makers, employers' associations and trade unions.

Currently one of three able-bodied Europeans has a low qualification or does not have it at all, therefore their chances of being hired are 40% lower than for people with medium level qualifications. On average European Union citizens with a high skills level are employed in 84% cases, with medium skills level - 70% and with low skills level – 49%. The corporations training their employees are 2, 5 times less likely to go out their business than those corporations, which do not train their employees.²³

Improving the skills of population is a benefit for all – economy, society, employers and, of course, for the individual itself (See *Figure 1*).

²² Putriņš, K., Zumente, I. *Skills Mismatch in Latvian manufacturing sector*. Latvia: SSE Riga, 2011., 51 lpp.

²³ **Eiropas sociālais. Izaicinājums indivīdam – nodrošināt prasmes, kas atbilst darba tirgus prasībām**. Brisele : Eiropas Komisija, 2010., 17 lpp.

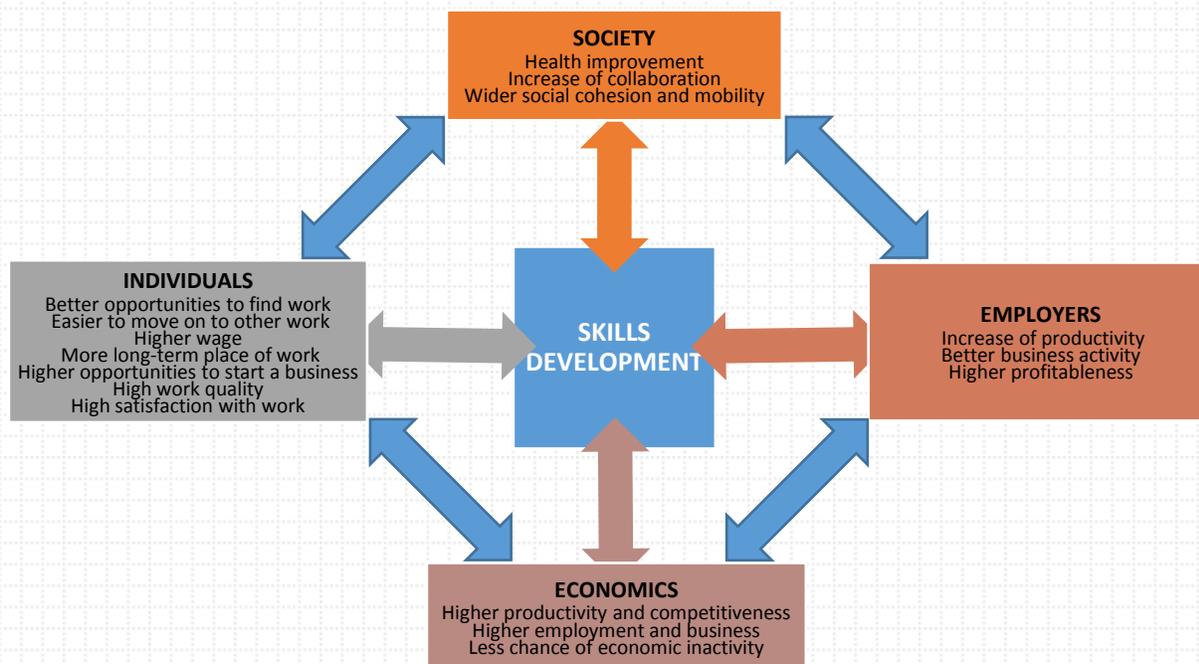


Figure 1. Benefits from skills ²⁴

The skills are included and form a common system in which the individuals, employers, economics and social contexts are in constant dynamic interaction. A higher skills level will help an individual to find work or an opportunity to get out of unemployment, to be employed and, using a progress, to get a better place of work.²⁵

Studying the employees' skills' mismatch to the position it should be examined how the employees could affect economics, in particular, in unstable sectors, which are strongly dependent on changes in international competition. The skills' mismatch should extend to the whole society, but, in particular, to the researchers of this issue, trade and commercial unions. Skilled people often do a simple work, which is a common international phenomenon. In the last Cedefop's review on "Future skills needs in Europe" (Cedefop, 2008) it is observed that from a direct labour force growth – more than 13 million of places of work from 2006 until 2015 in the higher educational level could be around 12,5 millions of vacancies.²⁶

The data on skills mismatch in Europe shows that it is a common phenomenon. A very little understanding of skills mismatch means a low probability of interaction of skills between the types of skills mismatch. Addressing the issues of skills mismatch is particularly important for socially unprotected groups in the labour market, such as migrants, older employees and young people who have completed their studies and have to start their work. The following article analyses situations of two types: *Overskilling* – a situation when a person is not able to fully use their abilities and talents in a current work. *Underskilling* – a situation when a person lacks necessary abilities and talents to fulfil the norms of their current work.

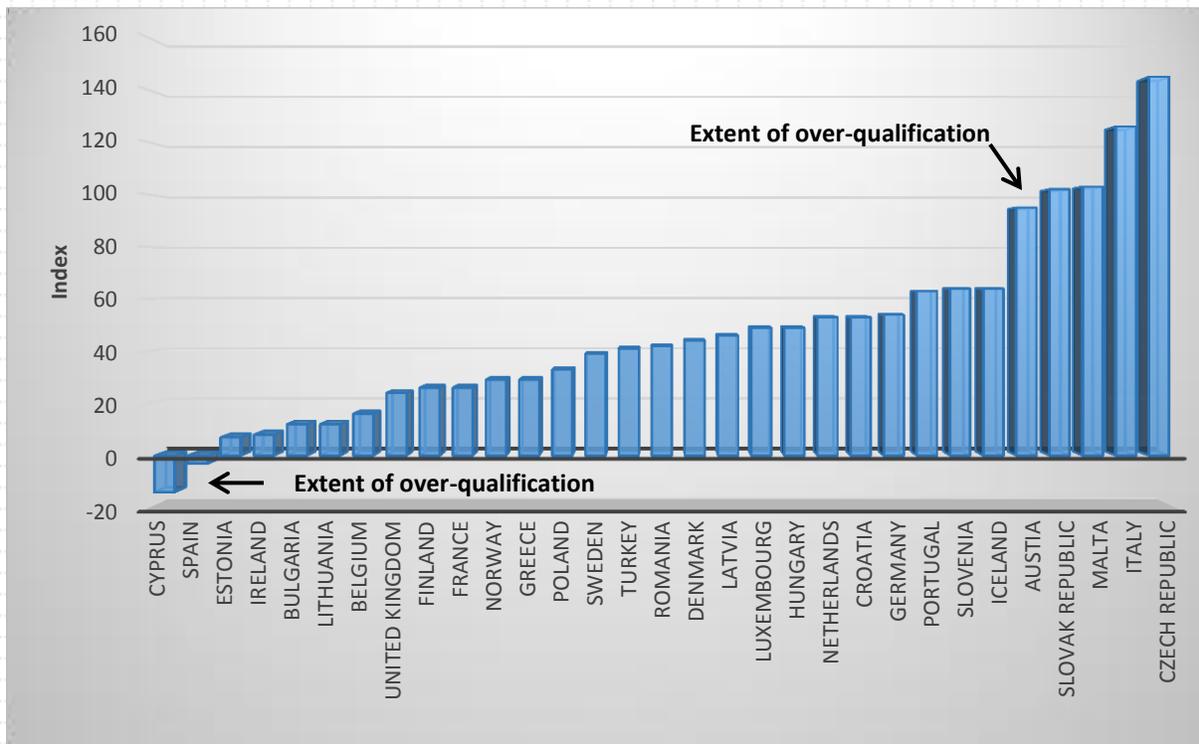
²⁴ **European Commission.** *New Skills for New Jobs.* Brussels, 2010.

²⁵ **Eiropas sociālais.** *Izaicinājums indivīdam – nodrošināt prasmes, kas atbilst darba tirgus prasībām.* Brisele : Eiropas Komisija, 2010., 17 lpp.

²⁶ **CEDEFOP.** *The skill matching challenge: analysing skill mismatch and policy implications.* Luxembourg: Publications Office of the European Union, 2010. 93 lpp. ISBN 978-92-896-0485-7

Employers when recruiting overeducated or overskilled employees believe that such employees are more productive while at the same time, this high productivity doesn't involve higher salary. Businessmen also recruit undereducated and underskilled employees if their salary costs compensate the low productivity²⁷.

Underqualification is a situation in which the person is less qualified than the current job requires. However, a situation in which a person is better qualified than the current job requires is overqualification. Data of *Figure 2* indicates on the qualification compliance level.



*Figure 2. Qualifications conformity index in European countries*²⁸

This qualification assessment shows that the qualification conformity level of persons employed in Latvia is not relatively high. This means that highly skilled jobs are often done by less skilled employees or also employees with a high level formal education perform lower level job duties. For example, an employee with a master's degree performs secretary duties.

4. The Analysis of Skills Compliance of Employees in the Sector of Latvian Banks

This study aims to find out the skills matching of the employees working in banking sector to the demands of the sector and to state how the mismatch influences the employees' motivation.

The questionnaire was developed based on defined skills of the Latvian Banking Specialist in professional standard (see Occupational Standard) as well as it was based on the necessary

²⁷ OECD Science, *Measuring Innovation: A New Perspective*. 2009., ISBN 9789264059467

²⁸ OECD Science, *Measuring Innovation: A New Perspective*. 2009., ISBN 9789264059467

skills report of UK financial service sector which indicated the major skills for banking staff. British employers in the banking sector in comparison with Latvian professional standard requirements, require multi-skilling employees:

1. Numeracy and maths skills are needed. First skills include mathematical formulas and calculations.
2. Languages and cultural awareness includes bank employee's specific character of his job. The employee must be able to communicate with international organizations and clients. An additional skill that the employee can show the employer is the ability to speak a foreign language and/or to get to know other cultures.
3. Banking specialists work with clients who have complex financial objectives and conditions. Bank specialist must fully understand the client need and must offer services that are consistent with the client terms. Therefore specialist must be able to understand client needs and he needs also relationship management skills.
4. IT skills include the application of bank's information technology infrastructure, especially in the sales process²⁹.

The specialist should have an idea about the Economical Mathematics, Statistics, Insurance, Financial Analysis and Risks³⁰.

The study was conducted in the sector of Latvian commercial banks surveying their employees. The questionnaire was developed using the experience of other countries carrying out similar studies and it requires employees to perform their skills self-esteem. It was based on the study carried out in 2001 in Portugal on skills mismatch in banking sector. In this study an empirical methodology was used which is based on unemployment. The above described methodology has been tested with 600 Portugal (retail) banking employees.³¹

In the study 236 employees in Latvia operating commercial banks were surveyed. The survey was anonymous which gave possibility to evaluate more objectively the level of skills matching in the commercial banks. Questionnaires were completed by employees of different levels: customer service specialists (37%), administrative employees (27%), back-office employees (36%). The survey results showed that the majority of bank employees are aged 25 to 35 (56%) what is indicative of good potentialities in skills development.

As the main factors of skill mismatch were determined:

- Temporality of skills;
- Change of work responsibilities;
- The growing demands in the pace of work;
- Insufficient previous training;
- Other variant

The survey results show that all these factors are important in the skills mismatch (See *Figure 3*)

²⁹ **Financial Skills Partnership.** *The Sector Skills Council for the finance, accountancy and financial services industry is the Financial Skills Partnership.* United Kingdom : Financial Skills Partnership, 2011., 44 lpp

³⁰ *Profesijas standarts [tiešsaiste].* Izglītības un zinātnes ministrija, 2003 [skatīts 2012.g. 2.mar.]. Pieejams: <http://visc.gov.lv/saturs/profizgl/standarti/ps0152.pd>

³¹ **Sgobbi, F.** *A methodological contribution to the measurement of skill (mis)match.* A draft presented at the Decowe Conference: Ljubljana, Slovenia, 2009.

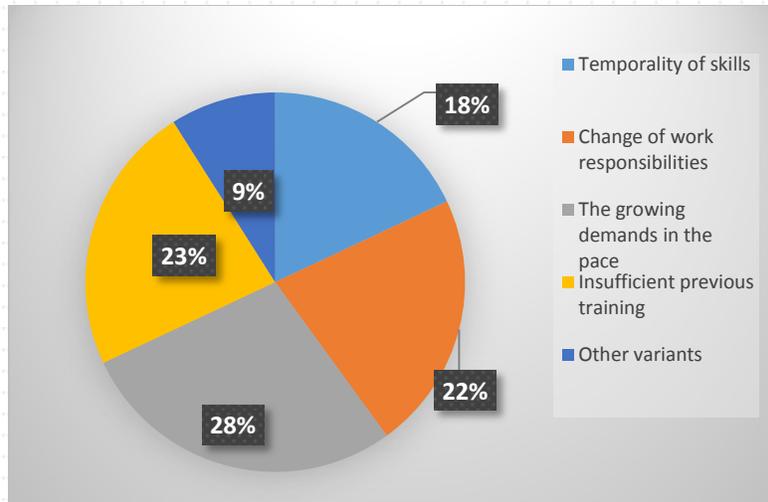


Figure 3. *Causes of Skill Mismatch*

As the main factors the insufficient previous training and the growing demands in the work place were mentioned. The study has also found out what impression leaves the work skills mismatch on the employees.

In cases if the employee esteems their skills higher than the job responsibilities demand, it was possible to give the following answers:

- You expect to get a job promotion;
- You troubled to lost a qualification;
- You feel undervalued;
- You do not care.

The survey results show that the majority of respondents in this situation hope to get a job promotion, 38% are troubled that not using fully their skills they may lost a qualification, but, 24% feel undervalued (See Figure 4)

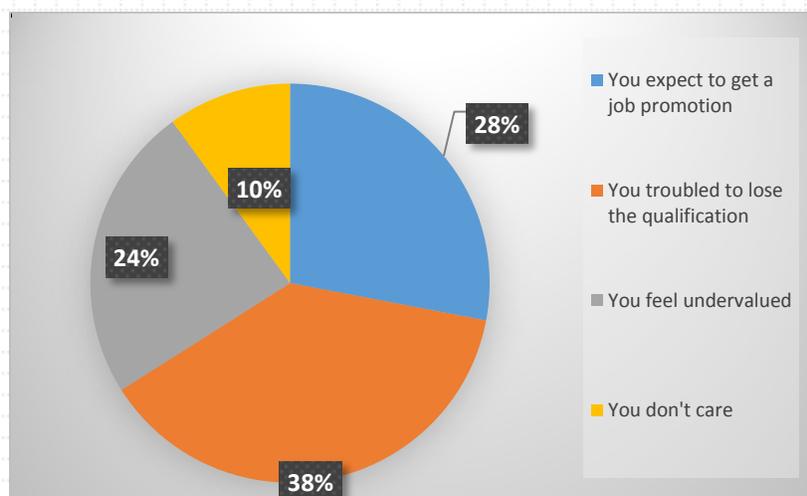


Figure 4. *Arising Effects from High Skill Assessment*

In cases if the employee has esteemed their skills as low, then it was possible to choose the following answers:

- You believe that you just do your duties well enough;
- You hope to get the support of employer in improvement of professional skills;
- You feel discomfort and insecurity;
- You do not care.

The answers given show that the majority of respondents hope to get the support of employer, 26% feel discomfort and insecurity and 10% of respondents do not care (See *Figure 5*).

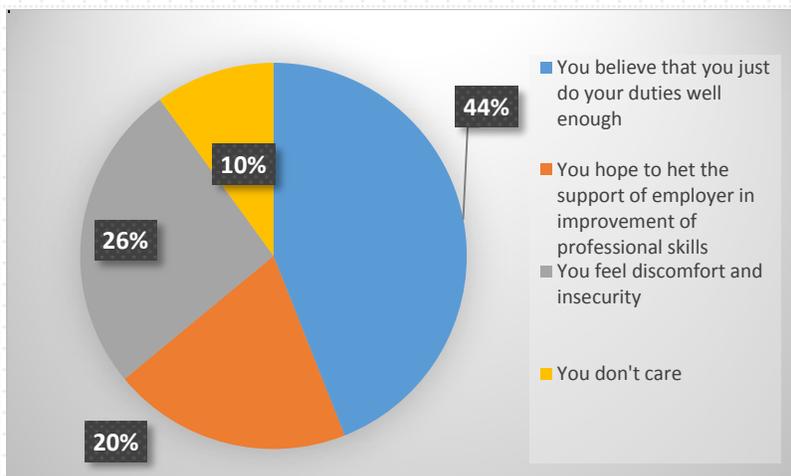


Figure 5. Arising Effects from Low Skill Assessment

As important skills of bank employees were nominated – ability to work with clients, persuasion skills, understanding of the process of banking activity.

The survey data shows that the respondents in these positions esteemed their skills as very good or good.

The research shows that employee' skills compliance with the requirements of employers has overall impact on human resource efficiency and in accordance with the above-mentioned research in this area is an important factor in the country's economic development and prosperity.

Conclusions

1. The human work skills and their ability to use them is a special form of capital and its development requires substantial time and material resources to be invested.
2. An unfavourable demographic development and insufficient use of human capital has begun to threaten the perspectives of several countries and their regions.
3. The employees' skills create a common system, in which the individuals, employers and social context interact and affect the national economics.
4. The main reasons for the skills mismatching of Latvian commercial banks employees is the temporality of skills, the change of job duties, the growing demands in the workplace, insufficient previous training.

5. In the Latvian banking sector there is skills mismatching of employees, but it affects about 20% of respondents. For 1/3 of them it creates tension and insecurity, which influence the work productivity.

Acknowledgement

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INTERNATIONALIZATION STRATEGIES OF “BORN GLOBALS” BORN IN LATVIA

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Introduction

Traditionally, international business and strategy literature has been dominated by a focus on large multinational enterprises that usually operate in their home country for a number of years and then gradually enter the geographically closest foreign markets (e.g. Johanson and Vahlne, 1977). Increasingly, however, attention has also been given to the internationalisation of small and medium-sized companies, in particular firms that start to internationalize very rapidly – almost right after business is launched (Hollensen, 2007). This phenomenon has been called ‘born global’ and characterizes the type of SME that possesses a “borderless” view of the world and tends to develop business strategies that already allow for global expansion in the first years of operation (Cavusgil and Knight, 2009).

Focusing on the time when companies enter the global market rather than the size of the global market enterers, overall, the born global phenomenon challenges traditional theories of internationalization. In this light, following the observation by Crick and Spence (2005) that internationalization strategy formation for high performing SMEs is not always systematic and capable of being described by one single theory, Coviello and McAuley (1999) conclude that the internationalization of born globals should also be viewed by integrating major theoretical frameworks. Drawing on this notion, a number of existing theoretical perspectives on SME internationalisation, such as traditional internationalization theories, international entrepreneurship theories, stage theory, transaction cost theory, strategic choice theory, knowledge theory and resource-based/network theory, amongst others (see Wright et al, 2007, Keupp and Gassmann, 2009 for a review) have shed some light on how and why SMEs decide to go international. In particular, those theories have focused on timing (i.e. Autio et al, 2000), intensity and sustainability (i.e. Zahra et al, 2000) of SMEs internationalisation patterns, mode of

SMEs internationalization (Westhead et al, 2002) as well as environmental influences affecting SMEs internationalization process (i.e. Taymaz and Kilicaslan, 2005).

Yet, contemporary research on SMEs lacks a fitting framework to interpret the international activities of born globals. One reason for this is a lack of empirical evidence on the internationalization strategies of born globals. More specifically, little is known about “born globals” and how and why they internationalize so early. In this light, studies that explore the internationalisation patterns of born globals also often challenge our “general knowledge” of how expansion into foreign markets should and actually is implemented by companies that turn out to be successful global market players relatively early. For instance, findings suggest that the distance from the domestic market is regarded as non-significant when it comes to choosing the first international target markets (e.g. Peng and York, 2001). Furthermore, Madsen and Servais (1997) have argued that domestic markets are no longer an important “learning place” before international markets are entered. Arguably, these findings seem to go against “common wisdom”, which would in turn suggest that the local market can be a good starting point, where resources for global expansion can be acquired and the geographically closest markets can be more appealing for starting global expansion.

Moreover, according to Hollensen (2007) most SMEs, including companies that become successful internationally very early, enter new markets with very limited market information – in many cases without conducting any market research before entering the target markets. Instead, the selection of international markets is strongly influenced by change agents. An increasing number of studies (see Cavusgil and Knight, 2009, for review) have also emphasized the role of various company-specific characteristics that may trigger early internationalization and are typical of born globals. Yet, most of these studies focus on exploring the characteristics of born globals that originate from more advanced market economies. Considering the role of context, which also shapes entrepreneurship behaviour (Karlsson and Dahlberg, 2003), it is thus reasonable to assume that characteristics that are important for success in the global arena, especially in the early stages of a firm’s development, may also differ for companies that originate from new EU member countries, such as Latvia, as compared to more advanced market economies.

In light of this discussion, this study aims to contribute to entrepreneurship literature by exploring the internationalisation pathways of “born globals” that originate from a new EU member state. Empirically, the chapter draws on four case studies – firms that have been established by entrepreneurs from Latvia. The companies are STENDERS, a manufacturer of natural bath products and cosmetics; Munio Candela, a handcrafted candle manufacturer; Primekss, an industrial flooring manufacturer; and a manufacturer of premium jeans wear, Trousers London.

In the following sections of the chapter we attempt to determine whether patterns as identified by previous studies, mostly exploring characteristics of born globals that originate in more advanced market economies, also play a key role in the context of the four selected case studies, i.e. companies “born in Latvia”. We do this by providing an insight into the internationalisation pathways of each of the selected case companies, mainly focusing on the characteristics, international market selection criteria and market entry modes of these firms. Section Five, however, summarises the key findings and provides some conclusions and policy implications. Overall, the findings of this study may be relevant for companies, especially from new EU member states, that are on their way to developing a strategy for international expansion as well as policy makers for making informed decisions about investments to support the

international orientation of local SMEs. Understanding the patterns of “born globals” from countries such as Latvia might also benefit entrepreneurs from more advanced economies, for instance when making a decision to enter markets in Central and Eastern Europe.

1. The Case of STENDERS Ltd.

The natural bath product and cosmetics company STENDERS Ltd. was founded in 2001 by Janis Berzins and Zane Berzina, and opened its first shop in Latvia in 2002. In 2013 the ownership structure of the company has changed slightly, i.e. currently the owners of STENDERS are Ieva Eglite, Ali Jamani, Janis Berzins and Zane Dreimane. Yet, the key focus of the company has remained the same. Namely, the products, and perhaps more importantly the unique identity that is presented through creative product design as well as a focus on a healthy green lifestyle approach, soon attracted the interest of customers in Latvia in 2001 and continues to attract interest today. Arguably, since 2002, people in Latvia have not had to think twice when it comes to choosing the best present for themselves, their beloved ones, friends or colleagues – various bath and cosmetic products, simple but nicely packed, as offered by STENDERS, continue to be a good choice!

Even though this might sound like an advertising campaign, as explained by the co-founder of STENDERS Ltd., in a way the company has indeed lived the “Latvian dream”, showing that every individual can develop a successful business from scratch. “In order to live this dream, however, initially we were travelling around Europe looking for new ideas – products and services. Anything that might be interesting and not yet present in Latvia,” remembers Janis Berzins, the co-founder of STENDERS. And it was not too long to wait; while travelling they were lucky enough to come across a tiny shop with an exclusive soap concept in London.

The current founders of STENDERS wanted to franchise this company and bring the concept to Latvia, yet the bureaucracy simply took too much time. “Christmas time was approaching and it was the best time to start sales, so something had to be done very quickly!” remembers Janis Berzins, the co-owner of STENDERS Ltd. The solution appeared to be finding a similar product somewhere else and simply putting it on the shelves of a shopping mall: just to see whether there was demand for the product. “This is exactly what we did, with bath cosmetic products from Canada,” explains the co-founder of STENDERS, adding that in such a way the company explored the market, which in turn helped them to further develop the idea of producing luxurious and natural bath cosmetics.

“The experiment of producing soap,” as it is called by the co-founder of STENDERS himself, “...started with looking for various soap recipes in books and Internet sources.” As a consequence of these experiments, “Stendera soap factory” was established in Latvia with the initial aim of opening a few shops to sell its products in Latvia. Yet, the founders soon realized that there was also very good market potential in various countries across the border. For this reason, since “Stendera soap factory” was too long and rather difficult to pronounce for international markets, the company decided to export its production with the brand “STENDERS”.

Choosing the market entry mode

Indeed, not only customers in Latvia were interested in products offered by STENDERS. Already in 2002 the company received cooperation offers from partners in both Russia and Estonia, which enabled STENDERS to start their internationalisation very early in the start-up phase. STENDERS chose franchising as a global market entry strategy. The decision to prefer franchising as an international market entry mode was based on the following considerations. First, franchising requires minimal investments. Secondly, potentially it is more profitable and offers a more rapid development of the customer network. And finally, by franchising, faster international expansion is achievable, if implemented correctly. "We also considered other market entry options, of course, such as direct export, licensing, joint venture and subsidiary," said Ieva Eglīte, Member of the Board. "However, due to the previously mentioned assumptions none of them looked appealing enough."

According to the representative of the company, the choice of the market entry mode was one of the key elements behind the successful and rapid internationalisation of STENDERS. STENDERS chose the business format package franchising approach. This means that the business package contains most elements necessary for the franchisee to establish a profitable business in the host country in a prescribed manner regulated by the franchisor. The package contains trademarks, business know-how, geographic exclusivity, and the design of the store as well as location selection and marketing activities (Hollensen, 2007).

"In reality this means the franchisee always has to follow strict guidelines about the design of shops, the layout of the products, united marketing activities, etc.," explained Ieva Eglīte. For instance, "the company's designer creates the design of the stores, the furniture is also ordered from one manufacturer in order to ensure that all the shops look alike in each country," she continued, adding that franchisees are allowed to sell only STENDERS goods and that all the products are manufactured in Latvia, regardless of the market in which they are sold. Furthermore, all the shops are required to follow the same service standard, including the uniforms of the shop assistants and the packaging of the purchased products; franchisees are not allowed any elements that are not approved by the STENDERS Marketing Department in Latvia.

Entering global markets and expanding internationally

Similar to many other managers in Latvian companies, the founders of STENDERS did not have any previous international market entry experience. Yet they had some prior business management experience working for firms in different industries. "We all wanted independence, our own company and our common motivation, the key driving force, most probably, was the willingness to develop a successful business by producing products we really enjoy ourselves," remembered the co-owner of STENDERS Ltd. One of the cornerstones in developing a successful company turned out to be a differentiation strategy that STENDERS already employed from the very beginning of its operation.

Namely, similarly to many other "born globals" (e.g. Cavusgil and Knight, 2009), STENDERS initially was formed as a product-based firm that subsequently emerged as an international marketer gaining worldwide acceptance, drawing on the strength of its superior products. "The main added value of our products is their appearance, i.e. packaging design, as well as the unique design of all our shops," explained the representative of the Marketing Department at STENDERS, revealing that the unique selling point for STENDERS is that "...we

do not just sell goods in our shops, we sell feelings – joy, admiration, dreams, peace and passion. With this we get our customers to return to our shops.” To pass on the feelings, naturally, a great deal of attention is paid to the development and maintenance of a unified customer service standard. “At the same time,” as once again emphasized by the representative of the company, “...the constant need to ensure that the same service standards and quality apply in all the markets is one of the prerequisites for a successful franchise-based company.”

All in all this strategy, together with choosing the franchising approach, brought success for STENDERS not only in Latvia but also in many other markets internationally. Namely, in 2010, only 8 years after the first overseas shop was opened, the company had more than 180 shops in some 10 countries, including China, Japan, Saudi Arabia, Slovenia, Greece, Croatia, Colombia and Panama. Sales in international markets generate around 70% of the company’s total sales volume, and, with 106 employees, reached almost 5 million euros in 2009. And STENDERS continues to grow: in 2012, the company already had 222 stores in 22 countries: Latvia, Estonia, Lithuania, Sweden, Finland, Norway, Austria, Germany, Russia, Belarus, Georgia, Kazakhstan, Kirghizstan, Armenia, Ukraine, Croatia, Slovenia, Hungary, Poland, Japan, China and the United Arab Emirates. The turnover was around 5 million euros in 2010, 5.8 million euros in 2011, and 6.5 million euros in 2012. Aside from this, in 2011 the company invested around 150 000 euros in developing new products and redecorating the retail shops.

The main target markets for STENDERS are Western Europe, Asia and the Near East. In 2010 the company aimed to strengthen its positions in its key markets – China and Russia – endeavouring to expand the chain of its franchise shops. In 2012, however, the main sales markets were China, Russia and Latvia and for 2013 the key development market is Asia, especially the southeast regions.

Since two entrepreneurs from China expressed interest in cooperation, and both of them met the strict standards for STENDERS’ potential partners, the company signed a franchising agreement and chose the Chinese market. “That forced us to set aside our plans to enter America,” said a representative of STENDERS in 2010, adding that “...the operations of the competitors show that STENDERS’ decision to enter Asia first was right.” Namely, the main competitors of STENDERS are L’Occitane, The Body Shop and Lush. “As Lush was not represented in China, our cooperation partners were interested in expanding very rapidly to increase the market share before the competitors had strengthened their positions there,” emphasized Ieva Eglite. Initially, however, the company chose to start its internationalisation by entering Russia: the first franchised STENDERS shop overseas was opened in Russia, back in 2002. “We choose Russia as the first foreign market because it is Latvia’s biggest neighbour, with huge market potential,” revealed Janis Berzins.

In this context, it is important to note that, even though the founders of STENDERS had some previous personal contacts with entrepreneurs in Russia and other countries, the international expansion of STENDERS Ltd did not draw on significant global network relationships – something that seems to be one of the common fostering elements of the internationalisation of “born globals” in various countries across the globe (Bell, 1995; Coviello and Munro, 1995; Rasmussen, Madsen and Evangelista, 2001). On the contrary, the founders of STENDERS had almost no global network relationships before starting its international expansion, and all the networks were developed only after the company was founded.

“When it comes to expanding internationally,” continued the representative of STENDERS, “...we do not employ a proactive approach to search for partners with whom international markets are entered.” Indeed, and interestingly enough, almost all the franchisees of

STENDERS Ltd. have approached the company themselves. "Most of them make a decision after visiting one of our shops in Latvia," explained the representative of the STENDERS Development Team, adding that almost every day the company receives about ten e-mails or phone calls from potential partners expressing their interest in cooperation with STENDERS.

In general, the attractiveness of each country is determined by the "quality" of the potential cooperation partner. Namely, over the years STENDERS has developed criteria to evaluate potential franchisees. "We pay attention to the personality of the potential business partner as well as professional experience. The situation in the particular market is also very important, of course," explains the representative of the company. The potential partner has to present a 5-year business plan containing information on the target market, a financial forecast and plans for expansion in the given defined market or region.

"When a partner is selected, we also strictly monitor the selection of the most appropriate sales location of our shops," continues Ieva Eglite. Namely, most STENDERS shops are situated in locations with a large flow of people, such as shopping centres or central pedestrian shopping streets. Such an approach is a consequence of some mistakes STENDERS made during the development stages in markets such as Germany, Ireland and Spain. "We were simply forced to terminate contracts because franchisees were exceeding their legal rights and because of unfair actions. That is also one reason why a very strict franchise agreement was developed – to protect ourselves from such cases in the future," said the representative of STENDERS. "Although the defined target markets are Asia, Europe and the United States, other markets are considered if there is a strong potential partner who is interested in developing a chain in a defined region or country."

To further strengthen internationalisation efforts, in December 2009 STENDERS launched an Internet sales platform to reach global consumers all over the world. Even though in 2010 the owners of the company were rather sceptical about the potential outcome of this idea, today they acknowledge that the decision was right: "We continue to improve our web platform and the first significant results can already be seen in Japan. New changes will be implemented in every country eventually and STENDERS is expecting to at least double the turnover of Internet sales by the end of 2013," says the representative of the STENDERS Development Team. This move also reflects an on-going trend all over the world in which an increasing number of SMEs, affected by the Internet revolution, are establishing global sales platforms by developing e-commerce websites (Hollensen, 2007).

2. The Case of Munio Ltd.

As emphasized by recent entrepreneurship literature (e.g. Cavusgil and Knight, 2009) born globals typically start exporting their products two to three years after the company is established, and this is considered to be an early move, of course. Furthermore, usually the export volume of born globals is approximately one quarter of the total production. Munio Ltd., better recognized by its brand name, Munio Candela, a producer of handcrafted 100% natural soy wax candles, seems to be different with regard to both indicators.

Munio Ltd. was established in January 2008 by Ieva Dekstere and Elina Cima. A passionate search for a balance between style, function and ecology while conducting endless experiments with innovative raw waxes, indigenous flora and eco-friendly packaging resulted in the first candle sold in Latvia in November 2008. Only a few months later, in July 2009, the company entered its first international market. In 2012, Munio Candela's efforts in international

markets were recognized when they received the Grand Prix award from the World Packaging Organization.

Munio Ltd. is a small but rapidly growing company and the owners of the company have chosen to develop the company step by step, without attracting investors' money. At the end of 2008, one year after the company was established, the turnover was 8000.0 EUR, reaching 40000.0 EUR in 2009. In 2010, the turnover was already 153000.0 EUR, and in 2011 it was 157000.0 EUR, whereas in 2012 it reached 265000.0 EUR. The number of employees has also risen gradually: in 2010 the company employed 4 employees, including the two owners of the firm, and in 2012 there were around 15 employees. In this context it is important to note that in 2010 as much as 80% – and in 2012 70% – of the total sales volume of the company was generated in foreign markets. Furthermore, even though the company increased the capacity of its production machines tenfold in 2012, every candle is still unique and 100% handmade.

The company is growing not only in numbers but also geographically. Namely, if in 2010 Munio Candela products could be purchased outside of Latvia in European cities such as Copenhagen (Denmark), Paris and Vincennes (France), Dublin (Ireland), Rome (Italy), Wolfsburg (Germany) and Luxembourg, while some sales took place in Japan and the United States, in 2013 Munio Candela products are sold across all of Europe, the United States, Canada, Australia, New Zealand, China, South Korea, Taiwan and Russia. The main focus of the company for the time being is Japan, Switzerland and Norway, where the product generates the most income, and the next “big market” Munio is targeting with its activities is Russia.

As emphasized by the co-owner of Munio Ltd., Elina Cima, entering the international markets as early as possible was an intentional and targeted decision. In fact, according to her, this was the “only choice” for the company: “If you want to sell premium handcrafted candles – a high quality, niche product – in reasonable amounts, focusing on small markets like Latvia is a very bad idea,” says Elina Cima, the co-owner of the company. “For this reason,” continues the co-owner of Munio Ltd., “...from the first day the company opened its doors, the brand name, packaging design and brands of our product collections – “Naturella” and “Villa” – were designed so that they would fit the requirements of international markets.”

In this context it is important to note that, similarly to the case of STENDERS, and in contrast with the “typology” of born globals, where the owners of the companies have at least some international experience prior to starting the firm (e.g. Oviatt and McDougal, 1997), the owners of Munio did not have any prior experience in global markets. “One of us had an unfinished bachelor's degree in economics, and the other one had a background in the arts,” reveals the co-owner of Munio “...thus, as you can imagine, we had no proper idea of what should be done exactly, when it comes to working in the international arena.”

Entering the first international market

The first international market Munio Ltd. entered was Japan and, as acknowledged by the co-owner of the company, the choice of this market was mostly a coincidence. “We planned to start internationalisation with markets in Europe and indeed many people have told us that our success in Japan was just luck,” emphasized Elina Cima. “We were very lucky with the exhibition that opened the doors to Japan's market – this was the first international exhibition we participated in, back in June, 2009, and this exhibition did indeed determine our choice to start with Japan.” As further explained by the co-owner of Munio, the exhibition proved that the Japanese understand the product the company offers. “Also, today, the Japanese are usually the

first ones to enter our exhibition booth, whether we are in New York or Paris. And this confirms the propriety of our choice.”

Another reason why Japan was considered an attractive market was the assumption that the Japanese prefer high quality design items, especially if imported from Europe. When it comes to challenges, however, as emphasized by the CEO of Munio, it is not difficult to carry out market research in the information age. “You just have to open your laptop and have access to the Internet,” Elina Cima says. However, it was more difficult for the company to understand Japan’s market because of cultural differences: “Europe is more comprehensible with respect to culture and living standards,” admits the co-owner of Munio.

Internationalisation strategy: key success factors

Munio chose direct exportation as the key entry mode into international markets. “We are producers yet also deal with the exporting of our products, including transportation and dealing with work with our distributors,” says Elina Cima, co-owner of the company. Apart from the direct exporting approach, Munio has also established a subsidiary in the United States by opening its own factory. As a result, today one of the owners lives and runs the business in Latvia, while the other is based in the U.S. That such a move, i.e. direct exporting, is a good first step before making a direct investment, such as opening a factory, is also suggested by previous empirical evidence (e.g. Lymbersky, 2008). The benefits of one’s own factory in the U.S. are obvious: to decrease transportation costs and thus increase the profit margin in the U.S. and Japanese markets and to minimize the proportion of damage to goods that occurs during the transportation process.

Following its successful first exhibition in Japan, the company continues to focus on participation in international trade exhibitions as a way to build its business network and find distributors. The company does not miss any important trade shows in Tokyo, New York, Paris and Moscow where it can present its products; in fact, this is the main strategy for establishing network relationships with international partners. The co-owner of Munio explains: “Since none of us had previously worked in international markets, we also did not have any prior contacts that facilitated our expansion globally. All our contacts have been developed during foreign trade shows and exhibitions; we started from scratch.”

Whenever possible, Munio Candela Ltd. aims to establish contacts that enable entering several markets simultaneously, preferably with a reliable distributor reaching an agreement on exclusive distribution rights. In this context, as emphasized by the representative of the company, especially with a factory in the U.S., geographical distance from Latvia is not such an important factor when it comes to choosing the international market. Instead, Munio considers factors such as values, lifestyle, income level and competition. Such an approach seems to correspond with the general typology of born globals, which also emphasizes the insignificance of the distance between the host and domestic markets for most born globals when it comes to choosing which market to enter (e.g. Peng and York, 2001).

Munio Ltd., like many other companies around the world, also takes advantage of various communication tools that have eliminated the boundaries between markets – to process information efficiently and communicate with partners and customers (Cavusgil and Knight, 2009). In this light, the co-owner of Munio emphasizes the value of the Internet in the role of business expansion: “For example, our products are sold in big department stores and design boutiques and distributors are responsible for laying out the products on the shelves. They simply

take pictures of how our products look on the shelves and send them to us for approval – so we do not have to travel to Japan for such purposes.” The company also takes advantage of social media, especially Facebook, as a powerful marketing tool to tell the world about its products.

Apart from the market entry mode, the main reason behind the success of Munio Candela, however, turned out to be its differentiation strategy, i.e. focusing on niche markets in specific target markets. As already emphasized by M.Porter (1980), born globals indeed tend to follow differentiation or focus on a strategy that implies offering distinctive products with a differentiated design. In this light, the main selling points of Munio Ltd. are sustainability and ecology, and the handcrafting and nice packaging of their products. Namely, the company produces completely natural soy-wax candles, each artistically designed. This is a unique approach in both Europe and Asia (not in the U.S., though). The company uses recycled materials in the production strategy, thus proudly emphasizing the “green approach” as another value added element of Munio Candela products.

The company positions its products in the premium price and quality category. Indeed, superior product quality is another strength of Munio Ltd. As emphasized by Elina Cima: “Every candle we produce is poured by hand, undergoing strict quality control. Samples from each batch are test-burned to guarantee their safety, performance and aesthetic qualities.” This approach is also in line with previous findings with regard to born globals, which often offer “state-of-the-art products” that outperform competitors in design and quality (Cavusgil and Knight, 2009).

3. The Case of Primekss Ltd.

Primekss Ltd., an industrial flooring producer, was established in 1997. Today, the company can proudly position itself as the Northern European leader in industrial concrete and epoxy floors. The main reason for this undoubtedly remarkable success lies in its flagship product – the innovative, improved concrete floor PrimeComposit – developed in the laboratories of the company. Not only has the product received wide acceptance from the customers of Primekss Ltd., it has also been awarded various prizes, such as “The Most Innovative Product in Latvia 2010”, a prize in the competition “Export and Innovation Award 2009” and the “Most Innovative Product at World of Concrete 2012”.

The company’s idea arose by the observation that there was poor quality flooring in the local market. The goal of Primekss Ltd. was to do something about this and provide better quality flooring. “I remember that we bought plastic flooring from some Finnish company but it did not hold out because of the poor quality of the concrete flooring. Then we decided to try producing the concrete flooring by ourselves. We succeeded and the market potential was bigger than it seemed at the beginning,” remembers the founder and CEO of the company, Janis Oslejs.

In contrast to STENDERS or Munio, Primekss Ltd. did not plan its global expansion, especially not in the early years. “In 1997 it did not seem realistic that we could ever expand into international markets,” recalls the CEO of the company, Janis Oslejs. “In a way, we were all looking at “foreigners” here in Latvia with our “eyes wide open”, trying to figure out who they were and what were the ways people in different countries did business,” he says, half joking. “Furthermore, at that time I could not even get a visa to Sweden easily, so entering markets we can freely travel to these days was much more complicated back in 1997,” recalls Mr. Oslejs.

At first glance it may seem that Primekss Ltd. has gone through the traditional stage model of internationalization. Namely, the company started to expand abroad step by step some five years after establishment. “We started to look toward international markets in 2002, by

establishing the first subsidiary in Estonia,” says Janis Oslejs, emphasizing that the main trigger to start rapid internationalization was introducing the innovative product PrimeComposit in 2008. “We introduced a unique technology and realized that the product could also be interesting in the Estonian market – a market that is so close to Latvia,” recalls CEO of the company. Overall, the case of Primekss illustrates the so-called “born-again global company” concept (Bell, McNaughton and Young, 1997). These are firms that had no international activities when they were established, yet at some point decided to completely change their strategy towards very strong dedication to international markets.

In this light, previous studies also reveal the importance of accelerated internationalization, drawing on the strengths of an innovative product representing a significant technological advance. One reason for this is to limit competitors’ activities and thus strengthen market positions (e.g. Hollensen, 2007). Indeed, the added value and unique product qualities of PrimeComposit facilitated the company’s further expansion abroad and the change in its strategy to more rapid global expansion. Namely, the international expansion of Primekss Ltd. was followed up with Lithuania in 2004 and Scandinavian countries from 2005. In 2010 Primekss Ltd. had established subsidiaries in Sweden, Finland, Norway, Estonia, Poland, Denmark and Lithuania. By 2013, Primekss Ltd. has also opened subsidiaries in Germany, the United Kingdom and Belarus. As a consequence, almost 100 employees work for the company and the consolidated turnover of Primekss Ltd. reached 11.4 million euros in 2009, 12 million in 2010, 25 million euros in 2011 and 23 million in 2012. It is expected that turnover will increase in 2013. It is important to note that foreign subsidiaries generated as much as 90% of the total turnover in 2009, and in 2012 already up to 95% of total turnover.

Internationalisation strategy: key success factors

Several factors, such as focusing on a narrow market segment, superior product range and advances in production technologies, found to be significant drivers of international success (e.g. Dalgic and Leeuw, 1994; Oviatt and McDougall, 1997), also undoubtedly influenced the success of Primekss Ltd. Yet, as already emphasized, the key driver of the successful globalisation strategy of Primekss Ltd. lies in its product, i.e. the company has managed to develop a unique product that allows for differentiation from other companies. In this light, as emphasized by the CEO of the company, Primekss is a research and development based company: “Our PrimeComposit floors are very durable and economical and the materials used in the production of the product generate 30-50% less CO₂ emissions than the industry norm for industrial floors. This is indeed a great competitive advantage compared to our competitors!”

Since no one in the management team had any prior experience in entering foreign markets, initially Primekss Ltd. based their international expansion solely on trying to establish personal networks. “All the skills were developed through personal experience, both successful experiences and mistakes,” reveals the CEO of the company. Before entering into contact with individuals in the target country, however, Primekss usually conducted market research examining the potential demand, the state of the construction industry, macroeconomic data of the country and potential competitors.

Initially the key Primekss Ltd. strategy for entering international markets was opening subsidiaries. As emphasized by the CEO of the company, such an entry mode was chosen because it best suited the business model of Primekss: “When we received an order from outside Latvia, we transported our equipment and employees to the target country. Only construction

materials were purchased on site, not least because we were interested in redeeming the value added tax.” Such an approach, at least in the early stages of internationalisation, proved to be a good choice, not least because it allowed them to establish closer contact with the customer to evaluate the potential of further expansion in certain markets and provided them with full control over the quality.

One of the limitations for further global expansion using subsidiaries, however, was that the company had to deal with everything from the design and workmanship to quality control. The CEO of the company explains: “As we had to transport our equipment and technology as well as organize work permits for Latvian workers to work in the specific market, it was quite complicated to enter markets that were very far from our home country.” This is the main reason why Primekss Ltd. started to enter markets that were close to Latvia, at the same time thinking about other market entry modes to avoid limiting the company’s activities to geographically closer regions.

The solution turned out to be the decision made in 2009 to change the company’s strategy using a franchising model that also included selling Primekss know-how and technology. More specifically, by concluding franchising agreements, Primekss Ltd. planned, at the beginning of 2010, to expand to several markets simultaneously, thus accelerating international expansion. All in all, as revealed by the CEO of the company, “This decision was the most logical of all the options, yet it is too early to judge whether this is the best entry mode for our intentions to enter distant markets.” That year the further internationalisation plans of Primekss were indeed impressive as they aimed at markets such as Japan, the United Kingdom, Israel, the United Arab Emirates and Lebanon amongst others.

However, in 2011 there was a change of market entry mode and the company started to prefer licensing. “There is not a big difference between these two entry modes. We let our licensees who offer PrimeComposit in the host country operate with their original name and they don’t have to adopt the whole concept of our company,” says the CEO of the company. Up until 2013 Primekss Ltd. has experienced impressive expansion with some slight changes from the initial plans in 2010. The company has successfully entered Belarus, Belgium, the Netherlands, South Africa and the United States. Therefore, the turnover of the company doubled in 2011 compared to 2010. In 2013 the United States is considered to be the most attractive market.

“Primekss cannot provide PrimeComposite floors worldwide without qualified flooring contracting partners,” says J.Oslejs. Potential PrimeComposite licensees must fulfill minimal requirements. The flooring contractor must possess sufficient specialized equipment, including laser-equipped screed machinery and machines for finishing the floors according to the highest standards, as stated on the company’s website.

“Yes, the globalization of Primekss was triggered by the product PrimeComposit,” says the CEO of the company “...and we are aware that at the moment we are the only ones offering the unique technology of improved concrete floors, but this will not be for long.” The company has also licensed the new product but, according to the CEO of the company, this does not guarantee that competitors cannot and will not come up with similar or even better technologies. “This is the reason we constantly monitor the market trends and our laboratory employees work hard to meet the new challenges of the markets.”

4. The Case of Trousers London

Three entrepreneurs from Latvia – Kaspars Upmanis, Arturs Naumovs, and Mareks Kaminskis – together with Angel Tan from the U.K. established a premium jeans wear company, Trousers London Ltd., in February, 2008. Even though the business idea was born in Latvia, London, U.K., was chosen as the place for the establishment of the firm. The decision to start the business in London, not Latvia, was influenced mostly by the highly developed fashion industry in the U.K. as well as the bigger local market size as compared to Latvia. Besides, one of the company's founders already had prior experience living in London while studying e-business at one of the universities there. In this light, several studies (e.g. Madsen and Servais, 1997) emphasize that firm owners' experience acquired while living abroad is indeed one of the factors that, through personal networking, international contacts, education and a more in-depth understanding of the local environment, positively influence the internationalisation of born globals.

Needless to say, the intention to expand globally has existed since the inception of Trousers London Ltd. For this reason, similarly to the practices of most born globals, both the company name and logo were chosen to fit the international plans. As explained by Kaspars Upmanis, one of the founders of Trousers London: “London is usually associated with top level fashion, especially in Asia, but also parts of the world outside Europe and the U.S. For this reason we not only opened the company in London but also used ‘London’ in our brand name, and for the same reason: to develop the necessary association with our brand name.”

The main idea behind launching Trousers London Ltd. was to create very high quality limited edition premium jeans for men as well as other items such as socks, shirts and undergarments. “We did not have any experience in the fashion industry or in manufacturing, before starting the firm,” reveals Kaspars Upmanis. Thus, it took some time to understand the industry in depth and create a significant business network to open up opportunities for expansion in London and other markets around the world. In this light, as emphasized by the CEO of the company: “Personal contacts and networking are indeed very important in London and should always be considered as a top priority, especially in the fashion industry. Literally everything is determined by ‘whom you know’.” He adds that “creating personal networks, similarly to many other activities, such as advertising, PR and the manufacturing process itself, would be much cheaper to implement in a country like Latvia, of course.”

It seems, however, that the diversity of backgrounds of the Trousers London Ltd. owners does compensate for the lack of experience in the fashion industry prior to starting the company. This is also what Kaspars Upmanis emphasizes: “Including the diverse fields of architecture, advertising, business, design and social media marketing, the varied backgrounds of our team in many ways contributed to the success of the company.” More specifically, without knowledge of how to follow the “mainstream”, often promoted by the conventional schools of fashion, the team had no choice but to bring in their own approach. “This in turn made us different, in many cases more appealing, when it came to processes such as methodology in fashion design, marketing and promotion,” says the co-founder of the company.

“We view the world as our marketplace,” emphasizes Kaspars Upmanis, and the facts speak for themselves. The manufacturing process of Trousers London is organized in an outsourced factory in Italy, while organic premium denim is purchased in China. Trousers London started to expand outside London only six months after the company was established. Similarly to the case of Munio Candela, the first international market the company entered was

Japan and, interestingly enough, this choice was also more of a coincidence than a decision planned well in advance. “We concluded the agreement with a Japanese wholesaler while participating in a trade show in Japan,” reveals the representative of Trousers London.

According to 2010 data, Trousers London exports about 70% of their total production, and jeans with the Trousers London brand name can be purchased in eight shops in Japan, three shops in London, one shop in Latvia and one in Stockholm. Interestingly enough, all this was achieved by the three owners of the company themselves – without employing any extra staff. “This is possible since we outsource most of our activities,” explains Kaspars Upmanis. Such an approach in turn corresponds to the findings from studies of various born globals across the world, highlighting the effectiveness of outsourcing when it comes to expanding globally with limited financial and human resources (e.g. Cavusgil and Knight, 2009).

Internationalisation strategy

Trousers London enters international markets with the help of local partners in each target market, whereas in London all the sales are organized by the company itself. As emphasized by the co-founder of the company, being established in London, the company is very close to U.K. customers: “...thus it is only natural that we deal with the sales process in London ourselves.” The main advantage of such an approach is, of course, the opportunity to follow customers’ needs and get quick feedback to continuously improve the product. “The know-how we acquire in London is also very important when it comes to working with other target markets,” emphasized the representative of Trousers London.

Apart from carefully observing the requirements of direct customers in London, the company also conducts some market research prior to choosing both the target market and distributor to work with internationally. As explained by Kaspars Upmanis, market research, however, is more based on the intuitive decisions made by the founders of the company than on strict, formal guidelines. “For instance, I regularly monitor all the blogs and social networks to see what is written about jeans and denim. This is one of the ways we follow the world’s fashion trends and get to know our potential customers abroad better,” he says. “Then, in the management team, we analyse these fashion trends and select target countries with a potential interest in premium class jeans wear and other products launched by Trousers London.”

Trousers London, similarly to other born globals, employs a differentiation strategy and targets niche markets. “Our target is to create an exclusive series of coveted designs in organic denim, moving away from disposable clothing trends towards a new tradition of fashion,” says the representative of the company. He further emphasizes that the main ambition of Trousers London is to maintain a specialization in high-quality, directional men's denim: “Each new jeans model is numbered in the order of its design; to ensure the exclusivity of the jeans, besides carefully selecting materials and applying intricate details, we give every pair of jeans a unique ID number,” reveals Kaspars Upmanis.

When it comes to both production and organizing the distribution of products to international markets, Trousers London has chosen to contract a manufacturing company in Italy. Indeed, according to entrepreneurship literature, many internationally oriented companies choose to outsource their manufacturing process in order to reduce fixed costs, thus enabling them to focus on their competitive advantages (e.g. Lymbersky, 2008). The choice of outsourced manufacturing and distribution was also determined by lower investment requirements and less financial risks. As explained by the representative of Trousers London, “We are liaising with

distributors and shipping companies as well as taking care of picking up the goods from the manufactory, etc. The manufacturer only makes the product.”

At the beginning of 2010 an Internet sales platform was introduced by Trousers London: “Online commerce erases the borders between nations and the Internet sales platform is very important for our company – it generates 30% of sales annually. We forecast that its role will increase every year,” says the representative of the company, highlighting the need to constantly look for new solutions to become further established in the global markets. Indeed, Trousers London has a very strong international outlook and entrepreneurial orientation even today: “There is never a bad time to start doing something. If you don’t try, you will never know,” says Kaspars Upmanis, leaving the strong impression that the company is on its way to further successful international activities. Furthermore, Kaspars reveals that all three owners of Trousers London are also developing other business concepts that are not directly linked to fashion.

5. Conclusions and Implications

When it comes to understanding the general patterns of born globals originating from Latvia, empirical findings from the four case studies suggest the following key characteristics. First, born globals seem to have superior product ranges, knowledge and quality, which allows them to compete in the international arena. These companies usually produce niche products and seek to achieve growth via market diversification and economies of scale. Second, one of the characteristics, and at the same time advantages, of “born globals” is that they have management structures that allow for a relatively easy decision-making process to take place. This in turn makes both planning and implementation of expansion strategies more effective. Third, managers of born globals have a very strong international orientation and the motivation to create a successful-growth oriented business.

Furthermore, born globals purposefully, and usually at the very early stages of their business activity, choose a company name and brand name taking into consideration the ease of pronunciation and clarity of meaning in international markets. Also, the product design and the structure of the company are created to suit international markets long before these markets are actually entered. It can also be observed that international expansion strategies are very much driven by the features of the product the company is offering, which also influences the choice of the international market. The early internationalization of most of the companies analysed above is also influenced by the size of the home market and by the firm’s production capacity and competition in target markets.

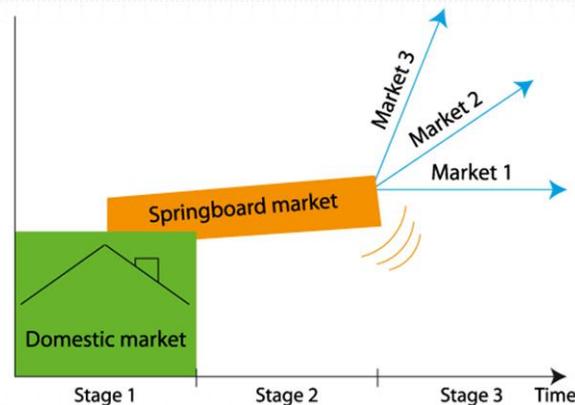
Responding to a growing trend of environmentally friendly products and understanding the impact of human activity on the earth’s ecosystem, born globals tend to choose “green” marketing strategies. The cases also suggest that born globals end up exporting about 70% of their total production. Furthermore, in contrast to born globals that originate from more advanced market economies, these entrepreneurs do not have any prior international business experience before planning their international expansion strategies. This pattern can be explained by the relatively recent shift from planned to market economy in Latvia and the fact that Latvia entered the European Union only in 2004. For this reason, most probably, reliance on personal and business networks is also not a dominant feature and business networks are usually developed through foreign business operations.

Interestingly enough, despite lacking international experience and facing financial constraints, born globals “born in Latvia” tend to choose to enter several markets simultaneously

in order to seize an emerging chance or forestall competition. Two key strategies are used when making a strategic decision to select target markets: the proactive way of screening markets where demand is theoretically the biggest or the reactive way of accepting offers from cooperation partners.

Furthermore, aiming to answer the question of how born globals should plan their expansion strategy in order to succeed internationally, we propose a model that could potentially be used for internationally oriented companies, especially those that originate in small economies with a limited local market size, such as Latvia. In building the model we draw both on the relevant conceptual discussion in the entrepreneurship and strategy literature and on findings from the case studies. To summarise, we find that the sooner born globals start their internationalization, the better. This is important since typically born globals have products that are usually developed in the “local” market and possess unique value added features as compared to competitors. Our observation suggests that it is important to act very quickly in order take advantage of such value added features.

One way to do this is by carefully selecting the first foreign country or “springboard market”, which would allow the company to meet economies of scale and to acquire the needed experience and financial resources for successful future growth. The logic behind the “springboard strategy” (see *Figure 1*) is that born global companies usually start to internationalize in the first years after establishment, as the niche market is too small in the domestic market to provide uninterrupted growth. Usually such companies have developed unique or technologically advanced products that help them to differentiate themselves from competitors and to develop their own niche market. However, the companies are aware that, taking into consideration the tough competition in the global arena, such a superior position is not likely to last for a long period of time. This creates pressure on born global firms to expand globally very rapidly in the first years after foundation. Therefore, born global companies should accumulate knowledge and experience in the home market as quickly as possible.



Source: Authors

Figure 1. Springboard Expansion Strategy for Born Global Firms

For this reason, we suggest that a company should not operate in a domestic market for longer than six months. Meanwhile, we suggest starting to select the first strategic foreign market, which would allow the company to meet economies of scale and to acquire the needed experience for further successful growth. It is also important to consider that, especially with

limited resources to invest in international expansion, entering global markets can take time – this is another reason to start working on this from the first day of operations. The first market could thus act as a “springboard” that allows the company to achieve more rapid growth and accumulate needed financial resources in order to continue the growth in several host markets simultaneously.

We acknowledge the shortcoming of the case study approach, of course, when it comes to the generalization of the model and thus welcome further research on this topic.

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PARTNERSHIP OF BUSINESS AND INFORMATION TECHNOLOGY FOR SUCCESSFUL INTRODUCTION OF INFORMATION SYSTEM (CASES OF RUSSIA)

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Abstract

Purpose: The aim of this paper is to describe the approach of establishing effective partnership of Business and Information Technology representatives for introducing new Information System (IS) at finance institution paying particular attention to business users' contribution in IS successful acceptance and launch. The investigation was done at one particular bank in Russia while applying proactive approach to business users involvement in the process of familiarisation with new system, including users' training, motivation and their close participation in IS preparing for Live Run. The paper analyses the set of factual data gained during new Core banking IS introduction at the bank, trying to evaluate the different aspects of business and Information Technology (IT) collaboration within the organisation for improvement new IS acceptance process and for getting it as smooth as possible. Paper gives some conclusions and recommendations for proactive behaviour of company's leaders as well as hints how to manage the main challenges of establishing the workable partnership of business and IT.

Design/methodology/approaches: The case study research methodology combines primary data gained from practical experience in launching new IS at particular bank in Russia, the interpretation of the data and the literature review. Methodical approach was developed based on one of the author's long-year experience as IT Manager in banking industry. Secondary data were collected from interviews with bank employees and managers.

Findings: This paper provides the idea of identifying most critical aspects and basic issues to be analysed and solved for getting successful launch of new IS.

Practical implications: The research could impact the proactive behaviour of top managers like Project Sponsors and Managers taking care about launch of new IS in time and with high quality. This approach allows company get good results related to financial investments and expenses and be more effective in the market. The authors believe their recommendations could supply also social and behavioural benefits like better collaboration amongst business and IT representatives.

Value: This paper provides value for companies who is implementing new IT solutions and facing various challenges in the process by giving several hints for establishing effective partnership at the company.

Article Classification: Case Study

Keywords: Partnership, Proactive Behaviour, Business Users, Information System Acceptance, Motivation, Training.

Introduction

Nowadays the vast majority of companies and enterprises are highly dependent on their Information Technology (IT). For lot of organisations, we could say, that if IT has some essential problems, accidents or crash, the business practically stops. In case a company wants to launch new innovative product/service usually there is some piece of new software or new Information System (IS) supporting this process. This statement is extremely important for finance area's enterprises, like banks, insurance companies and similar who truly cannot survive a day or even an hour without IS properly working. Customers, partners and bank employees as well as bank's management ask having IS operating business processes and operations in efficient way fully satisfying banking business requirements.

The authors of given research investigated the issue of business involvement in the process of new Core Banking System implementation from the very early stage like defining business requirements for IS and finishing with acceptance stage just before Live Run. Core Banking System launch in Live Production is considered as the apogee of IT staff and business users' common efforts, being able ensure highly effective new solution for serving banking customers. But how the partnership between IT and business should be organised to get the best finance and operation results while establishing and keeping friendly and fruitful cooperation of these two, sometimes, contradictory parts of each company? What set of tasks IT have to assign and entrust to business representatives, what contribution can we expect from business users and in what way Project management should conduct this process?

For ensuring that IT sustains the company's long-term strategy and aligns with the goals and objectives of the bank, top management should establish effective business and IT cooperation during the whole Life Cycle of new IS development and implementation, or during large IT Project. The involvement of business in the first stage of new Core Banking System (CBS) introduction, namely in the stage of business requirements definition and the document "Request for Proposal" preparing is the subject of particular research that we are going to conduct and present in the next articles. Though the authors have some experience in managing the process of business requirements definition, in the paper below we explore solely IT and business partnership during the last stage of new IS introduction, specifically, stage of User Acceptance Test.

Aim of the research: In this paper the authors wanted to investigate theoretical framework and methodologies for new IS implementation in companies, the case of introducing new CBS at

particular bank in Russia, analyse practical results and state recommendations, which could be useful in practice.

The beginning of the research was started in early 2000, when one of the authors participated and managed a lot of projects of new IS implementation at one of the Latvian banks. The authors analysed various approaches and models of end-users involvement in the process of new IT solutions selection, acceptance and support of Live Run.

Research methods: As research methods the authors choose literature review; the quantitative approach and primary factual data selection about particular Project at the bank while introducing new CBS; in-depth interviews with bank's top management and responsible users. The authors do not touch either financial issues of the Project or technical aspects like hardware, security or performance questions, concentrating on management and motivation aspect of business and IT collaboration.

The hypotheses of the research: The authors formulated the hypotheses that intelligent and smart establishing of partnership and collaboration between IT and business from the very first stages of new IS introduction could ensure smooth and effective Live Run of new IT solution being therefore, a key element in realizing business value by using IT.

1. Theoretical framework of new IS acceptance process

The experience in software testing area could give the clear evidence that “a human being can make an error (mistake), which produces a defect (fault, bug) in the program” (Müller, T., Friedenber, D., 2011). The authors mark a lot of problems in business operation due to the software working improperly: money, time or business reputation losses, even human death. Other authors express this statement considerably stronger, considering careful testing process as prerequisite and some type of warranty that system works properly, in secure manner, is reliable and with high level of user friendliness (Schotanus C., 2009). Abovementioned becomes even more important when we touch such sensitive area as finance and banking. Whilst new IT solution is the object of technical tests, it is IT responsibility to make the process highly professional and comprehensive. But when the process has got the critical stage like acceptance of new IT solution, company's management has to take extremely important decisions and precaution measures for managing and mitigating the risks to the company resulting from the major change, namely, from the introducing of new IS. Fully understanding the high influence of new IT solutions to the daily business operations, management should manage the process of effective cooperation between IT and business for ensuring strong belief and confidence about new IT solution quality and it's compliance with business needs. User Acceptance testing should assess the system's readiness for its deployment and usage in Live environment, as well as to what extent system functionality matches with company's business needs. The authors fully agree with Spillner, A. et al who consider that it every enterprise should has “basic knowledge that helps to achieve structured and systematic evaluation and testing. Implementation of these evaluation and testing procedures should contribute to an improved quality of the software being developed.

The employees who have to make the decision accept or reject the new IS are the business users and therefore it is critical to get the end users – business representatives involved in testing and not rely only on the IT staff. Background and rationale why User Acceptance Testing (UAT) is so important lies in fact that only business representatives could play the judge role justifying that new system delivers the business functions which are required for serving

customers strongly following business processes, rules and routines. “User acceptance testing should be performed by business users to prove that a new system delivers what they are paying for” (Kusiak J., 2007).

2. Business and IT partnership - key factors for effectiveness of collaboration

The authors of the research fully agree with the well-known statement expressed many years ago that could be successfully referable to software quality as well.

“Quality is never an accident; it is always the result of intelligent effort.” John Ruskin (1819 - 1900).

We suppose that in financial world, qualitative new IS definitely should match at least two main criteria: a)allows the company (bank, insurance, or similar enterprise) to serve customers and make money by doing business transactions b)meets the legislative, compliance, risks and other obligations according to local and international governmental and financial authorities requirements.

After new IS has been carefully tested by IT technicians, carrying all needed tests in various functional and non-functional areas, like system integrity, security, performance, and others, it is the business turn for careful and thorough system acceptance.

As it was described above, namely business users together with company’s management are the key players in the IS user acceptance process and the decision makers to decide whether newly introduced IS could be launched in Live environment. It is their responsibility to estimate to what extent IS meets current business requirements and could satisfy growing business demands as well as ensure new products and modern services introduction to customers that could cause good financial results. Bank managers should also check the risk and compliance aspects before system production run.

To ensure fruitful business users involvement in the acceptance of new IS and proper corresponding adequate results of this final business checkpoint, management of the enterprise should set up Actions Plan with clearly define steps. In the given research the authors have analysed the set of actions taken in particular bank by bank managers for smooth acceptance and introduction of new CBS and its correspondence with theoretical framework and best practice.

2.1. Standardisation of main business products and services as part of new business culture

As essential prerequisite for the introduction of CBS at the bank, top management considered creation of transparent clear descriptions of main business processes, workflows and data flows. Project team had defined the set of typical banking products and services trying generate standard procedure and routines for every business process. Standardisation of internal business processes could have many benefits while introducing and used properly, but at the same time it can be even harmful in case being understood and re-designed in incorrect way. Standard banking products and services in case they are properly designed could considerably simplify the implementation of CBS, bringing new business culture into organisation and customers’ service level, raising the performance of branches and departments and dramatically reducing real internal operating costs.

2.2. Business duties for each functional position and User Role Access matrix

New CBS for the bank was selected amongst several similar IS by comparing systems' functionality and bank's business needs. This selection was done during previous stage of the Project and in the given research the authors have not analysed this aspect. But when the selection of new IS was done, business representatives in cooperation with IT system analysts had to make essential job of investigating business users' duties, defining Key User Roles and matching the set of duties with CBS functionality. Generally, there were more than one thousand functional modules in new CBS and one of the most extensive preliminary task for project group was the investigation of system functionality and finding out which modules fit the duties of each key user. The next step refers to development of transparent User Role Access matrix, assigning appropriate data access rights for each Role for ensuring shared access and control to customers' and banking data.

2.3. Proactive approach to business users Training and Certification

The next issue that was chosen for research is proactive approach to business users Training and Certification to provide users' deep comprehensive knowledge and practical skills while operating with new CBS.

Bank management considered highly professional and well trained business representatives as one of the most essential factors for successful CBS running in production and decided having training process in advance like proactive step for user involvement.

In the very beginning of the Project the management agreed with the supplier of new CBS about process of training and certification for bank's key users, which included two options: 1) distant training with web-based access to Training Centre in Moscow 2) one or two weeks full-time training courses.

1) Distant Training using Interactive Portal in Training Centre was arranged for the set of functional modules of new CBS so each key user could apply for several modules according to user's position, duties and responsibilities. Business users could learn the architecture of the system, detailed theoretical description about all business processes and could get appropriate practical skills by executing training transactions. Generally, 61 modules of new CBS were learned by employees according to bank's specialisation as universal retail bank for small and medium enterprises. After training in each module every employee had to pass the exam in on-line mode. Distant Training duration was 60 days. To provide good quality of training and, mainly, ensure necessary progress in users' education, weekly report on training results was regularly reviewed by bank management.

2) For several particular key users full-time two-week courses were arranged, with comprehensive certification exam as final check-point.

2.4. Establishing the system for constant training and education

The concept of permanent learning is still valid in many managerial cases. Being aware of this statement, bank management have decided taking definite actions for establishing *system for constant training and education* that could be used by banking staff. Taking into consideration high responsibility for banking employees to serve customers quickly and

qualitatively as well as some shift of employees at the bank, for avoiding the risk of existence an unqualified bank employee several important managerial activities were made.

- A. *Internal Coaches*. Firstly, several internal trainers were chosen as coaches for permanent support of the banking staff. They could significantly reduce the psychological stress in training process for trainees and ensures non-dependence on the external IT supplier for the bank being integral part of banking team. Such managerial approach allowed the bank find out several strong personalities who were good expert in particular business area and could operate as internal Coach accessible for consultations in any time teaching end users what they need to know. In such way the bank could share and spread user experience through the whole organisation.
- B. *Training environment*. Particular central IT infrastructure for staff education and Training fully separated from Production IT infrastructure was established ensuring this environment is always accessible for training purposes.
- C. *The approach to Training process organization*.
Two various options for Training methodology were analysed. First option implies full usage of Training Class that is located in the central head office of the bank and scheduling the training hours for employees from the branches. Such education methodology ensures that trainees will be released from direct duties for particular time period and as a result could fully concentrate on the training cases. Second option means employees' self-training in the training class at each branch of the bank that usually was fully separated room with one or two computers. For avoiding the risk of mixing when particular computer is used for training and when for operation in Production, separate physical computers were dedicated solely for training purposes. Every trainee could fulfil self-training at their own pace according to his work load until they do all the exercises and are familiar with the functionality. In addition, every employee could ask the Coach for assistance or advice in case he meets any difficulty during training process.
- D. *Helpful documentation for users*.
To assist bank's users and provide helpful references to business functionality and specific system features, detailed User Guide either in paper form or in on-line mode should be in place, supporting quick, friendly and easily understandable manuals.

2.5. Employees motivation model

A lot of theoretical researches and practical experience gave the authors the basic for stating some reasonable hints for creating well-applicable employees' motivation model.

As first essential point for motivation the staff we could undoubtedly consider strong management position to encourage banking staff for operating as a joint bilaterally supported friendly team instead of being set of strong personalities. The team should be aware that they are doing very meaningful, important work, extremely needed for an organisation. In many cases the consciousness that team members are doing something very significant for their organisation and are well informed about Project progress could cause wondering unbelievable results. Abovementioned User Roles matrix allowed defining business roles and duties in precise way by giving each user clear job description and full accountability.

Managers of the bank had also widely using traditional motivation methods, like giving experienced key users new opportunities for individual career growth, or possibilities of usage the acquired knowledge in new business directions.

Paying bonuses for good results and performance was considered as regular traditional method as fair compensation for employees' additional duties and load while accepting new IS.

2.6. Set of Web-based tests

The authors consider as extremely important factor for getting highly qualified staff regular management control of employees' knowledge and skills after Live run of new CBS. As the tool for this purpose the *set of Web-based tests* was developed and successfully introduced at the bank. Each employee has to run the test in daily mode just in the very morning spending up to 5 minutes for answering the randomly appeared questions and getting at least minimum grade for the test. Set of Web-based tests includes various aspects of banking operating like tests for CBS, Security and IT Security issues, anti-money laundering issues, business risks and IT risks area.

2.7. User Acceptance Test process model

Due to the bank's management extremely ambitious plan for introducing new CBS in half a year, the schedule for all related activities was very tough. According to this plan, User Acceptance Tests were scheduled and arranged as two stages, each of them should be executed during a Saturday when the bank did not serve the customers but could afford ask the main part of the team to participate in the UAT. Justification and explanation of the fact that the UAT was organized in two stages, could serve the requirement to ensure blameless quality of new CBS and its perfect compliance with customers' and business needs.

Detailed Plan for two UAT stages was created in order to include therein the accurate and thorough configuration of all business products and services which bank was planning to offer for the customers. Top management of the bank have decided to involve the majority of the business users in UAT tasks fulfilment, each of them had to report about discovered errors or inconsistencies to appropriate Key User who was considered as expert in particular business area. The experts had to register, collect and analyse each error applied to obtain total list of discovered bugs and errors. Thus working the whole working day and imitating comprehensive servicing of banking customers, at the end of the UAT1 day total list of errors was successfully drawn. To ensure that all discovered errors and discrepancies in CBS were corrected very close cooperation with external supplier was maintained during the following two weeks. As a result the bank may arranged the second stage of UAT in scheduled day to check the new release of CBS with all corrections made. For the UAT2 the similar method was applied when the vast majority of employees were imitating the process or serving customers while Key Users have collected and analysing discrepancies discovered.

UAT2 results showed good status of CBS that fully met business requirements and was perfectly acceptable for the introduction in Live Environment.

3. Analysis of new Core banking IS introduction results

In the table below the authors registered some factual results of preparing for introduction CBS at the particular bank in Russia.

*Table 1.
The results of preparation for new Core Banking System introduction at Kapital bank (Russia)*

Key User	Key User Role	CBS applications number for each Role	Assessment in points of users' certification after training	Number of hours spent on training	The number of inconsistencies found out during UAT1	The number of inconsistencies found out during UAT2
User 1	Cashier	80	90	75	29	10
User 2	Manager	80	85	65	23	15
User 3	Chief Manager	82	85	70	33	11
User 4	Accountant	200	70	60	35	16
User 5	Chief Accountant	200	65	67	35	5
User 6	Loan specialist	140	80	85	35	12
User 7	Loan monitoring specialist	84	95	85	33	13
User 8	Currency control specialist	80	98	80	23	8
User 9	Financial monitoring specialist	50	80	65	31	5
User 10	Reporting specialist	90	86	70	25	4
User 11	Internal accounting specialist	40	75	76	15	2
User 12	Deposit specialist	55	90	120	41	5
	TOTAL:			918	358	106

The correlation between hours spent on Training and the numbers of discrepancies found out during the UAT1 is 0.3870, between Training hours and the numbers of discrepancies found out during the UAT2 is 0.1066. Undoubtedly, this correlation coefficient should be checked with more representative set of data, though even these pictures show the evidence that such approach to business preparation for usage of new IS could be acknowledged as proper and acceptable.

Conclusions

1. Top management of the particular bank showed long-term strategic approach to the processes of introduction the modern IT solutions at the bank.
2. Business representatives can give extremely valuable contribution to cooperation with internal Information Technology specialists for raising the effectiveness of business operating.
3. Proactive approach to business users involvement in collaboration with IT, like apropos User Training and Certification, establishing the system for regular control of employees' knowledge and skills could encourage business users for intelligent and sophisticated behaviour working with modern IT systems.
4. Business Users are very flexible and responsive working with new IT systems in case they have clear descriptions of duties and see understandable perspective for further operating.

Recommendations

The authors of given research can express some recommendations for ensuring fruitful business and IT cooperation during new IS acceptance at particular company hoping these hints could be useful for similar cases while introducing any new IT solution at big organization.

Standardisation of main business products and services as part of new business culture; business duties for each functional position and User Role Access matrix creation. Systematization and transparent clear descriptions of main business processes, workflows and data flows that causes clear defined business duties for each position should be considered as very important prerequisite for new IT system introduction.

Proactive approach to business users Training and establishing the system for constant training and education. Well thought out and good scheduled Training and Certification action plan including wide range of possible training activities could ensure proper qualification of business users and their confidence for working with new IT system. The next issue management have to think about is establishing and maintaining the effective system for employees' permanent education and training.

Set of Web-based tests. The authors consider that set of various web-based tests that should be carried on regular basic by all employees, is extremely important factor for getting highly qualified staff.

Employees motivation model. Paying bonuses for good results and performance should be considered as good traditional method of fair compensation for employees' additional duties and load while accepting new IS.

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EMPLOYER EVALUATION OF COMPETENCES PROVIDING OF COMPETITIVE ADVANTAGE IN LABOUR MARKET

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Summary

The article is based on the review of literature providing the theoretical background related to key competences of human resources and the results of the questionnaire-based survey aimed at obtaining information about employer priorities when selecting potential employees.

The objective of the article is to reveal the key competences influencing the hiring decisions of employers in Latvia labour market. It focuses on the role of skills developed within the study programme at BA School of Business and Finance, experience obtained during internship and exchange programmes abroad.

The employers' priorities are analysed and they allow to draw the conclusions related to the potential areas of further improvement of study programmes and teaching methods with the aim to increase the competitiveness of graduates in labour market and to provide competences that would contribute to the competitive advantage and sustainable development of the company.

Key words: competences, competitiveness, labour market, employability skills.

Introduction

To meet the requirements of the contemporary labour market the higher educational institutions have to ensure that they provide young people with the knowledge and competences required in the labour market.

Competence is a standardized requirement for an individual to properly perform a specific job. It encompasses a combination of knowledge, skills and behaviour utilised to

improve performance. More generally, competence is the state or quality of being adequately or well qualified, having the ability to perform a specific role.

For instance, management competency includes the traits of systems thinking and emotional intelligence, and skills in influence and negotiation. A person possesses a competence as long as the skills, abilities, and knowledge that constitute that competence are a part of them, enabling the person to perform effective action within a certain workplace environment. Therefore, one might not lose knowledge, a skill, or an ability, but still lose a competence if what is needed to do a job well changes. (http://psychology.wikia.com/wiki/Professional_competence)

Eurydice - Education, Audiovisual and Culture Executive Agency, 2010 informs that: In recent years, several EU initiatives have been launched with the aim of supporting the development of citizens' skills as well as improving education and training systems so that they are better able to respond to the needs of the economy and society. These initiatives include the Key Competences Framework, the European Qualifications Framework, the general policy framework for European cooperation in education and training and the initiative 'New Skills for New Jobs'. This latest initiative is intended to promote an improvement in skills forecasting and matching the supply of skills to the needs of the labour market through better cooperation between the worlds of work and education. (*EACEA P9 Eurydice 2010*)

Designing the study programmes the demands of the employers should be the decisive factor determining the key competences that should be ensured as a learning outcome.

The objective of the article is to reveal the key competences influencing the hiring decisions of employers in Latvia. To achieve this objective there were the following tasks:

- to summarise the key competences of employees highlighted by different authors in different sources of information and EU documents.
- To contact and survey a random sample of personnel managers who make hiring decisions
- To analyse the results of the survey to find out what are the top competences in Latvia labour market.

Review of key competences

The research of competences required in labour market has become a key issue.

The European framework for key competences for lifelong learning, released at the end of 2006, identifies and defines the key abilities and knowledge that everyone needs in order to achieve employment, personal fulfilment, social inclusion and active citizenship in today's rapidly-changing world.

The framework includes competences in 'traditional' subjects, such as mother tongue literacy, numeracy, knowledge of foreign languages, science and IT skills. But it also covers other skills, such as learning to learn, social and civic competence, initiative-taking, entrepreneurship, cultural awareness and self-expression.

Initial education and training systems across the EU should support the development of these competences in all young people, and adult education and training need to give real opportunities for all adults to continually build and maintain their skills. (*EU Commission > Education & Training > Lifelong Learning Policy*)

The notion "key competences" has been used for a long time. As one of the first users of this term was the German economist Dieter Merten in 1974 who was the Head of Institut für Arbeitsmarkt und Berufsforschung involved in the research of relationships between the labour

market and employees. He pointed out the importance of reacting to the changing needs of the labour market adopting the competences of the employees to the new requirements. Jobs are becoming more knowledge-and-skills-intensive. As it is reported by EACEA P9 Eurydice - Education, Audiovisual and Culture Executive Agency in its overview of the current situation in Europe, November 2010, the demand for higher education graduates is not saturated and by 2020, 35% of all jobs will require high-level qualifications (today: 29%). Higher education is a good insurance policy against unemployment, and especially long-term unemployment. Higher educational establishments have also joined the discussion of key competences envisaging the development of the required competences in their study programmes.

The number of the required competences has increased since the research of the demands of the labour market started. They can be divided into several groups:

- **Professional competences (hard skills)** which are obtained during studies and improved in further career. They are essential for a successful career.
- Other groups refer to **soft skills** and can be divided into
- **Personal competences** which are closely related to the individual and depend on individual traits of character (e.g. sense of responsibility, flexibility, being a self-starter, leadership potential).
- **Social competences** involve communication skills, ability to communicate with people at all levels, work in a team, resolve conflicts and make decisions, intercultural competence, motivation, loyalty, customer-oriented approach.
- **Methodological competence** refers to logical and analytical thinking, the ability to solve problems and presentation skills.

The mentioned groups of competences are in correlation. Many competences can be acquired during the study process while others depend on individual traits of character.

Foreign language competence is pointed out as one of the top competences in Latvia labour market required applying for different positions in the company. This has been caused by increasing international trade and globalization.

Assessment and selection of job applicants evaluating their competences is based on job interviews, references, tests, role-plays and simulation of tasks.

Key Competences in Latvia Labour Market

The contemporary society is often characterized as a consumer society and therefore a larger share of business activities and high employment are in the service sector. Besides the described groups of key competences common for different European countries it must be noted that due to the interest of foreign companies to set up outsourcing centres in Latvia presentation, selling skills and the foreign language competence (English and other European languages) are increasing in importance and are among the top requirements in Latvia labour market. The level of foreign language competence depends on the business sector and job responsibilities. In some top positions even the knowledge of two foreign languages is required.

The applicants for the position are also expected to be able to see the opportunities in order to set and achieve new goals. At present there is demand for flexible and competent employees able to cope with the job responsibilities of several positions that is possess additional skills and competences. Experts highlight the following key competences that would enable the job seekers to apply for different positions and provide more flexibility in changing the field of their professional activity:

- Entrepreneurial competences (financial analysis, planning cash flow, accounting, selling skills, basics of marketing and market research).
- The Latvian, Russian, English language competence.
- Computer skills
- Communication skills
- Personal competences such as time management skills that involve self-direction and motivation, ability to set and achieve goals, decisiveness, decision-making process, organizational ability, prioritizing, delegating.
- Social networking skills, etc.

Research methodology

The study is based on the assumption that the key priority of the employers selecting the candidate for the position is education that has led to obtaining an academic degree and professional competence.

The study focused on the literature, analysing the impact of different competences on the hiring decisions and the competitiveness of graduates in the labour market. The analysis included the latest sources of information in the form of EU documents, articles and books. The information was gathered and analysed to compare the top competences required in the European labour market and by employers in Latvia.

Researching and evaluating the opinions of different authors on the matter under discussion no contradicting viewpoints were discovered. The authors of the researched sources of information agree on the importance of forecasting and matching the competences to the needs of labour market.

In order to determine the key competences providing a competitive advantage in the labour market a questionnaire-based survey was carried out and therefore a questionnaire listing different competences and activities that have allowed to develop them was worked out. It contained 19 items and the scale of four degrees of importance of the listed skills and competences.

The respondents represented Human Resource Departments of banks, financial institutions and other businesses which closely cooperate with the Career Centre of BA School of Business and Finance and employ students and graduates of Business schools as well as provide internship possibilities.

Results of the survey

The obtained results do not prove the assumption of the authors that an academic degree has the top importance in selecting the candidate for the position. (Table 1)

*Table 1.
Assessment of the degree of the importance of the acquired competences and activities facilitating their development by Human Resource Departments in per cent*

Professional competences:	% Very important	Important %	% Little importance	Unimportant %
Bachelor's degree	10	40	50	-
Master's degree	-	20	60	20
Diplomas of foreign universities	-	20	50	30

Professional competences:	% Very important	Important %	% Little importance	Unimportant %
Evaluation of knowledge in the diploma supplement	-	30	50	20
Knowledge of basics of entrepreneurship	20	60	20	-
Knowledge of management theory	30	40	30	-
IT skills (MS Office), multimedia application	30	70	-	-
Ability to use special software (e.g. accounting)	10	50	30	10
Experience obtained during internship	64	9	-	27
Contacts with businesses while studying and writing Bachelor's thesis	27	45	-	27
Social competences:				
Study experience abroad increasing cross cultural awareness	10	30	40	20
Fluent English	60	40	-	-
Ability to communicate in at least two foreign languages	50	50	-	-
Ability to work in a team	70	30	-	-
Communication skills	70	30	-	-
Participation in out-of-university activities and societies	30	10	60	-
Participation in projects	40	30	30	-
Methodological competences:				
Problem-solving skills	60	40	-	-
Presentation skills	50	40	10	-

The results of the survey revealed that 100% of the surveyed evaluate as important or very important the following top competences (Figure 1):

- **Social competences:** ability to work in a team participating in projects and communication skills (70% - very important, 30 % - important); Besides the obtained results prove that employers see the student participation in different associations, organizations and social events as a contribution to the development of their social competence. (30% - very important, 10 % - important)
- **The English language competence** (60% - very important, 40 % - important). There is no doubt that English is essential for doing business internationally, building successful business relationships, networking, obtaining and exchanging information and thus improving the performance and financial results of the organization. The English language competence enhances social competences and presentation skills.
- **The knowledge of at least two foreign languages** (50% -very important, 50% - important)
- **Methodological competence:** problem-solving skills (60% - very important, 40 % - important)
- 90% of employers highly evaluate another methodological competence – effective presentation skills necessary for the presentation of business results, the company or its products and services. (50% - very important, 40 % - important)
- **Computer skills** (30% - very important, 70 % - important); However, the ability to use special software (e.g. accounting) is very important for 10% and important for 40% of employers.

Besides, the collected data proves that entrepreneurial competence is another competitive advantage of job applicants. 80% of the surveyed evaluate it as important or very important. Furthermore, the knowledge of management as well as participation in projects is considered to be important and very important by 70% of the surveyed.

Another advantage of candidates for the position is work experience that provides professional competence. 73% of personnel managers involved in selection and recruitment prefer applicants who have at least had internship or contact with companies, for example, when writing Bachelor or Master thesis. Experience obtained studying abroad and intercultural competence also contribute to professional and social competence of employees and is evaluated as important by 40% of employers, while another 40 % think it is of minor importance or unimportant (20%).

The results of the survey revealed that in spite of the forecast of EACEA P9 Eurydice - Education, Audiovisual and Culture Executive Agency in its overview of the current situation in Europe, November 2010, that by 2020, 35% of all jobs will require high-level qualifications, at present 50% of the surveyed employers do not expect the job applicant to have Bachelor's degree and for 80% - Master's degree and diplomas of foreign universities are of little or no importance. Therefore the majority of the 3rd year students and sometimes even the 2nd year students of BA School of Business and Finance are employed before they graduate. Probably the employers believe in the potential of the students to develop their professional competences combining work and studies. Besides, only 30% of the employers find the study results reflected in the diploma supplement important when making hiring decisions.

(Figure 1)

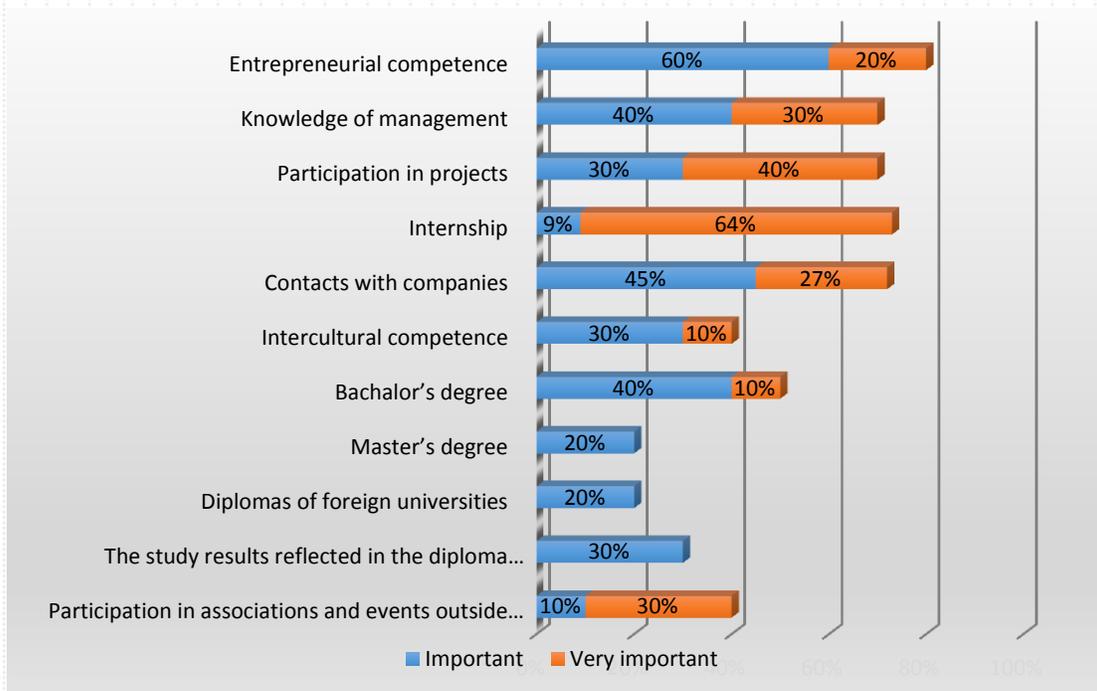


Figure 1. The percentage of HR managers who see as the strengths of the job applicants the following key characteristics

Conclusions

- Employers in Latvia besides the top competences required in the European labour market see as competitive advantages of job seekers their entrepreneurial and foreign language competences as well as the knowledge of management as a professional competence.
- The identified key competences should be considered in designing study programmes with competencies-based approach for business students.
- The educational establishments should develop transferable skills which can be applied working in different positions and different business areas in spite of the changing situation in the labour market.
- The research should be continued and the research base needs to be expanded for the assessment of skills required in different business areas in Latvia and to investigate thoroughly if the identified competences influence hiring decisions and competitiveness of the applicants in different sectors of economy.

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ANALYSIS OF THE TENDENCIES IN MECHANICAL ENGINEERING ENTERPRISES INFORMATION SYSTEMS DEVELOPMENT

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Key words: management system, information systems, management decisions.

Aim of the article: to research and systematize peculiarities, find out tendencies and define the problems of mechanical engineering enterprises, substantiate the efficient management system playing a vital role not only in providing management efficiency but also in enterprise development processes.

In the course of research several *methods* were used. Statistical analysis method, grouping method, and tabular procedure were used to estimate and analyse the results of mechanical engineering enterprises performance. Functional, comprehensive and systems approach were of use to determine the general structure of enterprise management system with information systems and technologies being used.

The complicated process of domestic industry development is substantially influenced by preceding historical events as well as modern market tendencies. Lengthy industrial production recession in Ukraine began to show when the country received its independence status and has been caused by many factors both external and internal. External factors comprise the following: national economy structural reconstruction which takes a long period of time; inflation and inflationary expectations leading to higher interest rates on short-term credits; investment activity decline etc. (Potynskyy, 2009).

There are several most important internal factors influencing the operating efficiency of industrial enterprises. Firstly, it is the enterprise's technological level (manufacturing equipment condition and structure, quality of equipment service and maintenance, level of transport-

storehouse supply, technological processes progressive character according to production stages). Secondly, it is the industrial engineering status (workshops and sections specialization levels, smooth production flow, manufacturing resources functioning capacity, methods of manufacturing planning etc.). Finally, it is the business operation status (strategic planning level, optimal production, marketing and forecasting programme formation, accounting and analysis quality, managerial decisions technology, personnel motivation) (Nazarova, 2006).

Mechanical engineering as a complex branch is a fundamental industry providing related branches with necessary equipment, stimulating their economic growth, and creating additional workplaces. The products of mechanical engineering enterprises play the vital role in scientific and technological progress realization for all the national economy sectors.

The specialization tendencies and patterns of different Ukrainian mechanical engineering enterprises are shown in table 1. Enterprises of heavy engineering metal consuming branches are distributed in Donets Basin, Prydniprov'ya and Kharkiv. The main centres are Kramators'k, Horlivka, Dnipropetrovs'k, Donetsk, Kryviy Rih, Luhans'k, Debaltseve, Mariupol', Druzhkivka etc.

The main transport engineering centres are Luhans'k, Kharkiv, Dnipropetrovs'k, Dniprodzerzhyns'k, Stakhanov, Kremenchuk, Mariupol', Mykolaiv, Kherson, Kyiv, Kerch, Zaporizhzhya, Luts'k, Lviv.

Table 1
Mechanical engineering specialization by regions in Ukraine

Regions	Mechanical engineering specialization
Donets Basin	Heavy and transport engineering
Western region	Chemical, electrochemical and agricultural engineering
Podillya region	Equipment and instrument production, electrotechnical and agricultural engineering
Prydniprov'ya region	Electrochemical, agricultural, automotive and heavy engineering
Prychornomor'ya region	Shipbuilding, road-building and hoist transport system engineering; workbench, equipment and instrument production
Kharkiv region	Power machine building, electrotechnical, agricultural and transport engineering
Central region	Workbench, equipment and instrument production; chemical, electrical and radio engineering

According to the data of <http://www.ukrstat.gov.ua>

Electrotechnical engineering is being developed in Kharkiv, Zaporizhzhya, Khmelnytskyi, Poltava, Kamyanets'-Podil'skyi, Odesa, Donetsk, and Berdyans'k. The main centres of workbench production are Kharkiv, Kyiv, Zhytomyr, Odesa, Dnipropetrovs'k, Kramators'k, Berdychiv, and Cherkasy.

Kyiv, Kharkiv, L'viv, Sumy, Dnipropetrovs'k, Odesa and other big cities are the centres of instrument engineering producing electronics, measuring and other instruments.

Tractor-building and agricultural engineering is developed in Kharkiv, Kirovohrad, Odesa, Dnipropetrovs'k, and Ternopil'.

Enterprises in Kyiv, Sumy, Poltava, Dnipropetrovs'k, Odesa, L'viv, Fastiv, and Drohobych produce chemical industry equipment, and those in Kyiv, Kharkiv, Dnipropetrovs'k, Odesa, Poltava, Cherkasy, Smila, L'viv, and Simpheropol manufacture food industry equipment.

Light industry is being provided with equipment by engineering enterprises of Kharkiv, Kyiv, Poltava, Chernivtsi, Kherson, Melitopol, Odesa, Ivano-Frankivs'k, Berdychiv etc.

Defense industry complex is a part of mechanical engineering branch developing and producing intelligent and science intensive produce. Nowadays defense industry is concentrated at 300 enterprises of Ministry of Industrial Policy, State Space Agency and Ministry of Defense. In the period of economic transformation the manufacturing cooperation schemes in defense industry broke down and led to fragmentary pattern of Ukrainian defense potential. This process created specific difficulties while adapting defense industry complex enterprises to the market economy.

To define the tendencies in mechanical engineering branch development over the last few years we need to estimate its activity. Table 2 represents the financial results analysis of engineering enterprises (in the light of engineering produce manner of manufacture and compared with data of the whole industry).

It is obvious that mechanical engineering enterprises were the most successful in 2012, when the before-tax financial results were 47957.3 million UAH. Previously the best results were achieved in 2007, and the before-tax financial results of routine activity made up 5127.5 million UAH. 2009 showed the lowest qualitative indices in mechanical engineering as 45,9% of engineering enterprises sustained losses. In our opinion it was caused by negative influence of world financial and economic depression. The share of profit-making enterprises rose from 66,7 % in 2006 to 67,9 % in 2012. But comparing to 2009 the number of profit-making engineering enterprises in 2012 rose by 11 %.

However the analysis of before-tax routine activity profit structure grouped by mechanical engineering produce show that transport and equipment engineering enterprises suffered the most. In 2012 the world financial depression caused 242845,5 million UAH of material losses at these enterprises.

Table 2
Industrial enterprises financial results (profits and losses) during 2006-2012

	Pre-tax profit (loss) (millions UAH)	Enterprises which earned a profit		Enterprises which incurred losses	
		% of total number of enterprises	financial results (millions UAH)	% of total number of enterprises	financial results (millions UAH)
2006					
Industry	34699,6	65,3	45903,0	34,7	11203,4
Mechanical engineering including	1916,9	66,7	3895,1	33,3	1978,2
- automotive and equipment production	734,2	64,2	1478,3	35,8	744,1
- electrical, electronic and optical equipment production	587,9	69,8	1124,7	30,2	536,8
- transport and equipment production	594,8	64,6	1292,1	35,4	697,3
2007					
Industry	43700,9	66,6	56956,9	33,4	13256
Mechanical engineering including	5127,5	69,2	7137,4	30,8	2009,9
- automotive and equipment production	1434,2	67,9	2328,2	32,1	894

	Pre-tax profit (loss) (millions UAH)	Enterprises which earned a profit		Enterprises which incurred losses	
		% of total number of enterprises	financial results (millions UAH)	% of total number of enterprises	financial results (millions UAH)
- electrical, electronic and optical equipment production	1347,9	71,4	1792,9	28,6	445
- transport and equipment production	2345,4	65,4	3016,3	34,6	670,9
2008					
Industry	20243,2	61,1	70812,5	38,9	50569,3
Mechanical engineering including	704,6	63,9	7412,0	36,1	6707,4
- automotive and equipment production	918,8	62,9	3062,5	37,1	2143,7
- electrical, electronic and optical equipment production	224,5	66,1	1787,9	33,9	1563,4
- transport and equipment production	-438,7	59,1	2561,6	40,9	3000,3
2009					
Industry	-3948,1	54,1	39611,7	45,9	43559,8
Mechanical engineering including	2547,3	56,9	7893,1	43,1	5345,8
- automotive and equipment production	2274,8	53,6	3814,3	46,4	1539,5
- electrical, electronic and optical equipment production	1937,9	62,6	2468,5	37,4	530,6
- transport and equipment production	-1665,4	51,7	1610,3	48,3	3275,7
2010					
Industry	26530,5	58,2	61629,1	41,8	35098,6
Mechanical engineering including	5531,0	63,6	8596,6	36,4	3065,6
- automotive and equipment production	1828,8	61,0	3256,5	39,0	1427,7
- electrical, electronic and optical equipment production	953,6	67,5	1582,8	32,5	629,2
- transport and equipment production	2748,6	61,4	3757,3	38,6	1008,7
2011					
Industry	63260,9	62,1	111105,1	37,9	47844,2
Mechanical engineering including	14396,4	67,2	17976,8	32,8	3580,4
- automotive and equipment production	2207,9	66,9	3686,5	33,1	1478,6
- electrical, electronic and optical equipment production	2088,3	68,4	3263,6	31,6	1175,3
- transport and equipment production	10100,2	62,9	11026,7	37,1	926,5
2012					
Industry	10855379,6	64,1	17290347,7	35,9	6434968,1
Mechanical engineering including	47957,3	67,9	514198,9	32,1	466241,6
- automotive and equipment production	135994,9	66,9	199596,9	33,1	63602,0
- electrical, electronic and optical	154807,9	69,5	257229,5	30,5	56801,1

	Pre-tax profit (loss) (millions UAH)	Enterprises which earned a profit		Enterprises which incurred losses	
		% of total number of enterprises	financial results (millions UAH)	% of total number of enterprises	financial results (millions UAH)
equipment production					
- transport and equipment production	-242845,5	67,0	102993,0	33,0	345838,5

According to the data of <http://www.ukrstat.gov.ua>

The most profit-making enterprises operated in electrical, electronic and optical equipment production, totaling maximum 69,8% in 2006 and 69,5% in 2012.

The main reason for the rise in quantity of unprofitable enterprises in Ukraine was the sharp decrease in sales of their products beginning from 2009 (Table 3).

Table 3
Sales of industrial products (services) 2001-2012

Year	Units	Industry	Mechanical engineering	Automotive and equipment production	Electrical, electronic and optical equipment production	Transport and equipment production
2006	UAH billions	551,73	68,73	22,42	15,51	30,80
	% to total	100,00	12,46	4,06	2,81	5,58
2007	UAH billions	717,08	98,34	30,10	21,22	47,02
	% to total	100,00	13,71	4,20	2,96	6,56
2008	UAH billions	917,04	121,78	37,27	25,58	58,93
	% to total	100,00	13,28	4,06	2,79	6,43
2009	UAH billions	806,55	85,83	34,25	24,50	27,08
	% to total	100,00	10,64	4,25	3,04	3,36
2010	UAH billions	1067,13	116,20	39,59	27,71	48,90
	% to total	100,00	10,89	3,71	2,60	4,58
2011	UAH billions	1120,33	134,82	40,84	28,77	65,21
	% to total	100,00	12,03	3,65	2,57	5,82
2012	UAH billions	216,37	7,25	1,76	2,51	2,98
	% to total	100	3,4	0,8	1,1	1,4

According to the data of <http://www.ukrstat.gov.ua>

Recently the part of mechanical engineering products sold in general industrial production fluctuating between 10 % and 14 %. So in 2011 it was 12,03%, in 2006 it rose to 12,46%. But in 2012 the situation substantially worsened and mechanical engineering products sales in Ukraine decreased sharply to 216,37 billion UAH. The part of mechanical engineering products sold in general industrial production comprises 3,4%, which is the trough of the last 7 years. Transport and equipment production in 2012 made up the largest part of 1,4%.

The dynamics of profitability indicators in Ukrainian mechanical engineering in 2005-2012 is shown on *Figure 1*.

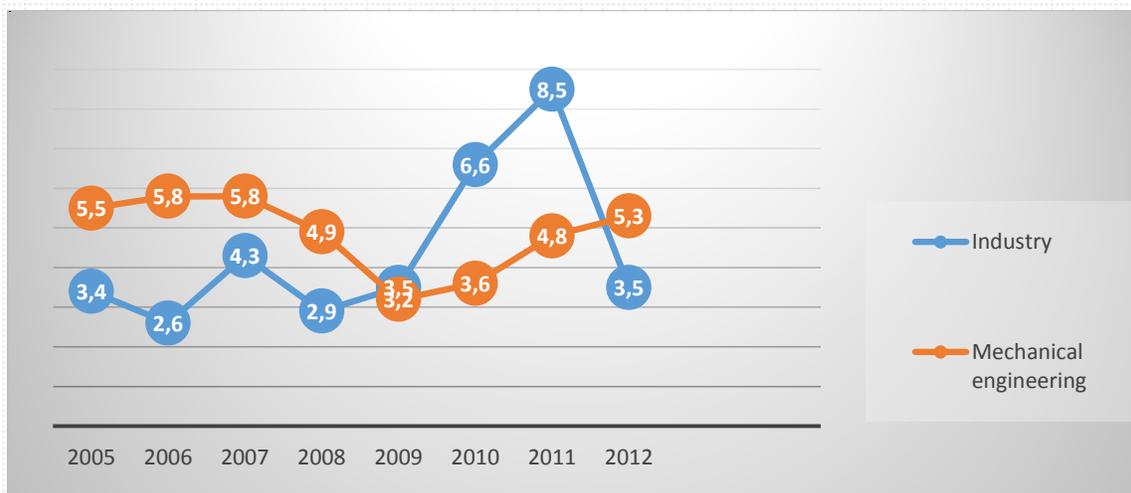


Figure 1. The dynamics of profitability indicators in Ukrainian mechanical engineering in 2005-2012 (according to the data of <http://www.ukrstat.gov.ua>)

In 2011 the mechanical engineering profitability improved significantly as compared not only to 2010, but also to the whole analyzed period in general. Though in 2012 the situation worsened again and mechanical engineering profitability reduced by 5 % in comparison with 2011, and industrial profitability rose by 0,5 %.

The analysis results show negative changes in mechanical engineering resulting from considerable problems faced by engineering enterprises and slowing the development of the latter.

First of all the following problems should be singled out (Romusik, 2010):

- lack of domestic market infrastructure development (the absence of real monitoring, distributor system and financial leasing);
- insufficient paying capacity level of commodity producer, negatively influencing the financial and economic performance of industry enterprises; basic plants producing complex equipment are in difficult situation;
- permanent assets obsolescence of industry's basic enterprises, which have not been renewed for the last 15 years, negatively influencing competitiveness, quality and production price;
- lack of circulating assets and medium-term and long-term crediting imperfection;
- limited domestic demand for domestic produce;

- absence of real funding sources leading to impossibility of reconstruction and technical re-equipment of industrial enterprises and therefore guaranteeing the high quality of the produce, and new competitive equipment production;
- absence of financial mechanisms and instruments rousing interest in innovations, stimulating research and design efforts; low level of domestic enterprises innovation activity;
- domestic enterprises dependence on assembly units, and components delivery from other countries, chiefly from CIS countries;
- substantial losses in productive and personnel potential during the years of destructive crisis;
- lack of state control over monopolists and middlemen leading to substantial growth in the price of materials, energy supply and components;
- considerable lag of mechanical engineering enterprises (as well as the Ukrainian economy in general) in informational technologies use;
- insufficient level of engineering enterprises managerial systems development.

In general, according to development potential, market conditions and multi-versioning models of decision-making enable changes in conditions and results of industrial enterprise functioning. However in many cases the managerial staff of mechanical engineering enterprises cannot cope with this task.

In our opinion further research of mechanical engineering enterprises should be concentrated on the problem of raising the level of their managerial systems development. For this purpose let's consider the definition of management made by a number of scientists (Table 4).

Table 4
Definition of the term «management»

Authors	Definition
B.M. Andrushkiv, O.Y. Kuz'min	Management is a purposeful influence on the object aimed at the change of its condition or behavior because of circumstance change.
A.S. Bolshakov	Management is the process of company's resources allocation and flow with a predetermined aim according to a developed plan and continuous activity results control.
E.E. Vershyhora	Management is the function of biological, social, and technical organizational systems, securing their structure and sustaining definite activity order.
S.A. Zhdanov	Management is a cyclic repeatable process of the authority influencing the controlled object based on processing of initial information about the object's condition and situation evaluation. The process logically comprises creating the plan of the aim achievement and corresponding measures, influences are made on the controlled object and their implementation is checked. The plan is amended according to situation changes and object's condition. New influences chosen from many possible variants and definite aims are made to ensure the achievements with optimal resource expenditure.
M.H. Meskon, M. Albert, F.Hedowry	Management is the process of planning, organizing, motivation and control necessary to create and achieve the goals of organization.

Authors	Definition
S.Y. Khaminich	Management is the total of interrelated actions chosen on the basis of certain information and directed to maintenance or improvement of controlled object functioning according to the set goals.
F.I. Khmil'	Management is a purposeful influence on the process, object or system aimed at maintaining their stability or change of condition.

Bolshakov, 2000; Andrushkiv, 1995; Zhdanov, 1998; Vershyhora, 1999; Meskon and others 1998

Most authors consider management as a “process”, “action”, “function” or “influence” resulting in the purposeful interaction between the agent and the object of management. Some authors pay more attention to the essence of management as a process of resource allocation and flow control. S.A. Zhdanov, S.J. Khaminich consider processing of initial information to be the necessary requirement for management (Zhdanov, 1998; Haminich, 2006). E.E. Vershyhora reviews enterprise management as the influence of a director on his subordinates when “a director receives, transforms, analyses and uses different kinds of information, because of what he can choose a right influence method” (Vershyhora, 1999). Thus efficient enterprise management depends primarily on providing timely, objective and exact information. We strongly believe that management process is impossible without it. Information in management is used due to its processing and new knowledge formation. “Knowledge” is understood as reliable, real idea of the system different from probable ones.

There are two forms of knowledge in the system of enterprise management: declarative – fundamental knowledge (how the process is organized) and procedural – pragmatic knowledge (how the process can be changed).

Thus, knowledge is practically confirmed data which enable certain sets of management problems be solved within the enterprise management system. Nowadays a special role is played by managerial knowledge accumulated inside the enterprise on the basis of generalizations made about management problem-solving experience. This is the knowledge of enterprise personnel and its skills in decision making and implementation. That is why improving decisions quality is possible if based on more reliable and reasonable ideas but it is impossible without deeper knowledge of subject sphere and management system, as well as skills to transform knowledge into results. As a rule management decisions making is based either on causal or functional knowledge. In its turn functional knowledge possesses higher value as they are based on understanding the system functioning laws.

Volume of information necessary for new knowledge formation and management process implementation is determined both by the level of management and management decision importance. It is possible to achieve the goal only in case when there is a chance to work with systematized information containing objective data on economic processes.

All information of an enterprise belongs to a special type of resources, namely, information ones. Information resources are the basis for enterprise information support to ground and implement current production tasks as well as prospective ones. We consider the definition of information resources by V.F. Sytnyk to be the most objective, specific and full one. “Information resource is a particular kind of resource based on ideas and knowledge amassed in the process of scientific and technical activity and presented in the form suitable for accumulating, realization and reproduction” (Sytnyk, 2004).

V.F. Sytnyk also asserts that the term “information resources” is often considered wider than “information” itself. He considers that general information resources in particular consist of

computer hardware means, computer software, information workers (analysts, systems programmers, database administrators, multicomputer system developers), users, facilities, data banks and, finally, information itself (Sytnyk, 2004).

S.M. Romashko holds the opposite opinion and considers that different kinds of resources are necessary for information system functioning. The main kinds of such resources are hardware, software, financial, information resources and manpower, though the author singles out the last ones as a separate kind of resources. Hardware resources comprise computers, peripherals, networking and data communications equipment. Manpower of information system is users, administrators and technical maintenance staff and “information resources of the system are the part of enterprise information resources used by information system” (Romashko, 2007).

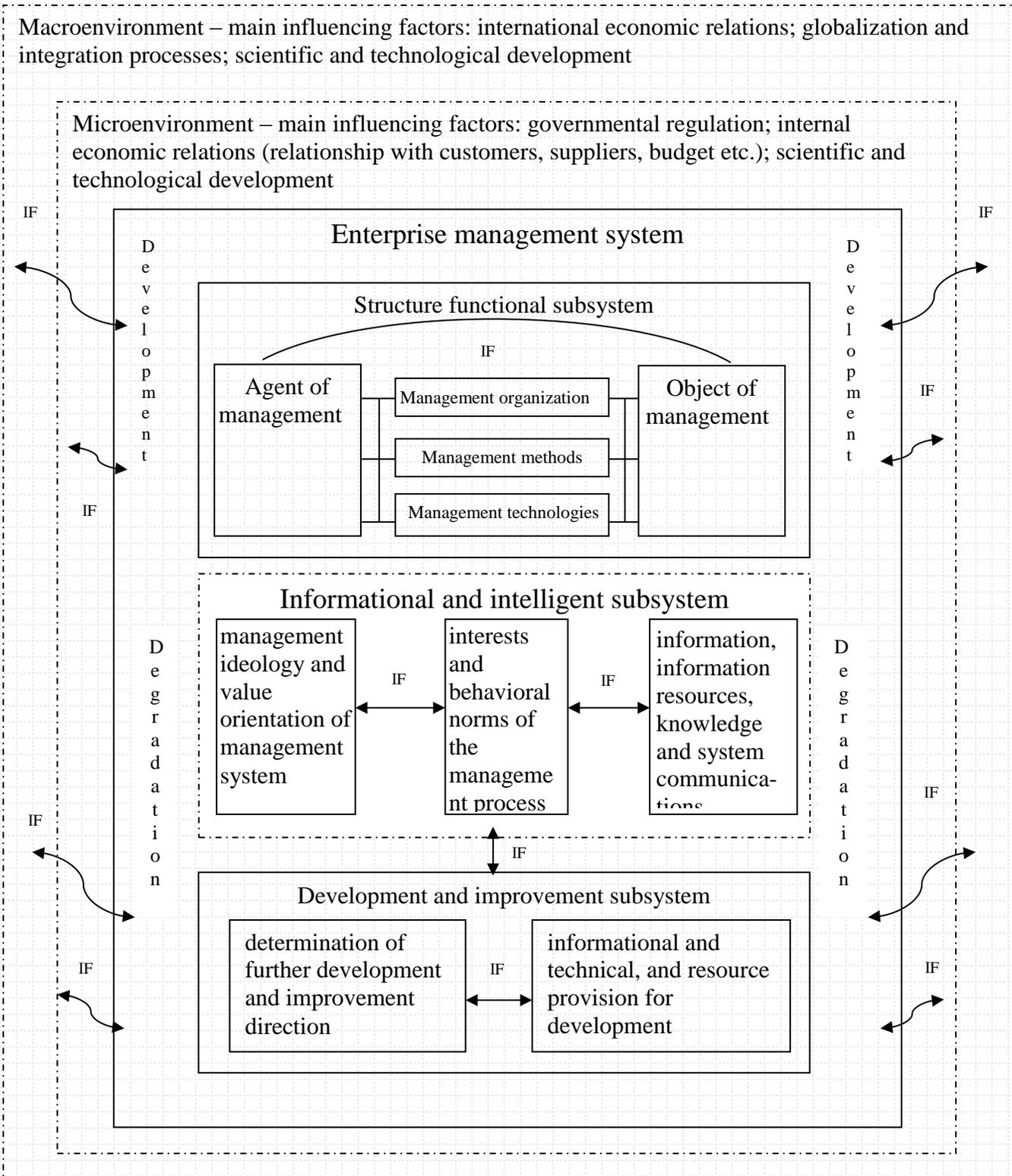
We also do not agree with the second part of information resources definition by S.F. Sytnyk because we consider that information resources are created processed and used with the help of other resources (material and labour). These information resources are separate objects having different measurements and use methods as it is shown in S.M. Romashko statement.

On the grounds of scientific resources we can state that enterprise management is a purposeful systematic influence of managing subsystem on a controlled one in the form of sequential operations. These operations are chosen on the basis of information processing results, information resources use, and new knowledge formation aimed at securing appropriate conditions of an enterprise.

Industrial enterprise management activity of any kind concerns managing people forming departments and branches. We consider such activity from the practical point of view to comprise social groups' management. That is why management activity should be viewed as a socially controlled system consisting of interdependent parts contributing to the whole.

Thus a conclusion can be made that *industrial enterprise management system* is total of all subsystems, elements, processes, technologies and their interrelations, along with information resources and knowledge ensuring the enterprise operation and further development.

The author poses a general scheme of industrial enterprise management system (*Figure 2*)



Developed by the author on the basis of sources analysis Halkowych, 1998; Potynskiy, 2009; Nazarova, 2006;

Symbols: IF – information flows

Figure 2. A general scheme of enterprise management system

The first subsystem of management system includes the total of administrative bodies, departments and executives performing the set tasks as well as administrative methods. That is why the given subsystem may be defined as unity of organization, technology and management methods. The author also poses management methods enabling the use of information systems potential and increasing enterprise functioning efficiency owing to high-quality management decisions making. Such methods comprise organizational, administrative, social and psychological, and economic ones.

The second subsystem is informational and intelligent covering the whole management system, because it is impossible to manage an enterprise and its departments without using and delivering information, information resources and knowledge. Management personnel work is intellectual and demands high-quality management information. That is why creation, processing and timely provision of such information at all management levels is the main task of the informational and intelligent subsystem.

The third subsystem is the one of management system development and improvement ensuring the further enterprise development.

Development is a notion characterizing qualitative changes in objects, emergence of new forms of living, different systems existence combined with their internal and external relations transformation (Haminich, 2006). This the higher level of movements and changes in nature and society connected with transition from one quality or condition to another, from the old one to a new one. Any development is characterized by specific objects, structure, source, forms and direction.

The subsystem of development and improvement should ensure the enterprise development irrespective of external environment condition. There is close connection between management system, its subsystems, elements and external environment. Such connection is accompanied by information movement in the form of different information flows leading to either enterprise management system development or its degradation.

Clear management system functioning and management tasks performance means the modern management technologies used only on the basis of information technologies. Management process automation, constantly renewed available software, and global information networks change all parts of enterprise industrial and economic activity radically. Nowadays new information technologies and complex systems have more and more significance for domestic enterprises. They help to solve the problems from preproduction to production distribution exactly and efficiently.

Mechanical engineering enterprises try to organize management activity using automated information systems in spite of negative depression influence. In recent years increasing demand for information technologies and service led to modern information processing technologies headed for the widest range of tasks. Automated systems and networks of different configurations are created on their base aimed not only at information accumulation, retention, and processing, but also at maximum approach of automated information systems components to the manager and CEO workplaces.

Modern information systems of engineering enterprises ensure supply and financial management, production control, sales management, personnel administration, as well as tax, management and financial accounting automation.

From the point of view of accomplishing definite management tasks information system provides with timely access to information resources, efficient internal decisions coordination and fast spread of management decisions. Also it helps to control the task performance, use

previous data saved in database, make changes to database. Fast current and previous data processing, possibility of multiple-choice planned performance forecasting, and raising the management quality and efficiency prove the use of information systems right.

Correct information system components management ensures the system to promote the enterprise development, economic and intelligent potential strengthening. With this purpose there should be defined practical instruments of influence on information system objects. First of all the role of information technologies in the enterprise should be stated, information problems and their connection with the general business development strategy should be found out.

It should be taken into account that while creating the enterprise management system based on modern information systems such rebuilding demands certain (sometimes very substantial) change in management processes in general. In modern condition the absence or imperfection of mechanisms and enterprise management methods, information uncertainty, and dynamic changes in external environment lead to making ungrounded management decisions. Information systems can change the enterprise decision-making hierarchy, reducing the costs for information acquisition and widening the areas of use.

At the beginning of twentieth century the period of information updating was one month or one week. Nowadays most enterprises try to receive the newest information which is updated each day. Even balance sheet turnovers and financial accounts are calculated over such period. Information can be updated instantly in more complicated situations not only in business transaction, but also in information generalization and accounting. Such technologies are invaluable for doing business, providing unlimited possibilities for improving efficiency and enterprise management over a long period of time.

The following properties are necessary for enterprise information system to increase the activity and management efficiency. Among them are: investment savings to minimize information system introduction expenses; reliability to guarantee data safety and accessibility in fault conditions; ensuring efficient data security and protecting from unauthorized access; opportunity of growth; degree of activity automation not only in accounting; interface intuitiveness for the user to understand it without description; possibility to integrate with EDM to realize its function in the system; adaptation to customer's business; moderate price. Such information systems become vital for mechanical engineering enterprises and can be the source of competitive advantage. According to existent estimates, labour productivity can be increased more than twice thanks to modern information technologies introduction into business organization and management (Voynarenko and Yemchuk, 2012).

Conclusions

The research results lead to conclusion that mechanical engineering complex suffered a lengthy destructive recession during the years of economic transformation. Now it adapts to market conditions and develops new industrial markets. These processes were accompanied by serious losses in productive and personnel potential and slowing innovation and investment activity. However during the last 5 or 6 years positive tendencies in mechanical engineering can be noticed. Profits of mechanical engineering enterprises increased; their profitability rose and sales of products augmented. But through the lack of finance the problems in productive potential renewal are solved very slowly, though they are based on innovation technologies and domestic developments use, further commodity production structure change and development of investment mechanical engineering, ensuring final product's competitiveness.

The problems of mechanical engineering development are the part of general economics' problems demanding decisions made on new innovative social and economic development principles.

But certain problems can be solved by separate mechanical engineering enterprise taking into consideration its functioning and reserves peculiarities. One of the problems singled out in the research is mechanical engineering management system development based on information systems. Such systems ensure industrial and economic activity automation and favour enterprise management system effectiveness increase and further development.

New tendencies in economic development of countries leading in the world economy and experience of many domestic enterprises prove that the use of information system industry achievements in enterprise management is a requirement and a component of management process success. Strategic prospective of enterprise activity depends on the information systems ability to function.

Originality

The authors pose a general scheme of mechanical engineering enterprise management system comprising informational and intelligent subsystem and development and improvement subsystem based on the information systems use and solving the problem of management systems level of development rise at mechanical engineering enterprises. Such subsystems give the possibility to systematize information flows, ensure the information quality and value, shorten the time for substantiation and realization of current management decisions, and also ensure the enterprise development irrespective of external environment condition.

To substantiate the chosen approach to the problem solving the authors researched the theoretical information and scientific works. They proved that indispensable condition for efficient dataware of enterprise activity is the use of information, information resources developed, processed and used with the help of other resources (material and labour). But these resources are separate objects and they are a main source of knowledge for making well-grounded management decisions.

The author's definition of enterprise management differs from the existing ones. It is characterized by modern stage of information environment development, that is why management influence is a series of chosen successive actions. The choice is made on the basis of information processing results, the information resources use, new knowledge receiving and developing aimed at securing appropriate conditions of an enterprise.

The authors substantiate the advantages of enterprise management system development based on modern information systems and define their properties and effects from their introduction.

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