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The Volume of Venture Capital Funds of Latvia and Their Financing Sources

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The venture capital funds (VCF) financing sources of Latvia are considered in this paper. In the course of the work, a comparison was made between VCF financing sources generally used in Europe, Central and Eastern Europe (CEE) countries, and Latvia. Based on the results of questionnaire of VCF partners, an investigation of sources and structure of the capital attracted by all of the Latvian VCF was performed. In process of the investigation, the following methods were applied: questionnaire, logical constructive method, and comparative analysis. Moreover, some VCs were interviewed. As a result, it has been revealed that as little as five financing sources exist in Latvia unlike Europe, where VCF have not less than 13 financing sources, and unlike CEE countries where the funds are supported by at least eight financing sources. The average size of a VCF in Latvia is 10.8 M EUR, which constitutes 35% of that of European VCF. Among the main reasons for a small size of Latvian VCF and a small number of types (classes) of their investors, the country's low financial appeal for VC and immaturity of some types of investors in Latvia can be mentioned. For that reason, the State has to compensate for a shortcoming of VC; as a result, the share percentage of social capital in VCF financing sources of Latvia has reached 76.2 % while all VCF of Latvia are hybrid.

Keywords: venture capital fund raising, venture capital funds capital structure, venture capital funds financing sources, Latvia

Introduction

The VC raising problems are a relevant topic of research, especially under the post-crisis conditions. The VC industry seemed to start recovering after the crisis, but the positive post-crisis tendencies slowed down. Besides, some structural changes are going on within the industry—namely, the increasing complexity of attraction of VCF investors, especially with respect to early stage financing.

The reason for such a situation is that not all of the investors are ready to assume risks which were previously considered acceptable. The potential limited partners (LPs) of VCF are currently more circumspective about long-term "parting" with liquidity, the expected profit margin, and withdrawal deadlines than they used to be. Indeed, with regard to VCF and especially the funds financing early stages of development of young and innovative companies, the future prospects of specific portfolio companies are more obscure than those of the financing late stage development and particularly the investments into Private Equity (PE) funds.

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Since VC ecosystem in European and especially CEE countries is inferior to the U.S. system (in particular, due to a development delay in VC) (Lerner & Tåg, 2012), the above-stated negative tendencies manifest themselves more distinctly. At the same time, the issue of financing projects connected with innovative development, transfer and commercialization of technologies developed by applied research and new business models—is becoming ever more pressing to European countries. In the opinion of Perez (2012), a sustainable economic growth is possible if investors re-orientate their policy towards the investments into innovations and the real economy. The early stage of VCF is one of the first steps of the "escalator", financing primarily the entrant young companies with a great potential for growth. Veugelers (2011) believes that the financial market barriers are too high for innovation projects launched by young companies. For that reason, both European agencies and the governments of specific countries are looking for some more efficient ways of supporting such financing source as VCF. There exist various forms and methods of support, influencing the attraction of VC. Depending on what specific forms and means of support are applied along with the exercised influence on the functioning and development VC industry in a specific country, the VCF capital amount, structure, and size may vary. VC investigators operating in new (EU11) and small countries of EU and CEE have not actually dwelled upon the issues of investor structure and VCF size. There exists some generalized data from European Venture Capital Association (EVCA) on the countries of CEE without data splitting over the countries and the investors with regard to VC and PE (individually). EVCA presents aggregated data on fund raising sources (investor classes) individually for VC and PE only concerning Europe as a whole; however, EVCA does not separate VC investors according to kinds of funds or finance stages. In the opinion of Cumming and Johan (2012), the issues of attraction of investors and the analysis of fund capital structure are currently one of the most important theoretical and practical issues of VC industry. The publicly available information necessary for such a kind of investigations regarding CEE countries is very scarce and in a non-classified form only; in most cases, there is total lack of such data or they are not accessible. Dörte Höppner, General Secretary of EVCA, believes that collecting reliable data is very important to enable EVCA to hold necessary comprehensive information for the analysis and formulation of proposals on VC industry development (Financial News, 2012). That's why an attempt of describing the structure and the size of VCF of Latvia will be made in this paper along with an attempt of drawing a comparison with the available data on CEE countries and European countries in general, and with some small countries of Europe. As a result of the investigation, data on the investor structure and the Latvian VCF size will be created, and the analysis of the established investor structure will be performed. This will allow one to develop a more efficient model of attracting VC investors in future. On the assumption of the importance and the significance of early stages of finance, it was exactly VCF (and not VC&PE or PE) that was selected for the investigation of their capital structure and financing sources.

Aim, tasks, and novelty of the research (the aims do not reflect the theoretical investigation; probably it should be included and placed after the investigation methods).

The aim of the investigation: to create data on the VCF investors structure in Latvia, and perform the analysis of investor structure and the size of VCF of Latvia.

The goals of the investigation:

(1) to collect data on the investors structure of each VCF of Latvia existing as of the beginning of 2013, and on their sizes (not violating the principles of confidentiality and divulging sensitive information);

(2) to generalize data on the Latvian VCF investors structure;

(3) to perform the analysis of Latvian VCF structure;

(4) to compare the data on the Latvian VCF investor structure with European VCF data as a whole and the data from CEE countries;

(5) to compare the data on Latvian VCF size with VCF sizes of Europe and CEE.

Novelty of the Research

The Latvian VCF investor structure is presented for the first time, as well as the share percentage of foreign investors and that of the managing factors.

Methods of Research

The methodological basis of the study is: the results of conducting survey of VCF partners, analysis of current scientific information sources, EVCA data, and the data on VCF of Latvia. Moreover, a number of other legislative, regulatory, statistical and informational materials listed in the reference list were used. The following methods were used in the study: questionnaires, logical constructive method, and comparative analysis; furthermore, VCs were interviewed.

Research Organization

To conduct a survey in various governmental and public agencies of Latvia (Ministry of Economics, the Latvian Guarantees Agency (LGA), Latvian private equity and venture capital association (hereinafter LVCA), Imprimatur Capital Fund Management company, ZGI Capital), a survey was conducted to obtain data on VCF operating in Latvia, and on the availability of any generalized or other information on the sources and structure of capital attracted by them. Total lack of any generalized information on investor structure and VCF capital was revealed; moreover, it was found that five VCF were operating at the beginning of the year 2013. The author has sent to each fund a questionnaire in a tabular form with the names of investor classes and the aggregate investments of a specific class, and then received answers by e-mail. The obtained data was compared with the available data on social capital (LGA). If there were some doubts about data accuracy, the author discussed the data with each respondent, making the data more precise. In process of preparation for questioning, consultations with two VCs experts (partners and managers of VCF management companies) were held. The survey was conducted in April-May, 2013. It embraced all the five operating VCF of Latvia, i.e., 100% of the available ones. The private equity funds (PEF) were deliberately excluded. The questionnaire included some questions on the kinds of investors and the amounts invested by a specific kind, without any reference to the investors' names. This allowed one to generalize and structure the information (i.e., obtain sums and interest and make other manipulations with that information in a way typical to quantitative analysis), not touching upon any issues of commercial secret like names of investors of specific funds and the size of their investments. At the same time, the information received by the author is, in the opinion of funds, sensitive information as well; therefore, it was decided to entrust it to the author as a member of Board of Latvian venture capital and private equity association (LVCA) under the condition of using the information in a generalized form only. But generalized information on VC investments is exactly what is required for research and for its being used by other investigators, non-governmental and governmental agencies; therefore, the above-listed data limitations did not have any negative impact on the research quality.

Literature Review

Post-crisis Changes in VC industry

In the opinion of Ghalbouni and Rousies (2010), VC&PE industry is experiencing certain structural changes caused by both the crisis and, possibly, some other reasons. Cumming and Johan (2012) believe that the structural changes in VC industry are inevitable in order to preserve an important source of financing incipient companies characterized by a high growth rate. In turn, Jakušonoka and Prohorovs (2011) believe that, to ensure a post-crisis change of economic structure and to finance the innovation-driven growth, financing sources, including VC, are needed as well as changing the model of VC functioning (Jakušonoka & Prohorovs, 2011). These two competing tendencies (the potential demand for VC and its poor availability) have an impact on VC industry and on raising funds to support it. Crisis and post-crisis changes in VC industry may manifest themselves differently in different countries. In the opinion of Cumming and Johan (2012), if VC&PE industry is under the conditions of crisis; this primarily has a negative impact on the growth of new technological companies. A common challenge faced by European countries over the last years is the problem of attracting VC from private and institutional investors. This situation continues to worsen with respect to VC funds (Tykvová, Borell, & Kroencke, 2012). The fund raising complexities over the last years had occurred, first of all, with respect to funds financing exactly the early stages of company development. The volume and the dynamics of rasing capital into the funds financing the early-stage development and PE funds for 2010-2012 are shown in Table 1.

Table 1
Comparison of Volumes and Dynamics of Early-Stage VCF and PE Funds Raising in CEE Countries in 2010-2012 (Growth Capital, Buyout, Mezzanine, Generalist)

Funds raised by fund stage focus	Amounts in € thousands (2010)	Amounts in € thousands (2011)	Amounts in € thousands (2012)	Change of investment volume in % as from 2010 to 2012
VCF early-stage	90,270	71,020	24,870	-72.5% from the index recorded in 2010
PE (Growth capital, Buyout, Mezzanine, Generalist)	461,490	788,350	637,560	+ 38.1% to the index recorded in 2010
Capital raised in VCF early-stage to capital raised to PE funds ratio	19.5%	9.0%	3.9%	

Note. Source: Developed by the author, EVCA Central and Eastern Europe Statistics 2011, EVCA Central and Eastern Europe Statistics 2012, and the author's calculation.

As is can be seen from Table 1, investors are ever more watchful of investments into VCF. Thereby, they reduce the amount of venture capital (Cumming & Johan, 2012). Even in Germany, the flagship of European industry and export, VC in 2012 was characterized by such negative trends as fund-raising complexities (and, accordingly—the capital availability to potential portfolio companies), VCF focusing on investments into industries and lower-level risk companies, and investment rounds of less magnitude (Guellmann, 2013). The author believes that VC raising is quite relevant with respect to small countries (CEE) which are passing or have passed through the period of transitive economy (Prohorovs, 2013a). Raising VC and the VC structure proper largely depend on successful results (exit, devestment) of VCF. However, there is a variety of other factors influencing the attraction of VCF investors.

In 2013, Prohorovs (2013b) has investigated 27 factors influencing VC raising: The investigation was based on polling 19 VCs of Latvia (Prohorovs, 2013b). In the opinion of the Latvian VCs, the five main factors

having a negative impact on raising capital into VCF of Latvia are the following ones (in order of precedence):

(1) Fund investors do not trust the fund management team due to lack of any positive experience and previous achievements;

(2) The fund raising is hampered by lack of institutional investors;

(3) There is no venture capital in Latvia that might transfer into venture funds, or, such a capital is not sufficient;

(4) Fund investors understand that it will be hard to find good projects to apply the funds;

(5) Fund investors understand that Latvia is a small market and, therefore, it will be difficult to promote a project in other European countries; at the same time, promotion in other countries will be hampered as well due to different regulations, laws, and the language.

Some Factors Influencing Investor Structure, Capital Size, and VCF Success

Lerner and Tåg (2012) believe that the regulatory environment, the maturity of financial market, the tax system, labour market regulation, and governmental Research and Development (R&D) expenses are correlated with the activity of VC investors in different countries. The technology transfer policy is also important as well as the presence of international venture capital firms, since they provide for numerous advantages for the development of the country's VC ecosystem VC (Lerner & Tåg, 2012).

Several researchers have attributed the successful development of early stages of VCF funding to the activity of informal venture capital (IVC). According to Mason, Botelho, and Harrison (2013), poor functioning of IVC makes a gap in the "escalator" of VCF funding projects: Respectively, no projects occur that are "prepared" to finance VCF. Prohorovs (2014) believes that VCF attractiveness for investors financing the initial stages of development may depend on the level of development and the activity of IVC in specific countries (Prohorovs, 2014). In the opinion of Sahlman and Richardson (2010), IVC and VCF complement each other. According to Zarutskie (2006), the most important factor for success at the early stages of financing is that the investment team includes both a serial entrepreneur and an experienced VCs (Zarutskie, 2006).

Prohorovs and Pavlyuk (2013) mark the interrelationship between the level of development of R&D in specific countries and their attractiveness to VC investors VC (Prohorovs & Pavlyuk, 2013).

According to Tykvová et al. (2012), there exists a positive relation between the developments of dynamic sectors of high-tech entrepreneurial ventures and the efficient VC industry.

In small countries in Europe, especially in CEE, the issues of competition between VCF's are not yet a significant problem of VC industry (Prohorovs & Jakušonoka, 2012). However, VICO project researchers believe that VCF and PE funds compete with each other to attract investors (VICO, 2011).

In accordance with their respective studies, Cincera and Veugelersb (2013) believe that the lower rate of return in relation to risk in general, and in comparison with the United States in particular, makes it difficult to attract investments for early stages of VC in Europe. Let us consider the opinions of various investigators as to the forms and methods of state support of VC.

Governmental Support of VC

To promote the innovative development in a number of countries, the government applies various tools for promotion, therefore, acting as a VC acceleration catalyst (Hall & Lerner, 2010; Schröder, 2009). There exist various forms and methods both of direct and indirect support of VC investments in EU and in a number of

European countries. For example, tools of European investment fund (EIFs) consist, in particular, of investments into VCF (European Commission, 2012). Dębski (2010) believes that the further development of VC&PE market in Poland may take place at the expense of financial resources allocated by EC, which will be directed to VCF through the National Fund. According to the data from Kitsing (2013) and Estonian Development Fund (2013), the Estonian State directly invests VC into some prospective innovative companies. Over the last five years, Estonian Development Fund acting jointly with private investors has invested into 19 companies. Two-thirds of them are technology start-ups. However, no information as to the fund volume and investment size is published (Kitsing, 2013; Estonian Development Fund, 2013). Schröder (2009) points out a very large difference between VC-raising opportunities in various European countries and admits that private VC may be raised not through subsidizing VCF by social capital but rather by establishing reduced tax rates for companies supported by private VC raised. According to the data from Meyer (2007), if government support is rendered, the "bottlenecks" are selected, for example, the least advantageous industries in terms of private VC-based investments and gaps in financing of seed stage for example. In line with indirect methods of promotion of VC private investors through tax exemptions, Lerner (2010) suggests that boosting the demand for VC on the part of State should be used instead of direct financing of VCF. According to Tykvová et al. (2012), State VC greatly differs from commercially-oriented VC since it fills up the financing gap in private VC and is largely focused on small and young companies at seed and start-up stages, frequently with a longer product development cycle and, accordingly, with a longer investment term. Moreover, the investments are made in local markets, not reaching after syndication with other types of VC (Tykvová et al., 2012). On the initiative of JEREMIE, two governmental VCF and one VCF for co-investment with BA were launched in Lithuania in 2009. Snieska and Venckuviene (2012) believe that it is very important to determine precisely, which specific small and medium-size companies are innovational and have the fast growth potential to become a project to be financed by VCF with government taking part. The research by Grilli and Murtinu (2013) shows that government-controlled VC exercises a small influence on sales growth and the increase in the number of employees in high-tech companies as compared to private VC. These authors also find a positive and statistically essential influence of syndicated investments on company sales growth with respect to both types of investors—but only if the syndicate is managed by private investors of VC. In their opinion, the government's ability to support high-tech commercial companies through direct participation in VC markets is doubtful. They believe that, should the European VC market ever need governmental support, the government intervention will be preferred through indirect support companies. In turn, Grilli and Murtinu (2013) believe that contribution to development of European high-tech entrepreneurial companies is connected not only with financial resources unavailability but possibly with lack of added value obtaining skills. According to Humphery-Jenner (2012), the properly structured governmental support of venture funds can promote innovations and VC activity. In his opinion, the properly structured schemes of state participation in VC can stimulate innovations.

According to Luukkonen, Deschryvere, and Bertoni (2013), there is no significant difference between two types of investors (state VC and IVC). Nevertheless, added value profiles differ with regard to those investor types. In particular, IVC results turn out to be much higher than those of state VC, including the development of business idea, professionalization, and commitment to exit.

Cumming and Johan (2009) point out that pre-seed funds where governmental VC participate invest into high-tech companies not more often than private VCF do. Jääskeläinen, Maula, and Murray (2007) believe as

well that hybrid VCF are capable of solving the missing finance problems only temporarily; however, they do not solve the problems of investor quality improvement in VC industry. In their opinion, the state should apply other forms and methods of promotion of investors, experienced VC and entrepreneurs in key technological sectors as well.

In the opinion of Meyer (2007), government may give incentives to any manager of a private VCF to ensure financing of target-oriented portfolio companies. This raises a number of conceptual issues, including what kinds of support tools should be selected and which market segments should be selected to render community support. Meyer (2007) also believes that a fundamental question is that such kind of interference (where support is rendered under wrong circumstances or without any other accompanying measures) implies that the attractiveness to private capital is lost. Meyer (2007) believes that small and medium companies support programs should not be mixed up with VC, since such a support will be declined by the market and will give no result in terms of attracting private investors. In the opinion of Snieska and Venckuviene (2012), in countries characterized by small macroeconomics, such as Estonia, Latvia, and Lithuania where VC market is only in a formative stage, the role of State is vital (Snieska & Venckuviene, 2012). At the same time, government should act as an originator only but not as a key player; otherwise, the excessive direct promotion in the form of state-owned VC may bring about negative consequences (Snieska & Venckuviene, 2011). Cumming, Grillib, and Murtinu (2013) draw a conclusion that private-public VCF have an advantage over the wholly owned VCF. Bertoni and Tykvová (2012) come to the conclusion that, if VC is used to finance a new innovative product, the best result is provided by cooperation of public and private capital, so long as the private capital is controlled by a syndicate (Bertoni & Tykvová, 2012). According to the investigation by Brander, Du, and Hellmann (2010), the best results are achieved if the state support is available but does not dominate at the same time. The findings of the investigation performed by Bertoni, Colombo, and Quas (2011) show that state venture capital (GVC) investments are incapable of raising private VC to young, small, and early-stage companies. Moreover, such public investment reduces the private VC's interest in investments and displaces private VC, since GVC can invest on below-market conditions as well (Bertoni, Colombo, & Quas, 2011). Brander, Egan, and Hellmann (2010) show that the Canadian portfolio companies funded by private VCF demonstrate more successful exits and better valuations than those where state-owned VC participates. Moreover, they find that, despite the state-funded VCF activities' yielding lower results as against private VCF, they still do have a certain exercise effect. In other words, VCs are trained, since less experienced VCs come to work in VCF with public ownership as compared to those coming to private VCF, but, as a result, they finally gain experience and become high-class experts. The above-mentioned researchers believe that the success of hybrid VCF is partially achieved not due to high qualification of VCs but rather at the expense of their lobbying skills (Brander, Egan, & Hellmann, 2010). Hall and Lerner (2010) believe that VCF procure "work" to funds financing the further stages of companies development. Accordingly, if state promotes investments into VCF, this may have a positive impact on PE funds investment volumes. In the opinion of Gadus (2012), a Slovak researcher, state must create special motivations to attract both GPs and KPs into hybrid VCF. Groh (2010) believes that VC investors select countries according to a number of criteria. They pay great attention to VCs qualification and the possibility of ensuring a deal flow. Groh (2010) believes that such an indicator as the financial market size and liquidity and IPO activity level is important but is not the main index anyway. In his opinion, public subsidies do not play any positive role either, when decisions are taken by institutional investors, since public money does not attract any private capital (Groh, 2010).

Result and Discussion

As a result of polling of VCF of Latvia, there occurred some data on the structure of their capital and the sources of its attraction. First of all, let's examine the generalized data on VCF capital structure of Latvia. The data on capital structure and the sources of its attraction are shown in Table 2. For reference, the same table presents data on financing sources of 13 European VCF.

Table 2

Europe and Latvian Venture Capital Funds Raised by Type of Investors 2007-2011

Nr	Types of investors	Europa 135 funds 2011 (%)	Latvian venture capital funds raised (%)
1	Government agencies	34.0	65.14
2	Private individuals	14.9	5.88 (8.98*)
3	Corporate investors	12.1	4.03
4	Banks	9.8	3.64
5	Fund of funds	9.0	
6	Pension funds	8.0	18.2
7	Capital markets	5.0	0
8	Insurance companies	2.6	0
9	Family offices	2.1	0
10	Other asset managers	1.2	0
11	Endowments and foundations	0.6	0
12	Sovereign wealth funds	0.3	0
13	Academic institutions	0.2	0
14	Fund management company	No data	3.1

Notes. * Section "Fund management company" investments will be attributed to section "Private individuals". Source: EVCA Yearbook 2012 and the author's (Latvian funds), based on the Imprimature Capital Seed Fund, Imprimature Capital Start-up Fund, BaltCap Fund, ZGI Fund, 2EF Fund information and the author's calculation.

Let's consider and compare sources of capital (or investor classes) which provide VCF financing. Let's consider the most notable differences between the data on 135 European funds (EF) and Latvian VCF. Firstly, VCF of Latvia have six capital attraction sources; however, such a capital source as Fund Management Company is not stated in the list of EF. It is clear that partners of a management company cannot abstain from taking part in fund capital management as well. Therefore, it may be assumed that, as far as EF is concerned, the investments of Fund Management Company are included into the section "private individuals" or "corporate investors". Therefore, it is considered that VCF of Latvia have five investor types according to the investor structure proposed by EVCA. To draw a more accurate comparison between the investor structure of Latvian VCF and that of EF, these investments will be attributed to section "Private individuals", too. Then, as regards Latvian VCF, this value will constitute 8.98%. So the conclusion may be drawn that, first of all, unlike 13 capital sources in EF (not counting any other unidentified sources), the Latvian funds have only five capital attraction sources. Eight EF investor classes which did not take part in financing Latvian VCF have provided 21% of capital for EF. Secondly, the financing share of government agencies with the Latvian VCF is twice as much as that of EF. Thirdly, the investment share of pension funds of Latvia exceeds the indices of attraction of that type of investors in EF more than twice. Fourthly, such classes of investors as Fund of funds, Capital markets, Insurance companies, Family offices, other asset managers, Endowments and foundations, Sovereign wealth funds, Academic institutions do not invest into VCF in Latvia so far. Fifthly, private investors

in EF represent half as much—twice as much capital, and corporate investors and banks—three times as much. The investment data of Fund Management Company has not been included into financial statements of EVCA. In Latvia, VCF of Fund Management Company have invested 3.1% of the total VCF capital into the capital of funds managed by them.

Latvia is a small country pertaining to the group of CEE countries. Therefore it would be interesting to get to know how capital sources of CEE look like, and it is also interesting to compare these data with the aggregated data of the Latvian VCF. The available data describing CEE countries allow us to consider the situation with the attraction of various classes of VC & PE investors in CEE countries within five years from the last pre-crisis year (2007) and ending with the year 2011. Two of the five existing Latvian VCF started attracting capital in 2007 as well, and the other three—in 2010-2011. Since there were only five VCF in Latvia before 2013, the Latvian VCF were analyzed not based on annual split-up of investor attraction but according to investor classes within CVF capital structure. To make the picture more evident for the entire period of time, the author has calculated the average values (shares) of each class of investors in the VC & PE CEE. Unfortunately, EVCA does not present any CEE data on VC and PE funds separately. But, in the author's opinion, the capital structure of VC and PE funds in CEE countries is not very significant differences, since, according to EVCA data, CEE market was more focused on the SEED and start-up stage investments, with the early stage investments constituting 74% of total VC investments in CEE (EVCA Central and Eastern Europe Statistics, 2012). The results of comparison between the capital structure of VC & PE funds in CEE countries and the Latvian VCF are presented in Table 3.

Table 3

CEE and Latvian Venture Capital Funds Raised by Type of Investors 2007-2011

Nr	Types of investors	CEE 2007 (%)	CEE 2008 (%)	CEE 2009 (%)	CEE 2010 (%)	CEE 2011 (%)	CEE 2007-2011 (average weighted %)	Latvian venture capital funds raised (%)
1	Government agencies	2.6	2.7	28.3	64.3	14.1	9.6	65.14
2	Private individuals	4.8	9.3	8.8	4.1	5.2	6.3	8.98
3	Corporate investors	3.2	6.9	0.9	0.9	8.3	4.6	4.03
4	Banks	7.6	12.1	10.1	1.6	12.2	9.1	3.64
5	Fund of funds	21.2	25	9.4	8.3	25.6	21.3	
6	Pension funds	8.7	18	0.8	0.7	12.7	10.9	18.2
7	Capital markets	No data	No data	No data	No data	No data		0
8	Insurance companies	3.9	6	8.5	0	1.5	4.2	0
9	Family offices	No data	No data	No data	No data	No data		0
10	Other asset managers	2.2	2.8	0.7	5.8	0.5	2.4	0
11	Endowments and foundations	No data	No data	No data	No data	No data		0
12	Sovereign wealth funds	No data	No data	No data	No data	No data		0
13	Academic institutions	No data	No data	No data	No data	No data		0

Note. Source: Developed by the author, EVCA Central and Eastern Europe Statistics 2012; and the author's data (Latvian funds).

Analyzing the number of financing sources, it can be seen that, unlike five VCF sources in Latvia, CEE countries with VCF have available data on eight sources. Those three VCF sources in CEE which do not finance VCF in Latvia, are fund of funds, insurance companies, and other asset managers. If we consider CEE average data for five years, it will be seen that three sources (except for social capital), with fund of funds being

the largest, jointly provide about 35% of financing of CEE funds. In 2011, the share of the same sources had increased to 50.5%. At the same time, the share of public financing has dropped below average and constituted 14.1%. According to EVCA data, corporate investors showed interest towards buy-out funds, growth funds, and blend funds (EVCA Central and Eastern Europe Statistics, 2011). As regards VCF of Latvia, the share of financing retirement funds turned out to be 2.2 times as much as that in VCF CEE. As compared with Latvian VCF capital structure, the structure of attracted capital of VCF CEE is 2.4 times as large in terms of bank financing, but, at the same time, financing from government agencies is almost thrice smaller. If CEE government agencies' investment data for 2011 is compared with the respective Latvian data, then it will be obvious that the share of government agencies in Latvia is 4.6 times as large. It came to 65.1% of all the resources attracted by VCF of Latvia. In 2013, LGA had sponsored three more VCF to the amount of EUR 30M. Apart from that, one of the existing VCF of Latvia was additionally financed by social capital to the amount EUR 1.8M in 2013.

As a result, the share of government agencies in Latvian VCF reached 80% early in 2014. Accordingly, the share of non-governmental investors of Latvian VCF had constituted 20% as of the beginning 2014. According to EVCA data, government agencies remained to be the largest source of funds capital in CEE countries in 2012, providing for 29% of the total volume of attracted capital. Funds of funds were the second largest financing source (19%), while retirement funds had invested 15%. If financing sources are subdivided into internal and external ones, it will be seen that the drivers of internal financing sources in CEE countries were government-supported programs. European investors from outside of CEE region were the main financing source as before, having invested almost 60% from the total volume of attracted capital. The U.S. investors had provided 20%. Local investors had invested 4%, which attests to a deficiency of institutional investors in the region (EVCA Central and Eastern Europe Statistics, 2012). One of the reasons for the deficiency of internal VC in CEE countries may be an essential capital export. In Estonia for example, 69 projects out of 120 fund-financed ones were launched in Estonia, while the remaining 51, or 42.5% were launched abroad (EstVCA home page, 2013). In CEE countries, essential annual fluctuations of investor attraction volumes and structure are recorded. To a large extent, those fluctuations depend on a specific cycle the funds are in. The annual fluctuations must be taken into account when analyzing the structure of attracted resources. Unfortunately, EVCA publishes generalized data only; therefore, there is no opportunity for examining the situation with respect to individual small countries and in the context of financing stages, which would have given some additional information to be used in a more profound analysis. In the opinion of VCs—partners of Imprimatur Capital Fund Management company, Latvia is a market too small to be interesting to such capital sources as fund of funds and some global investors of the venture industry. The investigations show that one of the factors of attractiveness for VC are the market volume (Mrsik, Lazarevski, & Smokvarski, 2012; Karsai,2012; Prohorovs, 2013a). For that reason, countries most attractive to VC among CEE are Poland, Hungary, Czech Republic, and Romania. This is confirmed by data of Global index of countries' attractiveness to VC (Groh, Liechtenstein, & Lieser, 2012). It can be assumed that fund of funds is mainly investing exactly into VCF of the above-listed countries.

Let's consider the following example by analyzing the structure of the main investors of VC&PE funds of Poland and compare them to indices of Latvia (see Table 4).

As it can be seen from Table 4, fund of funds dominates in VC&PE funds-raising investor structure of Poland—25.9%. The second-large source of capital was endowments and foundations—13.2%. Governmental

agencies whose share was 6.3% were only the fifth fund raising source in terms of importance. The comparison between the investor structure of Poland and Latvia, shows that, despite the two countries are members of CEE and EU 11, their structure (types) of investors and their specific weights of similar types of investors differ greatly. When a huge difference is estimated in foreign investor attraction indices in Poland and Latvia, a confirmation of the above-stated opinions of a number of researchers is obtained—namely, that the market size is of great importance to attract VC. The author believes that a small market confines investors' activities and, alongside with some other factors of (non)-attractiveness of VC, may promote the outflow of domestic VC (Prohorovs, 2013b). Taking Estonia as an example, 69 projects out of 120 ones financed by funds were launched in Estonia, while the remaining 51 (or 42.5%) were launched abroad (EstVCA home page, 2013).

For that reason, the Government of Latvia has to meet the capital demands of VC industry of Latvia in full or in part, thus, making up the deficiency of institutional investors—primarily, foreign ones. If Latvia had reached Poland's indices in terms of attraction of foreign venture capital, the capital volume of VC&PE funds would increase almost thirtyfold.

Table 4
Comparison Between Share Percentages of the Main VC Funds-Raising Sources (Investor Types) of VC&PE Funds of Poland and VCF of Latvia for 2007-2011 (Average Performance for Five Years Calculated)

Fund raising sources	Fund of funds	Endowments and foundations	Pension funds	Banks	Government agencies	Insurance companies	Private individuals	Domestic sources
Poland VC&PE funds	25.9	13.2	10.2	7.7	6.3	3.3	1.0	3.3
Latvian VCF	0	0	18.2	3.6	65.1	0	8.98*	More, then 95

Notes. * Taking into account GPs investments (management partners). Source: Developed by the author, EVCA Central and Eastern Europe Statistics 2011 (Poland), author data (Latvia) and the author's calculation.

So far, there are not so many "exit" VCF and other success stories in CEE countries (and in Latvia, prospectively), while Chen, Gompers, Kovner, and Lerner (2010) and Prohorovs (2013a) believe that success story is an important factor governing the opening of new funds and affiliates and the investments into VCF. Bottazzi, Da Rin, and Hellmann (2008) believe as well that there exist some positive relationships between investors' activity and the success of portfolio companies. In the opinion of Schertler and Tykvova (2011), one of the factors influencing cross-border investments to small countries, is the investments magnitude (small sums are not interesting) and the availability of local partners—venture capitalists cooperating with foreign investors, as well as the international practice of those foreign-based VC (Schertler & Tykvova, 2011). Moreover, Schertler and Tykvova (2012) consider that cross-border investments are influenced by such factors as tax, legal environment for VC and mediation and capitalization of stock market. The author believes that the last factor mentioned (capitalization of stock market) is one of the main factors hampering the attraction of foreign VC to Latvia. Cumming and Johan (2012) are of the same opinion; they believe that one of the two most popular "exits" among VC is the initial public share placement (IPO). They also believe that VCF take part in the first round of investments more reluctantly than they did before the crisis (Cumming & Johan, 2012). This may explain and support the decisions by the governments of some CEE countries to sponsor VCF, funding the early stages of company development. At the same time, in the opinion of Pelly and Kramer-Eis (2011), social capital should not just be used as a VCF financing tool but should be a catalyst for the attraction of non-governmental investors and for creating a greater attractiveness for investors to finance exactly

innovative projects (Pelly & Kramer-Eis, 2011). Bottazzi et al. (2008) believe that investigators have so far underestimated the influence of human capital upon attracting VC investments.

After drawing the comparison between the Latvian VCF capital structure and VCF of Europe and CEE countries, the differences in capital structure of various VCF of Latvia will now be considered. The funds have been assigned reference numbers instead of their names to ensure confidentiality of information. Lack of fund name has impact on information quality. The data on capital structure of all the five VCF is shown in Table 5.

Table 5

Share Percentage of Various Investor Classes in VCF Capital of Latvia (%)

Fund/financing source (funds are stated unnamed by reason of confidentiality)	Fund No 1	Fund No 2	Fund No 3	Fund No 4	Fund No 5
Government agencies	100	67.0	64.2	66.6	33.3
Private individuals	0	5.8	26.1	3.3	0
Corporate investors	0	0	0	0	33.3
Banks	0	8.3	0	4.8	0
Pension funds	0	13.2	8.5	23.7	20.0
Fund Management Company*	0	5.5	1.0	1.3	13.3

Notes. * Capital source is not stated in the list of EF. Source: Developed by the author's data.

Considering the number of financing sources, not counting Fund Management Company as a separate source that might be attributed to investments of private individuals or corporate investors (if resources have been invested by the fund management company)—it is fair to say that the Latvian VCF capital structure has essential differences—first of all, in terms of financing sources. There is one fund with a sole investor—namely, government agencies. All of the VCF, except VCF wholly financed by government agencies, have managed to attract the capital of retirement funds as investors. Two funds have only three kinds (classes) of investors participating in capital and two more funds have four. If no government agencies are taken into account among those kinds of investors, it turns out that two VCF have only three classes of investors, and two more VCF have just two of them. Only one VCF has managed to attract corporate investors. The share percentage of private individuals or corporate investors fluctuates from 0 to 26.1% in various funds (not counting VCs shares), which is quite an essential fluctuation. The share of Fund Management Company fluctuates from 1.3% to 13.3% in various funds, leaving alone the fund where 100% of the capital were invested by government agencies. According to the data collected by the author, not less than 95% of VCF capital of Latvia was attracted from local investors. The share of domestic sources in CEE countries fluctuates from 8.3% to 36.5% annually, depending on social capital investment volumes for a specific year. At the same time, the share of domestic sources in Europe in general constitutes 34.3% (EVCA Central and Eastern Europe Statistics, 2011). Based on this fact, one may come to the conclusion as follows: Either Latvia is very unattractive to foreign investors of VC or the Latvian VCF have failed to attract foreign investors for some other reasons. As an example, according to Y. Li, Vertinsky, and J. Li (2013), institutional and cultural distances exercise an essential negative impact on the attraction of international venture capital. In the opinion of Prohorovs (2013a), among the factors exercising a negative impact on the attraction of VC, there may be absence of a neighbouring country with a strong VC industry in the vicinity of Latvia. The author called that factor a cross-border one (Prohorovs, 2013a). Moreover, one may agree with the EVCA conclusion that CEE countries lack institutional investors (EVCA Central and Eastern Europe Statistics, 2012). At the same time, the only Latvian PE fund

registered as of the beginning of 2014—ABLV Private Equity Fund—has managed to raise EUR 10M from non-governmental sources in 2011 (ABLV, 2011). According to LVCA-issued data, the capital of ABLV Private Equity Fund constituted EUR 22M at the year-end 2013. This points either to the fact that not only state financing sources are ready to invest into the Latvian VC&PE or to the fact that, with respect to private and institutional investors of capital, investments into PE funds are more important than those in VCF.

Having considered the structure of VCF financing sources, it would be logical to assume that, given a small number of investor classes, the size of VCF capital of Latvia will be small as well. In order not to divulge the information not stated in public space, the funds were assigned just reference numbers instead of their names. The sizes of VCF of Latvia are shown in Table 6.

Table 6

Sizes of VCF of Latvia

Fund (funds are stated unnamed by reason of confidentiality)	Fund No 1	Fund No 2	Fund No 3	Fund No 4	Fund No 5	Total amount (thousand EUR)	Average
Fund size (in thousand EUR)	6,000	4,500	7,000	30,000	6,532.4	54,032.4	10,806

Note. Source: Developed by the author's data.

The average size of VCF of Latvia is EUR 10.8M, which makes 39.4% from the average size of VC&PE funds in CEE in 2011 (EUR 27.3M). The average size of CEE funds has increased by 40% since 2010 (EVCA Central and Eastern Europe Statistics, 2011). The average size of VCF of Europe in 2010 (final closing in the year) was EUR 43.2M, in 2011—57.7M, and in 2012—EUR 49.7M (EVCA, 2013). In the second half of 2013 in Latvia, three new funds each amounting to EUR 10.5M have occurred as a result of a tender held in Latvia, financially supported by LGA[1]. Their size was almost equal to the average size of the existing VCF (EUR 10.5M with each of the funds, including EUR 0.5M that had to be provided by a private management company); therefore, the average size of Latvian VCF has not changed as of the beginning of 2014. Significantly, as many as 14 private management companies pretended to the right of controlling those VCF. The majority of them were established exceptionally for the purpose of taking part in the tender with a view of acquiring entitlement to control those three new VCF.

The NESTA experts in their report "UK Government support for early-stage venture capital research" come to the conclusion that the size of hybrid VCF (a hybrid fund is VCF with social capital taking part) should be not less than £ 50 M. Lesser hybrid funds of VC cannot diversify their portfolios and ensure the subsequent financing for the most prospective investments (contained in their portfolios). As regards VCF of early-stage financing, it must be capable of controlling a diversified portfolio (at least 20 enterprises) and ensure funding of a few rounds of financing necessary for a successful exit (NESTA, 2009). Dębski (2010) believes that the main problem faced by VC market of Poland is still a small size of VCF. At the same time, Cumming and Dai (2011) believe that, given the excessive growth of the size of VC and PE funds, the quality of human capital may be lost and its deficiency may be manifested. According to the opinion of Cumming and Johan (2008) with regard to Pre-Seed Fund government venture capital programs, the impact of government venture funds depends not only on program structure but on the selection of managers who make investments (Cumming & Johan, 2008).

[1] Latvian private equity and venture capital association home page (Retrieved from Latvian private equity and venture capital association home page) and Latvijas Garantiju aģentūra home page (Retrieved from www.lga.lv).

Tykvová et al. (2012) also emphasize a small number of VCF of sufficient size in Europe that would have experienced partners, skilled in the area of venture investments. According to the data from Snieska and Venckuviene (2011), three hybrid VCF operate in Lithuania, with the smallest of them being Business Angels Co-investment Fund possessing the capital of EUR 8.4M, while the average capital of the three VCF is EUR 16.1M. In fact, the average size of hybrid VCF in Lithuania exceeds the average size of VCF in Latvia by 50%.

Let's compare between the size of VCF of Latvia and Ireland—a small country like Latvia which had obtained international financial support during the crisis, just like Latvia did. The average size of 10 hybrid VCF of Ireland late in 2012 constituted EUR 56.9M. Four of the 10 VCF of Ireland specialize in SEED financing. The average size of hybrid VCF of Ireland made EUR 31M, while the minimum size was EUR 17M. The average size of investments of SEED funds in Ireland had constituted EUR 230,000 in 2012 (Enterprise Ireland, 2013). The average amount of 18 investments of a sole dedicated SEED fund Imprimature Capital in Latvia made EUR 107,000, while the average amount of investments in the start-up VCF Imprimature Capital Technology projects constituted EUR 383,000 and the average amount of 10 later-stage VCF BaltCap investments constituted EUR 1.132M[2]. The average amount of seed-stage investments constituted EUR 123,000, and that of start-up stage—EUR 673,000 Estonian Development Fund (EDF) (Kitsing, 2013). NESTA experts believe that the VCF should be ready to ensure the financing of the next rounds of the most prospective projects (if it turned to be impossible to find another investor or attraction of another investor is not expedient); at the same time, not less than 20 projects should be in the fund portfolio to ensure diversification (NESTA, 2009). To provide for innovation-driven growth, realize the National Development Plan for 2014-2020 and, furnish young innovative companies in high-tech sectors (such as Biotech, Energy, ICT manufacturing Internet, Nanotech, Other R&D, Pharmaceutical, Robotics, Software, TLC and Web publishing) with finance and "smart capital", the size of VCF of Latvia should be essentially larger than it currently is.

Briefly summarizing this study, one may agree with Da Rin, Nicodano, and Sembenelli (2006), that a reasonable State policy should use a wider range of tools to promote VC than merely directing more public funds in VCF (Da Rin, Nicodano, & Sembenelli, 2006).

Conclusion and Recommendations

From all above-mentioned paper, we can conclude that:

(1) There exist various forms and methods of direct and indirect governmental promotion of VCF in various countries.

(2) Direct governmental promotion of VCF has a number of advantages and shortcomings subject to a lot of various factors, including macro-economic situation, the maturity of VC system, and capital markets.

(3) Despite the advent of the post-crisis period and the general macroeconomic stabilization on a global scale, the early-stage VC investors demonstrate an abrupt downward trend of fund raising—both in absolute terms and in the share of early-stage VCF fund raising with respect to the whole VC&PE industry.

(4) EVCA statistics shows VCF investor structure, which provides an opportunity of analyzing VCF structure and comparing it to similar statistics in another country; however, VCF have not been singled out in EVCA statistics published in Special Paper Edited by the EVCA Central and Eastern Europe Task Force. Due to this, one can not analyze the difference in VCF fund-raising structure between European and CEE countries

[2] Retrieved from www.lga.lv.

or between CEE countries and a specific country; as a result, a more generalized comparison (between all kinds of funds) has to be made. This makes such investigations of CEE countries less informative (in the framework of the impossibility of comparison between capital sources with respect to different VC&PE funds). Since VC fund raising is utterly obstructed with respect to the earliest stages of financing, it would be expedient for EVCA to collect and publish statistical data on each of the financing stages and possible on separate countries, which would allow one to compare fund raising results and VC promotion tools in specific countries.

(5) VCF capital structure in terms of investor types and the share of foreign VC vary considerably among various CEE countries. It can be assumed that the structure of VCF capital and the share of foreign VC in specific countries largely depends on the size of the economy of the country.

(6) The number of financing sources (types of investors) of VCF in Latvia is almost three times less than in VCF of Europe.

(7) The share of domestic investors in Latvian VCF is very high—95% (in CEE countries, it ranges from 8.3% to 36.5%, while in Europe the average is 34.3%), which suggests a possible unattractiveness of the country for foreign VC or inability to attract foreign investors in VC.

(8) As of the beginning of 2013, the share of public capital in VCF of Latvia was 65.1%, and at the beginning of 2014, it amounted to 76.2% (the share of public capital in VC & PE funds in CEE countries generally ranges from 6.1 to 58.5%).

(9) The share of Fund Management Company in Latvian VCF on average is 3.1% of the capital funds.

(10) All the eight (8) VCF of Latvia are hybrid funds, which means insufficiency and immaturity of private VC and institutional investors in VC, as well as that investments in Latvia may be less attractive for potential private investors in VC and private VCF.

(11) The average size of VCF of Latvia constitutes EUR 10M, which is much smaller in size as compared to VCF of Europe, CEE countries, the hybrid VCF of Lithuania and Ireland examined by us, and the opinions of experts on the necessary sizes of hybrid VCF.

Practical Usefulness of the Study

(1) This study can be used by institutions of EU, as well as state institutions and development institutes, public funds of VC funds of individual countries, especially CEE and others, passing or having passed the way of transitive economy—for the analysis and formation of public policy in the field of capital raising into VCF.

(2) This study can be used by EVCA, VC & PE associations of different countries, especially CEE countries—both in the form of statistical and analytical material and as a material to establish an attitude towards hybrid VCF and governmental forms of promotion of VC investments.

(3) This study can be used by the Ministry of Finance of Latvia and the Ministry of Economics of Latvia as institutions responsible for the implementation of innovative economy-financing programs and the alternative financial tools, and by the Latvian Investment and Development Agency and the Latvian Agency for guarantees (the public fund of VC funds) for the formation and implementation of Latvian policy of financing of innovation-driven growth, and for working out the most effective tools to promote the development of VC industry in the medium and the long run.

(4) One can hope that this study has filled the information vacuum for VC researchers and practitioners to a certain extent, which opens up interesting possibilities for further research of VC.

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The Significance of Costs Calculation in Evaluation of the Value Added*

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In the article, a problem of importance of proper costs calculation caused by risk factors which emerge in logistic processes is presented. On the basis of literature analysis, there was shown the costs structure of the value chain. The concept of customer value and the concept of enterprise value were extracted. It presents also dependence between actions in internal value chain and generated cash flows. It signalizes also the meaning of risk management influence on the problem of achieving established value added, understood as net income from operational activity by the main enterprises processes. Basis of theoretical modeling using the Gorbatov's principle of characterization was discussed. The research material relates to food businesses. The study was conducted on the basis of questionnaires, surveys, and direct conversations with employees. To build the model, the theory of characterization was used. Its essence is in the mutual interpretability model of the test object to the model structure. Mutual interpretability of models is achieved by selection of the proper functioning of the universal laws (expressed in the functional model) and the structural interpretation of the functional model, the one of representative character is Hasse diagrams. The functioning of the model is illustrated experiment research of the study. The results show the great importance of the correct calculation of the cost of risk factors in logistics processes. Not taking into account the actual cost of risk factors may have a significant influence on errors in decision-making, giving an incorrect picture of the financial situation. A false idea of the creation of value-added may consequently result in the deterioration of the conditions of the enterprise market functioning.

Keywords: logistic process, risk factors, value added, principle of characterization, parametrization model, costs, total costs

Introduction

The value added is one of the key parameters to assess the efficiency of the enterprises. Analyzing the activities of the organization should always wonder what the added value is, where it comes from, what determines it, and what to do to make it as high as possible in terms of the entire process chain. The added value creation and the manner of its use in the creation of the new strategy is one of the main problems to solve.

The company independently determines the value that will be provided in the form of a product which it has decided to produce. Clients represent a demand for what the company offers. From these premises, certain

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consequences are derived. A way to interact with customers through the process of exchange is needed, in order to sell products. The way businesses interact with customers has long been a method enabling it to obtain economic value from the customer. Companies have developed different procedures for obtaining this value—by increasing the range of products offered, efficient delivery and servicing products, adapting them to the needs of individual customers, and many other. One of the most important is the continuous improvement of the processes. A number of possibilities associated in this respect with the concept of risk management. Planning, organization, implementation, and control of interference in the course of logistics processes contribute to creating a higher level of realized customer value and higher added value for the company. The analysis of the literature was developed based on the publications of recognized authorities (Bowersox, 1987; Cooper & Ellram, 1993; Giunipero & Brand, 1996; Hewitt, 1994; Jenkinson, 1995; Johnson & Wood, 1993; Porter, 1985; Prahaland & Ramaswamy, 2005; Schuderer, 1996).

The paper presents the author's studies intended to demonstrate that proper costing of risk factors in logistics processes significantly reflected in the assessment created by a value added. Model proposed by the author translates directly into increased opportunities measureable change in value added induced by the implementation of the risk management system.

For the modeling there were used solutions based on the algebra of logic and Gorbatov's principle of characterization. The resulting model structure and model of the verified during research yielded results in the form of a solution to the quantification of the total and the actual cost of risk factors in logistic processes and the assessment of change in value added.

Theory and Research Problems

Level of utility which is given to a client by results of process realization, in practical sense, is not measurable. Utility itself has subjective character and is an abstractive category. All attempts to impute a unit to it (e.g., utyl) failed. Utility can by ascribed with the ordinal only. In that meaning utility is the reflection of orderly preferences system.

It is however crucial category in analyzing value added that realized by enterprise's processes. Without any value for the client, there is, in fact, no value for the enterprise either—those are interdependent. The real value added may emerge only when client purchase product and founds come in to bank account of the enterprise.

As Figure 1 shows that dependence between value for a client and value for an enterprise is also dependent on the exchange. On the one hand, there is the money transfer, which is the value within the meaning of the revenue for the enterprise; and on the other hand there is the transfer of the stream of products, which constitute the value within the meaning of benefits and utilities for the buyer.

It is on the basis of these two relations, which can be seen in Figure 1, that it is possible to define the value added as the difference between revenues from sales of products and their manufacturing costs ($V_{x,f}$-$V_{i,f}$) in economic terms or as the surplus of the utilities received by the buyers ($V_{i,c}$), which are expressed by the willingness to pay (covering the costs) for the product ($V_{x,c}$) in terms of market value. If it can perceive the created value as the buyer propensity for paying for the product of the given enterprise (Porter, 1985) then the economic value corresponds with the market value (with the utility).

In accordance to the fact that benefits and utilities for a client are not measurable, the relation between them and costs can not be described as formal relation (formula). Therefore it can not assume as a real part of

interpretation doing from Figure 1. In aspect of the value for an enterprise, relations between income and costs can be described as difference or quotient. Each enterprise should endeavor to the situation when such difference is positive and possibly the highest. The higher than 0 result of quotient is, the higher level of the value added gained by enterprise is.

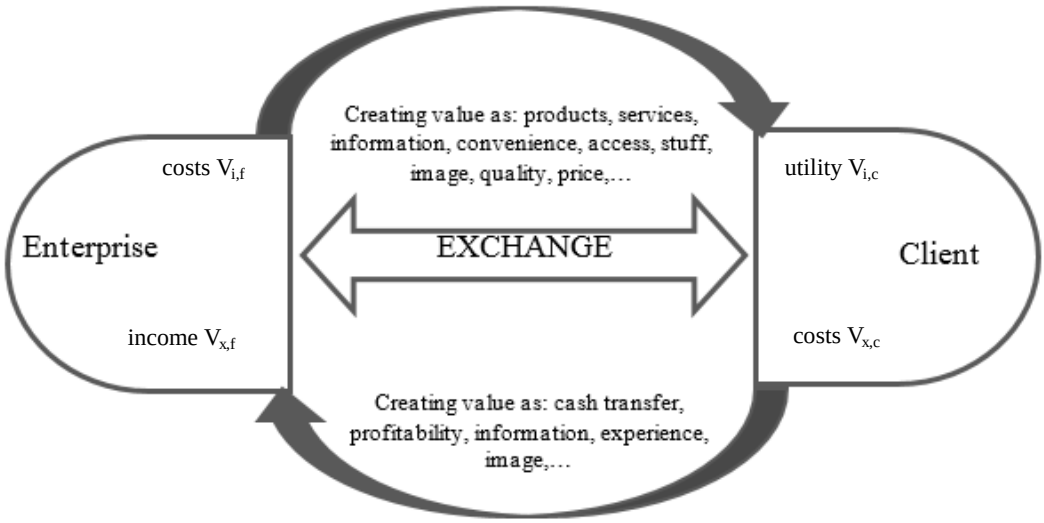

Figure1. Exchange-value for a client and for an enterprise. Source: Own elaboration on the basis of Porter, 1998, p. 38.

The interpretation of Porter implies two depictions of the value category (Porter, 1998). The first one is shown as a sum of costs incurred in relation to production of the given product. The second one is shown in terms of the exchange value as the price that the buyer is willing to pay for the product. Without taking into account the relation client-enterprise in the first term, it could come to the conclusion, that increasing expenditures for achieving process result, which is a product, would increase its value. That is not true, even significant increase of total costs related to article production does not guarantee an increase of its value, that value may stay unchanged or even decrease.

In second term, considering that value is a price which clients are willing to pay for the result of a process, could be even more doubtful. That would mean that increase of the price implies increase of the value of process result for a client, which is not true either.

From the point of view of the enterprise, considering the customer value and activities creating this value makes sense, if the categories mentioned above are treated as carriers of revenue. It is possible to assume in this way that there is a certain level of the customer value, at which the value for the enterprise is the largest.

While interpreting this relationship, one should assume that performing activities creating the customer value causes the rise in sales revenues, since the improvement in parameters (quality, amount and the like) of the product causes that the customer is willing to pay extra for it. However, if the action in favor of the product does not contribute to the increase in its value in the form of the rise in the income but causes the increase in costs then it is an activity not creating value.

It is because, as indicated at least by the value chain concept, the key objective of any company is to maximize the value for owners rather than for customers.

The value chain is important instrument for analyzing value added for an enterprise. Realization basic processes with participation supporting processes determine flow of cash, which decides abort creating value for an enterprise (economic value).

In Table 1 there was shown dependence between individual activities in internal value chain and generating cash incomes. Set of activities comprising on value chain processes determines level of individual constituent categories of stream of the flow of cash, so that it determines level of value for an enterprise (Kulińska, 2009a).

Table 1

The Relation Between the Customer Value and the Value for the Enterprise

Enterprise infrastructure					
Human resources management					
Technology developement					
Butying					
Logistics of entrance	Production	Logistics of withdrawal	Marketing and sell	After selling services	
					Sell income
supplies storage administration material manipulation	tooling installation testing packing	storage distribution administration material manipulation	sell advertising promotion administration	installation tutorials maintenance returns	operating costs
					= operating income – income tax = operating income after taxation + amortization
inventories of raw materials for the production of liabilities	undone production of liabilities	inventories of finished products	charges	inventory of spare parts	+/- change in demand for networking material
					= flows of cash from operating activity
stores warehouses transport cars equipment	production facilities tools and machines needed for production	stores warehouses transport cars equipment	facilities for distribution cars of sales representatives computers and other devices	service facilities transport cars equipment and service devices	- investments in fixed assets
					= value added

Note. Source: Elaboration on the basis of Kulińska, 2011.

It is important to identify cost creating factors in the enterprise and examine their impact on the creation of the value added. The analysis of the internal value chain of the enterprise should be carried out, that is:

- The activities performed in the areas of individual groups of functions should be recognized;
- The analysis of the relations occurring amongst these actions in different sections should be along with assigning costs, revenues, and assets to these actions;
- The identification of factors affecting the level of costs should be conducted.

The last stage concerns the use of this information in order to determine the strategy and possible modifications to the chain (Kulińska, 2009a). Research using the enterprise value chain taking into account

cash flows is relatively difficult, which results from the analysis of literature and studies. Problems arise from the need to obtain the information necessary for the various stages of analysis. This means the need of excluding logistic costs from overheads in the accounting system. These obstacles most often appear in the following situations:

- When the company has no separate individual processes and, consequently, does not recognize them as a separate organizational areas to gather information and generate cost;
- The accounting is tailored to the functional organization of the company and not to the horizontal;
- If the organization assumes the independence of internal accounting one enterprise, and information, related to the coordination of various processes, are rarely collected;
- The accounting system takes into account the ongoing relationship between indoor units the company, but uses the off, not basic, simplest means of accounting for the shape of interdependence.

It is because of the obstacles mentioned above that the method does not have many supporters. If additional deviations, which may appear in the course of logistic processes, are taken into account, its implementation seems to be almost impossible.

The risk management process can be interpreted as a component of the transformation process in logistics processes, the aim of which is to achieve the highest value. It is an inherent component of the transformation in the process of creating customer value and added value for sized enterprise.

The risk management process is shown in Figure 2 as supporting the transformation process by translating the likelihood and consequences of risk factors in logistics processes. The achievement of the objectives in this respect can be seen in two directions. On the one hand, the identification and assessment processes in terms of added value are of vital importance in the design of integrated risk management system, on the other hand, optimally designed system integrated risk management directly translates to the level of the creation of value (Kulińska, 2009b).

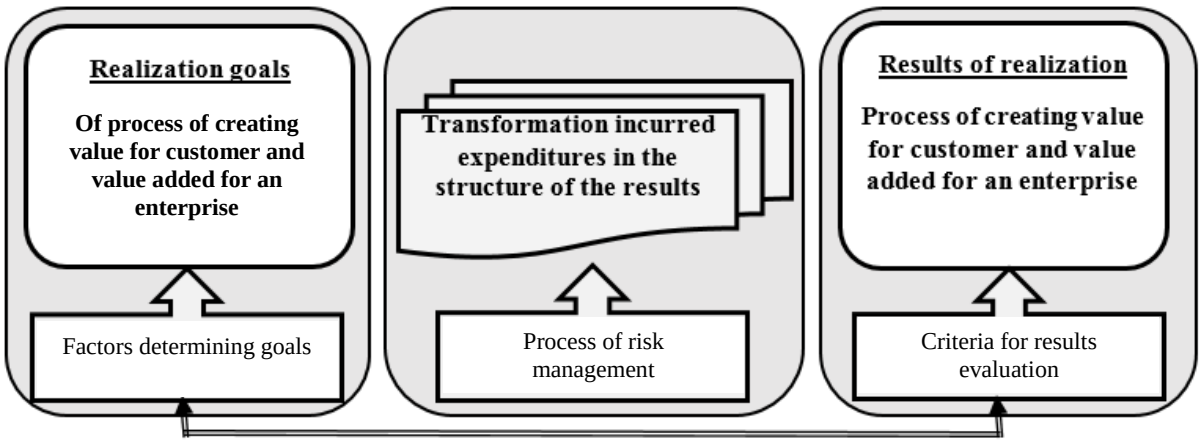

Figure 2. Risk management as an inherent component of the transformation processes of value creation.

The first aspect of the relationship between risk management and value creation of logistic processes associated with the division of logistics processes in terms of their contribution to the creation of added value. The second one points to the fact, that the more developed risk management system, the greater the increase in the value added obtained in the results process—that means in products.

Research Problem in Terms of Functional and Structural Characterization Principle

In the context of its deliberations process should be interpreted as a statement of successive steps, repeated in a certain cycle that transform input resources in the outcome of the process. The transformation consists in giving a new value (value added). Measurable objective is to obtain as a result of the highest value-added verified and recognized by the recipient.

This approach facilitates the optimization of the enterprise as a whole, because the boundaries between departments, to communication, are replaced by boundaries between processes. As a result, the overriding objective is the result of the process, and what processes and their results are expected source of delivery to the customer by their products. Logistics processes are to help improve the management system and ensure its effectiveness and efficiency. They include activities and activities related to the preparation of the structure of the basic processes, creating management information systems, transportation, storage, finance and accounting, reporting and controlling.

Logistics processes do coordinate all the activities carried out in the enterprise. The final objective is to achieve unanimity coordination in the implementation of the tasks, which are components of these activities. The key to coordination is an insight into the internal structure of the performers and their tasks. Logistics processes appear when there is a need to coordinate with each other main processes carried out in a manufacturing company.

Structural and functional nature of the relationships in logistics processes indicates the possibility of using the rules for parameter characterization of their added value. Analyzing the impact of risk factors in logistics processes at the level of added value produced, there is a need to simultaneously take into account parameters such as (Kulińska, 2011):

- The process of value creation;
- Identification of risk factors;
- Probability (frequency) of risk factors;
- The effects caused by risk factors;
- Depending logical, time, priority, hierarchical, functional;
- The conditions of the transformation;
- Input (supply) processes;
- Output (the effect of implementation) processes;
- The result of the implementation process.

Given the multitude of possible states that these parameters can take, there is a situation, which implies the necessity to generate and evaluate a set of many possible solutions that may occur in a particular problem situation. As the number of elements of the set of the solutions for most practical problems grows in the NP-complete way, there is no practical possibility of seeking and considering each of them in the real time. Hence, the need of seeking solutions appears, which could enable the selection of variants to be evaluated and allow for narrowing the space and reducing the time of finding interesting solutions.

Principle of characterization belongs to modern methodology apparatus of system theories. Systemic interpretation of tasks in accordance to that principle boils down primarily to the:

(1) Designation not the solutions themselves, but its characteristic features;

(2) Features of solutions should refer to representatives (invariants) of equivalence class of solutions;

(3) Equivalence class of solutions emerges as a result of interpretation of input the dissolved group of tasks in terms of the characteristics of solutions.

Equivalence classes of solutions are usually less than all possible solutions and the analysis of the characteristics of solutions can be carried out without the direct (present) generation. Developed formally and methodologically verified in the area present rules of characterization, form a theory of characterization. Its essence lies in the mutual interpretability model of the test object to the model structure. Mutual interpretation-ability models are achieved by selection of the proper functioning of the universal laws (expressed in the functional model) and the structural model of interpretation (Gorbatov, 1979).

In accordance with the principle of characterization, facility will function properly if you manage to define and prove mutually consistent interpretation of the rules among its functioning (described by the model of which is denoted by ψ_a) and the structure of executing (described by the model structure which is denoted by ψ_b). To define and prove unambiguous interpretation of these two models, here are the following assumptions:

- Resource is functioning adequately to its structure;
- The structure of the resource is adequate for the desired mode of functioning.

The essence of the principle of characterization can be written as:

$$\left\langle \psi_a,\ \psi_b, P_0\left(\psi_a,\ \psi_b\right)\right\rangle$$

where:

ψ_a—model of functioning;

ψ_b—model of structure;

$P_0(\psi_a, \psi_b)$—atomic predicate.

Atomic predicate P_0 (ψ_a, ψ_b) is characterized by the possibility of interpreting the model in terms of the functioning of ψ_a ψ_b structure model. The predicate P_0 is a special case of the Boolean variable and takes the value “1” or “0”. “1” indicates the possibility of mapping, while “0” indicates the lack of such a possibility.

Application of the principle of characterization requires precise definition:

- What is the operating model of logistic processes?
- What is the structural model of logistic processes?
- How should the P_0 predicate be interpreted (ψ_a, ψ_b)?

Developing the theory of the conditions for converting the ψ_a model into the ψ_b model for construction parameterization model of logistic processes requires:

(1) The set of ψ_a operating models in terms of logistic processes includes the information on:

- The probability (frequencies) of appearing of risk factors in logistic processes;
- The effects of appearing of risk factors (defined as the maximum cost caused by them, when they appear in logistic processes) as well as;
- The achieved (planned) value added, adequate for all examined manufacturing companies with regard to the period of the research (2012-2013).

(2) The set of the ψ_b structural models in terms of logistic processes includes the information on:

- The continuity of the course of logistic processes supporting main processes in the manufacturing company;
- The real costs (the effects and the probability) of appearing of the defined risk factors in logistic processes;
- The achieved (real) level of the value added in the obtained outcome of the process adequate for all

examined manufacturing companies with regard to the period of the research (2012-2013 flies).

(3) The P_0 atomic predicate (ψ_a, ψ_b) determines the mutual interpretability of the operating model in terms of the structural model (Kulińska, 2011).

To formulate a model of the necessary information is the frequency of risk factors in logistics processes. The presence of risk factors in the area of operation of the logistics processes in a given year in the operational model was designated as the first. If the risk factor did not occur in a given year in any area or function, has not been included in the propositional function (Kulińska, 2011).

It is on the basis of the data describing the probability and the effect of appearing of the risk factors in logistic processes for any manufacturing company that it is possible to develop an operating model in the form of the system of propositional functions, which describe relations and structure of logistic processes, i.e., such propositional functions, which will include the information on the presence of risk factors with the defined effect and probability in logistic processes and which affect the created value added in the given period of time here: month or year.

On this basis, it can be concluded that the model of functioning, contains information about the total cost of risk factors in logistics processes, because the data is mapping the current state of the research problem fixed on the basis of a specific company and a specific period of time.

In fact, the costs of the risk factors appearance are usually higher than the ones, which are shown in income statements. It is to obtain the information on the real costs caused by risk factors that an interpretation of the structural model is essential. Obtaining the structural model requires the accomplishment of the consecutive stages of the characterization principle.

The set of Ψ_b structural models in terms of logistic processes must include information on the real costs of the presence of risk factors in logistic processes translating into the size of the value added achieved by the given company. It is achieving this result that requires, according to the characterization principle, determining conditions of redesigning the operating model into the structural model so as that its components would create a partially ordered set, i.e., the set whose elements $\mathbf{P}_i^{\sigma_i}$ meet the requirements of the partial ordering:

$$R \subset P \times P\left(P_i^{\sigma_i} \in P\right)$$

Described with properties:

- Maneuverability:

$$\forall\left(P_i^{\sigma_i} \in M\right)\left[\left(P_i^{\sigma_i}, P_i^{\sigma_i}\right) \in R\right]$$

- Antisymmetry:

$$\forall(P_i^{\sigma_i}, P_j^{\sigma_j} \in M)\{[(P_i^{\sigma_i}, P_j^{\sigma_j}) \in R] \wedge [(P_j^{\sigma_j}, P_i^{\sigma_i}) \in R] \rightarrow P_i^{\sigma_i} = P_j^{\sigma_j}\}$$

- Trazitivity:

$$\forall(P_i^{\sigma_i}, P_j^{\sigma_j}, P_k^{\sigma_k} \in M)\{[(P_i^{\sigma_i}, P_j^{\sigma_j}) \in R] \wedge [(P_j^{\sigma_j}, P_k^{\sigma_k}) \in R] \rightarrow (P_i^{\sigma_i}, P_k^{\sigma_k}) \in R\}$$

where:

R—relation symbol;

P—set of risk factors;

$P_i^{\sigma_i}, P_j^{\sigma_j}, P_k^{\sigma_k}$ —element sof risk factors set;

M—set of propositional variables.

The correct form of presentation of the model structure is the Hasse diagram, because it is directed graph, which captures the idea of the process as a sequence of consecutive steps at risk. Constructing a Hasse diagram requires the removal of all the graphical presentation of the process loop, which is repeated operations, mirrored (which corresponds to a set of partially ordered property maneuverability) and closing arches that reflect such incorrectly labeled internal transport routes, incorrect or lack of labeling storage boxes, etc. (which corresponds to the congregation partially ordered property of transitivity).

Finding the optimal Hasse diagram requires the transformation model of ψ_a, ψ_b in the model structure in such a way that the propositional function stored in the model ψ_a was clearly interpreted in the model ψ_b.

In the assumptions of the characterization theory, the universal laws of correct functioning are expressed by means of the so-called prohibited graph figures, defined as abstract structures, which should not appear in form of homeomorphisms in the operating model "under threat" of its incorrectness what originally was applied in the automata theory (Gorbatow, 1979; Nazaretow, Kim, & Krupa, 1991).

The prohibited Q^A figure is a graph submodel recorded in the form of cycle with odd length, whose apexes are weighed with pairs of cyclically changing weights, which are indexes of appropriate alternative elements. For model parameterization, such a graphic character indicates the presence of risk factors in more than one area of significance processes. It is very important from a point of view of the cost analysis concerning removing effects of the presence of risk factors, since the effects will be noticed in many areas (the number depends on a specific case) of functioning of any company and this will multiply costs and translate into a reduction in the value added in this way.

The second kind of the prohibited figure is the Q^B figure, which is a graph submodel recorded in the form of the triangle with hanging vertexes. The vertices of the triangle have equal weight, and each of them has an additional weight equal to the weight hanging vertex.

This kind of a prohibited figure corresponds to the situation, when the risk factors present in one area affect the adjacent ones, e.g., a risk factor associated with transport (let's denote it as a) triggers a risk factor in supply (let's denote it as b) and simultaneously triggers a risk factor in production (let's denote as c) as well as in the area of distribution (let's denote it as d). It is removing the initiator, that is splitting the prohibited graph figure according to the characterization principle through splitting the factor "a", that will eliminate effects in four areas.

While splitting prohibited graph figures, one should take the following issues into account:

- The splitting should be carried out in such a way that all prohibited graph figures will be eliminated;
- It is out of possible variants of splits (replicas of variables) that we always choose the minimal subset of propositional variables, which will cause the elimination of all prohibited graph figures;
- It is to choose from possible variants of splitting propositional variables that it uses a semantic decision table;
- The choice of a variable/variables for splitting conditions the form of the new ψ'_a operating model, and hence the form of the resultative Hasse diagram.

Obtaining a new model of operation and the particular form of the diagram Hasse has its consequences. The conducted operations are followed by splitting of the propositional variables. The meaning of the logistics

process variables reflects the risk factors in the studied areas of logistics processes, characterized by a certain probability and effect of risk factors, e.g., mirroring actions translate into the final level of costs. By applying the principles of characterization in a simple way it can be seen that the presence of risk factors has its consequences not only at the site of the event, the effects often translate into other areas of the enterprise and even the entire organization. After successful characterization it is possible to calculate the real costs of the risk factors.

Application of the principle of characterization for the parameterization of logistic processes is primarily associated with the demonstration of the actual costs actually incurred in connection with the occurrence of certain risk factors in logistics processes. After this analysis, using the model parameter logistic processes can be demonstrated that the actual costs are higher risk than those included in the calculations (if any are reported). Absence from the real cost of risk factors may have a significant influence on the creation of added value, translating to the terms of the enterprise in the market.

Research Design

Driven by the demands of the principle of characterization, use of logistic processes:

- Makes a formal record of the studied fragment of reality in the form of the system of propositional functions;
- Develops an operating model of the studied fragment of reality, through the analysis of the function, the elimination of the forbidden graph figures from the model of the propositional function with the use of the semantic decision table as well as splitting the ψ_a graph operating model;
- Finds its structural (technical) interpretation in the form of the graph structural model in the form of Hasse diagrams for the developed operating model.

Obtaining information on the actual costs incurred by the company in connection with the occurrence of risk factors showing structural-functional depending on the model, described in the example.

On the basis of data obtained from studies conducted in the years 2012-2013 in the food manufacturing set propositional function describing the risk factors in logistics processes translate into the creation of value added enterprises. Examined dozens of companies, the functioning of the model calculation is illustrated in one of the most representative of the surveyed companies located in the province of Opole in Poland.

Among the 67 identified risk factors for the analysis, nine of which were the most representative, and were selected. These include the risk factors X_7, X_8, X_{23}, X_{30}, X_{46}, X_{49}, X_{52}, X_{60}, X_{67}—which have been identified in six functional areas of business: procurement, production, distribution, transport, storage, and managing logistics processes. On this basis, the propositional function took the following form:

$$ZP_x(X_1, X_2, \ldots, X_{67}) = X_7\, X_{49}\, X_{23}\ \mathrm{V}\ X_7\, X_{52}\ \mathrm{V}\ X_{30}\, X_{46}\ \mathrm{V}\ X_8\, X_{46}\, X_{23}\ \mathrm{V}\ X_{46}\, X_{60}\, X_{67}\ \mathrm{V}\ X_{30}\, X_{52}\, X_{67}$$

Each of the risk factors selected for the analysis X_7, X_8, X_{23}, X_{30}, X_{46}, X_{49}, X_{52}, X_{60}, X_{67} includes information on the frequency (the probability) of appearances of risk factors as well as potential effect (measured with the maximum cost of removing the effects of the appearance of the risk factors). Taken into account the data of the company, these values were as follows (see Table 2).

On this basis, it can be determined that the operating model includes information on all-in costs of the presence of risk factors in logistic processes, since it is data mapping the direct information from the company examined in the given period of time. While limiting to these factors, it can be stated that the value added of the company could be higher by about PLN 7,515,332. On the annual basis of the operations of the company

listed on the Warsaw Stock Exchange, it seems not to be a large amount but only a few risk factors are analyzed here.

Table 2

Statement of the Likelihood and Effect of Risk Factors Appearance in Function ZP_x

The area of the appearance of risk factors	Propositional variable	2012-2013		Quantity × cost
		Quantity	Max cost	
Supplies	X_7	90	2,000	180,000
	X_{49}	49	5,100	249,900
	X_{23}	76	4,700	357,200
Production	X_7	90	2,000	180,000
	X_{52}	180	5,200	936,000
Distribution	X_{30}	159	1,500	238,500
	X_{46}	230	3,600	828,000
Transport	X_8	161	1,800	289,800
	X_{46}	230	3,600	828,000
	X_{23}	76	4,700	357,200
Storage	X_{46}	230	3,600	828,000
	X_{60}	121	4,150	502,150
	X_{67}	99	2,859	283,041
Management logistics processes	X_{30}	159	1,500	238,500
	X_{52}	180	5,200	936,000
	X_{67}	99	2,859	283,041
∑				7,515,332

Research Method—The Principle of Characterization in Research Experiment

Functioning model ψ_a of propositional function ZP_x is given as a statement of:

$$\psi_a = <M, R_2, R_3>$$

where:

M—set of propositional variables;

R_2—set of relations defined by 2-element alternative units;

R_3—set of relations defined by 3-element alternative units.

$$M = <X_7, X_8, X_{23}, X_{30}, X_{46}, X_{49}, X_{52}, X_{60}, X_{67}>$$

$$R_2 = \{ \{X_7\ X_{52}\}_2, \{X_{30}\ X_{46}\}_3 \}$$

$$R_3 = \{ \{X_7\ X_{49}\ X_{23}\}_1, \{X_8\ X_{46}\ X_{23}\}_4, \{X_{46}\ X_{60}\ X_{67}\}_5\ \{X_{30}\ X_{52}\ X_{67}\}_6 \}$$

The module enables to obtain a graphic form of the functioning model, which is shown in Figure 3.

The purpose of modeling is to model the structure, solving specific research problem, namely the search for the actual cost of risk factors in logistics processes, translated into a decrease in realized value added for the company. Obtaining a result requires constraints to the model structure so that the elements of X_i form a partially ordered set, i.e., a set whose elements satisfy the relation of partial order. It is therefore prohibited to designate figures Q^A and Q^B.

For the function ZP_X there were identified three types of Q^A forbidden figures and one prohibited type of figure Q^B. The next peaks of forbidden figures represent propositional variables that when appearing in conjunctions in a certain order, graphically form loops (see Figure 4).

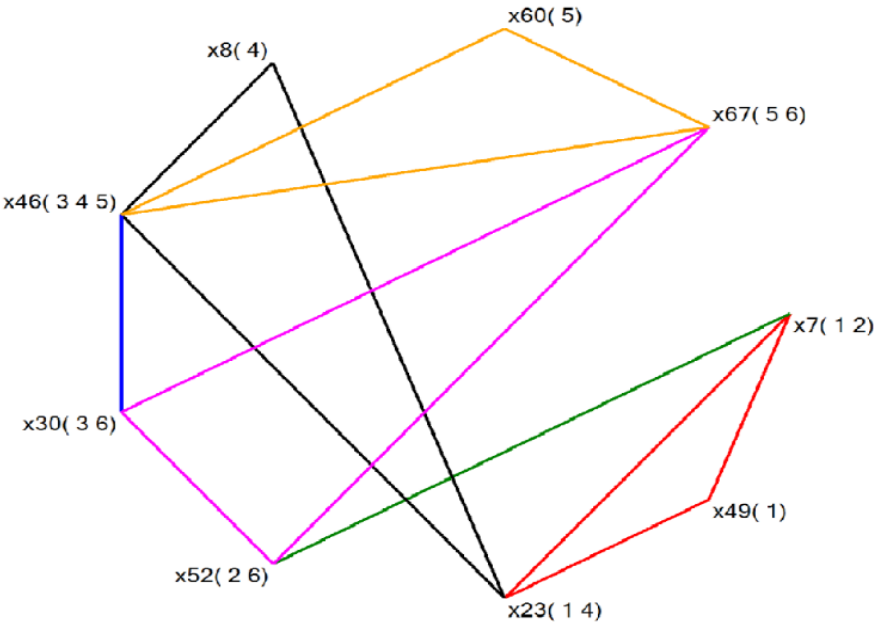

Figure 3. Functioning model ψ_a of propositional function ZP_x.

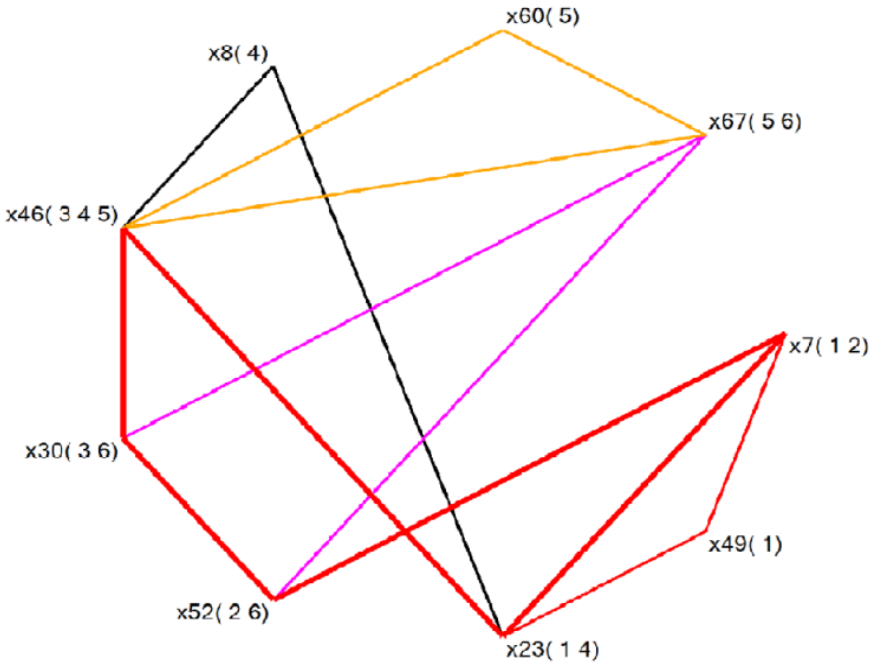

Figure 4. Counter model of functioning of function ZP_x with marked prohibited count figure type Q_1^A.

The formal description of prohibited figure Q_1^A:

$$Q_1^A = \{X_{23}, X_7, X_{52}, X_{30}, X_{46}\}$$

The second kind of prohibited figure is figure Q^B, which is counter submodel recorded in the form of a triangle with hanging vertices. Analyzed function also includes one figure of this type highlighted in Figure 5 with thick lines, and the peaks hanging by a dotted line.

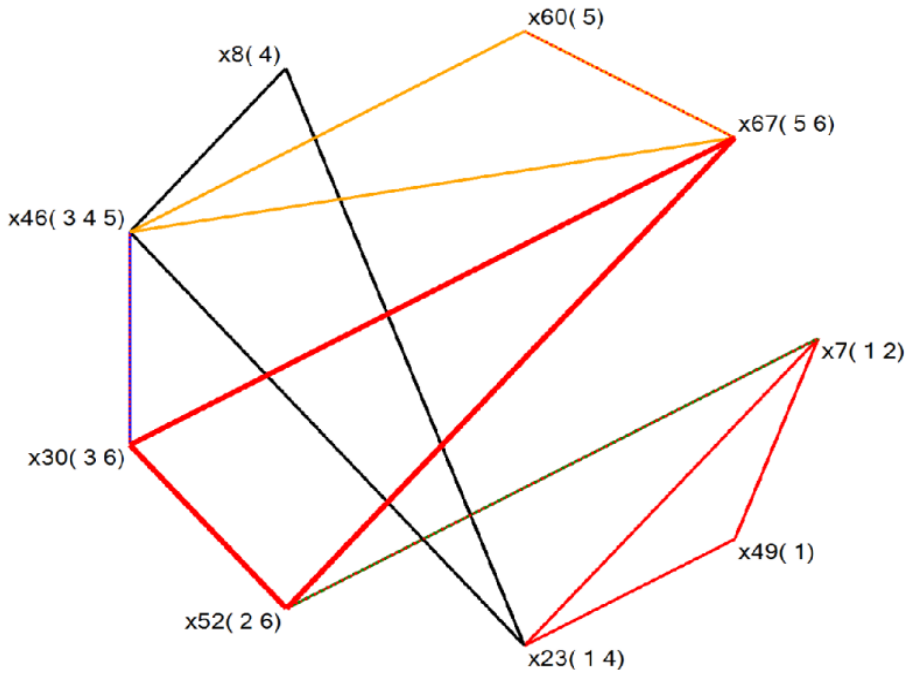

Figure 5. Counter model of propositional function ZP_x with marked prohibited counter figure type Q_1^B.

The formal description of prohibited figure Q_1^B:

$$Q_1^B = \{X_{67}, X_{30}, X_{52}\}\{X_{67}, X_{60}\}\{X_{30}, X_{46}\}\{X_{52}, X_7\}$$

For fission of prohibited figures which encountered in graph representation of the analyzed propositional function, there was an array of semantic (see Table 3).

Table 3

Array of Semantic Functions ZP_x

	X_7	X_{23}	X_{46}	X_{30}	X_{52}	X_{67}
Q_1^A	1	1	1	1	1	0
Q_2^A	1	1	1	0	1	1
Q_3^A	0	0	1	1	0	1
Q_1^B	0	0	0	1	1	1

In the first row of the table, there were introduced propositional variables that occur in all the identified prohibited figures. The first column of figures while introducing prohibited. In the following lines numeral 1 denotes propositional variables as a vertex in a forbidden figure graphs that have occurred in the forbidden figure (see Table 1). Minimum subset of propositional variables that will eliminate all the figures prohibited choose guided by the frequency of occurrence of a propositional variable in the forbidden figures (the largest number of ones in the column of the array semantic), and from the point of view of the cost of logistics processes, among the alternatives, select the propositional variables that represent risk factors with the lowest probability (frequency) of occurrence and the lowest cost of potential effects occurrence.

Selection of variables condition will form a new model of ψ'_a, and thus form the resulting Hasse diagram

and the level of the actual cost of picking risk factors in logistics processes translates into the level of the value added. Taking into account both criteria of fission it select variables X_{46} and X_{52}. Splitting the two variables in conjunction first (see Figure 6).

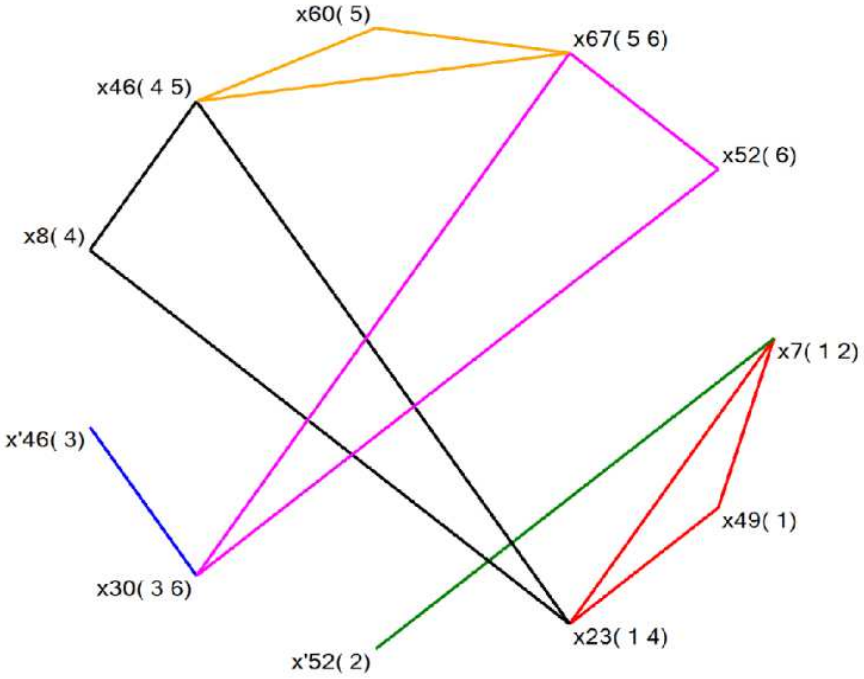

Figure 6. New counter model of functioning ψ'_a propositional function ZP_x after fission of prohibited counter figures.

New function ZP_x:

$$ZP_x(X_1, X_2, \ldots, X_{67})' = X_7\, X_{49}\, X_{23} \vee X_7\, X'_{52} \vee X_{30}\, X'_{46} \vee X_8\, X_{46}\, X_{23} \vee X_{46}\, X_{60}\, X_{67} \vee X_{30}\, X_{52}\, X_{67}$$

For which the new model of ψ'_a takes the following form:

$$\Psi'_a = \langle M', R'_2, R'_3 \rangle$$

$$M' = \langle X_7, X_8, X_{23}, X_{30}, X_{46}, X'_{46}, X_{49}, X_{52}, X'_{52}, X_{60}, X_{67} \rangle$$

$$R'_2 = \{ \{X_7\, X'_{52}\}_2, \{X_{30}\, X'_{46}\}_3 \}$$

$$R'_3 = \{ \{X_7\, X_{49}\, X_{23}\}_1, \{X_8\, X_{46}\, X_{23}\}_4, \{X_{46}\, X_{60}\, X_{67}\}_5 \{X_{30}\, X_{52}\, X_{67}\}_6 \}$$

As a result of fusion it gets a new model of Figure 6, which corresponds to adequate Hasse diagram shown in Figure 7.

In fact, the costs of the presence of risk factors are most often higher than the ones, which are shown in income statements. It is for obtaining information on actual costs, which result from risk factors that the interpretation of the structural model is essential. On this basis it is known that the replica of variables in the following form were obtained: X'_{46}, X'_{52}. It has the consequences in the cost accounting of risk factors present in logistic processes. Table 4 shows that the costs of risk factors were put together on the basis of the new ψ'a model.

While comparing the total and actual costs of the appearance of risk factors, one can notice the importance of their correct calculation. After examining a small number of risk factors, the difference was more than PLN 1,700,000 (see Table 5), what gives the preliminary idea of the scale of the phenomenon.

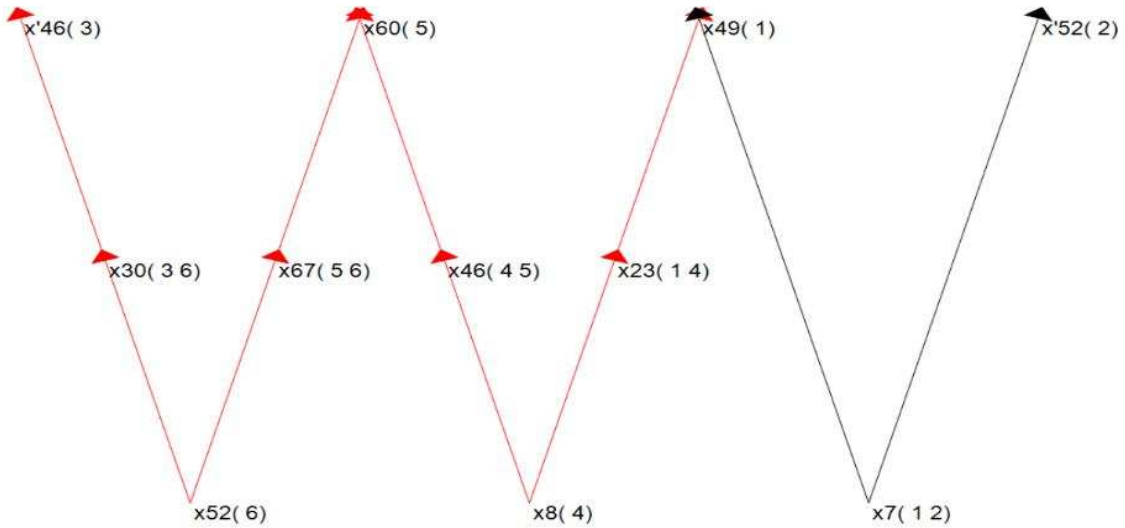

Figure 7. Structure model ψ_b of propositional function ZP_x.

Table 4

The Analysis of the Costs of the Elimination of the Individual Risk Factors for the Selected Propositional *Variables in the* ψ'_a Operating M*odel of the* ZP'_x Function

The area of the appearance of risk factors	Propositional variable	2012-2013		Quantity × cost
		Quantity	Max cost	
	X_7	90	2,000	180,000
Supplies	X_{49}	49	5,100	249,900
	X_{23}	76	4,700	357,200
	X_7	90	2,000	180,000
Production	X_{52}	180	5,200	936,000
	X'_{52}	180	5,200	936,000
	X_{30}	159	1,500	238,500
Distribution	X_{46}	230	3,600	828,000
	X'_{46}	230	3,600	828,000
	X_8	161	1,800	289,800
Transport	X_{46}	230	3,600	828,000
	X_{23}	76	4,700	357,200
	X_{46}	230	3,600	828,000
Storage	X_{60}	121	4,150	502,150
	X_{67}	99	2,859	283,041
	X_{30}	159	1,500	238,500
Management logistics processes	X_{52}	180	5,200	936,000
	X_{67}	99	2,859	283,041
∑				9,279,332

Table 5

The Comparison of Total Costs and Actual Costs of the Elimination of Effects of Risk Factors

Balance	
Total costs	Actual costs
7,515,332	9,279,332
1,764,000	

Demonstrating on the basis of the characterization made the cost difference show that not all resulting in the enterprise expenditure has been properly classified, which is not associated with the costs caused by risk factors. Demonstrating a difference instead of increasing the income start position results risk factors was (by the lack of proper identification) distributed on the income statement items such as cost of products sold, the value of goods and materials translating into cost of products, goods and materials. In addition, the costs caused by risk factors can be sought in the cost of sales, general and administrative expenses or profit (loss) on sales.

After this analysis, using a model based on the principle of characterization can be seen that the actual risk costs are higher than those reflected in the financial results in the profit and loss (if any are reported). The difference is already visible, taking into account only a few risk factors. Considering that during the tests reported in the enterprise 67 most adverse effects of repeated, the scale phenomenon is much greater. Not taking into account the actual cost of risk factors may have a significant influence on errors in decision-making, giving an incorrect picture of the financial situation. A false idea of the creation of value added, may consequently result in the deterioration of the conditions of the enterprise market.

Conclusions

Application of the principle of characterization is primarily associated with the demonstration of the actual costs actually incurred in connection with the occurrence of certain risk factors in logistics processes. This aspect has a strong practical value in decision-making process.

The functioning of the enterprise based on generating real value, determined by risk management is the basis for the creation of relationships on the market in all the areas of the manufacturing companies.

Analysis using the principle of characterization allows to organize activities related to the management of logistics processes, management added value and risk management. Additionally you can achieve synergies in the form of the fulfillment of the assumed levels of added value and action plans in the field of risk management for further periods.

On the basis of the costs associated with the presence of risk factors that the decisions concerning the expenses associated with securing against appearance of these risk factors in future should be taken. The choice and refining of the securing strategies against appearance of risk factors for needs of a given enterprise or the employment of a specialist in the field of the risk management is often very cost-consuming. The securing expenses against risk factors belong to the pool of alternative costs towards expenses associated with removing effects of their appearance. The answer to the question: “Shall it be secured or rather hoped that the risk factors will be avoided by simultaneous preparing funds for eliminating the effects?” requires accurate information concerning actual costs of the appearance of risk factors.

Making decisions based on underestimated data, you can come to the conclusion that spending on protection against risk factors is not relevant to the financial consequences of their occurrence. Carrying out the proposed analysis allows for a more precise eligibility of costs caused as a result of risk factors and their relationship with the achieved level of value added. In the face of the actual cost of the decisions in terms of broadly defined security expenditure prior to the occurrence of risk factors may be different from those taken on the basis of inaccurate information.

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Global Cities in Process of World Economy Net-Working and Transnationalization

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Cities play a key role in the modern global economy. They became full-fledged (together with states, multinational corporations, and international economic organizations) subjects of international economy relationships; concentrated financial and commodity markets, enormous productive and innovative potential of humanity. The main reasons of transformation of economic importance of cities are their advantages in comparison with State economic systems. Labor and capital in urban economy systems are more mobile and productive; cities are more predisposed to create and commercialize innovations. Moreover, cities are easier to connect with international markets and world trade, which are able to reduce transport costs, to increase own investment attractiveness, and to rapidly form new types of business activities and forms of manufacturing organization. This study analyzes a current system of global cities, an intensity of inter-cities relationships, a potential of global urban system transformations in a future.

Keywords: globalization, urban economy, global city, transnationalization, networking of economy, cities competitiveness

Introduction

Change of economic role of the cities, stimulated by globalization, transforms a structure and content of international economic relations. Now global cities can be considered as most important participants of international economic relationships. Cities are closing within own network worldwide production and distribution system, determining a countries' positioning in the structure of international division of labor, shaping conditions for international competition and further progress of the world economy (Bramezza, 1996; Jensen-Butler, 1997).

An intensification of interdependence of economic indicators of particular countries on the functioning of the global cities network, as well as need to increase theoretical and practical bases for effective national urban economic systems creation and development have identified a relevance of this research.

The purpose of the study is to determine an intensity of economic interactions between the cities within their global network and to classify global cities in dependence on their position in global economic hierarchy and role in international economic relationship.

The objectives of the study are:

- to analyze economic interactions between urban and national economic systems;

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- to identify the role of global cities in world economy networking; conditions of formation, principles of functioning of global cities' network and possible consequences of its development;
- to analyze interactions between the cities within a global system of urban economies, to assess its dynamics and intensity;
- to identify types of urban economies depending on city's positioning in the global hierarchy, and abilities of this hierarchy transformation in the dynamic of world economy.

Main hypothesis of the study is:

- Development of global cities network is a most important factor for world economy networking and transnationalisation, transformation of central world market institutions such as international competition, trade, division of labor;
- Role of the city in world economy, its competences in transnational production and distribution are determined by number of urban economic competitive advantages, structure of city's interactions with States, international economic institutions, and representatives of transnational entrepreneurship;
- Difference of intensity of inter-cities economic relationships allows to identify few global cities' roles in the world economy with different economical impact of the cities and different ways of further progress within global productive-distributive relationships;
- Analyze of the modern trends of urban economy globalization allows to forecast some changes in global cities' structure in the nearest future, these changes will identify main cities' internal and external competitive activities.

Global Cities' Economic Integration: Dynamic and Intensity

Main Approaches to Urban Economies Net-Working and Globalization

Attempts to consider a world economy as a network of interacting cities have made since the 1990's—time of global cities theorization.

An approach of GaWC expert group (GaWC Research Bulletin, 2008, 2009, 2010, 2011) is one of the most prominent. This group analyzes interdependence between global cities networking and world economy transnationalization.

Manufacturers of high-end services form a core of global service industry, offer possibilities of "global service" for MNC's and aggressively develop an international network of own offices that still cannot be effectively replaced in the Internet.

Global cities are nodes of this network. This approach allows a formalization of concept of global three-level network: First is a level of the world economy, where services are offered; second level is represented by cities as effective focal points, where high-tech services are produced and third level is represented by business (Taylor, 2011; Clark, 1996; Knox, 1995).

In this network system the cities are considering as points, where networks of global companies intersect. For identifying inter-urban linkages GaWC uses information about location of offices of 100 biggest multinational companies (that belong to six industrial and service sectors).

According to GaWC research most integrated into transnational network cities are concentrated in North America, Western Europe, and East Asia.

At the same time a historical role of European cities reflects in a large number of centers that provide services and have varying degrees of own involvement into the global network (Logan & Harvey, 2007). In

contrast, in East Asia only a few cities are integrated into the global network, but every one of them has a highest degree of this involvement. Outside of three dominant global regions (Europe, East Asia, and USA) any highly integrated cities are not presented.

An original approach of Viltox and Verekken (2005) to determine characteristics of the global cities' network based on analysis of air passengers flows between them. Using statistic data from largest airports and airlines of the world (see Figure 1), they identified busiest airlines and structure of inter-regional passenger traffic (see Table 1).

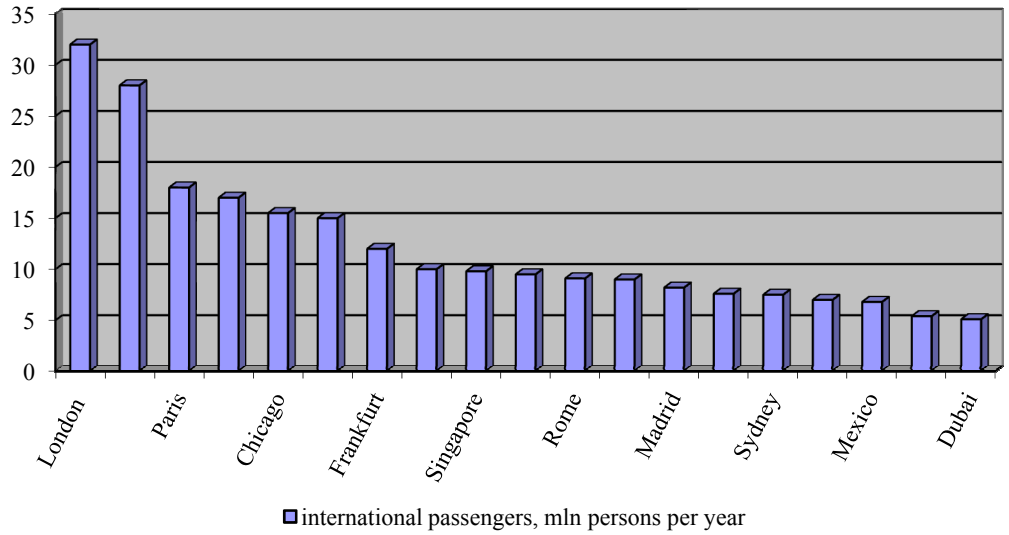

Figure 1. Busiest airports in the world, 2005 (Viltox & Verekken, 2005).

Table 1

Busiest Air Routes in the World, 2005 (Viltox & Verekken, 2005)

No	Pair of cities		Passengers, mln persons per year
1	Hong Kong	Taipei	2.138
2	London	New York	1.610
3	Melbourne	Sydney	1.563
4	Los-Angeles	New York	1.534
5	Rome	Milan	1.533
6	Cape town	Johannesburg	1.406
7	Amsterdam	London	1.240
8	Chicago	New York	1.160
9	Bangkok	Hong Kong	1.141
10	London	Paris	1.070

Obtained data was visualized as a variant of global urban network (see Figure 2). Overall, findings of Viltox and Verekken (2005) demonstrate a leadership of U.S. and European cities and rapid increasing of global impact of cities in Asia -Pacific region.

However, currently existing methods for determining the patterns of global urban network functioning are based on comparison of selected urban indicators without taking into account regional features of the cities and their relationships with own state.

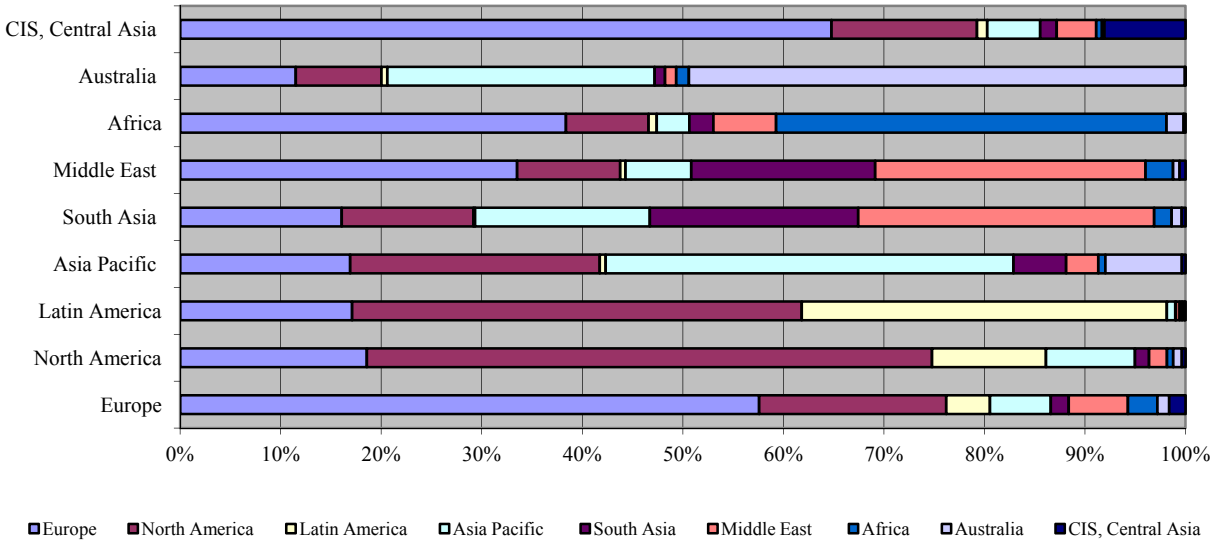

Figure 2. Regional structure of air-passengers flows (Viltox & Verekken, 2005).

Modern Cities Net-Working Evaluation: Methodology and Findings

As noted before, a definition of global cities network should be based on assessment of regional significance and importance of the city (Meteleva, 2012).

Further, analyzing a quality of interactions between the cities, city's opportunities to impact on the world economy progress and to be integrated in forming global urban network can be identified.

Within a study economic relationships between 33 largest cities in the world were analyzed. In assessing following indicators were used:

- number of headquarters/branches of MNCs (data from "Forbes-2012"/www.forbes.com/researches.html);
- number of national companies branches in partner city (data from "Forbes-2012"/www.forbes.com/researches.html);
- number of national financial MNCs based in the city, and number of their branches in a partner-city (data from "Forbes-2012" (TOP-500 companies in the world, 2012);
- urban export destined to partner city (data from web sites of the cities (urban commercial departments), 2012);
- urban imports from partner-city (Data from web sites of the cities (urban commercial departments), 2012);
- investments from/to partner city;
- number of seats on flights between a couple of cities in a day (Wiltox & Verecken, 2005);
- number and amount of money transfers of local residents and corporations to/from partner city per year (data from web sites of the cities (urban commercial departments), 2012);
- number of students from the partner city in largest local university (Data from Pricewaterhouse Coopers, 2012);
- number of applications for extension a working/migration visas by residents of the partner city per year (Data from Pricewaterhouse Coopers, 2012);
- daily Internet traffic between the pair of cities (Data from annual report by Microsoft, 2012);
- number of tourists arriving from the partner city per year (Annual report by World Tourism Organization, 2012);

- existing programs for development of partnerships between couple of cities and their quality;
- existing preferences and special regimes for the development of business relations with the city—partner;
- state of information environment of economic relations between the partner cities (number of partner-city's references on city official web-site (calculated by authors)).

Table 2

Intensity of the Modern Inter-Cities Relationships

Cities	Bangkok	Barcelona	Berlin	Buenos-Aires	Hong Kong	Jakarta	Johannesburg	Kuala - Lumpur	London	Los-Angeles	Madrid	Manila	Melbourne	Mexico	Milan	Moscow	New York	Osaka	Paris	Beijing	Rome	San - Paulu	Seoul	Sydney	Singapore	Istanbul	Tokyo	Frankfurt
Barcelona	4																											
Berlin	2	3																										
Buenos-Aires	5	4	2																									
Hong Kong	8	5	3	7																								
Jakarta	6	4	2	5	7																							
Johannesburg	4	3	2	4	6	4																						
Kuala - Lumpur	5	4	2	4	6	5	4																					
London	8	7	4	8	11	8	7	7																				
Los-Angeles	6	4	2	5	8	5	5	5	10																			
Madrid	6	6	3	6	8	6	5	5	9	6																		
Manila	5	4	2	5	6	5	4	4	7	5	6																	
Melbourne	5	4	3	5	6	5	4	4	8	5	6	5																
Mexico	6	5	2	6	8	6	5	4	8	6	7	5	5															
Milan	6	6	3	6	8	6	5	5	9	6	8	5	6	7														
Moscow	5	5	3	5	8	5	4	4	9	6	6	4	5	5	7													
New York	8	6	4	8	11	8	7	7	12	11	9	7	7	8	9	10												
Osaka	2	2	2	2	3	2	2	2	4	2	3	2	2	2	2	2	3											
Paris	8	6	4	7	9	7	6	6	11	8	8	6	6	8	8	8	9	3										
Beijing	5	4	2	4	7	5	4	4	8	6	6	4	4	4	6	4	8	2	7									
Rome	3	4	2	3	4	3	3	3	5	3	4	3	3	4	4	4	5	2	5	3								
San - Paulu	4	4	2	5	6	5	4	4	7	4	6	4	4	6	6	4	7	2	6	4	3							
Seoul	5	4	2	5	6	6	5	5	8	6	6	5	4	5	6	4	7	2	6	5	3	5						
Sydney	7	5	3	6	8	7	6	6	9	8	7	7	6	7	8	6	9	3	8	7	4	6	7					
Singapore	7	5	3	6	9	6	6	6	10	8	8	6	6	8	8	7	10	3	10	6	4	7	6	8				
Istanbul	4	3	2	3	5	4	4	3	7	5	4	3	3	4	4	4	6	2	6	3	2	4	4	5	5			
Tokyo	7	6	4	7	9	7	6	6	10	8	8	6	6	8	8	7	9	3	9	6	5	8	6	8	10	5		
Frankfurt	6	6	3	6	8	6	5	5	9	6	8	6	6	7	8	6	9	3	10	5	5	7	6	8	8	4	8	
Shanghai	4	3	1	3	5	4	4	4	6	5	4	4	4	4	4	3	6	2	5	4	2	3	4	5	5	3	4	4

Assessment of interdependence of major cities of the world was made by 12-points' scale (12 points were given to the maximum value of each indicator). The results are shown in Table 2.

As it can be seen from Table 2, maximum intensity of correlation is observed in pairs London and New York (absolute maximum), Hong Kong and New York, Hong Kong and London, New York and Los-Angeles.

Minimum intensity of relationships is built between geographically dispersed regional centers, such as Berlin and Shanghai, Osaka and Barcelona. Based on these data a table showing five most important partner cities for modern urban development was made (see Table 3).

It is obvious that in most cases the most important economic partners of all analyzed cities are London, New York, Hong Kong, Tokyo, Paris,[1] and Singapore. Based on the data from Table 3 cities of the world can be ranged by diversification of their international relations (see Table 4).

It can be concluded that cities playing less significant role in the global economy in general, however, have more diversified foreign economic relations, maintaining relationships with major urban economies of the world at approximately similar level of intensity.

While cities with a real global impact such as Hong Kong, Paris, London, Tokyo, Singapore, New York are increasingly specialized in internal (within a group) relationships.

Table 3

Ranking of Cities—Most Important Economy Partners, 2012

No	City	Ranking of cities—important economy partners				
		5	4	3	2	1
1	Bangkok	Singapore	Hong Kong	Paris	New York	London
2	Barcelona	Frankfurt	Madrid	Paris	New York	London
3	Berlin	Toronto	Tokyo	Paris	New York	London
4	Buenos-Aires	Hong Kong	Paris	Tokyo	New York	London
5	Hong Kong	Paris	Singapore	Tokyo	London	New York
6	Jakarta	Tokyo	Sydney	Paris	New York	London
7	Johannesburg	Hong Kong	Singapore	Tokyo	New York	London
8	Kuala-Lumpur	Tokyo	Sydney	Hong Kong	New York	London
9	London	Los-Angeles	Tokyo	Hong Kong	Paris	New York
10	Los-Angeles	Paris	Tokyo	Hong Kong	London	New York
11	Madrid	Milan	Tokyo	Paris	New York	London
12	Manila	Singapore	Shanghai	Sydney	New York	London
13	Melbourne	Hong Kong	Paris	Sydney	New York	London
14	Mexico	Hong Kong	Madrid	Tokyo	New York	London
15	Milan	Singapore	Paris	Tokyo	New York	London
16	Moscow	Tokyo	Hong Kong	Paris	New York	London
17	New York	Los-Angeles	Paris	Tokyo	Hong Kong	London
18	Osaka	Toronto	Paris	Tokyo	New York	London
19	Paris	Singapore	Hong Kong	Tokyo	New York	London
20	Beijing	Sydney	Hong Kong	Paris	New York	London
21	Rome	Frankfurt	Tokyo	Paris	New York	London
22	San-Paulu	Madrid	Paris	Tokyo	New York	London
23	Santiago	Madrid	Paris	Tokyo	New York	London
24	Seoul	Hong Kong	Paris	Sydney	New York	London
25	Sydney	Paris	Singapore	Hong Kong	London	New York
26	Singapore	Tokyo	Paris	Hong Kong	New York	London
27	Istanbul	Singapore	Hong Kong	Paris	New York	London
28	Stockholm	Milan	Toronto	Paris	New York	London
29	Tokyo	Singapore	Paris	Hong Kong	London	New York
30	Toronto	Sydney	Singapore	Paris	New York	London
31	Frankfurt	Hong Kong	Tokyo	Paris	New York	London
32	Chicago	Hong Kong	Paris	Tokyo	London	New York
33	Shanghai	Paris	Sydney	Hong Kong	New York	London

[1] Zurich and Geneva was not considered in this study.

Table 4

Rank of Cities With Most Diversified International Relations, 2012

No	City	No	City	No	City
1	Osaka	12	Seoul	23	Milan
2	Berlin	13	San-Paulo	24	Mexico
3	Rome	14	Jakarta	25	Moscow
4	Stockholm	15	Sydney	26	Frankfurt
5	Barcelona	16	Buenos-Aires	27	Los-Angeles
6	Istanbul	17	Santiago	28	Singapore
7	Shanghai	18	Beijing	29	New York
8	Melbourne	19	Chicago	30	Tokyo
9	Johannesburg	20	Toronto	31	London
10	Kuala-Lumpur	21	Madrid	32	Paris
11	Manila	22	Bangkok	33	Hong Kong

On the one hand, this trend is logical in context of growing influence of global cities—they are currently forming a framework of the world economy. On the other hand, a desire to limit and to fix the list of global economic centers (to prevent a formation of new centers of global economic impact) also demonstrates.

This phenomenon, called glocalization, is a concentration of international economic interactions within the countries—economic leaders are well studied now (Zinoviev, 2003); its economic causes and patterns are identified. This study confirms that a similar trend is relevant for the global cities.

On the one hand, glocalization of the cities shows that access to highly integrated transnational movement of capital and finished goods and services is considerably limited.

"Entry barriers" that have to be overcame by "new cities" in the way of their transformation on the global level become higher and higher every year. The initiators of this growth are the globalized urban economies not interested in losing their capacity to determine the world economy trends.

Table 5

Ranking of the Cities Depending on Their Integration in International Economic Relationships, 2012[2]

No	City	Index[3]	No	City	Index	No	City	Index
1	London	1500	12	LA	1031	23	Manila	848
2	New York	1468	13	Mexico	1009	24	Beijing	843
3	Paris	1261	14	Santiago	978	25	Johannesburg	802
4	Hong Kong	1236	15	Bangkok	941	26	Barcelona	797
5	Tokyo	1231	16	Moscow	927	27	Kuala-Lumpur	797
6	Singapore	1192	17	Jakarta	920	28	Stockholm	725
7	Sydney	1151	18	Buenos-Aires	904	29	Istanbul	723
8	Frankfurt	1118	19	Seoul	886	30	Shanghai	679
9	Milan	1111	20	Chicago	877	31	Rome	646
10	Madrid	1093	21	Melbourne	869	32	Berlin	511
11	Toronto	1071	22	San-Paulu	850	33	Osaka	467

Current Network of Global Cities: Structure and Potential to Transform

Based on results of the study (formation of global cities' network) and conclusions about world hierarchy

[2] Made by author using Indexes of intensity of inter-city relationships (35 world-largest urban economies were considered).
[3] Maximum index (for London) is 1500.

of the cities, a network of cities that are currently concentrating most of the world production and distribution can be created (see Figure 3).

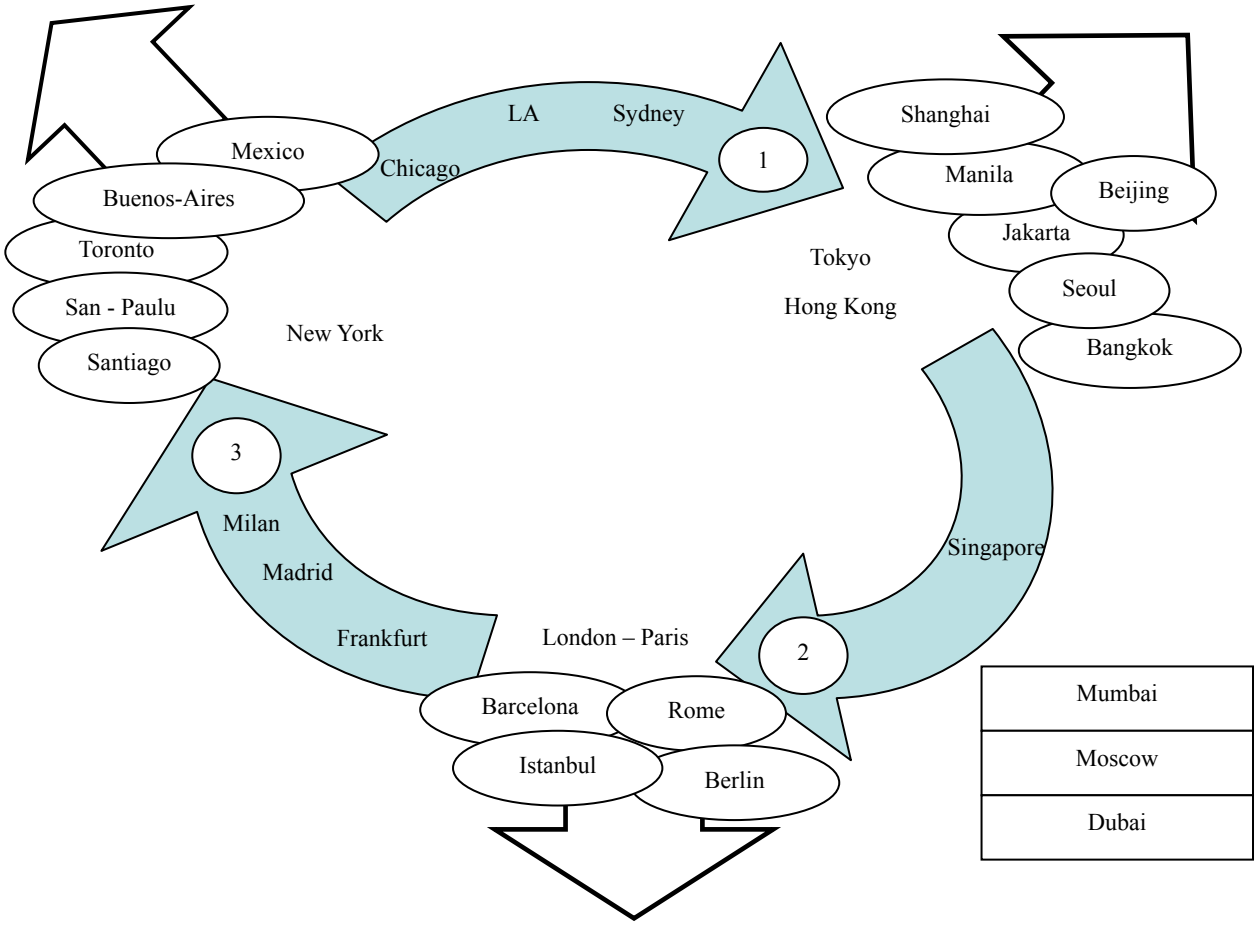

Figure 3. Global cities' net and hierarchy.

As follows from Figure 3, global cities (New York, Hong Kong-Tokyo, and London-Paris) are more closing on the interactions with each other (arrows 1, 2, 3) and provide a global range of movement of productive factors (including innovations and information, labor and capital). These are three historic centers of world capitalism that economic role is currently prevailing and dominating in the world economy.

Five global cities using considered instruments of entry barriers control and regulation obviously will retain their dominant position in the world economy in conditions of continuation the current trends and patterns of international economic integration.

In author's view, changes within a circle of global players are possible only in paired centers (Hong Kong-Tokyo, Paris-London), where one city will displace another.

In Europe, London will remain its leadership due to the role of British capital in global economic progress (London already overtook Paris by numerous indicators such as economic and social development, integration into the global economic space).

Actually, Paris' leadership in Europe is not based on its global economic role, but rather, on the opposition of continental to British economic policy (Berg & van der Braun, 1999). Existing differences in the trajectories

of UK and France development (even both countries are members of the European Union) required a continental European counterweight for London. Frankfurt or Milan could not be these counterweights; primarily due to their small size (they are essentially smaller than London by population and economic power). Paris, as an oldest and third (after Moscow and London) populated capital of Europe, is a recognized world cultural and economic center and is much better suited for the role of continental European trends' consolidator.

Currently, there are two possible scenarios for the European Union, and both of them show a decreasing of Paris' economic role and its movement out of the global cities' range.

The first scenario is a final integration of the European Union, full adoption of the European Constitution, formulation of pan-European public authorities and so on. In this case, a need of counterbalance with London will disappear and politic and economic role of Brussels will significantly increase.

The second scenario is preservation and escalating of problems of European integration. In this case Paris (that is less related with a global economy) will lose its economic impact due to the increasing of economic role of largest cities in disintegrating Europe (such as Madrid, Milan, and Frankfurt).

In Asia, the situation will also change. In author's opinion, the only one Asian city will remain a global leadership. This city is Hong Kong, now actively ousting the former global leader from Asia—Tokyo.

Hong Kong is a unique project of global city that maintains a maximum integration into the world economy and has a strong support from the Chinese mainland, largest and dynamic economy in the world.

Hong Kong is an independent player of the world economy that has all attributes of global economic entity (national financial and monetary system, political sovereignty).

As a city-state, deprived of rural population and any problems related with economic integration, Hong Kong can maximal orient own economies to the global world, to build a global power.

Tokyo, being a capital of large Asian country, cannot develop, fully focusing on the global economy, especially in relevant structural problems of Japanese economy.

City's wheels from the national economic system, intensification of urban globality, can undermine an economic security of the city, because in the globalized world city has to interact cities with equal economic power or even with countries whose political and economic weight may be substantially greater.

From this perspective, Hong Kong has enormous competitive advantage. Hong Kong can be maximumly focused on the world economy, can conduct an active global economic activity and form an infrastructure of global finance and management. At the same time, in case of global or regional crises, Hong Kong can always be supported by powerful Chinese economy (since 1997 Hong Kong is an autonomous Chinese territory). For example, in 1998 Chinese government implemented complex financial investments "saved" Hong Kong in the midst of the Asian crisis.

Tokyo or Singapore does not have abilities to conduct really global economic activity and at the same time to be in zone of responsibility of the world's largest economic system. Megacities of mainland China (Beijing, Shanghai, Guangzhou), are much more (than Hong Kong) dependent on China economic system, political decisions of Chinese government. Moreover, they are much smaller (than Hong Kong) global players and not be able to fully accumulate the benefits of a global city in the near future. Hong Kong for China also retains an importance as an economic project (PRC even keeps Hong Kong dollar and Hong Kong right to conduct independent foreign trade activities), which will save a partner interactions between Hong Kong and cities in mainland China. In addition to global cities, in Figure 3, two other types of cities also can be seen. The first type

is the cities of global orbit that provides a transfer of political and economic impact of the global centers, and also highly integrated into the world economy; however, they are not capable to have a significant effect on it.

In the language of management, these cities belong to middle level and transfer trends, initiated by the global cities to the level of national economies. These cities are regional leaders with high impact on its regional economic development.

According to Figure 3 there is only one global city in the second part of the global orbit—Asia-Europe-Singapore. From author's point of view, taking into account a geographical specific of localization of the largest cities in South Asia, the Middle East and Russia, this chain of global urban orbit will be under high competition for leadership among three cities whose place in the global urban network is not defined now. These cities are Mumbai, India, Dubai, and the Russian capital (less likely).

Mumbai is now a stronghold of economic development of the second populated country in the world, largest and dynamic economic system of the planet. India is interested in the presence of own cities within the orbit of global economic power (along with Singapore or Frankfurt).

Mumbai already plays a role of "gate" in the Indian economy, as has a potential to transit on a higher level in the global urban hierarchy.

This potential is defined by growing financial, cultural and innovative abilities of this city, by the presence of headquarters of five world largest MNCs in Mumbai, city' popularity for international exhibitions, rapidly modernizing business, transport, and social infrastructure.

If India does not have other cities competing with Mumbai (such as Delhi, Kolkata, or Chennai), it already would be regarded as a real player of global orbit. In the same existing conditions, Mumbai needs a qualitative improvement of living conditions of local people, enhancing of international relations (not only in Asia), building of effective institutions of global finance, transformation to not only world cultural (for example, due to success of Bollywood) but also innovative and technological centre.

Mumbai authorities understand this and already implement a program of urban development that called by journalists "To overtake Shanghai in 2020!" (The urban poverty: Global analysis, 2009).

Experience of Dubai is largely unique (as Hong Kong). In fact, this city is not now even a "gate" due to relatively low economic importance of the United Arab Emirates economic system.

This country has excellent living conditions for local residents. But their quantity (about one million) does not allow considering Emirates as a promising market. There is no large-scale industry and any potential for growth in the nearest future. Meanwhile, the city's authorities past 25 years have implemented an unprecedented program of artificial (not based on economic realities) transition of Dubai to the rank of global cities.

To do this municipal authorities has set up super modern logistics, transport, services (including banking, international finance institutions, insurance, trade and tourism) infrastructure.

Since 2005, the city of Dubai has implemented large-scale programs to attract highly qualified specialists in every field of science, research and development (projects of Internet City, Education Village, Health City, and Silicon Oasis). Dubai now is a world recognized center of tourism, conventions and business trips. Before 2008 Dubai was the world leader in sales of real estate to foreign owners (due to odious development projects) (Meteleva, 2012). Projects of Dubai-land, Festival City, and Movie-land promise to make a world center of entertainment and cinema in Dubai.

Thus, Dubai has an infrastructure of the global city, but its real economic impact is insufficient for the city's transition to the top of global cities pyramid. In order to overcome this limiting fact, in terms of lack of time to develop own production and distribution networks, Dubai businesses are actively investing every attractive projects, regardless of geography and economic spheres—from retailers of South Africa to London Stock Exchange.

Together with all success of these operations, in the economic sense Dubai has significantly less global impact than metropolises of China, Europe, or India. However, taking in account ambitions of the city leadership, the fact is that Dubai is rapidly recovering from the financial crisis in 2008, and already claimed plans to diversify foreign investments in the country and to attract foreign TNCs (by creating the most favorable business conditions), as well as urban strategy of innovative modernization (that should turn Dubai into a city of high technology and cultural capital of the world in 2030), the opportunities of this Arab city to enter into a global urban orbit are very real.

The third competitor for entrance into the global urban orbit (in the chain Asia-Europe) is Moscow. However, a presence of Moscow in list of possible candidates is just based on the Russian capital's geographical location and historical role as a center of state between Europe and Asia, and not on the real economic strength of the city.

Certainly Moscow is one of the most famous cities in the world, has an authority and power to impact (also due to the Soviet legacy) (Zanadvorov & Zanadvorova, 2003). But the modern Moscow's economy role in the global network is a "city-gate" to the Russia economy, the way to Russian resources.

Even this function Moscow does not make well (Moscow's position in a global cities' rank is lower than position of Jakarta or Buenos—Aires). Moscow has the best Russia' infrastructure to develop international contacts (transport, communications, exhibition activities, financial institutions, huge consumer market). Moreover Moscow is a federal capital and this is an extremely important competitive advantage within the current structure of Russian economy. None of Russian city has same advantage, although some of them have a more favorable geo-economic position (for example, the city of Surgut where world largest MNC based, or Vladivostok, Kaliningrad and St. Petersburg).

As it can be seen from this study, Moscow has no any socio-economic indicator comparable with similar indexes of the global cities. Moreover, an increasing of concentration of Russia international economic initiatives in Moscow, year by year reduces an efficiency of Moscow's business functions—due to rising of living cost, price of real estate, indicators of city's corruption, deteriorating of business conditions, increasing of urban transport problems, crime and so on.

This negatively affects investment attractiveness of the city, and desire of transnational business to include Moscow in the list of prior and favorable locations, and reduces financial performance of domestic corporations based in the city. Moscow's functions as a "gateway" to Russia national economy in such conditions are transformed into the "parasite" role of "evil customs" and dramatically reduce an efficiency of Russia economical development.

Of course, Moscow already has some attributes of global economic center. The city is actively trying to improve an own image, to attract tourists and businessmen, to implement pretentious infrastructural projects. But speed and cost of this upgrade can not be compared with growing of mega-cities of the South and East. In such a difficult situation, the development of Moscow is seen simultaneously in two directions:

- Improving of efficiency of the Russian capital as a portal to connect national economy with global flows of goods/services and productive factors. It will help to overcome problems of regional differentiation (at least in the European part of Russia), and will provide opportunities for increasing of global competencies of Moscow;
- Inclusion of Moscow in global cities orbit (in the chain Asia-Europe), turning Moscow in a world-class financial center, performs the broadcasting role between Hong Kong and London in the long term. This will require a number of infrastructure and institutional measures to level a substantial loss of Moscow to its closest competitors—Dubai and Mumbai.

Conclusions

The study of modern global cities network, based on the definition of inter-cities contacts, of their integration in transnational production and distribution, led to the following conclusions.

As global cities determining the world economic progress New York, a European couple—London/Paris and Asian couple Hong Kong/Tokyo can be considered. In the dynamics of the current conditions of world economy Paris and Tokyo, according to our findings, will leave the circle of global cities.

Global cities, having abilities to impact on the functioning of transnational entrepreneurship, international flows of productive factors, support a preservation of existing global cities hierarchy, create the entry barriers of global level of urban economies (for example, innovative potential of the cities, their financial resources, political influence, investment attractiveness, domestic consumption and so on).

Global economic axis whose hubs are New York-London-Hong Kong, assumes so-called cities—compilers that are integrated into the world economy, and are relatively weakly dependent on the functioning of economic systems of their countries. These cities broadcast the trends initiated by global centers to regional markets, and provide their connectivity to the global axis of "cities-gates".

Finally, the third level of the global cities hierarchy is presented by so-called "cities-gates" that provide connections of national economies to the transnational production and distribution system.

This hierarchy is almost completely framed; significant transformations of its framework in the short term with maintaining of current trends of the world economy are not expected.

Modernization of the global axis Hong Kong-London due to the additional inclusion of Mumbai, Dubai, or Moscow is possible. It allows consideration of these cities as competitors at the present stage; and the prospect of entering in this global axis is a leitmotif of realizing policy for their local development.

Existing methods of determining the patterns of global cities' network functioning based on a comparison of urban development indicators (Beaverstock & Smith, 1999; Begg, 1999; Duffy, 1995; Velikhov, 1996) without taking into account regional features of the cities and relations with own countries. Thus, based on proposed classification, global cities hierarchy and on the evaluation of 15 criteria (number of head offices/branches of national TNC, value of inter-cities export-import operations; inter-cities investment flows, passenger traffic, Internet traffic, number of tourist exchanges, state of information environment development and so on) paper analyzes an intensity of economic interactions between cities, and determines their potential impact on the global economic progress, value of their integration into the global network.

Maximum intensity of economic relationships was observed between pairs of cities—London-New York, Hong Kong-New York, Hong Kong-London, and New York-Los-Angeles. Less intensive relationships are built between geographically dispersed regional centers, for example, Berlin-Shanghai or Osaka-Barcelona.

Cities with less significant role in the global economy, however, have more diversified foreign economic relations, and maintain connections with major urban economies in the world at approximately the same level of intensity. While cities with a global impact (Hong Kong, Paris, London, Tokyo, Singapore, New York) are specializing in internal links (within a group). This trend (glocalization) is legitimate in a growing global influence of these cities; they form the framework of current world economy.

Assessment of municipal infrastructure allows selecting tools of conservation a global leadership of few cities associated with the functioning of global finance institutions, transnational movement of highly skilled labor force, innovative development and inner (urban) consumption.

High capitalization of stock exchanges of the global cities, provided mostly by foreign capital, demonstrates their ability to concentrate within its own network of global financial flows. Global cities also act as leaders in the field of innovations, creating a necessary infrastructure for new knowledge generation, opportunities to commercialize innovations by expense of venture investment programs and public funding.

Global cities that have a maximum variety of economic, social, cultural, recreational, service infrastructure, headed the ratings of most attractive places to live, ensure a constant supply of highly qualified labor from around the world. The major advantage of a global city also is capacious and diversified consumer market that develops through growth of urban population income. Quantity and quality of consumer demand is also a condition for financial, innovative and political progress of the urban economy.

Global cities (New York, Hong Kong-Tokyo, and London-Paris) are closing more on interaction with each other, providing a range of major global movement of factors of production, including innovation and information, labor and capital. These five global cities representing three world centers of capital will retain their dominant position in the global economy while modern trends of international economic integration continue.

Changes in circle of the global players are only possible in the pair centers (Hong Kong-Tokyo, Paris-London), where one city will displace other.

In Europe where the position of Paris is not based on its global economic role, but rather, on the opposition to the British continental economic policy both by optimistic and pessimistic scenarios for European integration development, London will be only one global leader.

Hong Kong will be the only global city in the Asia-Pacific region. Now Hong Kong is slightly inferior to the Japanese capital in its socio-economic development and economic role, however, Hong Kong is a unique project of global city that, maintaining a maximum integration into the world economy, has a strong support from the Chinese mainland.

In addition to the global cities in proposed version of world urban network cities of global orbit and "cities-gates" can be identified. Cities of global orbit provide a transfer of political and economic influence from global centers and are highly integrated into the world economy.

Their geographical location ensures a smooth functioning of communication channels and transfer of productive factors required for global production and distribution system.

"Cities-gates" allow connection of national economies to the cities of global orbit. They are deprived of impact on the global economy and keep relationships with economy of the country and conditions of its functioning.

Currently there is only one city in the second part of the global orbit—Asia-Europe-Singapore. Taking in account geographical specific of localization of the largest cities in South Asia, the Middle East and Russia it can be suggested that this place in the global orbit will be a place of strong competition among three cities, whose place in urban global network at the present time is not defined—Mumbai, Dubai, and Moscow.

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The Significance of CSF Among Enterprises in Latvia: An In-depth Analysis

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The present research paper is dedicated to the in-depth analysis of the significance of critical-to-success factors (CSF) among enterprises in Latvia. The goal is to distinguish and find key success factors of Latvian companies who survived the economic crisis, which started in 2008, and executed the enabling objectives of the paper. Research methodology involves the analysis of the existing theoretical literature, in-depth interviews with the top management representatives of large Latvian business entities were interviewed by GFK (Custom Research Baltic agency) on behalf of the authors of the paper. It is found out that 10 largest industries for the big companies are: fuel retail and wholesale, energetics, food retail and wholesale, chemical products, logistics, metal processing, financial services, information technologies service and production, passenger transportation, and telecommunication services. For medium companies such industries are: food retail and wholesale, logistics, fuel retail and wholesale, wood processing, automotive industry, construction, financial services, pharmaceutical products, metal processing, and beverage wholesale and production. The authors also scrutinised 72 articles of 38 Forbes magazine archiving from the years 2010-2014. Thirty CSF were defined. The most significant CSF according to the Forbes interviews are specific market niche, export, technological innovations, and high quality of products and services. The in-depth interviews with the top management representatives prove the importance of the above mentioned factors. Relevant recommendations are provided in the end of the paper.

Keywords: critical-to-success factors (CSF), key success factors, investing in Latvian economy, market niche preference, export, interviews

Introduction

Prior to starting a new business, entrepreneurs are performing market research and choosing a specific industry to operate in. Establishing a new company in a foreign country is especially complicated, as usually an

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entrepreneur is not acquainted with its economic situation and many other peculiarities. Detailed market research demands much time and effort. However, there are critical-to-success factors, which can significantly help a company to achieve great success and profit, as well as survive harsh economic situations or even deep crises. CSF vary depending on the company, economic environment, country, location, etc.. Knowing these factors for a specific industry may help an entrepreneur with conducting market research.

The significance of the present research is that it may help potential investors who are planning to start businesses or invest in the Latvian economy, to choose the most profitable industry. Defined CSF (and confirmed by Latvian enterprises) may assist and benefit them in conducting business in the Republic of Latvia.

The problem of the research is in defining and analysing CSF among enterprises in Latvia that survived the economic crisis in 2008, which already leads to a conclusion that these factors played a significant role during the fight against stagnation. Therefore, the compliance with CSF may also lead to success. The research covers and scrutinises such topics as the top industries according to turnover in Latvia, target sectors for potential investments in the country, historical background and specification of the CSF in terms of Latvian business enterprises, Latvian national economy, successful entrepreneurs in Latvia, and European Funds in Latvia, etc..

The subject of the paper is CSF applied by companies in Latvia and the data, acquired by performing the analysis of information, relevant to the current topic of the research.

The object of the paper is the TOP-500 Latvian enterprises according to their turnover in 2012, the list of the TOP-100 wealthiest people in Latvia according to their assets, 38 Forbes magazine archives from 2010-2014 and six in-depth interviews with the top managers of large Latvian business entities conducted by GFK (Custom Research Baltic agency) on behalf of the authors.

Prior research, the authors put forward seven hypotheses regarding the topic:

(1) Export activity is the main success factor of enterprises in Latvia.

(2) Government funding is one of the CSF of companies in Latvia.

(3) There are several CSF that underlie performance of enterprises in Latvia.

(4) Both large and medium companies have specific business sectors with the highest turnover levels that coincide.

(5) Market niche is one of CSF especially important for SME.

(6) EU funds are CSF of great significance for Latvian companies.

(7) There are several CSF that both large and SME define as of great and vital importance.

With a view to prove or disprove the above mentioned hypotheses, the goal of the paper is to distinguish and find key success factors of Latvian companies who survived the economic crisis, which started in 2008, and execute the enabling objectives of the paper.

In order to achieve the aforementioned goals and prove the hypotheses of the research, the following enabling objectives have been put forward:

(1) To study existing theoretical literature dedicated to CSF;

(2) To study the scientific approach of CSF implemented by multiple researchers and interaction of these factors with the practical business environment;

(3) To provide a brief look into the Latvian national economy since the beginning of the 20th century;

(4) To scrutinise top industries, in which the TOP 500 enterprises in Latvia are operating;

(5) To divide the above mentioned companies into large and medium companies;

(6) To summarise the acquired data on the TOP 500 enterprises in Latvia;

(7) To analyse Forbes archives from 2010-2014 totalling 38 magazines;

(8) To select articles relevant to the present topic of the paper;

(9) To analyse all the interviews and define CSF;

(10) To analyse six in-depth interviews with the top managers of Latvian enterprises;

(11) To scrutinise information about high-net-worth individuals (HNWI) in order to demonstrate the industries in which the wealthiest people in Latvia are operating in;

(12) To find and analyse information about EU funds in Latvia.

(13) To draw relevant conclusions and provide recommendations to potential investors.

The research methodology involves the analysis of existing theoretical literature, interviews with either proprietary or top management of the scrutinised enterprises, and comparative research method when working with the received data. The methodology also involves private interviews with the top managers of large Latvian enterprises, which were conducted in cooperation with the international research agency GFK.

The results of the present paper may help potential investors, who are planning to start a business or invest in the Latvian economy, to choose the most profitable industry. Defined CSF may assist and benefit them in conducting business in Latvia.

Brief Look Into Latvian National Economy Since the Beginning of the 20th Century

From the 20th century until the present day, the Latvian economy can be divided into four major sections: Latvia in the time of the Russian Empire, the period following World War I; the independency period of the Republic of Latvia; World War II and the subsequent incorporation of Latvia into the USSR; and the restoration of independence of the Republic of Latvia and subsequent EU accession.

The industrial production revolution that had begun in Latvia in the 1830s, continued through to the second half of the 19th century. Factories replaced manufacturing. By 1847, 14 companies in Riga were already using steam engines and boilers, although manual work was still applied. In the 1840s, two steam engines were operating in Strazdumuiza textile; and in 1848-1849, the first machine was set up in a paper-making company in Ligatne. At the same time, the concentration of labour and production at large companies was taking place (in 1894, in nine enterprises there were more than 200 employees; 41.3% of industrial output was produced). Riga was the main industrial centre in Latvia (in 1834, there were 33 factories (1,593 employees), in 1860, there were 1,889 factories (6,134 employees)). Textile was the leading industry, in which eight enterprises were operating. The largest were Pihlavas kokvilnas fabrika (782 employees), Sepera kokvilnas fabrika (500 employees), and Tilo fabrika (Zasulauka manufaktura, (420 employees)). Second place was held by the tobacco industry. Prior to the construction of the railway, the main market outlet was the Baltics, however, after its opening goods produced in Riga were transferred to Poland, Belarus, and the Russian hinterland. In other Baltic governorates, the production sector was less developed. In Kurzeme (a region of Latvia)—in Liepaja and Ventspils cities, there were working shipyards; in 1840, in Liepaja a bone flour factory started to operate (it was closed in 1847, with an ironwork factory opening later in its place). During 10 years (1848-1857), Liepajas kugu buvetava shipyard built 48 ships. Factories also started to appear in rural manors. The main product was vodka (in the Latvian region Vidzeme, the vodka production rate was 10%, in Kurzeme—50% of production).

The end of the century faced crisis, but after overcoming this, the Baltic industrial sector saw a rapid development of companies that were co-owned by representatives of various countries. In 1890, Latvian industries were employing approximately 25.5 thousand persons (in Vidzeme—18.8 thousand, in Kurzeme—4.9 thousand, and in Latgale—1.8 thousand). The main industries were wood processing, metal processing and mechanical engineering, chemical industry, and food industry. At the end of the century, Latvian ports were significant in exporting and importing not only local production, but also all goods of the Russian Empire (Tilde, 1998-2012).

At the beginning of the 20th century, Latvia became one of the most developed governorates of the Russian empire. It was an important industrial and agrarian region, as well as the financial centre of the Baltics, with its developed banking sector. Rapid development of industry contributed to changes in the social structure of the population. There was a significant increase in the number of employees; the ethnic composition of workers living in cities, was rather diverse. However, the majority of employees, residing in rural areas, were Latvians, many of whom were still subjected to servitude and were often only employed as slave labour, in the manufactories of their owners. Huge areas of land belonged to landlords affecting landless peasants, the number of which exceeded 50%. Unable to provide for themselves, peasants were forced to become wage-earning agricultural workers or face moving to a city, which only a few managed to do. Capital was mainly concentrated in German (Kurzeme and Vidzeme) and Polish (Latgale) manors, as well as in the hands of Russian officials (Riga region). Sharp social, ethnical, and political conflicts became the reason for the Revolution of 1905 and the following military confrontation (Tukums uprising, Aizputes war, etc.).

In the beginning of the 20th century, the above mentioned industry sectors preserved their leadership. However, the economic crisis of 1900 to 1903 dramatically affected them. Nevertheless, starting in 1909, industrial production gained new momentum, and by the year 1913, industrial enterprises and their employees doubled in number. This economic breakthrough also had a significant effect on banks.

The Russian-Baltic wagon factory (in 1908-1914, its production volume increased 2.9 times) became a universal mechanical engineering enterprise that started producing cars (in 1908 it produced 170 cars and lorries), agricultural machinery and aircraft (in 1915, this factory produced and tested the first tracked military vehicle in the world). Wagon factory “Fenikss” was also modernised. Shipbuilding and machine factory “Lange un dels” was producing river boats and barges. General electric company plants (the largest was “Unions” factory) significantly increased the variety of electrical products available. At that time, the largest Latvian enterprise “Provodniks” which produced rubber, gutta-percha, and linoleum products employed 14 thousand people. This was one of the four largest rubber companies in the world and the second largest enterprise that produced tires for aircraft, cars, and bicycles. Latvian industries suffered severely during the WWI due to their evacuation. A large proportion of production equipment was permanently lost.

In the newly established Republic of Latvia, industries needed to be recreated and the new situation dictated new rules. There was a need for other kinds of goods, therefore, food and light industries began to develop, whose production in the first years mainly went to the local market (approximately 80%). Metal processing and chemical industries, which played an important role in the pre-war period, were not restored to previous levels, as this required major investment. For local consumption and export, there was a rapid growth in production in forestry, wood processing and paper manufacturing industries. In 1923, Latvia took first place in this sphere; it employed approximately 20% of all workers. Latvia was exporting paper, plywood, matches, rubber, and other products. During 1920-1929, the value of manufactured products grew approximately fourfold. This successful

development period was interrupted by the world economic crisis that began in the late twenties and early thirties, affecting Latvia as well—there was a decline in production and some enterprises were closed.

Electro technical factory (VEF, founded in 1919) became the biggest company in the Baltics in the present sector. It produced telephones (4.8 thousand pieces in 1938), radios (32 thousand pieces in 1938), telephone exchanges, aircraft plywood, electricity meters, irons and vacuum cleaners, and since 1937 VEF, started to manufacture the world's smallest camera "Minox" that achieved international recognition. During the World War II, this product (including the technical and patent documentation) was taken as war booty by Germany and continued to be produced in West Germany. In the late 1930s, VEF began to produce light aircraft (constructor K.Irbitis). This production (and technical documentation) after 17 of June 1940 was taken into USSR (Aizsilnieks, 1968).

Before 1940, there were many successful companies belonging to both local and foreign entrepreneurs. During this period, the agricultural sector was especially successful in developing. At the beginning of the 20th century, the Latvia agricultural industry was the most developed in the whole of inner Russia—arable land was used more intensively, therefore, the volumes of harvest rose higher. Milk production for both landlords and farms achieved a good level for those times (with a single cow producing, on average, two thousand litres of milk per year). There was a good outlet for pedigree cattle and butter on the all-Russian market. Most of the land was still owned by landlords. Out of 5,409.6 thousand dessiatin of arable land, 48.3% was privately owned (mostly by landlords), 38.5% was owned by peasants, approximately 11% by the government and less than 2% by vicarages, urban estates, and other owners.

The state of the Latvian countryside was also affected by the Stolypin agrarian reform in Russia, the goal of which was to form farmsteads and farms separated from the community, by transferring them to private farmers. The reforms were aimed at ensuring the creation of the middle class in the countryside. The full reform was also aimed at Latgale (before 1912, 14% of farms were divided into farmsteads). In Vidzeme and Kurzeme, where there were no villages, farms could receive big loans. Riga Central Agricultural Society was founded (it received state grants) and co-operative society—Latvian agricultural economic society that contributed to the rational management of the farm, facilitated agricultural machinery and fertilizer purchase, butter export, as well as being responsible for the promotion of agricultural education. In 1913, in Priekuli the first Latvian agricultural experimental station was founded (Strods, 1992).

The Republic of Latvia paid special attention to the development of the agricultural sector. Peasants were granted long-time loans for purchasing construction materials and inventory, and were provided with beneficial import and export tariffs and other tax incentives. In comparison with other European countries, on average, the harvest in Latvia was low; however, in 1933, the country fully supplied itself with grain, and in 1934 began to export it (87 thousand tonnes of rye and 30 thousand tonnes of wheat). In the late 1930s, grain farming and crop production accounted for around 33% of a farmers' income, farm animal production—51%. It later became the main agricultural sector and enjoyed a very successful development. The extensive network of agricultural communities also contributed to rural development. In 1935, the Chamber of Agriculture closed part of these communities and, in accordance to the Chamber's statutes, formed one community for each district. Dairy product manufacturing was especially significant for dairy farming communities (in 1925, there were more than 100, in 1937—around 300). In a short time, processed milk volume in these society communities' dairies doubled (in 1937—approximately 547 thousand tonnes of milk, produced approximately 22 thousand tonnes of butter). Much attention was paid to farmed animal breeding and cultivation. In 1938, Latvia, as a milk (mainly

butter) and meat (mainly bacon) product exporter was in fourth place in Europe (after Denmark, the Netherlands, and Sweden). Mechanisation levels in farms was relatively low, therefore in the 1930s, the agricultural sector employed seasonal workers from abroad (mainly from Lithuania and Poland; in 1936 approximately 48 thousand people in total, and in 1938—37 thousand people) (Tilde, 1998-2012).

After the proclamation of independence on 18 of November, 1918, Latvia needed a new financial system and national currency. In order to implement a successful monetary policy, on the 7th of September, 1922, the Constituent Assembly adopted a law on the establishment of the Bank of Latvia, which had been granted emission rights. Its temporary statutes were confirmed on the 19th of September, 1922, by the decision of the Cabinet, and its initial capital was 10 million lats. The bank was founded on the basis of a State Savings and Credit bank, with the Bank of Latvia taking over its assets and liabilities in 1922. Already on the 2nd of November, the Bank of Latvia put into circulation temporary 10 lats banknotes—500 Latvian rouble banknotes with imprint. The Bank of Latvia performed both direct national central bank note—money emission, security and control of its circulation, and commercial activities by financing and providing loans to state and private companies, establishments, and citizens.

On the 24 of April, 1923, the Latvian Saeima plenary session approved the Statutes of the Bank of Latvia, which were signed on the 2nd of July by the then president Janis Cakste. The Bank was managed by the council and management board. The Council consisted of the Chairman, Deputy Chairman, and 11 members, but the board also included the managing director, his deputy, and three directors. The first Chairman of the Council was the minister of finance Ringolds Kalnings. In 1926, the economist, Member of Parliament and director of Riga Diskont bank, Julijs Celms became the next Chairman of the Council. In 1931, he was replaced by Adolfs Klive, who led the Board until 1940 (Latvijas Banka, 2014).

The war and post-war period brought significant changes to the Latvian economy, therefore, after regaining its independence in 1991, it was difficult to instigate competitive economic activity. Previous sources of raw materials and outlet markets in the former USSR were lost and obsolete equipment and technology prevented the production in Latvia of products for the world market. The situation was aggravated by the slow and poorly organised privatisation of state enterprises, which only began in 1995. These factors led to a contraction in industrial production, causing unemployment. Wood processing and food production industries were in the best positions, as they mostly used local raw materials.

Presently, wood processing is one of the largest Latvian industries and this grew rapidly in the post-independence period, however, in the last year this growth has stalled. Food production is the second largest Latvian industry and forms one fifth of total value added manufacturing. Approximately 75% of its production is consumed by the local market and the rest is exported. Accession to the EU increased the demand for Latvian food sales in all directions—in Russia, CIS, and EU countries. The export of metal and metal processing industries is almost 80%. Approximately, only one fifth of the light manufacturing (textile and leather products) stays in Latvia. Most products (three-quarters of the total production) are exported to European Union countries.

In many industries—wood processing, automotive, metal processing, printing, etc., it was foreign companies who began the manufacturing and export of such products from Latvia. Latvian entrepreneurs themselves did not start or will not be starting in the near future.

Availability of structural funds for Latvian enterprises allowed for a greater scope in the realisation of business ideas and problem-solving, which had previously impeded an increase in production volume, and hence, served to increased exports.

Presently, transit plays an important role in the Latvian economy. Despite the fact that this sphere can be affected by various external economic risks, it amounts to 1/5 of the Latvian GDP (Tilde, 1998-2012). Implementation of the euro on the 1st of January 2014 strengthens Latvia's position on international markets and projections indicate that the introduction of the euro will increase investment in Latvia. The Latvian economy is considered as one of the fastest growing; however, this growth can be threatened by various internal and external risks.

TOP Industries in Latvia According to Annual Turnover Figures

In the 1990s, entrepreneurs emerged as an important new force in Latvia. "They constituted about 95 percent of all registered businesses at the start of 1993 and employed some 20 percent of the Latvian workforce" (Martinsons & Valdemars, 1992). After the collapse of the Soviet Union, "growing numbers of people faced the prospect of starting their own businesses, as state enterprise jobs disappeared" (Martinsons & Valdemars, 1992). Many companies that got established at those times are still operating to the present day. For example, Grindeks (pharmaceutical products), Elko (commodity products), Latvijas Balzams (beverage wholesale and production), Akselss (fuel retail and wholesale), and Severstallat (metal processing), etc.. Latvian enterprises operate in various industries.

The present article concentrates on the analysis of the TOP 500 companies in Latvia (according to their turnover data in 2012). The list was published by "Dienas Bizness" business newspaper. In order to better qualify the analysis for the present article, these companies were divided into those with a turnover exceeding 50 million euro per annum (large companies) and those with less turnover (medium companies). The figure "50" was taken from the European Commission recommendations on Small and Medium Enterprises (SME). According to EC, SMEs are "enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro" (Extract of Article 2 of the Annex of Recommendation 2003/361/EC). It has been a consensus among the academics and researchers that there is no uniform definition for an SME nationally or internationally and definitions vary from country to country (Mohibul & Alejandra, 2008).

After analysing the data on turnover in the year of 2012 for both large and medium companies in Latvia by applying the comparative research method, it is discovered that the 10 largest industries for the big companies are: fuel retail and wholesale (approx. 3,605 bil euro.), energetics (approx. 1,821 bil. euro), food retail and wholesale (approx. 1,689 bil. euro), chemical products (approx. 1,519 bil. euro), logistics (approx. 1,235 bil. euro), metal processing (approx. 1,019 bil. euro), financial services (approx. 896 mil. euro.), information technologies service and production (approx. 857 mil. euro), passenger transportation (approx. 705 mil. euro), and telecommunication services (approx 539 mil. euro). For medium companies such industries are: food retail and wholesale (approx 1,365 bil. euro), logistics (approx. 842 mil. euro), fuel retail and wholesale (approx. 657 mil. euro), wood processing (approx. 521 mil. euro), automotive industry (approx. 466 mil. euro), construction (approx. 451 mil. euro), financial services (approx. 355 mil. euro), pharmaceutical products (approx. 276 mil. euro), metal processing (approx. 273 mil. euro), and beverage wholesale and production (approx. 252 mil. euro). Industry leaders in both large and medium companies that coincide are:

- Food retail and wholesale;
- Logistics;
- Fuel wholesale and retail;

- Financial services;
- Metal processing.

The acquired information proves our fourth hypothesis that both large and medium companies have specific business sectors with the highest turnover levels that coincide. According to Martinsons and Valdemars, who conducted research in the present sphere in 1992, Latvia's income has always been dependent on industrial spheres and agriculture (see Table 1).

Table 1
Composition of National Income in Latvia

	1938 (%)	1989 (%)
Industry	27	45
Agriculture	38	25
Construction	7	8
Transport	10	8
Trade and other	18	14

Note. Source: Martinsons and Valdemars (1992) and Spekke (1957).

"Agriculture and forestry, as well as a broad service sector, are likely to be the life-blood of a successful Latvian economy (Martinsons & Valdemars, 1992). Meat and dairy products each accounted for over 10 percent of the total economic activity. In the earlier period of independence, per capita butter and bacon exports ranked Latvia among Europe's top three countries, while agriculture and forest products each made up over 30 percent of total exports (American Latvian Association, 1968, p. 30).

The performed analysis in the present paper shows that these industries remain popular in the 21th century. Industry leaders for large, medium and small companies—food retail and wholesale, logistics and metal processing remain the same as in the 20th century. However, in present century, they are joined by two other leaders—financial services and fuel retail and wholesale.

Latvian Target Sectors for Potential Investments

During three years, LIAA (Investment and Development Agency of Latvia) researched world economic trends, Latvia's potential and expertise. As a result, eight target sectors based on competitive advantages of Latvia were established. LIAA states that the following industries have potential foreign investment opportunities:

- Information technology (incl. SSC/BPO/Data Centres);
- Green technology;
- Healthcare;
- Life sciences;
- Transportation and logistics;
- Metalworking, machinery and electronics;
- Woodworking;
- Food processing (Investment and Development Agency of Latvia (LIAA), 2014).

The agency has conducted their own research on the following industries in Latvia and demonstrates its key advantages for each particular business sector. The authors of the paper have systematised the information provided on the LIAA website by composing Table 2 "Key advantages of investing in Latvian industries". It presents useful information to potential investors who are willing to invest in Latvian business sectors.

Table 2

Key Advantages of Investing in Latvian Industries

Industry	Key advantages
Information technology	• Skilled labour force and high investment in tangible assets contribute to productivity • Western-style working culture • Well-developed export market • Knowledge of foreign languages among IT professionals • Highly developed logistics and communications infrastructure • Low electricity prices for industry • Supportive government policies
Green technology	• Supportive government policies and EU initiatives • Long-standing experience and expertise in the generation of energy from renewable sources • Leading exporter of renewable energy sources in the EU • Lowest energy intensity in Central and Eastern Europe • Low energy prices • Potential to decrease energy dependence on Russia • Abundance of natural resources
Health care	• Recent efforts to improve efficiency • Highly qualified workforce at competitive cost • High standard of health services • Promising new business opportunity: medical tourism • A government supporting an efficient and innovative health care sector
Life sciences	• Strong R&D capability • Established manufacturing infrastructure • Geographical proximity to Eastern markets • Long-standing tradition in chemistry • Skilled and competitive workforce
Transportation and logistics	• Historic transport and trade gateway • Access to Russian and European markets • Excellent infrastructure • Freight volumes projected to increase • Diversified alternatives; no bias towards road transport • Rapid development of air transport sector • Riga International Airport is a regional hub • Competitive labour
Metalworking, machinery and electronics	• Traditionally a leading sector • Easy access to raw materials due to an advantageous geographic location • Excellent logistics infrastructure • Competitive labour force • High competitiveness in higher value products • One of the lowest electricity prices across the EU • Shift towards more sophisticated production
Woodworking	• Traditionally strong sector • Easy access to raw material • Abundance of skilled labour • High private investment in R&D • Supportive government initiatives, focused to facilitate innovation and encourage higher value production • Industry's sustainability
Food processing	• Robust supply chain • Access to quality ingredients • Ecological agriculture for natural ingredients • Abundance of skilled and competitive labour • Industry standards and sustainability • Developed transit infrastructure

Note. Source: Authors' table.

An Opinion on Economy Crisis in Latvia

Since the authors of the paper try to analyse and define critical-to-success factors of Latvian enterprises, it should be noted that during the period of rapid economic growth, the majority of companies in small, medium and large businesses were successful one way or another. It was enough to register a company and to have skills in a craft for a business to develop. To earn equity was difficult at all times; moreover, during the period of economic growth, having profit was not impressive: The majority of enterprises were profitable. Thus, CSF could be defined. During the period of economic growth, these factors were unclear, reminiscent more of Monet works rather than Durer's.

Until the appearance of economic recession in Latvia, in August of 2008, there was a period of global economic growth that seemed endless to the majority of entrepreneurs. The authors assume that the upturn in the economic cycle of the country can be traced back to 1995, with the arrival of first Western investors to the country, and continued up to the year 2008. Thus, during these 12 years, entrepreneurs had positive prospects. The only thing disturbing this was global crises—as an example—the Russian default of August 1998, however, the economy quickly revived.

The period of rapid economic growth in the first years of the millennium was largely due to Latvia joining the European Union in May of 2004. This was a strong impulse to enhance the attractiveness of the economic climate in the country and led to the influx of investors. In reality, it was not only the classic economic development, but also the speculative rise in prices in most sectors, as foreign entrepreneurs initially invested in the country for the purpose of short-term resale of assets and businesses. In the German language, there is a term "hartgesotten", which means "hard-boiled", an investor that puts money into country's economy, counting on a global perspective, from 35 years and above. No matter what happens to assets in the short-term, the investor will not be willing to sell them, as they are confident in their choice of investment object. The authors also assume that the majority of Latvian investors belonged to the second "zitterig" group ("shaky" investors) that were performing their business with only the goal of short-term resale, and any event could critically and globally change their strategy, for example, in the elite real estate project in Riga, called "Tomsona Terases", one flat was resold five times in one year. This was not an isolated case. The situation with the majority of real estate objects and businesses was the same. This leads to a conclusion that investments were short-term resale, for the purpose of instant market skimming.

In the year of 2013, famous Latvian politicians held the view that crisis is a fictional phenomenon, that it could be referred to a "crisis in one's mind", and that in reality, the situation is not as complicated. In this case, the authors cite Upton Sinclair's words: "It is difficult to get a man to understand something, when his salary depends on his not understanding it". For this reason, the authors try to correct "the success story of the country" and to target it, not at the whole region, as a separate republic, but at stories of success of certain companies and specific businesses.

The cause of crisis in Latvia should be searched for across the seas. As German speculators say, when New York sneezes, Frankfurt catches cold. Common features of the Latvian crisis are not much different from other EU countries like Greece, Spain, and Italy that are caught in a difficult situation.

In the developing crisis situation, many enterprises, operating in almost every industry, faced the threat of bankruptcy; some of them were forced to close. Companies performing business in the sphere of marketing and commerce, as known to the authors, has survived, mainly due to a reorientation towards the export of services;

specific segments of health care, first of all supported by enterprises on the basis of financing insurance, also went bankrupt. Many real estate companies were shut. The crisis painfully hit the labour market forcing 300,000 Latvians to look for work in other European countries, mainly the United Kingdom.

Nevertheless, many enterprises have survived and successfully continue their existence. In the present article, the authors scrutinise these critical-to-success factors that helped them in overcoming the crisis.

Historical Background and Specification of the CSF in Terms of Latvian Business Enterprises

Actively starting with the second half of the 20th century, business organisations commenced to rely on critical-to-success factors in order to define and distinguish factors that are important for business decision-making. Such factors may be a system, programme, project, process or a set goal.

The initial concept of CSF was developed by Rockart and the Sloan School of Management, with the phrase first used in the context of information systems and project management (Rockart, 1982). Rowlinson (1999) has stressed that CSF are those fundamental issues inherent in the project, which must be maintained in order for team work to take place in an efficient and effective manner. They require day-to-day attention and operate throughout the life of the project.

CSF can be used at all levels of the organisation. They can stem from internal improvement initiatives, such as a need to improve workplace efficiency, or originate from external forces—changes in technology, legislation, or a stealth attack from the competition (Howell, 2010). An important fact is that CSF are the motivators but not the initiators of its kind, they can be used to enhance, rather than supplant, organisational improvement initiatives already in place.

The start of CSF research can be tracked from 1961, when Daniel (1961) first began discussing enterprise success factors in management literature. He concentrated on literary works related to production, which is relevant to any company in various industries.

In his paper on management of crisis in information systems, Daniel pointed out that a company information system must be discriminating and selective. It should focus on "success factors". He also stated that in most industries there should be three to six CSF that determine success. In the framework of the present research this statement is also confirmed.

Representing one of the most frequently-cited definitions in the literature, Rockart uses ideas from Daniel (1961) in defining CSF as "the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization". Consequently, he highlights the fact that these particular areas of activity should be constantly and carefully managed by a company.

CSF can be used as a means to establish management information requirements, to define information to be managed, and above all, to identify the crucial factors that must be addressed for an organisation to do well (McPherson & Nunes, 2006). In generic terms, CSF can be defined as "...those handful of things that, within someone's job, must go right for the organisation to flourish" (Robson, 1994), indicating that these are factors that the manager should follow. In policy terms, they are described as "...those components of strategy where the organisation must excel to outperform competition" (Johnson & Scholes, 1993).

According to Brotherton (2004), CSFs are the factors that must be achieved if the company's overall goals are to be attained. They may be derived from the features of a particular company's internal environment, i.e., its products, processes, people, and possibly structures, and are a reflection of a company's specific core

capabilities and competencies critical for competitive advantage (Berry, Seiders, & Gresham, 1997). However, the CSFs facing any given company will also be determined by the nature of the external environment it faces. One feature of these external CSF's is that they: "...are less controllable than the internal ones, though they may still be subject to varying degrees of measurement and control" (Brotherton & Shaw, 1996, p. 115). Rockart (1979) also categorised CSF's into short-term (monitoring) and long-term (building) activities and demonstrates the four types of CSFs:

- Industry (factors specific to a particular industry);
- Strategic (factors specific to an organisation's particular strategy, developed for competitive advantage);
- Environmental (external influences, such as technology advancements, the economy, and political or regulatory actions);
- Temporal (factors arising from short-term situations and forces internal to an organisation).

A successful CSF that covers the entire organisation should include all four types. There are two options for defining CSF: The analysis of enterprise planning documents and interviews with the top-managers of the companies, performed by the Forbes Latvia magazine. The following six crucial CSFs of Latvian enterprises were defined during the research: specific market niche, exporting activities, technological innovations, team work, high-quality manufacturing, and IT sector significance.

Specific Market Niche

According to Garvin (1984), a particular dimension of quality in which an industry claims to be superior or excellent, is responsible for creating a market niche of the product. A small but profitable segment of a market suitable for focused attention by a marketer. Market niches do not exist by themselves, but are created by identifying needs or wants that are not being addressed by competitors, and by offering products that satisfy them (Business Dictionary, 2014). When choosing a specific market niche, an enterprise is offering a certain product or service that is currently not offered by other companies, or offered at a superior quality. Such a marketing move dramatically reduces the chances of competition among other enterprises that are offering some type of goods and services. No competition or low competition allows a company to set their own prices. In such cases, they do not depend on the price of similar products offered by their competitors. By operating in a certain business segment, a company positions itself as a leader, so when new players join the market, the customers will already be used to the leader. This is the most popular CSF implemented by the interviewed companies.

Exporting Activities

To export means to "send goods or services across national frontiers for the purpose of selling and realizing foreign exchange" (Business Dictionary, 2014). According to our research, exporting activities take second place among the most popular CSFs. Even if the produced goods or services are not in demand in the country, where the head office of a company is located, they can still be popular on international markets. Export allows enterprises to broaden its activities, to join new markets, and sell goods that are more in demand in other countries, etc.. It opens a great variety of opportunities for businesses, especially for small and medium ones, as they "tend to move into foreign markets mainly as exporters because exporting is the cheapest, simplest and quickest way to achieve internationalization" (Leonidou, Katsikeas, & Coudounaris, 2010). The majority of enterprises, for which interviews are scrutinised in the present paper, belong to the SME category. For some, exporting activities is the only way to continue their business.

Technological Innovations

Technological innovations are "new knowledge or know-how employed to develop or manufacture a product service" (Capon & Glazer, 1987). Such innovations help in increasing the quality of goods and services, sometimes allowing a company to create a unique product, which can be only achieved by applying these innovations. By implementing technological innovations, companies can achieve customer loyalty, as they will be seen as a developing enterprise that provides high quality or unique services. Technological innovations can also help conquer new business segments and even form the basis of new products. This CSF takes third place in the present research.

Team Work

Team work or "the activity of working well together as a team" is fundamental to the success of business (Oxford Business Dictionary, 2006). When people come together to form teams, shared knowledge and thinking expand beyond the individual, problem-solving becomes easier and production rises. Team spirit and competition are motivating factors but the team shares a common goal to succeed, supported at all levels of the business. The same two people working together as a team are twice as productive as when working independently. Successful businesses are typically team driven. As part of a team, an individual can still apply themselves, bringing their own expertise and knowledge to a task but they will also personally benefit from working with other team members who may have different skills.

High Quality Manufacturing

In the post-crisis business world, manufacturing businesses are presented with a stark choice between offering cheap, mass produced goods for general consumption or higher quality products that may cost more to manufacture and have a limited customer base. The danger in relying on quality alone is evident in the number of smaller companies that did not survive the crisis, when their customer base disappeared, often opting for cheaper options to save money. The inverse can be seen in the rise in manufacturing imports of cheap products from China and other countries, where labour and material costs are significantly cheaper. Companies with high quality manufacturing ethics must therefore endeavour to foster greater loyalty and respect among their customers to survive difficult financial times. Our research proves this statement, as this CSF is among top five factors that are critical to success.

IT Sector Significance

Petroleum and automotive companies claim the highest individual net worth, but the IT sector effectively shapes world business. Familiar names such as Apple, Google, eBay, Facebook, and Microsoft are a part of our daily lives but beyond this there are the smaller businesses who specialise in everything from code and app development to statistical and data analysis, internet and E-commerce. These businesses can start-up with relatively little overhead costs and grow quickly to become even a Fortune 500 company in a fraction of the time of traditional industries. The IT sector has an abundance of entrepreneurs who's forward thinking ideas and contributions can often be of global significance. The significance and importance of the IT sector to economies cannot be overstated and growth is exponential. IT companies are well equipped and flexible to weather a financial crisis but certain sectors, such as social media and personal technology are also vulnerable to the fast paced development of competitors and are at the whim of the public. According to our research, the present CSF is among the most popular factors.

Critical Success Factors—Research Findings

Figure 1 is created and based on 72 articles from Forbes and Dienas Bizness magazines in Latvia, describing how Latvian companies survived the economic crisis that started in 2008, including interviews with either proprietary or top management of those companies. The authors of the paper analysed Forbes magazine archive from 2010-2014 totalling 38 magazines. Following selection of the articles, each of them was thoroughly scrutinised and 30 critical success factors (CSF) were defined. These factors are divided into two sections—primary and supplementary. After summarising the results, a CSF figure was created in order to reflect the studied case situation.

According to the CSF figure (see Figure 1) the evident leading critical success factor is a specific market niche. There are 72 companies operating in 52 different industries and 28 of them (38%) named this factor as crucial or determinative. By selecting a certain niche, a company can decrease the level of its competitors. On occasion, if a product or service is very specific, as in the case of "Daba laba", "ISP Optics Latvia", and "Raksi", there are no competitors. During a crisis, this factor is especially important, as clients will not move to competitors in case of price increases. Another benefit of selecting a specific niche—a company can concentrate on a certain product, making it more qualitative. The majority of 28 companies (26) highlighted this factor as primary.

Export takes second place on the scale of importance among CSF—24 companies emphasised this factor (31%). Sixteen out of 21 companies named this factor as primary. If a company did not succeed in finding a specific niche or that niche is not in demand in a certain country—other markets can provide an entrepreneur with such opportunity for business. In the present study, technological innovations take third place (14 companies marked this factor as important). Half of these companies consider this factor as primary. Technological innovations allow providing more qualitative or unique services and goods. Four out of 14 companies, who highlighted technological innovations as an important factor, also mentioned "high-quality product" factor as critical to their success in business. Fourth place is taken by team work factor, which was highlighted by 13 companies. High quality of products follows with 12 companies mentioning it as a critical success factor. IT factor takes sixth and price/quality policy achieves seventh position according to our figure. B2B collaboration (business to business) takes eighth place. Some companies (for example, "Jums" apparel company) state that without B2B they would not achieve the same results and development as they presently have. B2B collaborations allow making large steps forward, saving years of development. Reinvesting profit, customer relationship marketing (CRM), green marketing, unique product assortment, costs' optimisation and E-commerce share ninth place. Logistics and location factors were mentioned as significant by five companies and taken for tenth place. Eleventh place is shared among diversification in activities, recruitment policy and first-mover advantage critical success factors. Remaining CSFs have been chosen by less than three companies each. However, half of them are stressed as primary and the other half is considered supplementary by the interviewed companies.

Our first hypothesis is confirmed partially. Export is among the most significant critical success factors; however, it is not primary. Finding a specific niche is seen as more critical by the interviewed companies. Our second hypothesis has been proven wrong, as government funding was mentioned only once as a supplementary CSF. The third hypothesis has also been proven wrong, as during the research, 30 critical-to-success factors were named in the interviews.

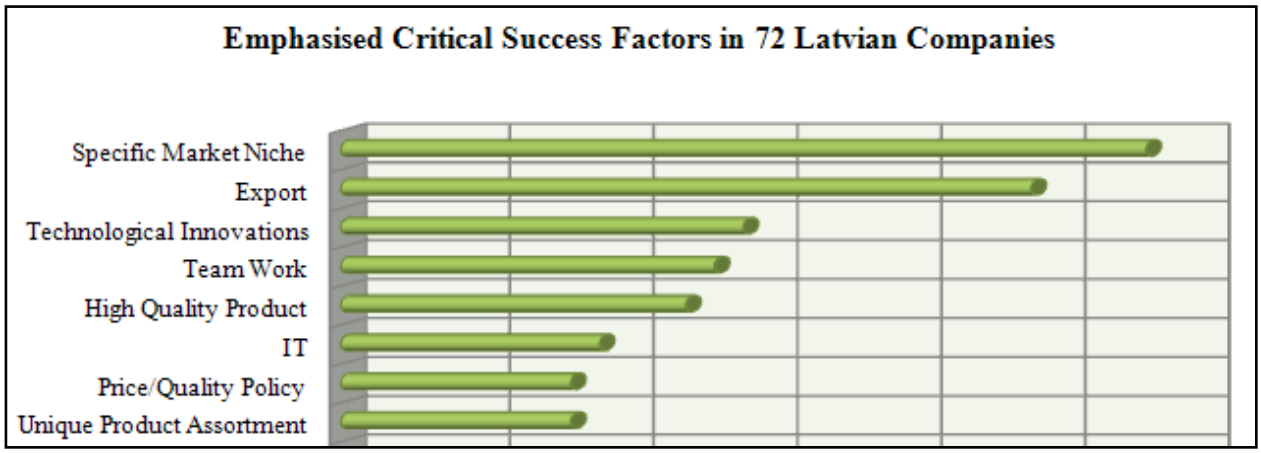

Figure 1. Emphasised critical success factors.

In-Depth Interviews With the Top Management of Six Companies in Latvia that Survived the Economic Crisis in 2008

Top management representatives of large Latvian business entities were interviewed by GFK (Custom Research Baltic agency) on behalf of the authors of the paper. These companies were selected based on their responsiveness and availability. The interviewed Latvian companies operate in various industries from chocolate manufacturing to real estate value improvement. All those interviewed were given a list of 30 CSF that were carefully selected by the authors of the paper. Interviewees were asked to rate each factor on a scale of 1 to 5 with the highest evaluation of 5 points indicating an "absolutely critical" factor while a value of 1 indicates a factor viewed as "irrelevant".

SIA Metrum

Metrum enterprise is operating in various spheres of real estate business, more precisely—real estate value improvement, which deals with planning through to air quality data acquisition (for nature conservation, etc.). The interview was held with Maris Krievs, who is the member of the board of SIA Metrum. Maris is responsible for the company's finances and development. The company has been operating for nearly 10 years. Metrum was founded in 2005, before the crisis, when the financial climate in Latvia was seen as healthy and expanding.

Maris lists 12 CSF that are marked as very significant to the company. These critical-to-success factors are: effective management, outsourcing, first-mover advantage, diversification activities, CRM, unique product assortment, IT, high quality product, team work, technological innovations, and specific market niche. However, he also highlights his TOP five CSF from among the above mentioned. The first place belongs to the high quality of products. Second place is taken by unique product assortment, which is followed by team work, CRM and learning organisation, which, in his opinion, is related to customer relations management. The following CSF were marked as irrelevant—B2B collaboration and franchising.

Green marketing, pricing policy, costs optimisation, and recruitment policy factors were each given 2 points out of 5, or viewed as relevant but not as significant as other above mentioned ones.

Export was given 4 points out of 5, marked as critical, however, in the interview it is highlighted that export is very important for the sphere in which Metrum operates. Export has also provided additional income to the company and helped them to retain several employees during the financial crisis; however, the company was still forced to optimise human resources.

SIA Karavela

The following fish processing enterprise was founded in the year 1882; however, it has only been known as Karavela since 2003. The company has already dealt with economic crisis before, in 1998 and was forced to cease its business activities. Nevertheless, it reopened in 2002 and followed a successful road of redevelopment. During the following 10 years, Karavela's turnover grew from four million to 32 million (in 2013).

The interview was held with Andris Bite who is the co-owner of the enterprise. He states that previous negative experience in fighting the 1998 crisis has helped the company to fight the last crisis (in 2008), as the management had no illusions about the recession and was ready for the hit. Andris also stated that the company did find positives in the 2008 crisis, as there was an increase in employees willing to work in the industry.

Another very significant fact is that Karavela is predominately an exporter and as such, the economic situation in Latvia has relatively little effect on the enterprise. Karavela exports to 46 countries. The Latvian market accounts for less than 5% of turnover. The most profitable foreign market is the Russian Federation. The company pays significant attention and puts much effort into adapting to foreign markets in order to be successful. Andris says that it is about individual preferences of customers in different countries: "You need to make exactly what they want and what they eat. Then you can become a player on their market".

The next CSF is business to business collaboration, as Karavela established a very successful cooperation with one local enterprise that was forced to liquidate their production, as operating costs, for example, in Denmark, was too high. In order to stay in the market the company joined with Karavela and Karavela started to produce for that local enterprise. With time that enterprise became Karavela's representative and recommended it to the foreign market. Karavela needed those recommendations as it brought about future cooperation with other large businesses.

Another significant matter is to visit all the exhibitions in which you can be noticed by other local companies. Karavela has participated in these exhibitions for approximately 10 years. The company receives government funding, which covers 100% of the exhibition costs. However, the government factually covers only 25% with the remaining 75% being assured through EU funding.

Andris also highlights that mechanisation is also an important factor, as the cost of human labour including all the taxes is very expensive. Investing money in robots may soon pay off, keeping the costs down. Personal involvement in company's management according to Andris is also of great importance.

The co-owner of Karavela marked six CSF that are absolutely critical: high quality products, learning organisation, CRM, team work, technological innovations, export and market diversification, which is a new CSF added to our figure by Andris himself. High quality products are especially stressed, it is the value of the company. As previously mentioned, export is of vital importance. Mechanisation can be referred to as technological innovations. Reinvesting profit is also marked as very significant in the interview; however, in the figure it was marked 4 out of 5. Franchising, e-commerce, and marketing innovations were marked as irrelevant. Unique product assortment, advertising, recruitment policy, first mover advantage and logistics were given 2 points out of 5, which makes these factors relevant but not as important or critical as others that received higher marks.

The enterprise takes 420th place in the TOP-500 Latvian companies according to their turnover (20.505 million euro in the year 2012).

SIA Madara Cosmetics

SIA Madara Cosmetics is a relatively young company; it was founded in 2006, just two years before the economic crisis. During the last four years its turnover grew by 38%, half of which was earned from exporting to the Netherlands, Japan, South Korea, China, Sweden, and many other countries. The enterprise produces and sells cosmetic products. Madara as a brand is already recognised not only in Latvia but also in Finland. The interview was held with Anete Vabule, assistant director of the enterprise.

In 2008, the year the economic crisis began, Madara Cosmetics acquired Eko certification that confirms its cosmetic products are of high quality and made of natural products. This event opened new markets for the enterprise, as distributors started to trust Madara Cosmetics and this subsequently increased the volume of exports. Therefore, in that year the company was growing.

Anete highlights the importance of being flexible as a company, as a key to success. It is easier to overcome crisis situations, when you can adapt and change the way of performing business activities. High quality products are marked as of great importance 5 out of 5. Anete stated that the above mentioned CSF is the company's number one success factor. There are 10 CSF that are marked as absolutely critical: high quality products, team work, unique product assortment, export, e-commerce, flexibility, logistics, CRM, effective management, and learning organisation. Franchising and unique servicing assortment was market as irrelevant critical-to-success factors. Diversification of activities as well as recruitment policy CSF was given 2 points out of 5, which means that they are relevant but not of great significance. The company is also using EU funds for the purchase of necessary equipment; however, the present CSF was marked 3 out of 5. According to the company's assistant director, logistics is seen as a factor with the same importance as export activities.

As with Karavela, Madara Cosmetics enterprise stresses the necessity to participate in international exhibitions, where a company can establish beneficial networks, cooperate with other businesses, and get noticed by local enterprises.

SIA Brain Games

SIA Brain Games (formerly "Prata speles") was founded in 2004, also not long before the 2008 economic crisis. The company's business activities include the wholesale and reproduction of board games, as well as development and production of their own board games. Production began during or just before the crisis, as the head of the enterprise Egils Grasmanis states.

Business activities were not seriously affected by the economic crisis; however, Egils remembers: "...we had a point, those four years ago, when we almost had to shut down, as the financial situation was very, very difficult". He explains it as possible errors in financial planning and the lack of financial control, as well as decisions, based on emotions. Egils then highlights that Brain Games is only still in existence due to the enthusiasm of the management and company's employees. Only those with a passion for board games were recruited. Despite the critical financial situation, the head of the enterprise made a decision to take even bigger risks and they eventually paid off.

During the interview, Egils marked 11 CSF as absolutely critical: High quality products, market niche, B2B collaboration, unique product assortment, team work, export, profit reinvestment, recruitment policy, flexibility, CRM, and learning organisation. Among them, a TOP five CSF were selected—high quality product, market niche, team work, CRM, and learning organisation.

The following CSF from the top 30 list were marked as irrelevant: franchising and government funding. Diversification in activities, unique servicing quality, e-commerce, and marketing innovations were marked as insignificant.

Brain Games is an absolute niche product. Export is given 5 points out of 5; however, Egils stated that it was not this CSF that helped it survive the 2008 crisis, he also adds that there were no such physical factors, it was faith in the business and the ability to overcome the recession, as well as taking even higher risks.

SIA NP Foods

The present company consists of three Latvian companies—AS Laima (confectionery and sweets wholesale production), AS Staburadze (confectionery and sweets production), and AS Gutta (non-alcoholic drinks production). NP Foods performs confectionery and sweets wholesale, management, purchase, sales and marketing of the Laima, Staburadze, Gutta brands, and other companies. It was founded in 2009, during the crisis. The interview was held with NP Foods's export department head, Ieva Jonsone.

In 2009, the company's goal was to operate without losses. Ieva stated that there were pluses in the crisis, as you then turn to restructuring and fully concentrate on your activities in order to improve them. NP Foods reached that goal and even showed growth. During the economic crisis, unpopular decisions had to be made such as the consolidation of administrative resources, a 24 day limit imposed for raw material storage and car fleet reduction.

The next years, 2010 and 2011 were also years of consolidation, which allowed the company to stay on its feet and achieve further growth. The company started to pay more attention to inform people about their brands, for example, SIA Laima celebrated its 140 anniversary in 2010. Laima has been an exporter since 1870.

Ieva also stated that export is not the remedy for crisis, as "nobody is waiting for you" in other foreign markets. It is a long process, as you must "do your homework" before you enter a market, as you will only see the results after three-four years. Here another CSF comes into force—government funding for international exhibitions. In the case of NP Foods, it is EU funding, managed by the Ministry of Economy of Latvia and LIAA. The NP Foods export department head also highlights in the interview that it is very important for the brand to be recognised on the foreign market. This is a long-term process. Neighborly relations are also important for success in export transactions.

It is extremely important during a crisis not to reduce the quality of your product quality, otherwise you can lose the market completely. It is very difficult to maintain a good reputation.

Ieva marked 11 CSF that are absolutely critical: high product quality, B2B collaboration, unique product assortment (especially in the framework of export), technological innovations, profit reinvestment, flexibility, logistics, research and development, CRM, government funding and another, new CSF—brand and values.

Specific market niche, marketing innovations, and first-mover advantage are irrelevant. Green marketing was given 2 points out of 5, which makes this CSF relevant, but not as significant and critical, as others.

The company is present in the TOP 500 companies in Latvia, according to their turnover in 2012, and takes a high position—number 94, with a turnover of 42,844 million euros. In the previous year, 2011 it ranked 103 place, proving the economic growth of the enterprise.

SIA Cleanhouse

The enterprise was founded in 1997, when there was almost no competitors, no specific market niche in this sphere. Cleanhouse provides cleaning services. Its initial name was "Atri un tiri" (which means "Fast and

clean" in Latvian). Presently, the company has about 10 direct competitors and about 190 small competitors. The interview was held with Martins Drone who is the director of the enterprise.

He stated that in the field of cleaning services, the crisis is still present. There are too many market players preventing any increase to prices. As with Ieva Jonsone from NP Foods, Martins highlighted the fact that a high quality of service and products should always be present. He stressed that "It is one of the top factors that ensures successful and future development". For Cleanhouse, it is more important to provide a high quality service despite the possibility of larger losses from performing that service, but this is strategically beneficial. It is crucial to preserve a good reputation and loyal clients.

Cleanhouse, in the same way as other above mentioned companies is engaged in export activities. This year they have found new markets and new market niches. An interesting fact is that these activities started during the 2008 economic crisis. Nevertheless, Martins stated that the company could overcome the crisis without export activities, as there were simply new ways, new markets, and new experiences. He also highlighted the fact that during a crisis, one should focus on the market that is being affected by the crisis in order to keep and develop it. In the present case, when one enters a new market, attention is diverted to it which could otherwise be given to the market that is suffering more from the crisis. Martins stressed that it is possible that without export more attention, investments, etc., would be paid to the local market that faced recession, yielding more success.

Martins has marked TOP 7 CSF: The first place is taken by high product quality, which is followed by price/quality policy, team work, effective management, learning organisation, specific market niche, and diversification in activities. There are many CSF, marked as irrelevant by the director of Cleanhouse: franchising, green marketing, export, logistics, government funding, marketing innovations, location, first-mover advantage and outsourcing. B2B collaboration, unique product assortment, unique servicing quality, and R&D were marked as insignificant.

Interim Summary

On average, there are 10 CSF for each company; however, the most strongly pronounced critical factor is high quality of products. All six interviewed companies have marked it as highly significant and gave it first place in their individual top 5s. High quality of products is an absolute leader among all CSF. This means that if an investor wants to start their business activities on the Latvian market, and then be successful, it is vitally important to manufacture high quality products and provide high quality services.

Specific market niche, which was number one CSF according to Forbes magazine interviews, is only critical to small companies, such as SIA Brain Games, as this is their way to enter new markets and grow. Large companies (NP Foods, Cleanhouse) note that specific market niche is not critically important; as these enterprises do not operate in a narrow industry (confectionary and cleaning services are not unique products/services).

Four out of six companies are using EU funds, mainly for participating in international exhibitions and for purchasing equipment. Four out of six companies (Cleanhouse, Metrum, Karavela, and Madara) also provided clear and define answers that they are either not using government funding, or that it was not given to them. Therefore, it is important to take into account that new businesses are more likely to receive financial support from the EU.

Two out of six companies, NP Foods and Karavela are present in the TOP 500 companies in Latvia, according to their turnover in 2012.

According to the six in-depth interviews, there are seven leading CSF: High quality product (6 out of 6 companies gave this CSF 5 points out of 5), learning organisation (4 out of 6), team work (4 out of 6), CRM (4 out of 6), export, market niche, and technological innovations were stressed by 3 out of 6 companies.

European Union Funds in Latvia

As Latvia is a participant country in the European Union, its entrepreneurs have an opportunity to receive European funding for their business activities. In the present paper, EU funding is not listed as a critical-to-success factor. Nevertheless, EU funds can, sometimes, be a part of government funding, i.e., government will provide a business with financial support that will later be refunded to the government from EU funds.

The European Union funds Managing Authority in Latvia is the Ministry of Finance. This is responsible for effective and transparent implementation of EU funds according to principles of sound financial management (The Ministry of Finance, 2014). In Latvia, EU funds have an official website, which is administered by the Ministry of Finance.

The Managing Authority, in cooperation with responsible institutions and consulting with social, NGO and regional partners, develops EU funds programming documents thus ensuring compliance with the partnership principle in the development of programming documents, as well as ensuring intersectoral coordination of EU funds. The Managing Authority also performs functions of EU funds management, evaluation, communication management etc. (The Ministry of Finance, 2014).

During the years 2007-2013, Latvia received 4.53 billion Euros from EU funds, the European regional development fund, and Cohesion fund. Over 6000 projects were supported.

For the following seven years, 2014-2020, the EU will invest 4.4 billion euros from the above mentioned funds. An interesting fact is that Latvia is receiving four times more finances than it pays to the EU.

For the next seven years these 4.4 billion euros are planned to be invested as follows: 12% of the total amount into research, technological development and innovations, 5% in e-management and services, 7% in the increase of SME competitiveness, 11% in the transition to economy with low carbon-stock emissions in all sectors, 13% in the protection of environment and resource efficiency, 27% in sustainable transport system, 13% in employment, labour mobility and social inclusion, and the last 12% in education, skills, and lifelong education.

Specifically for business and innovations, it is planned to support 4,700 micro, small and medium enterprises. An 11.1% rise is estimated in the proportion of innovative entrepreneurs, which should reach 40%. The volume of Latvian exports in 2022 should reach 12,684 million euros. Risk capital investments will increase by seven times and in 2023 will be 15.6 euros per one person (The Ministry of Finance, 2013).

According to the information above, support for businesses is of least importance for the Ministry; however, it is among its available investments. Potential investors can still expect help from the funds.

Our six in-depth interviews with the top management of Latvian enterprises show that four out of six companies are using EU funds, mainly for participating in international exhibitions and for purchasing equipment. Four out of six companies (Cleanhouse, Metrum, Karavela and Madara) also provided clear and defined answers that they are either not using government funding, or that it was not given to them. Nevertheless, the EU funds are managed by the government. One of the interviewed companies, NP Foods, which is in the TOP 500 Latvian companies according to their turnover in 2012, marked government funding as

absolutely critical factor, and in the interview they state that it is the EU funding, managed by the Ministry of Economy of Latvia and LIAA. Madara and Karavela (which is also in the above mentioned TOP 500) have marked government funding factor as significant, by giving it three out of five points. In their cases it is also the EU funding. Cleanhouse company that is using the EU funds, has not given government funding any marks. The authors of the paper can draw conclusions that the EU funds factor is critical, however, it is not of vital importance for the business.

Successful Entrepreneurs in Latvia

Successful Entrepreneurs Worldwide

Successful entrepreneurs are those whose business is bringing good profit that grows with each year. How well their business is doing, is shown and proven in the assets and annual reports. Frequently, the success is measured in millions. Therefore, entrepreneurs that are making millions in profit can be classed as millionaires.

Firstly, the authors of the paper shall concentrate on the term "millionaire". Business dictionaries provide simple definitions of the term. According to Oxford Business Dictionary, a millionaire is "a person who has a million euros, dollars, etc. or more; a very rich person" (Oxford Business Dictionary, 2006). Cambridge Business English Dictionary provides almost similar definition: "a person who has money, property, etc. that is worth at least a million dollars, euros, pounds, etc." (Cambridge Business English Dictionary, 2011). Depending on the currency, a certain level of prestige is associated with being a millionaire, which makes that amount of wealth a goal for some, and almost unattainable for others (Harris, 2007).

Millionaires are also called "high-net-worth individuals" or HNWI. Oxford Business Dictionary offers a rather short definition of the term "a very rich person" (Oxford Business Dictionary, 2006). According to Cambridge Business English Dictionary "high net worth individual: used by financial organizations to talk about a person who is considered very rich, especially one whose assets are in cash or can be easily sold for cash" (Cambridge Business English Dictionary, 2011).

Capgemini, one of the world's foremost providers of consulting, technology and outsourcing services, who provide World Wealth Reports in cooperation with other partners, based on their own methodology, defined high-net worth individuals (HNWI) as those with finance in excess of US$1 million (around €747,000), not including the value of personal assets and property such as primary residences, collectibles, consumables, and consumer durables (WWR, 2013). As there is a large amount of millionaires around the world, ultra high-net worth individuals (UHNWI) appeared. Ultra-HNWI is defined as an individual with more than US$30 million in financial assets (WWR, 2007). High-net worth individuals are also divided into three groups: lower band HNWIs (US$1 million to US$5 million), mid-tier HNWIs (US$5 million to US$20), and upper-tier HNWIs (over US$20 million) (WWR, 2013). These millionaires, according to the above mentioned classification are also called "dollar millionaires", based on their assets on international stock markets.

According to Focus.de, 50 percent of dollar millionaires live in the top three millionaire destinations—the US, Japan, and Germany, with the world's fastest growing millionaire populations to be found in Hong Kong, India, Thailand, and New Zealand (Focus.de 2013, cited in The Local Germany's News in English, 2013).

In Figure 2, there is presented largest HWNI population growth by country in the years 2011 and 2012, from which it is seemed that the top five countries are the U.S., Japan, Germany, China, and the U.K. The United States has a definitive lead. Latvia, however, is not among these countries.

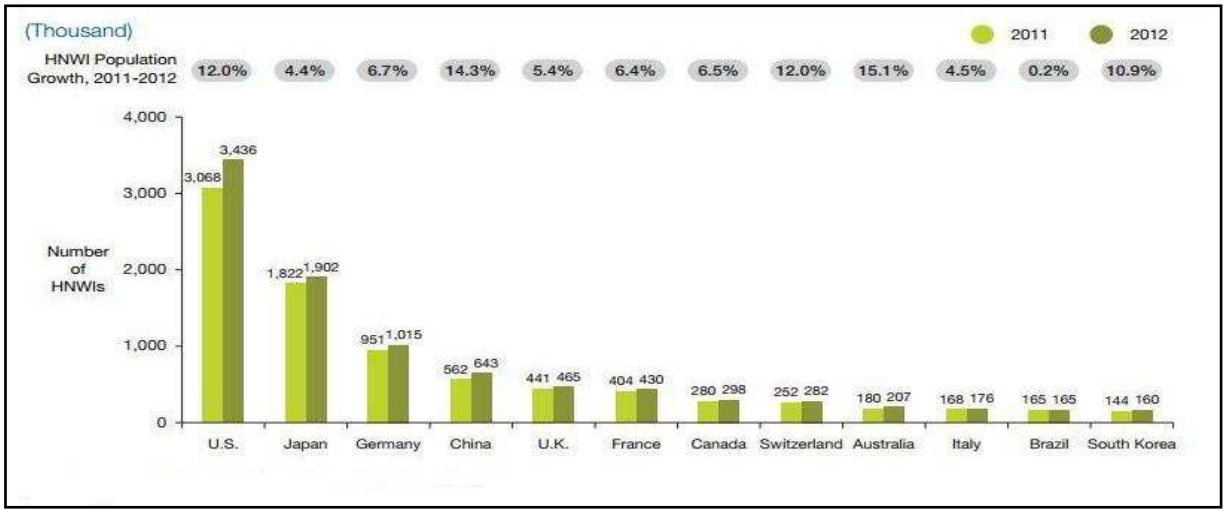

Figure 2. Largest HWNI populations, 2012 (by Country). Note: Percentage growth rates will not match column totals due to rounding. Source: Capgemini Lorenz Curve Analysis (2013).

Successful Entrepreneurs in Latvia

In Latvia, in December 2013, a respective business magazine "Kapitals" published a list of TOP 100 millionaires in the country. The list was created by Lato Lapsa, Kristine Jancevska, and "Baltic Screen" in cooperation with corporate finance companies "Laika stars" and "Lursoft".

The data shows that the wealthiest people are those working in the finance and pharmaceutical industries (owners of ABLV bank, Rietumu bank, Olainfarm, and Recipe plus pharmacy companies). The top three wealthiest businessmen in Latvia are operating in the financial services industry. Their assets have grown in comparison with the previous year.

Conclusions

Our first hypothesis is confirmed partially. Export is among the most significant critical success factors; however, it is not primary. Finding a specific niche is seen as more critical by the interviewed companies. Our second hypothesis has been disapproved, as government funding was mentioned only once as a supplementary CSF. The third hypothesis has also been rejected, as during the research, 30 critical-to-success factors were named in the interviews. The acquired information proves our fourth hypothesis, that both large and medium companies have specific business sectors with the highest turnover levels that coincide. The fifth hypothesis is proven—specific market niche, which was number one CSF according to Forbes magazine interviews, is only critical to small companies, such as SIA Brain Games, as this is their way to enter new markets and grow. Large companies (NP Foods, Cleanhouse) note that specific market niche is not critically important; as these enterprises do not operate in a narrow industry. Our sixth hypothesis is partially confirmed. The EU funds CSF is of great significance; however, only one company gave this factor 5 points out of 5. Other companies gave it 3 points of 5. Four companies out of six define this CSF as significant. The seventh hypothesis, which states that there are several CSF that both large and SME define as of great and vital importance, is confirmed. There are seven leading CSF: High quality product (6 out of 6 companies gave this CSF 5 points out of 5), learning organisation (4 out of 6), team work (4 out of 6), CRM (4 out of 6), export, market niche and technological innovations were stressed by 3 out of 6 companies. According to interviews in Forbes magazine, the most significant critical success factors are a specific market niche, export, technological innovations and high

quality of products and services. CSF according to Forbes interviews coincide with the ones that are defined in the six in-depth interviews. Moreover, these personal interviews reveal three additional factors—learning organisation, team work and CRM, as well as stressing the importance of high quality of products factor.

It is additionally found that the 10 largest (and most profitable) industries for the big companies are: fuel retail and wholesale (approx. 3,605 bil. euro), energy (approx. 1,821 bil. euro), food retail and wholesale (approx. 1,689 bil. euro), chemical products (approx. 1,519 bil. euro), logistics (approx. 1,235 bil. euro), metal processing (approx. 1,019 bil. euro), financial services (approx. 896 mil. euro), information technologies service and production (approx. 857 mil. euro), passenger transportation (approx. 705 mil. euro) and telecommunication services (approx 539 mil. euro). For medium companies such industries are: food retail and wholesale (approx 1,365 bil. euro), logistics (approx. 842 mil. euro), fuel retail and wholesale (approx. 657 mil. euro), wood processing (approx. 521 mil. euro), automotive industry (approx. 466 mil. euro), construction (approx. 451 mil. euro), financial services (approx. 355 mil. euro), pharmaceutical products (approx. 276 mil. euro), metal processing (approx. 273 mil. euro), and beverage wholesale and production (approx. 252 mil. euro). The data also show that the wealthiest people are those working in the finance and pharmaceutical industries (owners of ABLV bank, Rietumu bank, Olainfarm and Recipe plus pharmacy companies). The top three wealthiest businessmen in Latvia are operating in financial services industry.

Recommendations

Taking into account the received data, the authors of the paper can come to a conclusion and provide recommendations that in Latvia, it is important to choose a specific market niche in which an enterprise will operate, especially if you are a small or medium business. Latvian companies that survived crisis in 2008, highlight in their interviews that it is important to perform business in a particular sphere. Potential investors should plan export activities three-four years upfront, as this CSF is also stressed as crucial. The most important and vitally important factor is to provide high quality services or produce high quality products to be a successful company in Latvia. Innovations, both in marketing and technological spheres, play a significant role in operating business in the above mentioned country. However, potential investors should not rely on government funding, as this factor is mentioned only once and as a supplementary CSF. Nevertheless, there is support available from EU funds, which is mainly used for participating in international exhibitions and for the purchase of equipment. Team work, maintaining good relations with clients and constant learning will also help in achieving success on the Latvian market.

Financial services and pharmaceutical industries are the most profitable spheres, both according to the analysis of the TOP 500 largest companies and the list of wealthiest people in Latvia. Therefore, the above mentioned industries are the ones that the authors of the paper recommend when starting a new business in Latvia. However, there may be a high level of competition, which must also be taken into account. The list of other profitable spheres is available in the conclusions part of the present paper.

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The Relationship Between Government Policy and Financial Performance: A Study on the SMEs in Iraq

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The study examined the relationship between government policies and financial performance in small and medium enterprises (SMEs) in Iraq. The study aimed at establishing the relationship between government policies and financial performance of SMEs. In the Republic of Iraq, it is estimated that 99% of the business entities are SMEs. They also contribute to GDP and provide employment. Notwithstanding the recognition of the important roles SMEs play in Iraq, their development is largely constrained by a number of factors, such as the existence of laws, regulations, and rules that impede the development of the sector. The study provided some relevant recommendations to policy makers, development agencies, entrepreneurs, and SME managers to ascertain the appropriate strategy to improve the SME sector in Iraq.

Keywords: government policy, financial performance, small and medium enterprises (SMEs)

Introduction

Small and medium enterprises (SMEs) are the focus of this study as they are a key economic sector in many countries (Ayyagari, Demirgüç-Kunt, & Beck, 2003; OECD, 2004). SMEs are the prime mover of economic undertakings (Hak-Su, 2007; Kongolo, 2010; Mukaila Ayanda & Sidikat Laraba, 2011; Ogechukwu & Latinwo, 2010). SMEs in developed countries have a higher success rate than developing countries (Onugu, 2005). More evidence suggests that SMEs constitute the major component of the private sector and are the cornerstones for creativity and innovation because they can help raise productivity and introduce innovations; it is estimated to have accounted for between 20 and 40 percent of labour productivity growth in some range of European countries and in the USA (Wamono, Kikabi, & Mugisha, 2012).

SMEs were selected because they have a significant place in the economy, especially from the point of view of the development of local and regional economies. Literature related to performance of SMEs does not provide a comprehensive explanation for performance these companies. Particularly studies have been focused

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on factors affecting the financial performance of established SMEs (Harash, Fatima, & Essia, 2013; Mohd Shariff & Peou, 2008; Mohd Shariff, Peou, & Ali, 2010). In Iraq a systematic and empirical studies pertaining to the knowledge of how the government policies impact the financial performance of the SMEs sector is a few (Harash et al., 2013).

The main importance is that SMEs have the capacity to create sufficient levels of skilled and semi-skilled employment (Sana & Abbas, 2005; USAID, 2010). Studies have shown that Iraq consists of a vast number of SMEs which are the main provider of employment for the majority of people. However, SMEs face many problems that affect their financial performance in Iraq such as government policy (Sana & Abbas, 2005; COS, 2011; USAID, 2010). These studies have shown that SMEs which lacked government support policies have limited access to improving their financial performance.

Financial Performance

The performance is the result of strategies the firm employs to achieve financial goals (Yamin, Gunasekaran, & Mavondo, 1999). The level of success of a firm within the SMEs sector is measured through its financial performance based on a selected period of time (Liao & Wu, 2009). Financial performance is a measure of an organization's financial condition or financial outcomes resulting from management decisions carried out by organization members (Harash, Fatima, & Essia, 2013). According to Hoque and James (2000), financial performance refers to the level of companies' financial performance relative to their major competitors over the past years. It literally refers to financial measures, such as return equity (ROE), return on investment (ROI), operating profit, and sales growth rate (Chenhall & Langfield-Smith, 2007; Govindarajan, 1988; Hoque & James, 2000). Hoque and James (2000) claimed that these indicators are the best to identify whether an organization is doing things right and hence these indicators can be used as the primary measure of organization success. Furthermore, Doyle (1994) pointed profitability as the most common measure of performance in companies. These indicators are considered to be the common measures of financial profitability (Abu-Jarad, Yusof, & Nikbin, 2010).

Various scholars have attempted to provide a clear definition of performance, but they had yet to come to an agreement over a common definition, particularly regarding some aspects of terminology issues, analytical levels, and the conceptual basis for assessment. Performance of a company can be defined in various ways depending on the questions in mind when inquire about a company's performance (Davis & Cobb, 2010; Islam, Khan, Obaidullah, & Alam, 2011; Wheelen & Hunger, 1995). For example, Stainer (2006) defined performance as "the firm's ability to achieve their objectives, not only in a resourcefully manner but also consistently and, sometimes, by losing sight of the purpose of analyzing it" (p. 254). While, Penrose (1995) argued that performance is an evaluation of the degree and a firm has successfully achieved its goals. Regardless of the differences among researchers on what the definition of performance is, they agree that it is generally associated with expectations for success. The financial performance of SMEs depends on the success of firms in the market, both locally and internationally. Information on financial performance is useful in predicting the capacity of the enterprise hence analyzing how well or poorly an enterprise is doing against its set objectives. Financial performance is commonly used as an indicator of a firm's financial health over a given period of time. This puts financial performance as one of the key issues of SMEs. Therefore, in this study financial performance refers to ROE, ROI, operating profit, and sales growth rate.

The literature review by some researchers in the field of management and SMEs showed much interest in

researches related to SMEs and economic development (Hak-Su, 2007; Kongolo, 2010; Mukaila Ayanda & Sidikat Laraba, 2011; Ogechukwu & Latinwo, 2010) and they discussed various difficulties. Among the problems related to performance, a pertinent question is why only certain SMEs could achieve performance. In comparison there were also SMEs that had failed (Falkena et al., 2002; Abereijo & Fayomi, 2005; Okpara & Wynn, 2007; Abor & Quartey, 2010). The answer to such a dilemma is certainly needed by all governments and stakeholders in the SMEs sector. Some studies attempted to provide the answers by pointing to government policy as a strong influence on performance (Dandago & Usman, 2011; Keh, Nguyen, & Nh, 2007; Mohd Shariff, Peou, & Ali, 2010; Mohd Shariff & Peou, 2008; OECD, 2009). It was reported by USAID (2009, 2010) and Sana and Abbas (2005) that government policies often increase opportunities for SMEs to develop but often developing countries and post conflict countries seldom practice policies which are supportive of the development of SMEs. This may be due to a lack of understanding and access to important information regarding SMEs by decision makers or policy planners in the government (USAID, 2009). Besides, the concern of the government of the day is often to adopt policies that could strengthen their political power leading to less focus on economic development (Sana & Abbas, 2005). Subsequently, the government policies also left out or failed to address and overcome the hindrances pertaining to the development of SMEs.

Government Policy

Government policy, positions and guidelines of government, schemes and incentives support systems for the private sector, particularly for the SMEs (Dandago & Usman, 2011; Mohd Shariff et al., 2010; Mohd Shariff & Peou, 2008). Many recommendations have emerged from the studies and deliberate efforts are still needed on the part of governments, through its series of efficient policies affecting competition in the market to nurture a climate that is conducive to successful and profitable operations of SMEs (Dandago & Usman, 2011; Sobri Minai & Lucky, 2011). These recommendations include the call government to take concrete actions to curb dumping, smuggling and importation of cheap foreign products; reducing corruption practices; providing social justice; providing market information; improvements in infrastructure; providing training for SMEs and encouraging private investment. There are various factors influencing the financial performance of SMEs and most of them are complex and erratic. For example, government can behave an entrepreneurial role to impact the creation of a sustainable market factors. It also can act an entrepreneurial role to impact the creation of a land infrastructure conditions to support SMEs (Nguyen, Alarm, Perry, & Prajogo, 2009). The results of previous studies (Sana & Abbas 2005; USAID, 2009, 2010, 2011) indicate that economies in transition (Iraq, for example) need to take some specific measures to establish the conditions to promotion of entrepreneurial activities and for SMEs to create opportunities to grow in different sectors of the economy. The results of studies (Mohd Shariff et al., 2010; Mohd Shariff & Peou, 2008; Nguyen et al., 2009; Sobri Minai & Lucky, 2011) also indicate that in the absence of sturdy market forces in these countries transitional economy, the government must play a decisive role to create those conditions. In addition, the previous studies underlined that government policies have an impact on SMEs activities, linkages and networking in order to cooperation and utilizing resources (Brimble, Oldfield, & Monsakul, 2002; Harvie, 2001, 2002; Tambunan, 2005). Theoretical and empirical studies (Opara, 2010; Mohd Shariff & Peou, 2008) have shown government policy that seems to be more consistent in influencing the financial performance of the SMEs. In developed and developing countries, government policies that provide support are a critical factor for SMEs growth (Nguyen et al., 2009). The nature

and scope of government policies have a direct impact on a company's financial performance (Borges, Hoppen, & Luce, 2009). The supports of government policies for SMEs vary from country to country and from developed countries to developing countries due to differences in culture, the level of industrialization and business contexts (Nguyen et al., 2009). Country governments create the rules and frameworks in which businesses are able to compete against each other. From time to time the government will change these rules and frameworks forcing SMEs to change the way they operate. Financial performance of SMEs is thus keenly affected by government policies. Governments of the day regularly changes laws in line with its political policies. As a result SMEs continually have to respond to changes in the legal framework. These policies can have a major impact on the competitiveness and profitability of SMEs (Araujo, Kjellberg, & Spencer, 2008; Kjellberg & Helgesson, 2007; Nguyen et al., 2009; Nugent & Yhee, 2002).

Contingency Framework

According to the resource-based view (RBV) framework, government policy is considered as an important variable. This study will attempt to examine the influence of government policy variable on the performances of SMEs. More specifically, the primary objective of the study was to examine empirically the influence of government policy on the financial performance of SMEs in the Iraq. From the resource-based view viewpoint, different types of companies operating in different situations require different government policy. Government policy is normally effective for companies involved in high volume products. Figure 1 presents the research model of the present study.

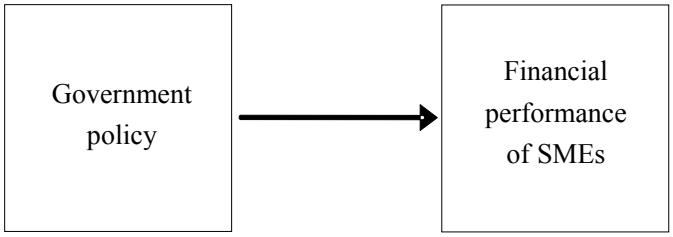

Figure 1. Proposed theoretical framework.

In order to exam the proposed relationships between government policy and financial performance of SMEs, current study developed the following proposition:

The financial performance of SMEs will vary with the choice of government policy adopted.

Conclusions

SMEs were selected because they have a significant place in the economy, especially from the point of view of the development of local and regional economies. This study was found the relationship between government policy and financial performance of SMEs. In addition, government policy has a major impact on the competitiveness and profitability of SMEs. Conceptually, the study indicates him financial performance of SME varies with the choice of the government policy they adopted. Conceptually, the study indicates the performance of SME varies with the choice of the government policy, positions and guidelines of government, schemes and incentives and support systems for the private sector. This is significant for at least three parties, (i.e., customers, companies, and the relevant authorities' bodies), to strategize on containing the existence of the effect in SMEs by accordingly controlling the selected factors.

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