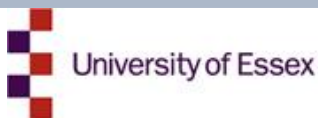


ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES

2(3)
2015



RISEBA





Dear scientists, entrepreneurs, politicians and other interested readers,

It is my greatest pleasure to introduce the new issue of international peer-reviewed journal, which tackles issues related to sustainable development. Rapid globalization and worldwide instantaneous communication made possible through intense application of Information technology have already rendered our planet highly interconnected and yet smaller. Alas, on the other hand, competition amongst firms has globally become fierce while consumerism has been followed as a prevailing norm around the world. At the same time, increasing consumerism in modern world results in environmental degradation, which if not dealt with due care and diligence can have catastrophic consequences for our precious planet in all its diverse forms of life. Nevertheless, it is strongly argued that entrepreneurship is the driving force for economic growth around the world and that countries that foster entrepreneurship are clear winners in terms of rapidly developing their nations while alleviating poverty amongst their citizens. However, it is imperative that firms and entrepreneurs engage in economic activities that are sustainable and strategic. For firms and entrepreneurs to achieve sustainable growth and prosperity, they need to follow three basic principles and they are: (1) planet; (2) people; and (3) profit.

Caring for our planet and responsible custodianship of its resources must be **the highest priority** for all world citizens and firms as well as governments, since we all need a clean and green environment in order to maintain a healthy life for ourselves and our future generations to come! On the contrary, let's remember that our planet does not need humanity for its ongoing self-sustenance in all its glorious and edifying manifestations of life forms. As a concluding remark, firms and entrepreneurs need to discharge systematically their economic activities with highest ethical standard in order to ensure commitment and motivation from their stakeholders including their employees, and consequently, economic growth pursued by firms and entrepreneurs alike evidently generates profits, which need to be invested in real projects that produce goods and service for the greater good of society which are sustainable.

Best regards,

Professor Dr. John SAE,
Ph.D., M.Com., B.A. (Beh.Sc.), AFFAIM, Membre de CNRS, SRSMS
President of Association of Global Management Studies (USA)



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ENTREPRENEURSHIP ECOSYSTEM: METHODOLOGICAL APPROACHES TO FUNCTIONS' REVIEW OF PUBLIC SECTOR INSTITUTIONS

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Abstract. Progress of small and medium business is influenced by many environmental factors and conditions, perceived as entrepreneurship ecosystem. A major element of this ecosystem is public sector, more specifically, the services provided by public sector. In the context of growing environmental demands and expectations in respect of public sector, it becomes necessary to justify the activities of institutions in the light of creating the preconditions for implementing the priorities of country's development. For this purpose, application of the functions review method in public sector has been internationally recognised as appropriate. While public institutions carry out reviews of functions, they face with methodological level problems which aren't still resolved in essence. A major issue is the methodological approach to functions review. A methodological basis of such review provided in special literature is insufficient. Our research allowed to supplement the methodological basis of functions review with well-founded approaches and to systemise methodological provisions for functions review. This article contains both the original recommendations on how to assess factors which determine selection of the methodological approaches for functions review and the regularities of links between such factors and methodological approaches which are recommended in setting an integrated combination of the methodological approaches for particular situation of public institutions.

Keywords: entrepreneurship, institutions, activities, functions (al) review, strategic planning, methodological basis, sustainable development

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1. Introduction

The role of public sector, as an element of entrepreneurship ecosystem, which creates increasingly better conditions for business development and facilitates sustainable development of any country, has been highlighted in a number of research articles (Bileišis 2014; Greblikaitė, Puškoriūtė 2014; Samoška 2011, 2013; Korsakienė, Tvaronavičienė 2014; Giriūnienė 2013; Šimelytė, Antanavičienė 2013; De Alencar, Almeida 2013; Išoraitė 2013; Wahl, Prause 2013; Tvaronavičienė 2014; Prause, Hunke 2014; Caurkubule, Rubanovskis 2014; Garškaitė-Milvydienė 2014; Šabasevičienė, Grybaitė 2014; Raudeliūnienė *et al.* 2014; Antanavičienė 2014; Vasiliūnaitė 2014; Mačiulis, Tvaronavičienė 2013; Tvaronavičienė *et al.* 2014; Scaringelli 2014; Vosylius *et al.* 2013). In Lithuania, progress of small and medium enterprises (SMEs) is impeded by many environmental factors and conditions. A major one, however, is the public sector which regulates business (Greblikaitė, Puškoriūtė 2014).

Therefore, there is an active search of the measures to improve public sector performance (Bivainis, Tunčikienė 2011; Nakrošis, Černiūtė 2010; Nakrošis, Martinaitis 2009; Bučinskas *et al.* 2013). It is suggested that problems in the area of activity of institutions can be solved with using business practice tested management tools, such as strategic planning, programme based budgeting, marketing, models of quality management, forms of network management, etc. In the context of growing environmental demands and expectations in respect of public sector, it becomes necessary to justify activities of institutions in the light of creating preconditions for implementation of country's development priorities. For this purpose, application of the functions review method in public sector has been internationally recognised as appropriate (Integrity review ...2013; Public Sector Modernisation...2004). In Lithuania, the regulation of the functional review has been in place for several years.

However, recognising the role of functions' review, or even legitimating it, is only one of the preconditions for its implementation. Effective application of this tool requires preparatory work, involving a difficult phase of designing models for functional review and their further development into methods. It is not at all easy due to still unresolved issues relating to the methodological basis (Afonso *et al.* 2010; Borge *et al.* 2008; Dudina, Sprindzuks 2006; Functional reviews and ... 2008; Gromov 2007; Lukashenko 2009; Manning, Parison 2004; Maslenikova 2002; Medvedev 2002; Petrov 2002a, b; Reed 2010; Resolution No. 968 ... 2011, 2013; Samarucha 2008). Undoubtedly, reasonable answer to these questions would allow to apply functional review as a tool of effective management, or more precisely, strategic planning in public sector.

The situation where, on the one hand, there is a high need for practice and, on the other hand, there is a lack of methodological approaches, determined the objectives of our research – to identify the place of functions review in strategic planning of institution, to investigate the existing methodological basis of the functions review and preconditions for the supplementation thereof, to draw up recommendations for selecting a methodological approach to the analysis of functions, and to justify the appropriateness of integrated methodology use of functions review. The research employed the systematic analysis method which enabled carrying out a logic abstraction-based synthesis of approaches, assessments and interpretations used by various authors and organisations with regard to the functions review.

2. The place of functions review in strategic planning of public institution

An arsenal of measures for improving institutional performance management is permanently supplemented (if not in essence, then at least in form) along with constantly changing conditions in public sector environment. Public organisations are prone to novelties, but their implementation is usually scarce, episodic and lacking radicalism (Raipa, Jurkšienė 2013). For instance, the New Programme for the Improvement of Public Administration 2012 – 2020 (Resolution No. 171 ... 2012) provides for insufficiently radical changes in the administration of public sector, which implementation is based on the established administration practice of ensuring the organisation and supervision of activities mainly through the implementation of the management indicators and, at the same time, of the provisions attributable to the New Public Management (NPM) with specification of the existing administrative regulation (Bileišis 2012).

There is an undeniable need for designing new type organisations of high technological level in the public sector that are capable of quick adaptation (Bučinskas *et al.* 2012; Raipa, Jurkšienė 2013). For this purpose, both theorists and practitioners recognise strategic planning as a tool for the sustainable development of the activities of institutions (Bivainis, Tunčikienė 2009, 2011; Raipa, Jurkšienė 2013; Resolution No. 827...2012; Skačkauskienė *et al.* 2013). Today this tool is targeted on broader consumer value orientations, competitive opportunities, possibilities for a complex conception of the improved management of public institutions' activities (Melian-Gonzalez *et al.* 2010). Taking institutional strategic planning as a flexible performance management tool rather than a normative one (the latter concept of strategic planning was particularly followed in the earlier versions of strategic planning methodology (Resolution No. 480 ... 2011), the current version of the methodology is viewed more positively in this respect (Resolution No. 827...2012)), it is appropriate to look for coherence and complementarity of different instruments for improving the management of institutions' activities. Functions review is one of the measures found rational to coherently supplement institutional strategic planning

instrumentation (Tunčikienė *et al.* 2013). In case of such integration, review of functions becomes an evidence-based and result-oriented management tool (Report of the activity of the State... 2012).

The current version of the methodology for strategic planning of public institutions (Resolution No. 827...2012) promotes (although not directly in every sense) application of functions review for dealing with solitary tasks of strategic planning. According to the methodology, the preparation of an action plan project of an appropriations manager starts with an environmental analysis and review of programmes in progress. It is rational to use the results of such analysis in later stages of drafting the strategic actions plan of institutions, i.e. for adjustment of the mission, forecasting strategic changes, setting strategic objectives and preparing programmes for their implementation. In addition, the current Strategic Planning Methodology stipulates that the need to apply mentioned functions review and other NPM tools (e.g. programme evaluation, zero-based budgeting approaches) in order to reach different agreements of interests and influences on planned decisions and their results, as well as on the limits of appropriations, should be considered on the level of the Office of the Prime Minister rather than on institutional level.

In order to increase coherence among individual measures of managing the sustainable development of activities and concurrently justify the appropriateness of supplementing strategic planning instruments with functions review, it is first of all rational to set out in detail the link between strategic planning and functions review. Special literature (Manning, Parison 2004; Recommendations for the application ... 2011) analyses the link between functions review and budgeting processes, and, at the same time, evaluation of budget programmes. Given the rationally composed set of strategic planning objectives (Bivainis, Tunčikienė 2009, 2011; Resolution No. 827 ... 2012; Tunčikienė, Skačkauskienė 2012), the analysis of the link between functions review and evaluation of budget programmes enables establishing the place of functions review and its role in the institutional strategic planning.

A functions review can have either a direct or indirect link with the budget programme evaluation (Recommendations for the application...2011):

- The use of functions review results in making decisions on the allocation of appropriations to institutions can be regarded as a direct link. Subject to the findings of functions review, reduction of management costs can be differentiated in respect of the role of an institution and its particular functions.
- The institution's decision to conduct a functions review resulting from decreasing budget appropriations and thus to look for performance effectiveness enhancement reserves can be regarded as an indirect link. Functions review results for institution provide a basis for appropriations required for future or present programmes of institution.

According to experts from the World Bank (Manning, Parison 2004), results of functions review are linked with the budget cycle and strategic planning process. The diagram of integrating the functions reviews into the cycle of budgeting and, at the same time, strategic planning is presented in Figure 1.

The functions review allows obtaining a full information picture which is necessary for assessing changes (quantitative and qualitative) in institution's activities resulting from the implementation of the strategic actions plan within a defined time period: information on the activities carried out by the institution, information on financial allocations for certain activities, information on the achievement of activity results. In addition, information of such a kind is useful in the context of identification of reserves for further promotion of targeted institutional developments and for making decisions as to the future funding required for the performance of activities geared towards the planned perspective. Moreover, the purpose of the functions review is to create preconditions for justifying the validity of next year appropriations sought by institutions (Dudina, Sprindzuks 2006; Functional reviews and...2008; Gromov 2007; Lukashenko 2009; Maslenikova 2002; Medvedev 2002; Petrov 2002a,b; Reed 2010; Samarucha 2008; The report on investigating...2010). Hence, the functional review enables addressing the fundamental strategic planning tasks of public institutions (to create preconditions for efficient allocation and rational use of budget funds, etc. (Bivainis, Tunčikienė 2009; Butkevičius, Bivainis 2009; Report of the activity of the State...2012) with a view to implementing strategic goals of institutions and priorities of the Government.

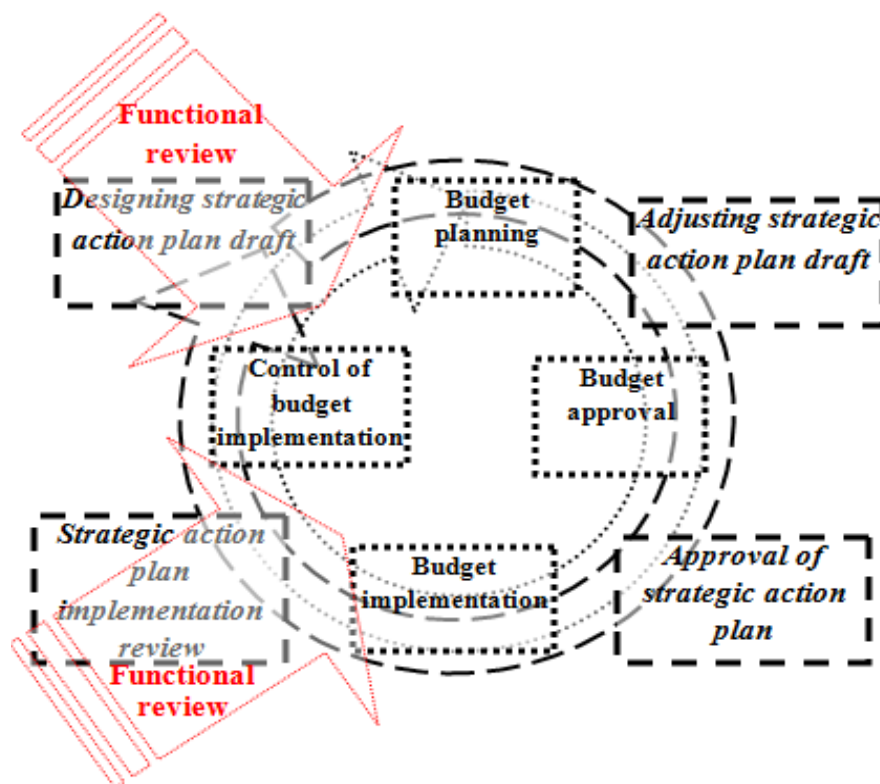


Fig. 1. Integration of functional review into the cycle of budgeting/strategic planning

Source: composed by the authors in accordance with Manning, Parison (2004); Recommendations for the application ... (2011)

The linkage between functions reviews and strategic planning derives from the assumption of the appropriateness of applying management tools in general: both institutional activity management tools in fact contribute to the rationalisation of budget expenditure. The goal of strategic planning in an institution is to create preconditions for increasing the efficiency of future-oriented activities of the institution, whereas the objective of strategic planning encompasses possibilities for coherence of institution's activities with its environment. The functions review is oriented towards creation of conditions for preparing and making the decisions that determine qualitative changes in public sector activities, basing them on the analyses results of the expedience of the institutions' activities as well as rationality and efficiency of their management. The object of functions review is the functions performed by institutions (their units) in the area of implementing national social and economic development priorities and, at the same time, satisfying public needs and expectations in the global market (Drejeris *et al.* 2013; Tunčikienė *et al.* 2013). In different phases of the institutional strategic planning cycle it may become necessary to conduct a functions review by analysing the institution's performance potential to implement a programme (whether continued or new) in an efficient manner and to pursue the goals set. According to the purpose is suggested to adapt the methodological potential for evaluating the effectiveness of the activity in public institutions (Afonso *et al.* 2010; Arend, Levesque 2010; Borge *et al.* 2008; Lonti, Woods 2007; Modell 2009; Pedraja-Chaparro *et al.* 2005).

Table 1 shows the peculiarities of integrating the functions review into the institution's strategic planning cycle by specifying the purpose of the functions review and conditions of its application in different phases of the planning cycle. Where specifically appropriate, the functions review may supplement the evaluation of planning decisions in every phase.

Table 1. Peculiarities of integrating the functions review into the institution's strategic planning cycle

<i>Cycle phases</i> <i>Tool integration conditions</i>	<i>Design and adoption of strategic action plan</i>	<i>Implementation of strategic action plan</i>	<i>Monitoring of strategic action plan implementation</i>
PURPOSE	Functions review supplements the ex-ante evaluation of a strategic background, target orientation, strategic decisions and their implementation action programme.	Functions review supplements the mid-term evaluation of a strategic action plan (target orientation, strategic decisions and their implementation action programme).	Functions review supplements the final evaluation of a strategic action plan (target orientation, strategic decisions and their implementation action programme).
NEED	There is a need to revise the target orientation, adopt strategic decisions on the implementation of the revised target orientation and their implementation action programme in terms of function content and process.	Monitoring results show deviations from the set goals and their implementation targets. There is a need to analyse the causes of deviations in terms of function content and process	Monitoring results raise a fundamental question of activity organisation - whether better results could have been achieved with the same resources and competences?

Source: composed by the authors in accordance with Recommendations for the application ... 2011.

3. Methodological basis of functions reviews

Methodological preconditions are relevant with a view to coherence of functions review and strategic planning, as well as the synergic effect of application thereof. According to Manning and Parison (2004), etc. (Petrov 2002a, b), the methodological basis of functions reviews consists of procedures performed and methods applied in the process. The principal chart of functions review is presented in Figure 2.

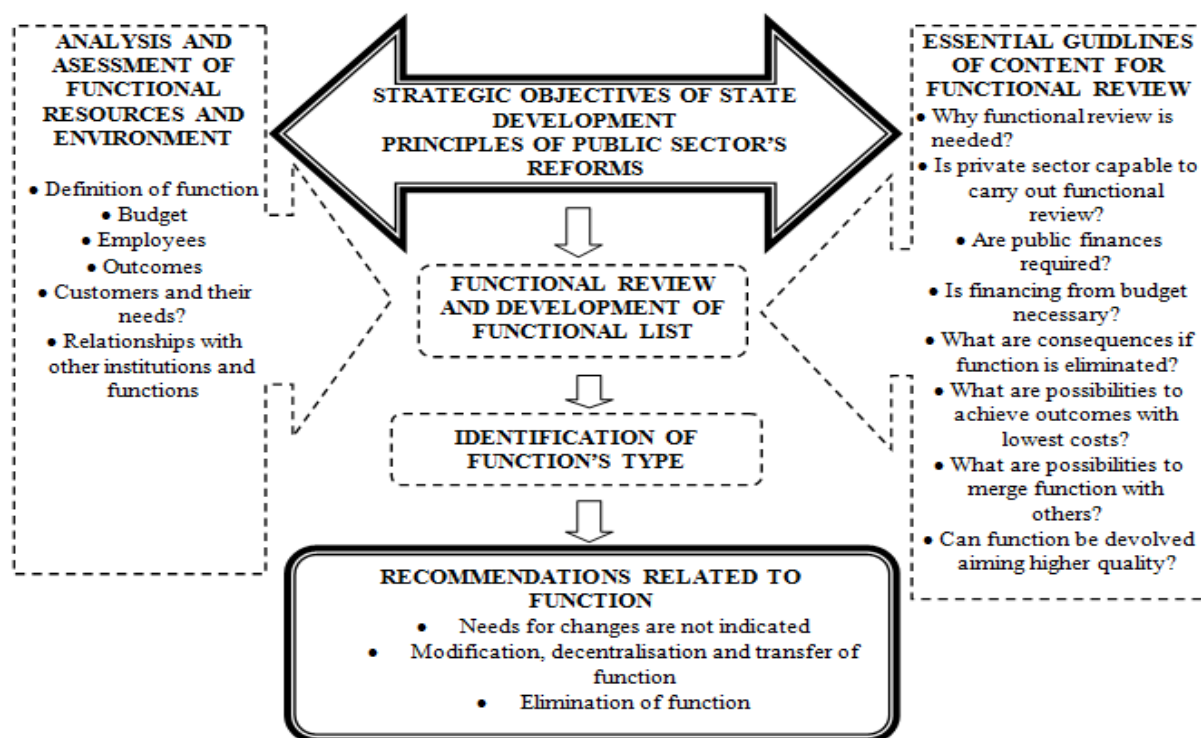


Fig. 2. Methodological basis of functional review

Source: modified by the authors in accordance with Manning, Parison (2004); Recommendations for the application... (2011); Tunčikienė, Korsakienė (2014)

The principal function review scheme (see Fig. 2) enables the analysis of a function against its background which comprises the results of the analysis and evaluation of function environment and resources, long-term national development goals and basic principles of public reform, as well as basic guidelines for functions review content. The functions review based on searching for answers to the given questions, drawing up of the list of rationally-composed functions, classification of functions by the defined characteristics represent the set of tasks of functions review with recommendations for the function as the ultimate outcome.

4. Preconditions for supplementing the methodological basis of functions review

In order to fundamentally incorporate the functions review tool into strategic planning of public institutions and to achieve the synergetic effect that promotes targeted development of institutional performance, it is logical to answer such questions as: whether the methodological basis of functions review is consistent with the strategic planning methodology; what options are possible in methodological approaches to functions review, in the light of traditional strategic planning methodologies; what methodological approaches to functions review are appropriate to be used as a basis for the functions review in institutions? Coherence (undeniable) of functions review and strategic planning methodologies can be based on:

- The link between the goal of functions review and strategic planning and the implementation tasks for achieving the goal. This link provides sufficient basis to consider the functions review an integral part of individual components of strategic planning;
- The principles of functions review and strategic planning. A summary of the principles for functions review and strategic planning found in special literature leads to a distinction to be drawn between two main groups of such principles representing the insights of symptoms of development barriers and opportunities, apprehension and solution of development-related problems, choice of activity development trends and the significance of their implementation (Bivainis, Tunčikienė 2009; Raipa *et al.* 2011; Tunčikienė *et al.* 2013).

Given the purpose of functions review in planning longer-term activity of institutions, it is rational to follow a read-across principle by characterising methodological approaches to functions review according to the systematised specifics of strategic planning methodologies in the context of public institutions (Bivainis, Tunčikienė 2009). Following a prescriptive methodological approach, functions review is based on the principles of comprehensive theory of preparing and making decisions which recognises sufficient foresight of the future, systematic complexity, necessary certainty, large formalisation opportunities, and multi-sided adaptation of decisions to a structure and other possibilities, as well as consistency of steps. The emergent approach is helpful in seeking such functions review results that would enable preparation, adoption and implementation of decisions that increase possibilities for greater coherence between institutions and their environmental demands. In case of an emergent methodological approach, preparation of a functions review model is considered as a less strict process of the backdrop of functions review, the functional review itself and drawing up and implementing the recommendations based on its conclusions. This approach also employs formalised rules and procedures, but they are not organised into one, strictly consistent, whole of steps. Such functions review is uninterrupted, with its individual iterations being determined by negotiations and knowledge results. Intent is the dominant aspect in the functional review process, with the key focus being placed on how to develop institutional resources for using the existing potential. The key methodological principles of functions reviews can be specified in more detail following the same logic which is applied to characterise the methodological aspects for implementing the strategic planning principles at the phases of designing a strategic background, setting target orientation, and preparation, adoption and implementation of strategic decisions (Bivainis, Tunčikienė 2009).

Taking into consideration the impact of environmental factors on institution's activities, as well as given the resources and competences of institutions, the formed totality of the specific features of institution's adaptation to the changing environmental conditions and requirements constitutes a common factor determining the choice of methodological approaches to functions review.

5. Technique of selecting methodological approaches to functions review in institutions

It is proposed to analyse the environmental characteristics of public institutions using the created solid methodological potential for environment analysis (Vasiliauskas 2007) or, more specifically, a method of environmental turbulence analysis modified by the authors. The essence of the method is to identify the level of environmental turbulence by the assessment the environment according to the qualitative criteria. The method is applied to assess the following aspects determining the nature of changes in the institutional environment: complexity, novelty, pace and predictability of environmental changes. The outcome of using the method is the estimate (a particular score expressed in points) of the institutional environment level of turbulence – ETL_{total} (for better objectivity it is proposed to use two estimation techniques for setting weights of the main environmental factors) which requires the following interim results (see Table 2 and Table 3):

- Assessment of the components of the institutional environment (political, economic, social and technological environment) separately by each criteria characterising environmental turbulence (complexity – K_1 , novelty – K_2 , pace of changes – K_3 , predictability – K_4) and by the integrated criterion (turbulence – TL_i);
- Assessment of the general institutional environment by each criteria characterising environmental turbulence ($PESTV_i$);

Table 2. Components of turbulence of the institutional environment and its elements (in formalised expression)

Criteria Components of the environment	Complexity (K_1)	Novelty (K_2)	Pace of changes (K_3)	Predictability (K_4)	TL_i
Political environment (P)	PV_1	PV_2	PV_3	PV_4	TL_P
Economic environment (E)	EV_1	EV_2	EV_3	EV_4	TL_E
Social environment (S)	SV_1	SV_2	SV_3	SV_4	TL_S
Technological environment (T)	TV_1	TV_2	TV_3	TV_4	TL_T
$PESTV_i$	$PESTV_1$	$PESTV_2$	$PESTV_3$	$PESTV_4$	ETL_{total}

Source: composed by the authors

- Significance of the components scores (political, economic, social, technological) of the institutional environment (q_i) and normalised significance (Q_i) (see Table 3).

Table 3. Significance of the components of the institutional environment (in formalised expression)

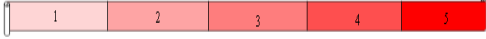
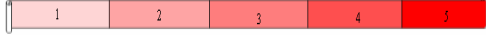
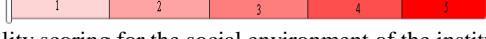
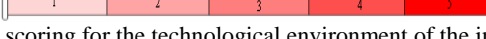
Significance Components of the environment	Significance (scored) (q_i)	Significance (normalised) (Q_i)
Political environment (P)	q_p	Q_P
Economic environment (E)	q_e	Q_E
Social environment (S)	q_s	Q_S
Technological environment (T)	q_t	Q_T

Source: composed by the authors

Experts are offered to analyse the characteristics of the institutional environment using a rationally composed questionnaire with answers variants and particular scores (expressed in points) attached to each answer (see Table 4). If it is difficult to produce unambiguous estimates of environmental characteristics, it is reasonable to use score intervals, i.e., to identify the minimum and maximum (*min* and *max*) values of the factors determining environmental turbulence.

Table 4. Questionnaire for the scoring of each component of the institutional environment (P-E-S-T)

Criteria	Question	Notes
K ₁ – complexity of the institutional environment	<p>What is the territory of changes having a direct impact on the activities of the institution?</p> <p><input type="checkbox"/> Town/city, district (1 point).</p> <p><input type="checkbox"/> Region (2 points).</p> <p><input type="checkbox"/> Country (3 points).</p> <p><input type="checkbox"/> EU (4 points).</p> <p>Complexity scoring for the political environment of the institution (PV_1)</p> <p>Complexity scoring for the economic environment of the institution (EV_1)</p> <p>Complexity scoring for the social environment of the institution (SV_1)</p> <p>Complexity scoring for the technological environment of the institution (TV_1)</p>	In case of diverse environmental complexity (impossible to strictly (unambiguously) define), it is reasonable to use score intervals by setting the minimum and maximum values of the factors determining environmental turbulence.
K ₂ – novelty of the institutional environment	<p>What is the nature of the environmental situations of the institution?</p> <p><input type="checkbox"/> Stable situation (1 point).</p> <p><input type="checkbox"/> Standard new situation/no unexpected situations (2 points).</p> <p><input type="checkbox"/> Likelihood of new situations/new situations can be predicted based on the analysis of past trends (3 points).</p> <p><input type="checkbox"/> Unexpected/new situations can be only fragmentary predicted (4 points).</p> <p>Novelty scoring for the political environment of the institution (PV_2)</p> <p>Novelty scoring for the economic environment of the institution (EV_2)</p> <p>Novelty scoring for the social environment of the institution (SV_2)</p> <p>Novelty scoring for the technological environment of the institution (TV_2)</p>	In case of diverse novelty of the environment (impossible to strictly (unambiguously) define), it is reasonable to use score intervals by setting the minimum and maximum values of the factors determining environmental turbulence.
K ₃ – pace of changes in the institutional environment	<p>What is the potential to respond to environmental changes? What is the strain posed by environmental changes?</p> <p><input type="checkbox"/> Very great potential, no strain (1 point).</p> <p><input type="checkbox"/> Great potential, low strain (2 points).</p> <p><input type="checkbox"/> Medium potential, medium strain (3 points).</p> <p><input type="checkbox"/> Limited potential, high strain (4 points).</p> <p><input type="checkbox"/> Very low potential, very high strain (5 points).</p> <p>Pace of changes in the political environment of the institution (PV_3)</p> <p>Pace of changes in the economic environment of the institution (EV_3)</p> <p>Pace of changes in the social environment of the institution (SV_3)</p> <p>Pace of changes in the technological environment of the institution (TV_3)</p>	In case of diverse pace of changes in the environment (impossible to strictly (unambiguously) define), it is reasonable to use score intervals by setting the minimum and maximum values of the factors determining environmental turbulence.
K ₄ – predictability of the institutional environment	<p>What is the level of predictability/foresight potential for future situations?</p> <p><input type="checkbox"/> Very great potential, simple methods of environmental forecasting and available information would suffice (1 point).</p> <p><input type="checkbox"/> great potential, standard methods of environmental forecasting and available information would suffice (2 points).</p> <p><input type="checkbox"/> Medium potential, it would be necessary to apply more sophisticated environmental forecasting methods and dispose of more extensive information (3 points).</p>	In case of diverse predictability of the environment (impossible to strictly (unambiguously) define), it is reasonable to use score intervals by setting the minimum and maximum values of the factors

	<p>□ Limited potential, it would be necessary to apply sophisticated environmental forecasting methods and dispose of comprehensive information (4 points).</p> <p>□ Very low potential, it would be necessary to apply highly sophisticated environmental forecasting methods and dispose of comprehensive information (5 points).</p> <div style="text-align: center;">  <p>Predictability scoring for the political environment of the institution (PV_4)</p>  <p>Predictability scoring for the economic environment of the institution (EV_4)</p>  <p>Predictability scoring for the social environment of the institution (SV_4)</p>  <p>Predictability scoring for the technological environment of the institution (TV_4)</p> </div>	determining environmental turbulence.
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Source: composed by the authors

Turbulence evaluation (TL_i) for the components of the institutional environment (political, economic, social and technological – P-E-S-T) using the integrated criterion (assessment of turbulence at the level of single environmental component):

$$TL_p = 0,25 * PV_1 + 0,25 * PV_2 + 0,25 * PV_3 + 0,25 * PV_4, \quad (1)$$

$$TL_E = 0,25 * EV_1 + 0,25 * EV_2 + 0,25 * EV_3 + 0,25 * EV_4 \quad (2)$$

$$TL_S = 0,25 * SV_1 + 0,25 * SV_2 + 0,25 * SV_3 + 0,25 * SV_4, \quad (3)$$

$$TL_T = 0,25 * TV_1 + 0,25 * TV_2 + 0,25 * TV_3 + 0,25 * TV_4. \quad (4)$$

Evaluation ($PESTV_i$) of each factor (complexity, novelty, pace of changes, predictability) that determines turbulence of the overall institution's environment (PEST):

$$PESTV_1 = \frac{PV_1 + EV_1 + SV_1 + TV_1}{4}, \quad (5)$$

$$PESTV_2 = \frac{PV_2 + EV_2 + SV_2 + TV_2}{4}, \quad (6)$$

$$PESTV_3 = \frac{PV_3 + EV_3 + SV_3 + TV_3}{4}, \quad (7)$$

$$PESTV_4 = \frac{PV_4 + EV_4 + SV_4 + TV_4}{4}. \quad (8)$$

Assessment of the individual characteristics of the overall environment is based on the mean estimate of the environmental components in respect to a specific characteristic.

Evaluation of the turbulence level of the overall institution's environment (ETL_{total}) where the weights are equal (technique 1):

$$ETL_{total} = 0,25 * PESTV_1 + 0,25 * PESTV_2 + 0,25 * PESTV_3 + 0,25 * PESTV_4. \quad (9)$$

In the second case, we suggest measuring the significance of the institution's environmental components and estimating turbulence of the overall environment taking into account estimation results for turbulence of individual environmental components and their weights. It is further proposed to calculate the level of significance (Q_i) of

the institution's environmental component (P-E-S-T) on the basis of the relevance of its influence when addressing the issue of improving country's economic competitiveness, taking into account the influence of each environmental component:

- ☐ Very low influence (1 point).
- ☐ Low influence (2 points).
- ☐ Average influence (3 points).
- ☐ High influence (4 points).
- ☐ Very high influence (5 points).

It is rational to convert significance q_i , ($i=1,...,4$) expressed in points into significance Q_i on condition, $\sum Q_i = 1$, ($i = 1,...,4$):

$$\frac{q_i}{\sum q_i} = Q_i, (i = 1,...,4). \quad (10)$$

Calculation of the overall turbulence level (ETL_{total}) of the institutional environment, taking into account the significance of the environmental components (Q_i):

$$ETL_{total} = Q_P * TL_P + Q_E * TL_E + Q_S * TL_S + Q_T * TL_T$$

or

$$ETL_{total} = \sum Q_i * TL_i; i = 1,...,4. \quad (11)$$

The results of the level of turbulence of the institutional environmental provide a basis for selecting a methodological approach which is rational for conducting the functional review (see Fig. 3).

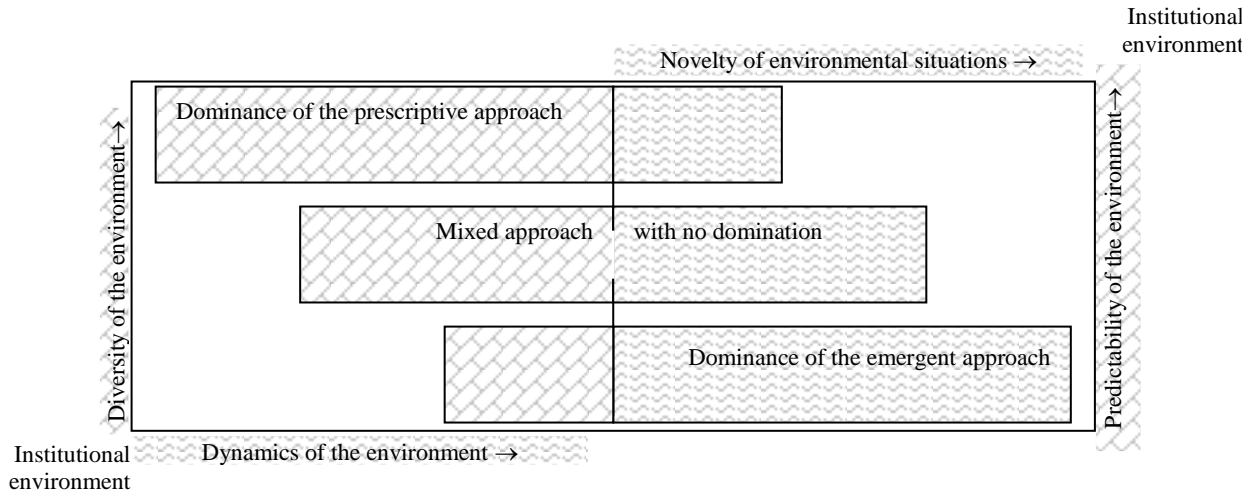


Fig. 3. Matrix of methodological approaches to functional review and their determinants

Source: composed by the authors

6. Expedience of applying the integrated methodology to functions review

Constructing a model of functions review for a public institution based on the principle of an integrated methodological approach means that recommendations for the each function are developed and implemented on the basis of either a prescriptive or emergent methodological approach which is then supplemented with the elements of the other methodology. Elements of different methodological approaches can be combined in different proportions (see Fig. 3). The appropriateness and effectiveness of such methodological principle depends on the following characteristics of the institution's environmental turbulence:

- Diversity of the institutional environment: activities of institutions are influenced by various (political, economic, social, technological, etc.) factors and different groups of interests (users, government, other institutions, etc.). Solutions of the political, economic, social, technological problems and complications based on the results of evaluating the suggestions for the institutional functions, and together satisfaction of the stakeholders' expectations and needs represent an important condition for the necessity of institution's activity and, concurrently, for adapting the institution to environmental changes.
- Diversity and complexity of problems in the institutional environment and complications thereof. Complexity of the political, economic, social and technological environment determines the limits of impact of the proposals for the functions implementation.
- Insufficiently investigated environment of institutions. National institutions apply the principles of the NPV in terms of form rather than content. (Programme budget is every year higher than in the previous year. Next year's appropriations for programme implementation are linked to the expenditure sustained last year and the year before rather than to the achievement of results (Performance Management in Lithuania ... 2007). However, application of modern methods and advanced information technologies allow institutions to predict new situations in the environment. In this context, it is also useful to apply a read-across method – analysis of social-economic development of other countries, comparison of national development and development patterns in foreign countries, adoption of “experience”. Certainly, results obtained through application of such methods should be assessed and evaluated with reservations.
- Diversity in the pace of changes in the institutional environment. Institutions may respond to changes in an adequate pace, with delay or even precede the changes. Changes in the institution's environment usually pose strain which is also determined by the status of country's public sector activities in the context of EU countries.

High diversity of the institutional environment is a category which is more allied to the prescriptive methodological approach. Another environmental category – dynamics – is more appropriate for the emergent methodology, with distinction between relevant fragments of the diverse environment, direction of resources to tackling priority problems and complications in the environment. In addition, seeking to promptly adopt and implement solutions to environmental problems and complications in respect of the institution's functions is indicative of the appropriateness of the emergent methodology. Complexity of the institutional environment determines the appropriateness to apply a combination of the prescriptive and emergent methodology. The application of combined approaches in particular creates preconditions for identifying the boundaries of political, legal, economic, social and technological problems of the environment, as well as of the impacts of their solution.

Insufficient level of investigation of the public sector environment is an unfavourable factor for both methodological approaches, and probably can be best dealt with when applying the integrated approach. The prescriptive approach is appropriate for the assessment of possibilities for resource consistency and for using the results of such assessment to justify reserves for promoting the essential changes in institutional activities, whereas the emergent methodology is appropriate for assessing opportunities for the development of institutional resources. The pace of environmental changes which determination is preconditioned by setting strategic objectives and priorities of country's development, understanding of the principles of public reforms and, hence, assessment of problems and complications in the environment, as well as identification of the potential to adequately respond, in terms of the content and process of functions review, to the changing environmental conditions and new environmental demands require a combination of the prescriptive and emergent methodological approaches.

The functional review requires updating of the organisational structure of public institutions, development of an advanced leadership style, coherence of institution's philosophy, culture and policy with emerging reforms in the management system. These are human-factor issues that can be better analysed using the emergent methodology approach. It is namely this methodological approach that creates preconditions for ensuring a better coherence of various actors determining the performance of institutions.

Conclusions

Generally, the following main functions of a state can be distinguished: addressing economic issues, social issues and other functions. The role of the public sector in creating increasingly better conditions for business development in a country has been highlighted. Within the context of the on-going processes (liberalisation of markets, competition that exceeds the boundaries of the farthest countries, social and economic differentiation of the world, change of information technologies, etc.) more active reforms are characteristic of public sector as well as new requirements keep being imposed on the institutions in this sector. Sustainable development and efficiency of public sector remain priority of governments. Hence, governments are concerned with assessment, plan and measure of functions performed by public sector institutions.

While carrying out functions reviews, public institutions face methodological level problems. A major issue is the selection of a methodological approach to functions review. Methodological approaches to the functions review provided in special literature are insufficiently intelligible. Our research allowed to specify the existing methodological basis of the functions review in more detail and to systematise the basic characteristics of methodological approaches to the functions review. Following the prescriptive methodological approach, the functions review is based on the principles of multi-sided decision-making theory. The emergent methodology approach, on the contrary, represents poorer foresight of the future, fragmentary complexity, weaker certainty, more limited formalisation, two-sided adaptation of decisions to a structure, and other possibilities, as well as unstable sequence of steps. These characteristics shall be considered as preconditions for preparing, adopting and implementing decisions that, in the first case, increase possibilities for greater coherence between institutions and their environment demands and, in the second case, are oriented towards development of institutional potential to use the existing potential and prevention of environmental threats.

The article contains recommendations on how to assess the factors determining the selection of methodological approaches to the functional review, identifies the consistent patterns of links between such factors and methodological approaches, and provides recommendations on the application in setting an integrated combination of methodological approaches for a particular situation of public institutions. Implementation of provided suggestions would contribute building more efficient entrepreneurship ecosystem, what would ultimately contribute to sustainable development of country.

References

- Afonso, A.; Schuknecht, L.; Tanzi, V. 2010. Public sector efficiency: evidence for new EU member states and emerging markets, *Applied Economic* 42 (17): 2147–2164.
- Antanavičienė, J. 2014. Foreign direct investment: driving factors and outcomes for secure and sustainable development, *Journal of Security and Sustainability Issues* 3(3): 55–67. DOI: [http://dx.doi.org/10.9770/jssi.2014.3.3\(5\)](http://dx.doi.org/10.9770/jssi.2014.3.3(5))
- Arend, R. J.; Levesque, M. 2010. Is the resource – based view a practical organizational theory? *Organization Science* 21 (4): 913–930.
- Bileišis, M. 2012. Empowering institutions: a case for connecting business and the academe through phronesis, *Journal of Security and Sustainability Issues* 1(3): 177–185.
- Bileišis, M. 2014. Public sector control as a factor in entrepreneurial policy: the case of Lithuania, *Entrepreneurship and Sustainability Issues* 1(3): 151–161. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.3\(4\)](http://dx.doi.org/10.9770/jesi.2014.1.3(4))
- Bivainis, J.; Tunčikienė, Ž. 2009. *Viešojo sektoriaus institucijų strateginis planavimas* [Strategic planning in public institutions]. Vilnius: Technika, 240 p.

- Bivainis, J.; Tunčikienė, Ž. 2011. *Viešojo sektoriaus institucijų strateginio valdymo biurokratija* [Bureaucracy of strategic management in public institutions] in the collective monograph *Biurokratija demokratinėje visuomenėje* [Bureaucracy in a democratic society]. Ats. red. [editor-in-chief] Raipa, A. Kaunas: Technologija. 280 p.
- Borge, L. E.; Falch, T.; Tovmo, P. 2008. Public sector efficiency: the roles of political and budgetary institutions, fiscal capacity and democratic participation, *Public Choice* 136(3-4): 475–495.
- Bučinskas, A.; Giedraitytė, V.; Raipa, A. 2013. Networking in the structure of public governance changes, *Regional Formation and Development Studies* 10(2): 47–56.
- Butkevičius, A.; Bivainis, J. 2009. Nacionalinio biudžeto išlaidų planavimas [Planning the National Budget Expenditure]. Vilnius: Technika, 248 p.
- De Alencar, L.M.; Almeida, H.N. 2013. Economic viability and sustainability of solidarity economy enterprises: a case study on the technological incubator of popular cooperatives of the Catholic University of Salvador, *Entrepreneurship and Sustainability Issues* 1(2): 92–98. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(3\)](http://dx.doi.org/10.9770/jesi.2013.1.2(3))
- Drejeris, R.; Bivainis, J.; Tunčikienė, Ž.; Drejerienė, E. 2013. Determining the purposefulness of new services on the grounds of the results of quantitative analysis, *Journal of Business Economics and Management* 14(4): 791–805.
- Dudina, A.; Sprindzuks, M. 2006. The Functional review of the administration of the parliament of the Republic of Moldova. Available from Internet: <http://www.undp.md/publications/doc/mission%20reports/Functional%20review%20of%20the%20Parliament%20of%20the%20RM.pdf>.>.
- Functional reviews and institutional audit of six public sector institutions to assess the impact of ongoing public sector reforms. 2008. Final report. Available from Internet: <http://www.mineduc.gov.rw/innovation/IMG/pdf/Functional_20Review_20-_20Final_20report_1_.pdf>.
- Garškaitė-Milvydienė, K. 2014. Anti-crisis management of enterprises and possibilities of overcoming their critical condition, *Journal of Entrepreneurship and Sustainability Issues* 1(4): 187–203. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.4\(1\)](http://dx.doi.org/10.9770/jesi.2014.1.4(1))
- Giriūnienė, G. 2013. Public sector's subsidies to business – suitability valuation of labor market support measures, *Entrepreneurship and Sustainability Issues* 1(1): 37–44. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.1\(4\)](http://dx.doi.org/10.9770/jesi.2013.1.1(4))
- Greblikaitė, J.; Puškoriūtė, N. 2014. Stimulation and encouragement of Lithuanian small and medium-size enterprises, improving public sector services for business, *Public Policy and Administration* 13(1): 137–148.
- Gromov, J. N. 2007. Increasing the competitive ability of economics, development of human capital and modernizing state government institutions within the region through ICT 2007. Available from Internet: <<http://www.gisa.ru/40397.html>>
- Integrity review of Italy. Reinforcing public sector integrity, restoring trust for sustainable growth. 2013. OECD. Available from Internet: <http://books.google.lt/books?id=ybPxAAAAQBAJ&pg=PA54&lpg=PA54&dq=function+review+in+public+sector&source=bl&ots=yqyCcnSOop&sig=0OCLpm813ZwRZYH1nZ8FTNOL7TM&hl=lt&sa=X&ei=Y3pwVM3bOaLIyAPi_oL4CA&ved=0CGwQ6AEwCQ#v=onepage&q=function%20review%20in%20public%20sector&f=false>
- Išoraitė, M. 2013. Motivation tools through lenses of prospective employees, *Entrepreneurship and Sustainability Issues* 1(2):116–123. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(6\)](http://dx.doi.org/10.9770/jesi.2013.1.2(6))
- Korsakienė, R.; Tvaronavičienė, M. 2014. Processes of economic development: case of Lithuanian real estate sector, *Entrepreneurship and Sustainability Issues* 1(3): 162–172 DOI: [http://dx.doi.org/10.9770/jesi.2014.1.3\(5\)](http://dx.doi.org/10.9770/jesi.2014.1.3(5))
- Lietuvos Respublikos Vyriausybės 2011 m. balandžio 20 d. nutarimas Nr. 480 Dėl Lietuvos Respublikos Vyriausybės 2002 m. birželio 6 d. nutarimo Nr. 827 Dėl strateginio planavimo metodikos patvirtinimo pakeitimo, *Valstybės žinios*, 2011 [Resolution No. 480 of April 20, 2011 of the Government of the Republic of Lithuania on modification of the resolution No. 827 of June 6, 2002 of the Government of the Republic of Lithuania on approval of the methodology for strategic planning. *Official Gazette*, 2011].
- Lietuvos Respublikos Vyriausybės 2011 m. rugpjūčio 17 d. nutarimas Nr. 968 dėl Lietuvos Respublikos Vyriausybei atskaitingų institucijų funkcijų peržiūros metodikos patvirtinimo, *Valstybės žinios*, 2011 [Resolution No. 968 of August 17, 2011 of the Government of the Republic of Lithuania on the approval of the methodology for the functional review of institutions accountable to the government. *Official Gazette*, 2011].
- Lietuvos Respublikos Vyriausybės 2012 m. spalio 10 d. nutarimas Nr. 827 Dėl strateginio planavimo metodikos patvirtinimo, *Valstybės žinios*, 2012 [Resolution No. 827 of October 10 of the Government of the Republic of Lithuania on approval of the methodology for strategic planning, *Official Gazette*, 2012].
- Lietuvos Respublikos Vyriausybės 2012 m. vasario 7 d. nutarimas Nr. 171 Dėl viešojo valdymo tobulinimo 2012–2020 programos patvirtinimo, *Valstybės žinios*, 2012 [Resolution No. 171 of February 7, 2012 of the Government of the Republic of Lithuania on the approval of the public management improvement program 2012–2020. *Official Gazette*, 2012].
- Lietuvos Respublikos Vyriausybės 2013 m. rugpjūčio 21 d. nutarimas Nr. 968 dėl Lietuvos Respublikos Vyriausybei atskaitingų institucijų funkcijų peržiūros metodikos patvirtinimo, *Valstybės žinios*, 2013 [Resolution No. 968 of August 21, 2013 of the Government of the

Republic of Lithuania on the approval of the methodology for the functional review of institutions accountable to the government, *Official Gazette*, 2013].

Lonti, Z.; Woods, M. 2007. Measuring productivity and efficiency in the public sector. Towards government at a glance: identification of core data and issues related to public sector efficiency, 16: 15-20. Available from Internet: [<http://search.oecd.org/officialdocuments/?hf=10&b=0&sl=official_documents&q=Lonti%2C+Z.!V!+Woods&s=desc\(document_lastmodifieddate\)>](http://search.oecd.org/officialdocuments/?hf=10&b=0&sl=official_documents&q=Lonti%2C+Z.!V!+Woods&s=desc(document_lastmodifieddate))

Lukashenko, O. 2009. Towards effective public administration: methodology for functional analysis. UNDP Serbia, 32 p. Available from Internet: [<http://www.undp.org.rs/index.cfm?event=public.publicationsDetails&revid=D87C2863-FAC3-51E2-DB6E2B8A5080A777>](http://www.undp.org.rs/index.cfm?event=public.publicationsDetails&revid=D87C2863-FAC3-51E2-DB6E2B8A5080A777)

Mačiulis, A.; Tvaronavičienė, M. 2013. Secure and sustainable development: Lithuania's new role in taking the Presidency of the EU, *Journal of Security and Sustainability Issues* 3(2): 5–13. DOI: [<http://dx.doi.org/10.9770/jssi.2013.3.2\(1\)>](http://dx.doi.org/10.9770/jssi.2013.3.2(1))

Manning, N.; Parison, N. 2004. Determining the structure and functions of government: program and functional reviews. World Bank, 91 p. [online], [cited on 30 September]. Available from Internet: [<http://www1.worldbank.org/publicsector/civilservice/ACSRCourse2007/Session%208/DeterminingStructureFunctions.pdf>](http://www1.worldbank.org/publicsector/civilservice/ACSRCourse2007/Session%208/DeterminingStructureFunctions.pdf).

Maslenikova, E. V. 2009. Conducting functional performance review of the state executive authorities on the level of the region. Rostov-na-Donnu [online], [cited on 30 September]. Available from Internet: [<http://www.ar.gov.ru/common/img/uploaded/functional_review.pdf>](http://www.ar.gov.ru/common/img/uploaded/functional_review.pdf).

Medvedev, A. M. 2002. Methodology of conducting functional performance review of the state executive authorities [online], [cited on 30 September]. Available from Internet: [<http://ar.economy.gov.ru/about/assistance/donors/projects_programms/metodes/?id4=662&i4=3>](http://ar.economy.gov.ru/about/assistance/donors/projects_programms/metodes/?id4=662&i4=3).

Melian-Gonzalez, A.; Batista-Canino, R. M.; Sanchez-Medina, A. 2010. Identifying and assessing valuable resources and core capabilities in public organizations, *International Review of Administrative Sciences* 76 (1): 97–114.

Modell, S. 2009. Institutional research on performance measurement and management in the public sector accounting literature: a review and assessment, *Financial Accountability & Management* 25(3): 277–303.

Nakrošis, V.; Černiūtė, R. 2010. Quality management in the Lithuanian public administration: main initiatives and their application, *Public Policy and Administration* 31: 63–76.

Nakrošis, V.; Martinaitis, Ž. 2009. The Lithuanian public sector organizations: the EU-driven expansion within the domestic arrangements of autonomy and control, *Public Policy and Administration* 29: 18–27.

Pedraja-Chaparro, F.; Salinas-Jimenez, J.; Smith, P. C. 2005. Assessing public sector efficiency: issues and methodologies, *Public Expenditure* 343–360.

Performance management in Lithuania: do we have an efficient government? 2007. Summary of research [online], [cited on 30 September]. Public Policy and Management Institute. Available from Internet: [<http://www.vpvi.lt/assets/Ataskaitos/Rezultatu-vyriausybesantrauka.pdf>](http://www.vpvi.lt/assets/Ataskaitos/Rezultatu-vyriausybesantrauka.pdf).

Petrov, V. P. 2002b. Methodology and techniques of functional review. Reform of state management: search for an efficient approach. 2002, 24–44 [online], [cited on 30 September]. Available from Internet: [<http://gov.cap.ru/home/25/fr_glava%203_rus.pdf>](http://gov.cap.ru/home/25/fr_glava%203_rus.pdf).

Petrov, V. P. 2002a. Organizing functional review. Reform of state management: search for an efficient approach, 9–15. [online], [cited on 30 September]. Available from: [<http://gov.cap.ru/home/25/fr_glava%202_rus.pdf>](http://gov.cap.ru/home/25/fr_glava%202_rus.pdf).

Prause, G.; Hunke, K. 2014. Sustainable entrepreneurship along green corridor, *Entrepreneurship and Sustainability Issues* 1(3): 124–133. DOI: [<http://dx.doi.org/10.9770/jesi.2014.1.3\(1\)>](http://dx.doi.org/10.9770/jesi.2014.1.3(1))

Caurkubule, Ž.; Rubanovskis, A. 2014. Pension system development and the sustainability of the principle of generation solidarity, *Entrepreneurship and Sustainability Issues* 1(3): 173–186. DOI: [<http://dx.doi.org/10.9770/jesi.2014.1.3\(6\)>](http://dx.doi.org/10.9770/jesi.2014.1.3(6))

Public sector modernisation: Governing for performance. October 2004. OECD. Available from: [<http://www.oecd.org/site/govgfg/39044817.pdf>](http://www.oecd.org/site/govgfg/39044817.pdf).

Raipa, A.; Jurkšienė, L. 2013. Innovativeness by modernizing public governance: comparative analysis of Baltic States and Denmark, *Economics and Management: Current Issues and Perspectives* 3(31): 22–32.

Raudeliūnienė, J.; Tvaronavičienė, M.; Dzemyda, I. 2014. Towards economic security and sustainability: key success factors of sustainable entrepreneurship in conditions of global economy, *Journal of Security and Sustainability Issues* 3(4): 71–79. DOI: [<http://dx.doi.org/10.9770/jssi.2014.3.4\(7\)>](http://dx.doi.org/10.9770/jssi.2014.3.4(7))

Recommendations for the application of the methodology for the functional review of institutions accountable to the government. 2011 [online], [cited on 30 September]. Available from Internet: [<http://www.lrv.lt/bylos/VORT/Documents/Recommendations%20for%20the%20application%20of%20the%20methodology%20for%20the%20functional%20review%20.pdf>](http://www.lrv.lt/bylos/VORT/Documents/Recommendations%20for%20the%20application%20of%20the%20methodology%20for%20the%20functional%20review%20.pdf).

Reed, P. J. 2010. Functional and management reviews in the context of economic downturn. UNDP RCPAR Workshop on functional reviews and audits in Kiev, Ukraine, 12 p.

Report of the activity of state governance improvement commission (Sunset Commission) in 2009-2012. Results and guidelines for further changes. 2012 [online], [cited on 30 September]. Available from: <http://www.lrv.lt/bylos/veikla/veiklos-ataskaitos/Saulelydzio%20ataskaita_2012%2011%2014.pdf>

Samarucha, A. V. 2008. The problem of redundant and overlapping functions of the executive bodies of state power in the region [online], [cited on September 30]. Available from: <http://www.usue.ru/files/structure/Izd/Izvestiya-UrGEU_2%2821%29_2008.pdf>

Samoška, M. 2011. The analysis of ease of doing business assessment methods, *Science – Future of Lithuania* 3(4): 82–89.

Samoška, M. 2013. Prosperity, human development and ease of doing business research analysis, *Science – Future of Lithuania* 5(1): 1–6.

Scaringelli, M.A. 2014. Are the foreign controlled firms more environmentally sustainable than domestically controlled ones?, *Journal of Security and Sustainability Issues* 4(2): 131–146. DOI: [http://dx.doi.org/10.9770/jssi.2014.4.2\(3\)](http://dx.doi.org/10.9770/jssi.2014.4.2(3))

Skačkauskienė, I.; Okunevičiūtė Neverauskienė, L.; Zabarauskaitė, R.; Andriušaitienė, D.; Tunčikienė, Ž. 2013. Socio-economic issues and assumptions for decision making in Lithuania. Vilnius: Technika, 168 p.

Šabasevičienė, V.; Grybaitė, V. 2014. Main foreign direct investment factors as precondition of sustainable entrepreneurship: evidence from Lithuania, Central and Eastern Europe, *Entrepreneurship and Sustainability Issues* 1(4): 230–238. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.4\(5\)](http://dx.doi.org/10.9770/jesi.2014.1.4(5))

Šimelytė, A.; Antanavičienė, J. 2013. Economic development and its influence on state capital structure, *Entrepreneurship and Sustainability Issues* (1): 1–9. DOI: [http://dx.doi.org/10.9770/jesi.2013.1\(1\)](http://dx.doi.org/10.9770/jesi.2013.1(1))

The report on investigating the tools of functional review and evaluation of budget programs in Lithuania and foreign countries. 2010 [online], [cited on September 30]. Available from: <<http://www.lrv.lt/bylos/VORTprojekto/Dokumentai/knyga2.pdf>>.

Tunčikienė, Ž.; Korsakienė, R. 2014. Sustainable development of public institutions: The model of functional review, *Journal of Security and Sustainability Issues* 4(2): 187–195. DOI: [http://dx.doi.org/10.9770/jssi.2014.4.2\(7\)](http://dx.doi.org/10.9770/jssi.2014.4.2(7))

Tunčikienė, Ž.; Skačkauskienė, I. 2012. The state of public sector institution strategic planning and preconditions for its improvement, *Social Sciences Studies* 4(1): 97–110.

Tunčikienė, Ž.; Skačkauskienė, I.; Grenčikova, A. 2013. Sustainable Development of Public Sector: The State and Assumptions of Improvement of Functional Review in Public Institutions, *Journal of Security and Sustainability Issues* 3(1): 11–21. DOI: [http://dx.doi.org/10.9770/jssi.2013.3.1\(2\)](http://dx.doi.org/10.9770/jssi.2013.3.1(2))

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

Tvaronavičienė, M.; Šimelytė, A.; Lace, N. 2014. Sustainable development facets: exporting industrial sectors from inside, *Journal of Security and Sustainability Issues* 3(4): 37–44. DOI: [http://dx.doi.org/10.9770/jssi.2014.3.4\(4\)](http://dx.doi.org/10.9770/jssi.2014.3.4(4))

Vasiliauskas, A. 2007. *Strateginis valdymas* [Strategic Management]. Kaunas: Technologija, 384 p.

Vasiliūnaitė, R. 2014. Sustainable development: methodological approaches toward issues, *Journal of Security and Sustainability Issues* 3(3): 69–75. DOI: [http://dx.doi.org/10.9770/jssi.2014.3.3\(6\)](http://dx.doi.org/10.9770/jssi.2014.3.3(6))

Vosylius, E.; Rakutis, V.; Tvaronavičienė, M. 2013. Economic growth, sustainable development and energy security interrelation, *Journal of Security and Sustainability Issues* 2(3): 5–14. DOI: [http://dx.doi.org/10.9770/jssi.2013.2.3\(1\)](http://dx.doi.org/10.9770/jssi.2013.2.3(1))

Wahl, M.; Prause, G. 2013. Toward understanding resources, competencies, and capabilities: business model generation approach, *Entrepreneurship and Sustainability Issues* 1(2): 67–80. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(1\)](http://dx.doi.org/10.9770/jesi.2013.1.2(1))

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HOW TO KEEP OPEN-SOURCE BASED INNOVATION APPROACHES SUSTAINABLE: A VIEW FROM THE INTELLECTUAL PROPERTY PERSPECTIVE

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Abstract. Open Source-based innovation has an exponentially increasing significance for companies seeking to improve their product portfolio without maintaining a costly research department. The abundant product-related data provided by users in virtual communities in form of comments, feedbacks, and recommendations is already today an essential source of innovation for the goods-producing, but also the tertiary sector. While these data are basically freely accessible on the web, the questions remain in how far this approach is sustainable, i.e. secure and safe also in legal terms. In fact, there are various intellectual property issues protecting the user's contribution (see e.g. copyrights, patents, utility- and design models) which are often not taken into account by companies making use of the respective data, causing an eventual infringement of protected rights and therefore the sustainability of the company's innovation policy.

Keywords: Open Source-based innovation, sustainability, user-driven design processes, virtual communities, intellectual property rights

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1. Introduction

Innovation is the key driving factor for economic growth and social wealth; but nowadays, innovation is increasingly complex, fast, inter-active and relies on connecting external and internal knowledge bases (Pavitt 1984; Chesbrough 2003; Asheim and Gertler 2005; Malerba 2005; Figurska 2014). So firms acquire knowledge from a variety of sources and actors at various spatial scales (Smith 2000; Tödtling *et al.* 2006; Figurska 2014), combining it with internal knowledge and competences through different transfer channels (Gilsing *et al.* 2011, Tvaronavičienė 2014). In open and user-driven innovation approaches the customer takes over the role of an active co-designer in the creation of value. The data provided by users in virtual communities in form of comments, feedbacks, recommendations on the web are touching various intellectual property issues, and their unauthorized use eventually infringes protected rights.

Cooper and Kaplan (1999) considered life-cycle costs of products according to their phases and differentiated between committed costs and costs incidence. In a more recent paper Specht *et al.* (2002) were able to give a more detailed view of committed and realized success dimensions of products during their life cycle. The considered success dimension were costs, quality, time lines, flexibility and differentiation and the phases of life-cycle

consisted of product development, procurement, production, sales and distribution, usage and MRO, and finally return. Both scholars see the highest part of the committed costs in the product and process planning and design phase with up to 80%. Improvements and innovation in product and process development phase significantly contribute to company success and profit.

Traditionally, innovation management and product development were driven by internal company forces, but in recent times more and more companies are using open innovation approaches to improve their products. In a survey comprising 2840 large companies in the USA and Europe Chesbrough and Brunswicker (2013) conducted a large sample survey about open innovation in large firms with an annual sale exceeding US\$ 250 million. The survey revealed that 78% of the large firms are practicing open innovation – and this more intensively than three years ago. Customer co-creation, informal networking, and university grants were the three leading practices in 2011 whereas crowdsourcing and open innovation intermediary services enjoyed the lowest rates of importance. The typical large firm in the survey spent in 2011 US\$ 2 million on open innovation which is equivalent to 20 company employees doing the same work.

There always has been also a focus on consumers as valuable knowledge sources since future buyers could best judge what would lead to commercial success and what not (Jaworski and Kohli 1993). Hence, more and more firms engaged in customer involvement for new product ideas which would easily be implemented and highly appreciated by customers (Kristensson *et al.* 2004). Originally, user innovators were defined as those individuals who develop new products and services based on their own perceived needs without the assistance and involvement of producers (von Hippel, 1988). In his recent research, von Hippel introduces some measures to quantify the importance of users in the innovation process and suggests that billions of dollars are spent annually by users to improve products and make them better suited to their needs (von Hippel *et al.* 2011; 2012). With respect to scale, von Hippel's surveys found that millions of users collectively spend billions of dollars every year on developing and modifying consumer products.

Since valuable consumer-related knowledge is widely dispersed, recent solutions for the integration of large numbers of consumers into the innovation process are mainly based on information technology (Web 2.0). These online communities contribute to company's profit, and related topics like the protection of intellectual property rights (IPRs) and the participation of user innovators in additionally generated company profits have recently been a major issue in the field of employee's inventions and non-affiliated private innovation contributions of any kind. Most the abundant product-related data provided by users in virtual communities, appearing in form of comments, feedbacks or recommendations, are basically freely accessible on the web, although the "authors" of these innovations generally have various protected intellectual property rights. Unfortunately these IPR issues are often not taken into account by companies making use of the respective data, causing an eventual infringement of IP rights.

2. Literature review

Since innovation becomes more and more complex, fast, interactive, companies acquire knowledge from a variety of different sources and actors, and combining these with internal, external and localized knowledge and expertise is crucial for competitiveness, as innovation processes in the interplay between local and complementary global knowledge (Porter 2000; Chesbrough 2003; Gertler and Levitte 2005; Boschma and Ter Wal 2007). Despite the multitude of insights into technology transfer, remarkably little is known about how transfer processes are shaped by the underlying industry and its technical regimes (Breschi *et al.* 2000; Marsili 2001; Gilsing *et al.* 2011). Young and Tilley (2006: 402) as well as Cohen and Winn (2007: 35) are stressing the efficiency and effectiveness in an inter-generational economic consideration for the future to characterize sustainable entrepreneurship, i.e. sustainable entrepreneurship is in line with entrepreneurs heading for profit and improving environmental sustainability and social conditions so that the long-term economic and business consequences of new venture opportunities become the central issue. Unfortunately the current discussions and concepts about sustainable entrepreneurship are oriented on larger companies than on the SME sector so that Gerlach (2003) proposes three strategies to implement sustainable entrepreneurship concepts based on sufficiency, efficiency and consistency. User-driven innovation in form of online communities can be considered, by following Bartl (2008), as an open

innovation approach, which underscores the way of going beyond the corporate boundaries, i.e. an active strategic deployment of environmental clout or external factors of influence to increase its own innovation potential. Crucial determinants of such concepts are the shift from an industrial society to a network-based knowledge and communication society.

Additionally, open innovation encompasses such manifestations as to be open for the knowledge of the other, generation of the knowledge as a joint action as well as the share of the knowledge with the other. Besides, an important role for the phenomenon of open innovations plays the customer. In the course of innovation management, a new role model of the customer was generated when developing new products or offering new services, opening a new field of management (Gibbert *et al.* 2002). In this sense, open innovation emerges also when the customer is involved into the process of generation. Therefore, it is vital to adapt to customer's needs and requirements as well as wishes in the customer goods markets. Furthermore, it is essential to integrate the customer into the entrepreneurship innovation-related activities as a new external knowledge and ideas source (Bartl 2008: 3-4). Zhao (2005) confirmed that entrepreneurship and innovation are positively related to each other and interact to help an organization to flourish, i.e. entrepreneurship and innovation are complementary, and a combination of the two is vital to organizational success and sustainability. He also pointed out that the organizational culture and the management style are crucial factors affecting the development of entrepreneurial and innovation behavior in organizations. Comparing user-driven innovation with other innovation models, the private-collective innovation model (Gächter *et al.* 2010) has been analyzed and juxtaposed against the private investment model. Taking a legal perspective on user-driven innovation, the research for this paper focused on employee's invention law, protecting the non-profitting inventor in a very similar way (Bales 2013), and took the regulation of the issue as developed by German law (Schwab 2014) as model regulation for user driven innovation.

User communities in innovation have been mainly investigated with a focus on new product development. Prandelli *et al.* (2008) analyzed and developed a classification system for new product development (NPD) of user communities, which also considered the start of the life-cycle supply chain, i.e. the development of new products. In order to cover the full life-cycle oriented supply chain by user driven innovations it is necessary to look for different portals of user communities. After product development the next stage in product life-cycle is related to production or operation. The dominating questions in recent manufacturing are related to how to tackle mass customization and how to construct and integrate performant supply chains (Simchi-Levi *et al.* 2010; Heizer and Render 2013). In both cases the postponement concept describes the crucial question, i.e. where exists the freezing or postponement point between the push and the pull part in the supply chain (Boone *et al.* 2007). The benefits of the involvement of user innovation communities for companies can be estimated from the life-cycle supply chain model of Cooper and Kaplan (1999) in a more detailed way from Specht *et al.* (2002). Both authors estimate the committed costs for product and process development and design phase up to 80%. But Specht *et al.* (2002) not only restrict their view on costing and product development; they consider all success dimensions in different life-cycle phases for the product like quality and product differentiation. These figures have to be balanced with the tentative IPR costs for user innovation involvement.

3. Method

The research process described in the paper has pursued a manifold research path, whereby diverse research methods have been combined with the respective research approach and research tool. Five techniques were employed in exploring the objectives of the present paper:

- Research types: analytical, qualitative, historical, empirical, practice-based
- Research approach: qualitative
- Research methods: descriptive and qualitative – case studies, semi-structured interviews, expert assessments and observations
- Research scope: different research activities in 2013 and 2014.

The reasoning behind the selection of the following techniques in the research process is elaborated in the following.

Regarding the research types, the paper has chosen analytical, qualitative, empirical and practice-based way, since during the research process the facts and empirical evidence gathered were appropriately analyzed and subject to a critical assessment. The core of the research process is the qualitative research approach. Important insight views were given in qualitative expert interviews and the analysis of case studies (Prause and Thurner 2014).

4. IPR protection schemes in open and user-driven innovation

From an IPR point of view, user-driven innovation can be differentiated on base of the nature of the innovation target:

Either innovators contribute privately and voluntarily to a public good, i.e. to a good or product which is freely available on the market. This model, known as “*private-collective innovation*” (von Hippel and Krogh 2003), is applied for instance often in the IT branch to develop and maintain open source software; well-known examples are Linux or Firefox. The model contrasts with the (traditional) private-investment model, where innovation is generated exclusively by the company itself, which – in return – has to amortize its prior investments via granting licenses to users. It therefore is bound to protect the achieved innovations, e.g. via licensable IP rights. In private-collective innovation, the privately generated innovation is not regarded as an “investment”, but rather as a voluntary contribution to a common good, making the innovator waive any copyright and further IP rights as soon as the innovation has been shared with others (Lerner and Tirole 2002a; b).

But not only the individual innovator refrains from his rights, also firms waive their IPRs extensively, realizing that making their technical state-of-the-art freely available to the public generates a much higher return in terms of innovation than the private-investment model (Henkel *et al.* 2013). Although innovators “invest” considerably time, energy, knowledge and other resources without any expectancy of financial gratification, the private-collective innovation model proved to be very successful in practice (Gächter *et al.* 2010) and gave grounds to extensive research recently, especially concerning the contributor’s intrinsic motivation for their free commitment (see e.g. Alexy and Reitzig 2013).

From a legal point of view, there is little demand for a balance of interest to be achieved by instruments of intellectual property law, as the free use of otherwise protected rights form the essence of the “Open Source Scene’s Spirit”: All parties involved in open source innovation are aware that they – expressly or impliedly – waive their respective IP rights, driven by the awareness that they jointly improve a “common good”. But not all open or user-induced innovations contribute to public goods. The innovation beneficiary more and more often happens to be a private and profit-oriented company, making the private user providing innovation not any more to a public good, but to private assets of that company – e.g. sport sailors disclosing improvements they made to sailing equipment on the sailing equipment’s company’s homepage. The value generated by this innovation is not any more freely available on the market, but has to be purchased by each sailor (or other kind of customer) individually.

Form a legal point of view, the exchange of interest in this situation not as balanced as in the Open Source Scene, and correction measures imposed by law may be required. As these contributions are of immaterial character, these correction measures – in other words forms of legal protection – must be sought among the existing intellectual property protection schemes. A central instrument aiming at the protection of technical improvement is the patent, either in form of national or international/European patents. A patent is basically the right to exclude competitors from the usage of an invention and is effected only upon registration, which will be granted upon application by national or international/European patent offices if evidence has been provided for following criteria: There must be a patentable subject matter (no patents will generally be granted e.g. on alterations of the human body), the invention must be novel – i.e. non-existent so far world-wide –, the invention must be non-obvious (in U.S. law) or must involve an inventive step (in European law), and the invention must be useful for a concrete purpose. A granted patent is a strong and effective right, granting the patent-holder a broad range of rights ranging from monetary compensation for past infringements to injunctions against future infringements – although its role in innovation has recently been a controversial issue, as it is sometimes claimed that innovation virtually cannot be harmed more than by the exclusion of others from knowledge (Hall 2014: 26).

In fact, every user-generated innovation communicated via virtual communities could generally be patented by the user, if the innovation fulfils the above-mentioned criteria. Returning to the sport sailor's example, the sailor's suggestion to improve e.g. the rope winch for a sailing boat is generally a patentable subject matter, which is – eventually – novel, non-obvious/involving an inventive step and it is quite probably useful as well. In other words, the sport sailor could hand in the same description of this rope winch improvement which he put online at the virtual community (or sailing equipment company's homepage) at his regional – or, if he is seeking for international exclusion rights, at an international – patent office, as far as he extended/supplemented it respectively (the description must meet the formal criteria of the patent office) and is ready to pay the respective fees.

Still, the mere ability to patent an invention does not grant yet a comprehensively protected right: The invention itself – even if communicated to the public – is not yet property-like protected and also does not deserve yet protection, as there is no form of intellectual property in mere ideas (Tönnies 2013). The inventor will have the exclusive right to use his invention (or to, practically just as important, grant a license to third parties for that patent) once the patent has been granted successfully. There is a certain debate about the protection of patent applicants between the time of submission of the application to the patent office and the final grant of the patent – which may take years –, as in this case the applicant has already demonstrated to the public that he requests a comprehensive exclusion right in (hopefully) near future; so far, most legal systems nevertheless would grant a mere compensation to be paid by the infringer to the applicant instead of the full range of patent defense rights mentioned above (see e.g. for German law Pahlow 2008).

5. Findings: Low IPR protection level

Returning to the typical situation in which user communicate their inventions online, on first sight the protection of users by these classical IPR protection mechanisms seems far-fetched, as in case of the average user, even this basic step of an application has not been reached yet (and is also not endeavored by him). Before application, there is generally no active right on base of which the inventor may prevent the usage of his patent by others: The sport sailor may, e.g., not seek a court injunction against the sailing equipment company which produced an improved rope winch modelled after the sailor's descriptions on a virtual community or the company's website. Patent law in so far does not directly protect the user's invention from the "exploitation" of the invention by private companies.

If the rope winch did not involve an essential inventive step, but merely a minor improvement, many States provide protection for these improvements in forms of the protection as a utility model, which can be seen as a "small patent". The procedure to protection a technical improvement in form of a utility model is generally comparable to the patent procedure, but requires less costs, fees and conditions – while respectively the scope of protection will be considerably smaller as well. But also here, protection as a utility model will again be only effected after successful grant of the registration as a utility model, and as users generally will not have applied for this kind of protection either, their legal position remains generally defenseless in this context.

In conclusion, a user communicating an invention online does not have the right to prevent other persons to make use of his improvement. But the situation changes if the private company seeks protection of its legal position from the usage of that improvement against other third persons: The sailing equipment company may eventually intend to hand in itself a patent for that rope winch development by that sport sailor, based on the descriptions put on the internet by the sport sailor.

6. Implications: A new approach for protecting innovating users

When the sailing equipment company will hand in a respective application for a patent or a utility model at the competent office, the office will check – among other conditions – the novelty of the invention/improvement. If the company did not even disclose itself the origin of the invention, a thorough research by the office may reveal the sport sailor as inventor, who, in this case, also made his invention publically available – depriving it from its novelty. Although details are controversial in national patent law systems (they essentially differ whether they

provide a grace period for filing an invention – e.g. U.S. law – or follow a “file first, publish later doctrine – e.g. Germany; Klett 2008: 4), the lack of novelty will considerably weaken the company’s legal position: Depending on the respective legal regime (national or international law, depending on the function of the patent/utility model office), the sport sailor could file a notice of opposition within a special opposition period (e.g. nine months for a European patent, three months for a German patent; for background see Klett 2008: 12).

But also if no notice of opposition was filed/the office did not find the actual source of the invention and the patent was successfully granted to the company, the company remains endangered that the user will later hand in an action for nullification of the patent, as the conditions for its grant had not been met: If the patent holder was not entitled to hold the patent, the patent will be revoked – e.g. European patents acc. to art. 139 European Patent Convention (for European patents), national patents according to respective national patent acts (for e.g. German law acc. to act. 81 Patent act).

In other words: If a company endeavors a sustainable exploitation of a patent or a utility design – and the more useful the invention is, the more probable this endeavor will be –, it has in some way to cooperate with the author of the innovation. Otherwise, it will run the constant risk of a later revocation of the patent – or, although less likely, the application for a respective patent by the inventor itself, which then would exclude the company also from the further usage of the invention in its products. Although therefore a clear demand for the regulation of these forms of cooperation exists, the legal protection of user’s interest in the context of user-driven innovation has not yet been settled. Still, there is a similar constellation of interests which already has been regulated in detail by law: Just as in user-driven innovation, an employee not holding any personal shares in the profit of a company generates innovation through suggesting improvements he or she invented through the daily use of products or application of production procedures, which lead to the improvement of these products and procedures and increase the profit of the producing company. These employee’s inventions constitute e.g. in Germany about 80 % of all inventions (Schwab 2014) and have therefore been subject to various acts and statutes.

In fact, employee’s inventions may either be owned by employees even if they were created during work, providing to the employer the chance to acquire the invention either by express assignment, by implication if the employee’s task included to (eventually) create inventions, or through the “shop-right”-model, if the invention was created during work-time and under use of working equipment provided the employer (Bales 2013), basically having the effect that the inventing employee originally owns the invention, but has to grant the employer the right to acquire the invention, i.e. to apply for a patent in the employer’s own name, but based on the employee’s invention. In those countries which apply the shop-right-doctrine – among them Germany, expressed in its Arbeitnehmererfindungsgesetz (ArbNErfG, act on employees’ inventions) – this right includes the employee’s duty to give notice to the employer about any eventual invention made (see e.g. sec. 5 ArbNErfG) and “offer” it to his employer, after which – after a respective reform of the German employees’ invention law – the acceptance of the employer is assumed he does not refuse to make use of the invention on behalf of the company within four months (e.g. sec. 6, 7 ArbNErfG). Does he decide to make use of the invention, the employee is in return entitled to a respective monetary gratification (art. 9-12 ArbNErfG), whose calculation – due to the broad variety of inventions and their eventual economic significance – is a true challenge in practice; the expected profit arising from the invention, the tasks and the position of the employee in the company as well as the company’s proper contribution to the invention have to be taken into account (Schwab 2014).

This regulation provides at least a general approach of how interests of inventor and a non-identical patent holder (here the employer) in the situation of “employee-driven innovation” can be balanced. It may be argued that this model cannot be applied directly on the situation of user-driven innovation, as there is an essential difference: While the inventing employee and his employer are bound by a joint employment contract, there is no contractual relationship between the user providing innovative improvements in a virtual community and the innovation-exploiting company. The central element of the employees’-invention-regulation is the company’s right to “shop” the (until then foreign) invention, which is directly based on the underlying work- or service contract with the employee. Also the duty to disclose any invention to the company derives directly from the contract employee-employer and cannot be imposed on any classical user in user-driven-innovation situations.

But there is another element in employee's invention law which does not arise from contractual relationships, but serves exclusively that balance of interest also envisaged in user driven innovation: The gratification paid to the employee distributes a respective share of the profit made by the company expected on base of the new patent, and as diverge national regulations of these gratifications may be in practice: The duty to pay a respective gratification – including its calculation methods – can be respectively applied to the favor of users in user-driven innovation as well, rendering the company's approach sustainable. As the user does often not know which company may exploit his invention in future – and as there would not be any duty to inform anybody about eventual inventions for users anyway – the information duties would be reversed, i.e. the interested company would be obliged to disclose its intention to patent the invention to its respective author (as far as possible). If the author does not react within a period of time still to be determined, his consent would be assumed – leaving untouched his claim for gratification, if he only finds out about the patent later.

Conclusions

The way technical innovation is generated in companies has essentially changed in recent years, and the trend has just started: No internal research department of any company has the resources to compete with the “wisdom of the crowd” provided by millions of private product users every day – in real time, based in real experiences, and – so far – at no costs. User provide these services to company as the “Open Source Spirit” – which is based on an informal understanding of mutual benefit of all actors involved, leaving any claims for monetary compensation aside – is still alive in the internet community, and as many users do not realize that their improvements disclosed on the web have indeed an – eventually considerably high – market value at all.

The estimation of the benefits of user innovation communities for companies is manifold comprising sustainability aspects due to stronger user orientation in product development as well as significant cost aspects as Cooper and Kaplan and Specht at al. pointed out due to their analysis of all success dimensions and all phases of the life-cycle supply chain of a product. Consequently the large potentials in the usage of innovations from user communities have to be kept in mind when it comes to the evaluation of related tentative IPR payments to users.

While the exploitation of this knowledge is at present basically free for private companies and therefore is becoming more and more essential in the firms' scheme (partly even replacing classical R&D-departments), the Open Source Spirit will sooner or later fade, as users will realize that there is not much of a mutual benefit left if their inventive contributions do not serve a public good, but the profit of private companies.

This does not mean that the trend to even more user-driven innovation should be stopped or even reverted – on the opposite, the abundant resource of user's experiences should even be explored further, and the communication between users and private companies should further be intensified. But there should be a legal framework for these considerable transfers of value, providing sustainability and a minimum of balance of interests of both users and companies. This framework is so far lacking in virtually most legal systems, as the dogmatically closest legal mechanism – employee's invention law – cannot be directly applied on user driven innovation due to the lack of any legal relationship between the innovating user and the exploiting company. Still, there is one element in employee's invention law, which is not based on a contract between both parties – the duty to pay a respective gratification to the inventor. This duty should be imposed respectively on companies exploiting user-driven innovation – at least as far they want exclusively exploit the innovation on base of a patent or a utility model.

References

- Alexy, O.; Reitzig, M. 2013. Private-collective innovation, competition, and firm's counterintuitive appropriation strategies, *Research Policy* 42: 895–913.
- Asheim, B.; Gertler, M. 2005. The geography of innovation, *The Oxford handbook of innovation*, 291–317.
- Bales, R. 2013. US Employment Law perspectives on the issue of who owns an employee's invention in Pittard, M.; Modotti, A.; Danns, Y (Eds.). *Business innovation and the Law*. Elgar, 191–2134.

- Bartl, M. 2008. White Paper: Open Innovation! Available on the Internet: <http://hyve.de/cms/upload/f_1599_WhitePaper_OpenInnovation.pdf>. [Accessed 15 Jun 2014]
- Boone, C.; Craighead, C.; Hanna, J. 2008. Postponement. An Evolving Supply Chain Concept, *International Journal of Physical Distribution & Logistics Management* 37(8): 594–611.
- Boschma, R.A.; Ter Wal, A.L.J. 2007. Knowledge networks and innovative performance in an industrial district: The case of a footwear district in the South of Italy, *Industry and Innovation* 14(2): 177–199.
- Breschi, S.; Malerba, F.; Orsenigo, L. 2000. Technological regimes and Schumpeterian patterns of innovation, *The Economic Journal* 110 (463): 388–410.
- Chesbrough, H. 2003. *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business School Press.
- Chesbrough, H.; Brunswicker, S.; 2013. *Managing Open Innovation in large Firms*. Fraunhofer Gesellschaft, Stuttgart.
- Cohen, B.; Winn, M. I. 2007. Market imperfections, opportunity, and sustainable entrepreneurship, *Journal of Business Venturing* 22(1): 29–49.
- Cooper, R.; Kaplan, R. 1999. *Design of Cost Management Systems*. 2nd ed. Upper Saddle River, NJ: Prentice Hall.
- Figurska, I. 2014. Sustainable entrepreneurship: localization, acquiring and use of knowledge sources in competitive organization, *Entrepreneurship and Sustainability Issues* 1(4): 210–222. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.4\(3\)](http://dx.doi.org/10.9770/jesi.2014.1.4(3))
- Gächter, S.; von Krogh, G.; Haeflinger, S. 2010. Initiating private-collective innovation: The fragility of knowledge sharing, *Research Policy* 39: 893–906.
- Gerlach, A. 2003. Sustainable entrepreneurship and innovation, in University of Leeds, *The 2003 Corporate Social Responsibility and Environmental Management Conference*, 30 June - 1 July 2003, Leeds: UK, 101–110.
- Gertler, M.S.; Levitte, Y.M. 2005. Local nodes in global networks: The geography of knowledge flows in biotechnology innovation, *Industry and Innovation* 12(4): 487–507.
- Gibbert, M.; Leibold, M.; Gilbert, P. 2002. Five styles of Customer Knowledge Management, and how smart companies use them to create value, *European Management Journal* 20(5): 459–469.
- Gilsing, V.; Bekkers, R.; Bodas Freitas, I.; van der Steen, M. 2011. Differences in technology transfer between science-based and development-based industries: Transfer mechanisms and barriers, *Technovation* 31: 638–647.
- Hall, B. 2014. Does patent help or hinder technology transfer? in Ahn, S. (Ed.). *Intellectual property for economic development*. Elgar, 11–32.
- Heizer, J.; Render, B. 2013. *Operations Management*. Pearson.
- Henkel, J.; Schöberl, S.; Alexy, O. 2013. The emergence of openness: How and why firms adopt selective revealing in open innovation, *Research Policy* 43(5): 879–890.
- Jaworski, B.; Kohli, A.K. 1993. Market orientation: Antecedents and consequences, *Journal of Marketing* 57: 53–70.
- Klett, A.; Sonntag, M.; Wilske, S. 2008. *Intellectual Property Law in Germany*. Beck Munich.
- Kristensson, P.; Gustafsson, A.; Archer, T. 2004. Harnessing the creative potential among users, *Journal of Product Innovation Management* 21: 4–14.
- Lerner, J.; Tirole, J. 2002a. The simple economics of open source, *The Journal of Industrial Economics* 50(2): 197–234.
- Lerner, J.; Tirole, J. 2002b. Some simple economics of open source, *Journal of Law, Economics, and Organization* 21(1): 20–56.
- Malerba, F. 2005. Sectoral systems of innovation: a framework for linking innovation to the knowledge base, structure and dynamics of sectors, *Economics of Innovation and New Technologies* 14(1-2): 63–83.
- Marsili, O. 2001. *The Anatomy and Evolution of Industries: Technical Change and Industrial Dynamics*. Edward Elgar Publishing Ltd., Cheltenham.

- Pahlow, L. 2008. Erfindungsschutz vor Patenterteilung [Invention patent protection]. *Gewerblicher Rechtsschutz und Urheberrecht (GRUR)*, 97–103.
- Pavitt, K. 1984. Sectoral patterns of technical change: towards a taxonomy and a theory, *Research Policy* 13: 343–373.
- Porter, M. 2000. Location, Competition and Economic Development: Local Networks in a Global Economy, *Economic Development Quarterly* 14(1): 15–34.
- Prandelli, E.; Sawhney, M.; Verona, G. 2008. *Collaboration with customers to innovate: Conceiving and marketing products in the network age*. Cheltenham.
- Prause, G.; Thurner, T. 2014. User Communities – Drivers for Open Innovation, *Foresight - Russia* 8(1): 24–32.
- Schwab, B. 2014. Der Arbeitnehmer als Erfinder [The employee as an inventor], *NZA-RR*, 281–287.
- Simchi-Levi, P.; Kaminsky, D.; Simchi-Levi, E. 2010. *Designing and Managing the Supply Chain*. 3rd edition, McGraw-Hill.
- Smith, K. 2000. Innovation as a systemic phenomenon: rethinking the role of policy, *Enterprise and Innovation Management Studies* 1(1): 73–102.
- Specht, G.; Beckmann, G.; Almelingmeyer, J. 2002. F&E Management: *Kompetenz im Innovationsmanagement* [R & D Management: Competence in Innovation Management]. 2nd edition, Stuttgart.
- Tödtling, F.; Lehner, P.; Tripl, M. 2006. Innovation in knowledge intensive industries: The nature and geography of knowledge links, *European Planning Studies* 14 (8): 1035–1058.
- Tönnies, J. 2013. *Erfindungen – ein Kollektivgut oder die Gedanken sind frei* [Inventions - a thoughts are free], *Gewerblicher Rechtsschutz und Urheberrecht (GRUR)*, 796–798.
- Tvaronavičienė, M. 2014. If industrial sector development is sustainable: Lithuania compared to the EU, *Entrepreneurship and Sustainability Issues* 1(3):134–142. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.3\(2\)](http://dx.doi.org/10.9770/jesi.2014.1.3(2))
- von Hippel, E.; de Jong, J.P.J.; Flowers, S. 2012. Comparing business and household sector innovation in consumer products: Findings from a representative study in the United Kingdom, *Management Science* 58(9): 1669–1681.
- von Hippel, E. ; Ogawa, S. ; de Jong, J.P.J. 2011. The age of the consumer-innovator, *MIT Sloan Management Review* 53(1): 27–35.
- von Hippel, E. 1988. Lead user analysis for the development of new industrial products, *Management Science* 34(5): 569–582.
- von Hippel, E.; von Krogh, G. 2003. Open Source Software and the 'Private-Collective' Innovation Model: Issues for Organization Science, *Organization Science* 14: 209–223.
- Young, W.; Tilley, F. 2006. Can business move beyond efficiency? The shift toward efficiency and equity in the corporate sustainability debate, *Business Strategy and the Environment* 15(6): 402–415.
- Zhao, F. 2005. Exploring the synergy between entrepreneurship and innovation, *International Journal of Entrepreneurial Behaviour & Research* 11(1): 25–41.

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**INSTITUTIONAL THEORY PERSPECTIVE AND INTERNATIONALIZATION OF FIRMS. HOW
INSTITUTIONAL CONTEXT INFLUENCES INTERNATIONALIZATION OF SMES?¹**

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Abstract. Institutional context significantly impacts international behaviour of firms by facilitating or restricting internationalization processes. The application of institutional theory in business management field has led to the discussions how formal and informal constraints influence human behaviour and what relationships are observed between institutions and organisations. The authors of the paper aim to address the following questions: 1) how institutional theory perspective contributes to the explanation of firms' internationalization and 2) how institutional context impacts entry direction and speed of internationalization. The paper is based on comprehensive reviews of extant studies. The recommendations for future investigations are developed at the end of the paper.

Keywords: institutions, institutional theory, internationalization, SMEs, entry directions, entry speed

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JEL Classifications: M10, M13, M19

1. Introduction

Small and medium size enterprises (SMEs) play an important role throughout all the European Union and contribute to economies by revenue generation and employment. Limitations of domestic markets and constant competition among firms encourage entrepreneurs seek opportunities abroad. Internationalization of firms is seen as a significant measure of competitive performance (Sousa *et al.* 2008) and contributes to economies of scale and scope, manufacturing efficiencies, access to foreign technological, marketing and management know-how (Korsakienė, Baranauskienė 2011; Korsakienė, Tvaronavičienė 2012; Korsakienė 2013; Korsakienė *et al.* 2014).

Majority of governments have undertaken considerable efforts aiming to establish and develop favourable institutional infrastructure (Ketkar, Acs 2012). Institutional context significantly impacts international behaviour of firms by facilitating or restricting internationalization processes. Hence, regulatory, normative and cultural-

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cognitive dimensions of institutions have attracted significant attention of researchers from various fields such as: sociology, economics, and political sciences. The authors of the paper aim to address the following questions: 1) how institutional theory perspective contributes to the explanation of firms' internationalization and 2) how institutional context impacts entry direction and speed of internationalization. Not going deep in prevailing discussions, the authors of the paper adopt the view that internationalization is the expansion of firm's operations to foreign markets.

The remainder of the paper is organized as follows. In section 1 the origins of institutional theory are investigated. In section 2 theoretical considerations of institutional theory in the context of multinational companies are discussed. In section 3 the role of institutional theory in the studies of SMEs is disclosed. The section 4 discusses the influence of institutional context on the directions of internationalization. The section 5 reveals how institutional context influence speed of internationalization. The final part concludes. The research is based on analysis and synthesis of scientific literature.

2. The origins of institutional theory

Institutional theory of organisations focuses on the central question why all organisations in the field tend to look and act the same (Miles 2012). Notably, institutional theory stems from sociology, economics and political sciences. The proponents of sociological perspective have investigated legitimacy role of institutions. They assert that organisations are impacted by different normative pressures, arising from external sources and within organisation. For instance, Zucker (1987) state that institutionalization of organisations reflected in theory shares two elements: 1) a rule-like, social fact quality of an organized pattern of action (exterior) and 2) an embedding in formal structures, such as formal aspects of organisations that are not tied to particular actors or situations (non-personal/objective). The normative pressures lead the organisations to be guided by legitimated elements and adoption of these elements increases the probability of survivor. Hence, Zucker (1987) has focused on three sources of institutionalization namely, the wider institutional environment, other organisations and internal organisational structure. Taking into consideration the view adopted by sociologists the conclusion can be drawn that institutional features of external environment of organisations influence both goals and means of actors. Hence, the role of institutional actors has attracted attention of researchers, namely: the state and professional bodies (Scott 1987). Later on the investigations have been extended focusing on regulatory, normative and cultural-cognitive dimensions of institutions (Scott 2008).

Meanwhile, the attitudes towards institutional theory from economics share the idea that institutions are the rules of the game in a society (North 1990). Notably, the proponents of economics perspective distinguished two groups of institutions: formal constraints (e.g. laws, rules, constitutions) and informal constraints (e.g. norms of behaviour, conventions, and self-imposed codes of conduct). The set of macro-level institutions influence transaction costs. Moreover, some scholars point out that the interaction of institutions and organisations shapes "the institutional evolution of an economy" (North 1994). The contributions of institutions to uncertainty diminishment in the society by a stable structure for human interaction and the role of institutions in economic performance have been investigated by different scholars. These investigations conclude that, governance structures are seen as the most critical driving force.

The scholars, representing political science, aimed to answer the question: how do institutions affect the behaviour of individuals? The investigations adopted the views similar to sociological and economics perspectives. However, the main concern of researchers is related to actions of individuals affecting political outcomes (Hall, Taylor 1996). Notably, the different streams of researches have been emerging. On the other hand, all studies aimed to answer seminal questions: how do actors behave, what do institutions do and why do institutions persist over time? Institutional theory has been applied by different researchers working in business management field what has led to a wider adoption of sociological and economics perspectives. According to Peng and Heath (1996), sociological and economics perspectives toward institutional theory share similar beliefs and complement each other. The scholars agree that institutional pressures can be divided into two broad groups of institutions, namely stemming from the macro-social environment and inter-organisational relationships. Hence, institutional researchers investigated external institutions such as rules, regulatory structures and agencies. Later on the field has been

extended to include other firms in the same industry or units within the same firm (Hessels, Terjesen 2010). Summarized different views of institutional theory are presented in Table 1.

Table 1. The comparison of different branches of institutional theory

Characteristics	Economic/political branch	Sociology/organisation theory branch
Assumptions	People make decisions based on the convenience and standardization of rules and agreements	People make decisions based on heuristics because of cognitive limitations and take action based on conventions and preconscious behaviour
Drivers of human behaviours	Rules and procedures, formal control	Social norms, shared cultures, cognitive scripts, and schemas
Relationship between institutions and organisations	External institutions create structures for organisations	Organisations adjust and conform to values and limits prescribed by a society's institutions

Source: Bruton *et al.* (2010)

Scientific investigations in business management field suggested different definitions of institutions. Not going deep into elaborated discussion, the authors of the paper adopt the approach proposed by Lawrence *et al.* (2002) stating that institutions are widely diffused practices, technologies or rules that have become entrenched in the same that it is costly to choose other practices, technologies or rules.

3. Institutional theory and MNCs

The assumptions of institutional theory have been extended by scholars focused on multinational corporations (MNCs) and aiming to investigate a wide array of issues and theorize at multiple levels of analysis. The nature of MNCs leads to diverse external environment and complex internal environment. For instance, externally MNCs are exposed to different institutional, cultural and economic environments. The fact that MNCs are facing issues related with establishment and maintenance of legitimacy in multiple host environments was acknowledged by scholars (Kostova, Zaheer 1999). Meanwhile, internally MNCs are comprised of different units operating in different external environments. The investigations carried out by Roth and Kostova (2003) confirm heterogeneity and complexity of the MNCs context being applied for both empirical and conceptual purposes. Hence, numerous streams of researches aiming to disclose different issues of MNCs have been emerging.

To date, studies of MNCs applying institutional theory can be grouped into the following groups: 1) studies focused on institutional profile/institutional distance, 2) studies focused on institutional change/transition economies, 3) studies focused on national institutional systems, 4) studies focused on institutional constraints of MNCs, 5) studies focused on diffusion, adoption and institutionalization of organisational practices across units within MNCs and across national boundaries and 6) studies focused on MNCs and host country institutional environment (Kostova *et al.* 2008). The scholars have been led by idea that the survival of organisation depends on the alignment with institutional environment and ability to comply with institutional pressures. The concepts of organisational field, legitimacy, isomorphism and mechanisms of institutional pressures have been the most cited in international management literature. However, some critics appear in scientific literature regarding too narrow view of institutional theory adopted by different researchers (Kostova *et al.* 2008). Hence, a blended institutional perspective comprising concepts of social embeddedness of organisations, the ideas of agency, social construction, power and politics have been proposed.

4. The role of institutional theory in the studies of SMEs

The activities of entrepreneurs are constrained and fostered by institutions (Bruton *et al.* 2010). For instance, entrepreneurial opportunities are limited by institutional environment impacting the size and rate of new firms. Meanwhile, availability of capital and favourable market incentives foster entrepreneurial activities. Hence, institutional theory has gained popularity among scholars concerned with entrepreneurship issues. Bruton *et al.* (2010) observed that application of institutional theory in entrepreneurship field has been growing since 1999. The

scholars acknowledge that the main contribution of neo-institutional field of research has been in the focus on the spread of various organisational practices, models and governance mechanisms. Hence, the application of institutional theory has led to three major streams of investigations: institutional setting, legitimacy and institutional entrepreneurship.

Notably, inadequate institutional environment is common for developing countries, while developed countries have more established institutional framework. The research questions have been raised how and why levels of entrepreneurship vary by country. Hence, majority of studies aimed to explain how an emerging economy entrepreneurship phenomenon differs from a mature economy (Bruton *et al.* 2008) and let the scholars to define factors hindering establishment and development of new ventures. Building on the concepts developed by institutional theory, the scholars discussed regulatory, normative and cognitive dimensions in emerging economies of China (Peng 2003), Eastern Europe (Manolova *et al.* 2008) and Russia (Aidis *et al.* 2008).

Macro-level institutional constraints widely investigated were: barriers to entry to market, export and import barriers, trade and investment policies. With respect to regulatory dimension of developing countries, referring to formal laws and regulations, the absence of effective market based institutions able to protect property rights, fair competition and financial discipline was observed (Manolova *et al.* 2008). The analysis of various studies led to the fact that ineffective formal regulatory institutions encourage entrepreneurs rely more on informal norms and seek to design alternative governance structures. Hence, normative dimension of institutions, comprising professional societies that determine roles and expectations for certain groups, play an important role, especially in developing countries. Finally, cultural-cognitive dimension of institutions, referring to accepted beliefs and values shared among individuals through social interaction, which guide behaviour, has to be taken into consideration. While scientific investigations focused on different countries identified norms facilitating and promoting entrepreneurship, some scholars observed negative societal attitudes underpinned by a distinct institutional legacy, hindering entrepreneurial rates and initiatives (Manolova *et al.* 2008).

Weak regulatory institutions lead to the higher corruption level of developing countries what might discourage to start business. Moreover, some scholars claim that formal institutions interact with informal institutions by complementing or substituting each other (North 1990). Complementarity is observed when informal institutions strengthen incentives to comply with formal rules. Meanwhile, substitution appears when informal institutions structure incentives of individuals, incompatible with formal laws. These assumptions led to the conclusions that both formal and informal institutions impact decisions of business people (Tonoyan *et al.* 2010). Hence, the need to develop more favourable social environment of developing countries is emphasized.

Recent works identified that the gap between what some large groups of society believe to be legal and what consider being legitimate exists (Webb *et al.* 2009). The term “legal” refers to the rules defined by laws and regulations, while “legitimacy” refers to the rules specified by norms, values and beliefs. Hence, informal economies falling within informal institutional boundaries but outside formal institutional boundaries have been distinguished. These economies create opportunities for entrepreneurs that are illegal but legitimate for some groups of society and let to take advantage. Notably, informal economies might be identified in both developed and developing economies.

Bruton *et al.* (2010) assert that institutional environment determines the process of gaining cognitive and moral legitimacy thus increasing survivor of SMEs. Notably, legitimation of activities is seen as the important factor aiming to secure resources and gaining support from key stakeholders. Hence, some firms are concerned with strategies letting to gain approval of certain activities from both political and general public perspective. Some scholars note, that obtaining of legitimacy for a new firm or business model in developing economies is especially complicated (Ahlstrom *et al.* 2008). Therefore, some activities of firms, such as image building, networking and developing close connections with government, appear to be the most crucial. Referring to the works of institutional theorists, the scholars outline organisational procedures, structures and personnel used in legitimation processes.

Finally, different actors aiming to encourage particular institutional arrangement have been emerging. Hence, institutional entrepreneurship has been developing as a new phenomenon in scientific literature. The main concerns of scholars have become why and under what circumstances firms are prompted to change institutionalized contexts (Greenwood, Suddaby 2006) and what challenges institutional entrepreneurs are facing (Battilana *et al.* 2009).

5. Institutions and SMEs internationalization: entry direction

Internationalization of firms is seen as an important measure of competitive performance at national as well as at regional level (Sousa *et al.* 2008). The scholars adopted the idea that internationalization of new ventures is seen as rather complex phenomena and requires integration of several perspectives. In comparison to MNCs, new firms lack resources and are faced with low level of legitimacy. While large companies are better equipped to deal with internationalization issues, small firms benefit more with advancing institutional mechanisms (Ketkar, Acs 2012). Hence, the insights adopted from studies focused on MNCs do not let us explain why SMEs internationalize. On the other hand, some scholars assert that majority of studies focused on SMEs internationalization ignore the role of external environment (e.g. home market, organisational field) (Hessels, Terjesen 2007). Hence, the investigations of various factors stemming from institutional context and contributing to internationalization of SMEs have to be discussed.

One stream of researches was focused on the link between institutional theory, entry mode choice and direction of SMEs. Hessels and Terjesen (2007) argue that factors relating to the perceptions of the home market environment are relevant in explaining SME export behaviour and export mode. The assumptions have been developed taking into consideration resource-dependence and institutional theories. Institutional theory let to suggest that the greater the pull from the global organisation field, the more likely the firm will export overseas. For instance, the investigation of Dutch SMEs led to the conclusion that institutional theory perspectives explain the decision to export, while resource dependency arguments guide the choice between direct and indirect export modes (Hessels, Terjesen 2007).

Meanwhile, the notion, that existing findings on the influence of institutions on entry mode choice are largely inconclusive prevails (Schwens *et al.* 2011). The scholars assert that the institutional context doesn't influence entry mode choice independently and institutional environment has to be analysed with other decision-making criteria investigated in scientific literature. Schwens *et al.* (2011) adopted interpretation of institutional theory as follows: socially constructed beliefs and role systems exert strong influence over organisations' structure and conduct, including internationalization. The interpretation led to the investigation of informal institutional distance and formal risk determined by institutional context. Notably, informal institutional distance is defined as the cultural and ideological differences between firm's home and host country. Meanwhile, institutional context determines formal risk, which is defined as the constraints resulting from insufficiently developed market support institutions in the host country. Putting emphasis on informal institutional distance and formal institutional risk of host country, Schwens *et al.* (2011) investigated German SMEs and found that the influence of international experience, proprietary know-how and strategic importance on SME mode choice is contingent on the institutional context of the host country.

Building on the strategy literature Yamakawa, Peng and Deeds (2008) have proposed integration of industry-based view, resource-based view and institution-based view (Figure 1). Industry-based view emphasizes the impact of industry's conditions on internationalization decisions. Resource-based view highlights firm-specific resources and capabilities impacting performance of firms. Finally, institution-based view put emphasis on formal and informal institutions impacting performance of firms. The idea that industries with high degree of competition and technology intensiveness influence internationalization of firms has been proposed. Considering resource-based view, the firms focus on learning, aim to establish alliances and leverage social capital and entrepreneurial orientation. Finally, regulative, normative and cognitive forces both at home and abroad impact internationalization.

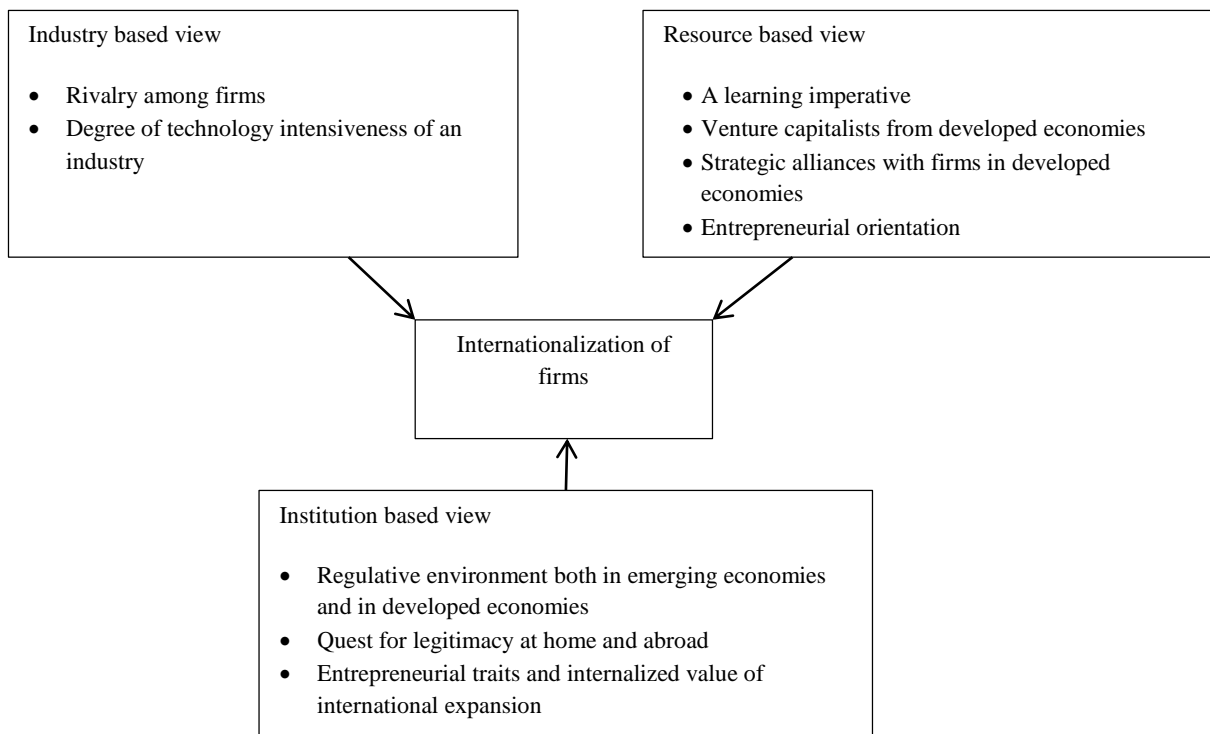


Fig.1. Three perspectives

Source: Yamakawa *et al.* 2008

Yamakawa *et al.* (2008) were concerned with directions of SMEs internationalization. Specifically, the interest was focused on SMEs based in emerging economies and moving to developed economies. Industry-based view led to the conclusion that internationalization of SMEs from emerging economies to developed economies is beneficial due to 1) enhanced learning opportunities, 2) lower level of institutional and country risk and 3) greater market potential (Yamakawa *et al.* 2008). On the other hand, new ventures are motivated to internationalize by a high degree of competition in a domestic industry. The explanation resides in the fact that developed economies are related to lower competitive, expropriation and corruption risk than emerging economies. Ultimately, firms aim to replicate each other's strategic decisions under competitive pressure. Notably, the level of technological intensity is seen as a key driving force fostering new firms to expand abroad. Firms from high technology industries are forced to move on bigger markets aiming to justify investments on products or services. Meanwhile, firms from low technology industries may have little incentive to internationalize via foreign direct investments.

The adoption of resource-based view led to the explanation of the main internationalization benefits, namely: 1) organizational learning via foreign direct investments, 2) overcoming resource and capabilities deficiencies and 3) leveraging entrepreneurial orientation (Yamakawa *et al.* 2008). Firms moving from emerging economies to developed economies put emphasis on “exploration” of new opportunities rather on “exploitation” of existing advantage. In addition, resource and capabilities deficiencies might be overcome by venture capital and strategic alliances. Notably, venture capital firms facilitate investments of SMEs in developed economies. Meanwhile, strategic alliances let firms to lower risk of internationalization. Scholars argue that internationalization is a certain act of entrepreneurship (Zahra *et al.* 2000). Hence, a high level of entrepreneurial orientation defined by autonomy, innovativeness, risk-taking, aggressiveness and proactiveness motivates international expansion of SMEs. Regulatory environment of some emerging economies (e.g. China and Vietnam) could be described as discriminating new ventures (Yamakawa *et al.* 2008). Hence, “push” factors such as harsh regulation and “pull” factors such as more friendly institutional environment let us explain SMEs internationalization, aiming to overcome financial barriers established in home countries. On the other hand, the differences in regulatory regimes can determine the lack (or extent) of institutional support for international activities (Kiss, Danis 2008). Hence, we can predict that countries with high level of institutional development provide higher support, while countries

with low level of institutional development provide lower support. The explanation resides in well-developed banking systems, strong public equity markets and established venture capital industries, distinguishing developed and developing countries. Notably, internationalization from emerging economies to developed economies let firms to establish legitimacy in their home markets. Home country governments, investors and consumers get appropriate signals, what lead to the fact that internationalized firms receive higher recognition from government than non-internationalized firms (Yamakawa *et al.* 2008). Meanwhile, other scholars assert that normative dimension determines the extent to which entrepreneurs value international activities. Hence, the proposition that less developed countries lack international experience and thus strong normative values supporting internationalization has been suggested (Kiss, Danis 2008). Above provided discussion let us compare main drivers of internationalization as well as the role of institutions. Notably, two groups of firms are distinguished: 1) expanding from emerging to developed countries and 2) expanding from developed to emerging countries. On the contrary to the firms from emerging markets, we can predict that SMEs from developed countries are richer in resources and capabilities and are supported by institutional context at home country (Table 2). Meanwhile, SMEs from emerging markets are more vulnerable due to weaker institutional support. Thus, relationships between institutions and SMEs are different what lead to different drivers of internationalization.

Table 2. Main drivers of internationalization of SMEs and role of institutions

	Internationalization from emerging to developed countries	Internationalization from developed to emerging countries
Drivers	Learning opportunities, lower level of institutional and country risk, greater market potential, the aim to overcome resource and capabilities deficiencies, leveraging entrepreneurial orientation	Cheaper production opportunities, possibility to expand sales for products or services, to realize additional production capacity, to avoid strict regulation in home country
Relationship between institutions and SMEs	SMEs are seeking to compensate weakness of institutional environment in emerging countries (e.g. in terms of capital, labor and product markets) and increase their legitimacy in home country.	SMEs are aiming to exploit support of institutional environment in developed countries (e.g. well-developed banking systems, strong public equity markets and established venture capital industries), stronger values supporting internationalization

Source: developed by authors (considering Kiss and Danis 2008;Yamakawa *et al.* 2008)

Finally, the notion that SMEs internationalization is the outcome of its internal abilities and leader's cognition of its external environment has been proposed recently (Cheng, Yu 2008). Yanakawa, Peng and Deeds (2008) assume that internationalization of new ventures is fostered by the distinctive cognitions of entrepreneurs, aiming to contribute to the nation's success and to do right things despite the risk. On the other hand, low development level of institutions increases the role of a social network and determines the path by which internationalization is implemented (Kiss, Danis 2008). Meanwhile, Cheng and Yu (2008) argue that the decision to go abroad may have more to do with sociological factors than economic factors. The explanation of internationalization decisions resides in institutional pressures. According to proponents of institutional theory organisational behaviours originate in the context of institutional environments and organisations have to conform to this context. Hence, the role of institutions in internationalization processes of new ventures has been analysed taking into consideration regulative, normative and cognitive pillars proposed by Scott (2008). The researchers assert that actions of entrepreneurs, adopting international strategy, are facilitated and constrained by ongoing process of institutional relations in both home and host countries (Yeung 2002).

6. Institutions and SMEs internationalization: speed of internationalization

The literature focused on SMEs internationalization investigates when new ventures start international activities. Speed of internationalization refers to the time from the company's foundation to its first entry into international markets (Cieslik, Kaciak 2009). However, some scholars point out that "explanation of conditions under which the speed of international expansion increases or decreases" is seen as inconsistent (Luo *et al.* 2005: 705) and scarce (Mohr, Batsakis 2014). Notably, the speed with which firms expand internationally is seen as important facet of internationalization. For instance, the Born Globals or International New Ventures (INV) attracted significant attention of researchers due to fast internationalization process. These firms are defined as

entrepreneurial and internationalize from the outset. While literature aimed to investigate high-tech firms (Crick 2009; Musteen *et al.* 2010), the investigations related to traditional firms that may have operated domestically for long period were limited (Mohr, Batsakis 2014).

On the other hand, the literature focused on the speed of internationalization is vast and lacks common agreements. Some scholars defined INV as being involved in international markets at or immediately after establishment (Acedo, Jones 2007). Hence, the discussions related to the speed of internationalization range from instant internationalization to gradual internationalization considering business development. Notably, majority of studies refer to speed as “the time it takes to internationalize from inception of firm” (Chetty *et al.* 2014: 633). Acedo and Jones (2007: 237) state that in some definitions “speed of internationalization is accompanied by a specified level of export ratios and a range of measures from 20% of total turnover in 2 years to around 80% within 6 years have been advanced”. Considering different speed of internationalization, the study distinguished non-exporters, exporters that took more than 5 years to become international and firms that took less than 5 years to become international since foundation. Comprehensive study carried out by Chetty *et al.* 2014 distinguished main reasons impacting speed, namely: characteristics of entrepreneur and management, network of relationships and ties, institutions and technology in foreign markets and firm strategy.

Notably, the investigations carried out by Coeurderoy and Murray (2008) led to the conclusion that the timing of early internationalization depends on corporate resources, organisational experience and sector effect. On the other hand, regulatory environment determines internationalization dynamics of newly established technology firms. Meanwhile, Kiss and Danis (2008) examined the relationships between specific ties of entrepreneurs and internationalization speed and how these relationships depend on institutional context of country. Thus, the scholars argued that stronger ties were the most important in the context of low institutional development and vice versa. Hence, the authors of the paper agree with other scholars indicating that speed of internationalization is endogenous variable impacted by micro- and macro-level (host country) conditions (Luo *et al.* 2005). Hence, the conclusion can be drawn that the speed of internationalization is not isolated from firm’s capabilities. Some micro level factors such as: ability to enter, operate, compete and sustain in international market have to be taken into consideration (Luo *et al.* 2005). Hence, the emphasis has to be put on international experience, innovative capability, marketing capability and location. On the other hand, we argue that institutional context either diminish or increase speed of internationalization. Hence, macro level factors such as host country’s institutional and technological infrastructures have to be investigated.

Finally, the differences among the firms as well as industries play a significant role in predicting the speed of internationalization. The study carried out by Luo *et al.* (2005) shed some light on the difference between traditional companies and non-traditional (e.g. e-commerce) companies. While cultural difference influences internationalization speed, cultural distance doesn’t have significant impact on the speed of internationalization of non-traditional companies. Hence, the conclusion can be drawn that traditional and non-traditional firms are following different paths of internationalization. Meanwhile, physical infrastructure (e.g. technology supportiveness and internet use) as well as regulatory infrastructure (e.g. legal protection and government transparency) were considered the most significant variables impacting the rate of internationalization.

Table 3. Main variables of internationalization speed and role of institutions

	Traditional SMEs	Non-tradition SMEs
Speed of internationalization	Internationalize later on in life cycle of the firm and at the lower speed	Internationalize after the inception and at the high speed
Relationship between institutions and SMEs	All factors of institutional context (e.g. cultural, legal technological) were considered equally significant variables impacting the rate of internationalization.	Physical infrastructure (e.g. technology supportiveness and internet use) and regulatory infrastructure (e.g. legal protection and government transparency) were considered the most significant variables impacting the rate of internationalization

Source: developed by authors (considering Luo *et al.* 2005; Kiss and Danis 2008)

The above discussion let us conclude that traditional and non-traditional SMEs are impacted by both industry and institutional contexts (Table 3). However, the most significant variables for non-traditional SMEs are seen physical infrastructure and regulatory infrastructure of host country. Meanwhile, traditional SMEs are impacted by all variables stemming from institutional context. Hence, contrary to non-traditional SMEs, traditional SMEs are influenced by informal institutional distance, defined by the cultural and ideological differences between home and host countries.

Conclusions

The origins and development of institutional theory are traced in economics, sociology and political sciences. However, the ever growing popularity of institutional theory among proponents of business management field is observed as well. The application of institutional theory in business management field has led to the discussions how formal and informal constraints influence human behaviour and what relationships are observed between institutions and organisations.

The assumptions of institutional theory have been extended on MNCs defined by diverse external environment and complex internal environment. The alignment of organization with institutional context and ability to comply with institutional pressures are seen of the highest significance. These considerations have led to the different streams of scientific investigations and wide array of issues. Further, institutional theory has gained recognition among the scholars focusing on entrepreneurship issues and has led to three major streams of investigations: institutional setting, legitimacy and institutional entrepreneurship.

Institutional context defines limitations for SMEs aiming to expand both nationally and internationally. Increased globalization and liberalization of markets have led to more intense competition what requires SMEs to match international competitors. On the other hand, the growth of SMEs is related to internationalization processes due to the obvious limitations of home markets. Small size of firms and limited resources are seen as considerable disadvantage of firms which can be overcome by more favorable institutional context. However, the difference is observed between SMEs from developed and emerging markets.

Emerging markets are characterized by diverse institutional environment in comparison to developed economies. These differences lead to different institutional support and consequently different drivers and aspirations for internationalization. Hence, institutional context influence entry mode choice and direction of SMEs. Finally, institutional context might increase or limit the speed of internationalization. Traditional and non-traditional firms are following different paths of internationalization. Hence, physical infrastructure and regulatory infrastructure were considered the most significant variables impacting the rate of internationalization of non-traditional SMEs.

Considering research approach adopted in the paper, additional empirical research is needed to disclose the influence of institutional context on the internationalization of SMEs. Specifically, the focus has to be concentrated on emerging countries, experiencing constant institutional transformations. These transformations change entrepreneurial behavior and contribute to internationalization of SMEs. Of particular benefit, would be expanding the research to traditional and non-traditional enterprises aiming to disclose different patterns of internationalization impacted by a set of factors from home and host countries institutional environment. These investigations will help to uncover whether it is appropriate to make generalizations regarding traditional and non-traditional firms. Traditional SMEs that may have operated domestically for long period before internationalization have to be investigated more consistently. Considerations have to be given to integration of several perspectives contributing to the understanding of complex phenomena of internationalization.

The research contributes to the theory by portraying through a review of extant studies how development of institutional theory perspective contributed to the explanation of firms' internationalization. In addition, the paper focuses on directions and speed of SMEs internationalization, which thus represent challenges for managers.

References

- Acedo, F.J.; Jones, M.V. 2007. Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms, *Journal of World Business* 42(3): 236–252.
- Ahlstrom, D.; Bruton, G.D.; Yeh, K.S. 2008. Private firms in China: building legitimacy in an emerging economy, *Journal of World Business* 43: 385–399.
- Aidis, R.; Estrin, S.; Mickiewicz, T. 2008. Institutions and entrepreneurship development in Russia: a comparative perspective, *Journal of Business Venturing* 23: 656–672.
- Batillana, J.; Leca, B.; Boxenbaum, E. 2009. How actors change institutions: towards a theory of institutional entrepreneurship, *The Academy of Management Annals* 3(1): 65–107.
- Bruton, G.D.; Ahlstrom, D.; Obloj, K. 2008. Entrepreneurship in emerging economies: where are we today and where should the research go in the future, *Entrepreneurship Theory and Practice* 32(1):1–14.
- Bruton, G.D.; Ahlstrom, D.; Li, H.-L. 2010. Institutional theory and entrepreneurship: where are we now and where do we need to move in the future, *Entrepreneurship Theory and Practice* 34(3): 421–440.
- Cheng, H. – L.; Yu, C.- M.J. 2008. Institutional pressures and initiation of internationalization: Evidence from Taiwanese small- and medium-sized enterprises, *International Business Review* 17: 331–348.
- Chetty, S.; Johanson, M.; Martin, O.M. 2014. Speed of internationalization: Conceptualization, measurement and validation, *Journal of World Business* 49(4): 633–650.
- Cieslik, J.; Kaciak, E. 2009. The speed of internationalization of entrepreneurial start-ups in a transition environment, *Journal of Developmental Entrepreneurship* 14(4): 375–392.
- Coeurderoy, R.; Murray, G. 2008. Regulatory environments and the location decision: evidence from the early foreign market entries of new-technology-based firms, *Journal of International Business Studies* 39(4): 670–687.
- Crick, D. 2009. The internationalization of born global and international new venture SMEs, *International Marketing Review* 26(4/5): 453–476.
- Greenwood, R.; Suddaby, R. 2006. Institutional entrepreneurship in mature fields: the big five accounting firms, *Academy of Management Journal* 49(1): 27–48.
- Hall, P.A.; Taylor, R.C.R. 1996. Political science and the three new institutionalism. MPIFG Discussion Paper 96/6.
- Hessels, J.; Terjesen, S. 2010. Resource dependency and institutional theory perspectives on direct and indirect export choices, *Small Business Economics* 34: 203–220.
- Hessels, J.; Terjesen, S. 2007. Resource dependency and institutional theory perspectives on direct and indirect export choices, *Small Business Economics* 34(2): 203–220.
- Ketkar, S.; Acs, Z.J. 2012. Cultural burdens and institutional blessings: internationalization by SMEs from emerging countries. GMU School of Public Policy Research Paper, March.
- Kiss, A.N.; Danis, W.M. 2008. Country institutional context, social networks and new venture internationalization speed, *European Management Journal* 26: 388–399.
- Korsakienė, R., Baranauskienė, A. 2011. Factors impacting sustainable internationalization: a case of multinational company, *Journal of Security and Sustainability Issues* 1(1): 53–62. DOI: [http://dx.doi.org/10.9770/jssi.2011.1.1\(5\)](http://dx.doi.org/10.9770/jssi.2011.1.1(5))
- Korsakienė, R., Tvaronavičienė M. 2012. The Internationalization of SMEs: an integrative approach, *Journal of Business Economics and Management* 13(2): 294–307.
- Korsakienė, R. 2013. Internationalization of construction firms: what strategy do they follow?, *Entrepreneurship and Sustainability Issues* 1(2): 99–106. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(4\)](http://dx.doi.org/10.9770/jesi.2013.1.2(4))
- Korsakienė, R.; Diskienė, D.; Drūteikienė, G. 2014. The role of human capital and organizational learning in internationalization of SMEs. The 8th international scientific conference *Business and Management 2014: selected papers*. May 15-16, 2014. Vilnius: Technika, ISSN 2029-4441. ISBN 9786094576522. p. 76-84.

- Kostova, T.; Zaheer, S. 1999. Organizational legitimacy under conditions of complexity: the case of the multinational enterprise, *Academy of Management Review* 24(1): 64–81.
- Kostova, T.; Roth, K.; Dacin, M.T. 2008. Institutional theory in the study of multinational corporations: a critique and new directions, *Academy of Management Review* 33(4): 994–1006.
- Lawrence, T.B.; Hardy, C.; Phillips, N. 2002. Institutional effects of interorganizational collaboration: the emergence of proto-institutions, *Academy of Management Journal* 45(1): 281–290.
- Luo, Y.D.; Zhao, J.H.X.; Du, J.J. 2005. The internationalization speed of e-commerce companies: an empirical analysis, *International Marketing Review* 22(6): 693–709.
- Manolova, T.S.; Eunni, R.V.; Gyoshev, B.S. 2008. Institutional environments for entrepreneurship: evidence from emerging economies in Eastern Europe, *Entrepreneurship Theory and Practice* 32(1): 203–218.
- Miles, J.A. 2012. *Management and Organisation Theory*. John Wiley&Sons Inc.
- Mohr, A.; Batsakis, G. 2014. Intangible assets, international experience and the internationalisation speed of retailers, *International Marketing Review* 31(6): 601–620.
- Musteen, M.; Francis, J.; Datta, D. 2010. The influence of international networks on internationalization speed and performance: a study of Czech SMEs, *Journal of World Business* 45(3):197.
- North, D.C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- North, D.C. 1994. Economic performance through time, *American Economic Review* 84(3): 359–368.
- Peng, M.W.; Heath, P.S. 1996. The growth of the firm in planned economies in transition: institutions, organizations, and strategic choice, *Academy of Management Review* 21(2): 492–528.
- Peng, M.W. 2003. Institutional transitions and strategic choices, *Academy of Management Review* 28(2): 275–296.
- Roth, K.; Kostova, T. 2003. The use of multinational corporation as a research context, *Journal of Management* 29(6): 883–902.
- Scott, W.R. 2008. *Institutions and Organizations: Ideas and Interests*. 3rd Ed. Los Angeles: Sage.
- Scott, W.R. 1987. The adolescence of institutional theory, *Administrative Science Quarterly* 32(4): 493–511.
- Schwens, C.; Eiche, J.; Kabst, R. 2011. The moderating impact of informal institutional distance and formal institutional risk on SME entry mode choice, *Journal of Management Studies* 48(2): 330–351.
- Sousa, C. M. P., Martinez-Lopez, F. J., Coelho, F. 2008. The determinants of export performance: a review of the research in the literature between 1998 and 2005, *International Journal of Management Reviews* 10(4): 343–374.
- Tonoyan, V.; Strohmeier, R.; Habib, M.; Perlitz, M. 2010. Corruption and entrepreneurship: how formal and informal institutions shape small firm behavior in transition and mature market economies, *Entrepreneurship Theory and Practice* 1:803–832.
- Webb, J.W.; Tihanyi, L.; Ireland, R.D.; Sirmon, D.G. 2009. You say illegal, I say legitimate: entrepreneurship in the formal economy, *Academy of Management Review* 34(3): 492–510.
- Yamakawa, Y.; Peng, M.W.; Deeds, D.L. 2008. What drives new ventures to internationalize from emerging to developed economies? *Entrepreneurship: Theory & Practice* 32(1): 59–82.
- Yeung, H.W.-C. 2002. Entrepreneurship in international business: an institutional perspective, *Asia Pacific Journal of Management* 19: 29–61.
- Zahra, S.; Ireland, R.; Hitt, N. 2000. International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance, *Academy of Management Journal* 43: 925–950.
- Zucker, L.G. 1987. Institutional theories of organization, *Annual Review of Sociology* 13: 443–464.

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SUSTAINABLE ENTREPRENEURSHIP AND PECULIARITIES OF MEDIA-BASED LEARNING

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Abstract. Building of sustainable futures requires efficient learning. Media-based learning does not necessarily make sense nor is it necessarily effective, for that matter, simply because it uses a medium. Rather, there are several variables that can and do influence its success: the very medium, the content, and the learner's cognitive styles. For example, it is necessary to accept the difference between native language learning, second language acquisition, plurilingualism, language learning programs for children or adult learners, for visual or auditive or kinesthetic types. All these variables and more have to be taken into consideration, alone and interacting, in order to decide whether and where media-based learning is to be used, and where it might be counterproductive.

Keywords: sustainability, IT, learning, medium, performance, content

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JEL Classifications: O30

1. Does media-based learning lead to sustainable results?

Building of sustainable futures in changing environment requires continuous learning. Learners could be viewed as entrepreneurs living through environmental challenges. Development of values and behavioral patterns leading to sustainable outcomes of learning process depend on variety of factors (Laužikas, Mokšėckienė 2013; Wahl, Prause 2013; Išoraitė 2013; Bileišis 2014; Figurska 2014; Tarabkova 2014; Caurkubule, Rubanovskis 2014; Raudeliūnienė *et al.* 2014).

One of those factors is efficiency of learning technologies. Efficiency of IT based technologies, i.e. media based, comes a question of crucial importance. In an early phase of media-based learning, Clark (1983) implied in a frequently mentioned article, that the media probably does not have a decisive influence for the learning process. Within an externally funded project under my direction which investigated the chances and problems of media-based language training (project “Language Networks” within the model trial-program “Lifelong Learning” of the Federal-Länder-Commission for Educational Planning and Promotion Research, funding code: A6682SL01), it soon became clear already during the early stage of literature review, that a final conception about media-based learning is more complex (including its verifiability) than generally assumed (Giessen 2004). Initially (and very broadly) the majority of the corresponding studies confirmed a performance imbalance between traditional and media-based learning. Since the studies involved were of quantitative nature, usually school classes or groups of

learners were compared. Here, the sociographic composition of the groups, and also the learning content were kept as identical as possible so that the only altered variable was related to the media-based instruction. In the context of these experimental studies, media-based instruction proved to be, also in direct comparison with traditional classroom instruction, on average not worse than the conventional instruction methods – however, but in general not significantly better.

However, there were observations which indicated that individual pupils can do better with media-based learning than with traditional instruction, while on the contrary, other learners had greater difficulties, got along not so well and even produced worse results with media-based learning than with traditional instruction. Accordingly, these experimental studies might hide a division of the pupils in those who profit from learning with the computer and other who got along not so well with media-based instruction. Which other variables could play a role in this context? Wallace and Mutooni pointed out already in 1997 that users of computer-based programs indicate, in contrast to the participants of classroom-based events, the tendency to adhere to individual learning topics until a high level of content understanding has been reached. They also had a more flexible approach to learning than their ‘competitors’, who spread this process throughout the day. Apparently, media-based learning requires more time than traditional learning. Learners, who were not able, or did not want to bring up sufficient time, did not benefit from media-based instruction. The opposite was the case.

On the contrary, Pitman, Gosper and Rich analyzed the grades as well as the learning behavior of 348 students in 1999. Here it became clear that the students with the higher grades had requested and used more frequently and regularly the computer-based additional options than the students with lower grades. Schulman and Sims confirmed this assumption in 1999 – they also noticed that the better learners preferred to learn using media-based resources and used this alternative more often, while the less successful learners normally chose traditional forms of learning.

Different time lengths would thus be a criterion which may be important for the success of media-based instruction. Apparently sufficient periods of time are required to learn efficiently with a computer – and that is clearly more time than with traditional learning methods. Anyone who brings up, or is willing to bring up the necessary time seems to have a greater learning success. This is also confirmed by additional surveys, qualitative studies and evaluations, for instance by Scott, Durnell Cramton, Gauvin, Steinke and Patterson, who already in 1997 interviewed 123 *distant learners* for their judgment in connection with a multinational *e-learning project*. The respondents stated that larger time lengths and adequate time coordination were of utmost importance. Ward and Newlands also reached a similar conclusion in 1998. The respondents stated that the main advantage achieved was their autonomy when determining the time and pace of the own learning process. This also had the effect that the learners involved dealt longer with the learning contents until they had processed all the information. Therefore, the main conclusion of Ward and Newlands was that through media-based learning more contents can be acquired, but also that more time is needed to achieve this. This was also confirmed for instance by Usip and Bee in 1998, stressing the importance of the ‘time’ factor. They analyzed the differences in the attributes of the users of online offers and the attendants of lecture hours. They delivered as their main finding the fact that the user of computer-based options appeared to be on average not worse, but better than their ‘competitors’. One decisive argument was that in this case also more time was needed to acquire learning contents, but generally in a more concentrated manner, for instance, when working through tests and performance assessments.

The group of participants who ultimately was successful was the one which had a large amount of time available. Nevertheless, during our project it was evident that an additional explanatory perspective behind these facts was needed. Apparently, the objective amount of time available does not play the attributed decisive role. Many pupils were unwilling to invest a sufficient amount of time because they did not particularly appreciated media-based learning. Our surveys indicated that this was mainly due to two factors: the learning contents and the learner type. Of course, there are forms of media-based learning in which, similar to traditional instruction, individual learners and their specific preferences and difficulties can be taken into consideration, such as with videoconferences (Bufe and Giessen 2005). Partly, this also applies for the so called “social media”, at least (again) in connection with its particular type of application. The situation is quite different in the case of media-based learning units, tutorials, practices, etc., which usually are standardized and where the media plays a dominating role. In many cases,

acceptance or refusal are here the only alternative courses for the learner. This sort of media is precisely developed to make learning contents available with a certain effectiveness for many learners (in large numbers). Nevertheless, the result is that the learners who might be more suited for other forms of learning are forced to subject themselves to the media-based method.

There are of course also options which are not imposed by schools or school teachers – for instance CDs of language courses or similar online offers. Nevertheless, a direct empirical comparison between two learning groups cannot be made in this context. In principle, such options seem to meet a certain demand which can be interpreted as an indicator for their efficiency. But it could be the case that an early selection of potential learners takes place – this means that these offers are only taken by those who can handle media-based learning materials in an effective and targeted manner. Others probably would not want to take such offers in the first place. Moreover, it became very early apparent that the motivation to use media-based learning options must be seen in a more differentiated light. The quality of learning or its practical results is only one, and sometimes not even the most important category for deciding in favor of such an option – other categories which are as relevant or sometimes even more relevant are for instance, the flexibility of room and space in the learning process and their achievable added values. The expectations in terms of educational quality and the relation effort-result were in this case less important (Kariya 2003). The market for educational media is therefore not an argument which contradicts the assumption that there are different learner types, some of which have difficulties with media-based learning.

The fact that there are different learner types has been a known fact for a long time. Reference is made to the historical research of Kurt Lewin from 1942. Likewise, the fact that there are different learner types of computer users is not a new finding. This insight was made popular already in 1984 by a book of Sherry Turkle. Although the existence of different learner types, also in the context of media-based learning should not be a surprise, it is noticeable that this is rarely taken into account. As already mentioned, this is due in particular to the fact that media-based learning units are usually prepared and structured for groups or classes, or as learning material for user groups (and not for individual learners), so that also the evaluation is determined at a group level.

When the evaluation leads to average results that are not worse than the ones with traditional instruction methods, the non-consideration of different learner types is hardly noticeable (at least in the context of the evaluation). It may then occur that indeed, some learners profit from media-based learning options (but perhaps at the price of an increased time input), while other learners with greater difficulties ‘get lost’ in the evaluations. The perspective of the learner has so far played only a subordinate role, since this is an individual category which cannot be easily depicted on a quantitative level, for instance for the granting of funds for the production of learning contents or for the feedback from supervisory authorities. For this reason, there have been only recently studies which deal with the issue of learner types in the context of media-based learning. The insight that the ‘learner’s perspective’ (Ehlers 2004) or individual, cognitive learning styles are of importance for media-based learning first conducted to relevant studies at the middle of the last decade. In any case, it is clear that the concept which states that media-based learning and traditional learning are of equal value, ignores important aspects – which, by the way, are related to both learning forms: some learners profit from media-based learning significantly more strongly than from traditional learning (Giessen 2004: 44–47). What therefore are the variables which make media-based learning (more) successful – and when it is perhaps better to abstain from it? Surely, there are also situational and individual aspects which have an effect in individual cases; on a supraindividual level, the medium or also the type of media-based learning materials and the learner type seem to play the major role. Therefore, I will concentrate hereinafter on these issues or that is to say, variables.

2. Contents, media, learner types

In principle – and detached from media-based learning – it is a commonplace that not all contents can be transmitted equally well with every media form. The following example illustrates this: Why are usually newspapers and magazines in most cases the sources of investigative reporting that can even provoke a crisis in a political system, like the “Washington Post” and the *Watergate affair* in the USA? Why this can be achieved by a daily newspaper, which is read by comparatively few (but certainly influential and opinion forming) people, and

not the television, which has a bigger audience? A look at the television reports of that time clarifies quickly why this was the case. The television reporters filmed namely the “Washington Post” and the *Watergate* building from outside and of course the White House, and of course, they did not have pictures of the facts around the *Watergate Affair*. Investigative journalism concerning individual scandals is in this case barely possible on television, because everything there has to be illustrated – This is of course not the case in investigative journalism that uses images. For instance, when a camera team detects mouldy food in a supermarket, it can produce impressive images which have a strong effect among the public. But in an environment where acts are no longer observable because they were carried out in the past by persons who often operate secretly, there are no associated images and not even the chance to film them.

Since it is almost impossible to produce investigative reports without authentic images about the behavior of the persons involved, generally this is not even attempted in television programs. This abstain from handling such issues is a consequence of the requirements of this media. Newspapers on the other hand can easily provide such reports and describe how the information was researched. Such scandals were near always made public by press reports of the print media. The medium is certainly decisive – as shown in the example – when determining which contents should be presented, and what public impact they might have. This insight evidently also applies for learning materials. One example here within a project on the subject ‘Language Learning and Media’, were video clips produced for a multimedia offering where native speakers could be seen and heard (Giessen 2006). The integration of authentic speech samples seems to be a clear added value of this medium; in particular the comprehension of language could be facilitated using a synchronous input of mouth movements and phonetical production. Its integration in a multimedia offering implied that the video material shown by default was not screen-filling (as in the case of television), but filled more than one fourth of the screen area, which made the mouth movements easily visible. The learners could also switch over to a full-screen representation, but this demanded an active intervention. In the standard screen representation, the *frame* alternative is a part of the multimedia options which was seen as an additional alternative. For instance, the navigation bar as well as the additional information is always available (also for the video clips).

An interesting fact herewith was that the test users did not use the video segments in the manner we had expected. They partly stopped using the application before it was finished. Why did this unexpected behavior occur? We observed the users and also conducted several interviews with them. One of the results was that this was not due in principle to the video-based contents. The test users found the video productions in full-screen representation appealing, interesting and didactically helpful. The unexpected user behavior was rather caused by specific medial characteristics.

A main problem when viewing video clips in computer-based multimedia products seems to be the short distance to the computer monitor. The users sit very close to the monitor in order to click exactly the *icons* or *hyperlinks* with the mouse. As a rule, they target specifically only a sector of the monitor, and sometimes only a spot on the screen. This of course leads to a narrowing of attentiveness. Furthermore, the character resolution of computer monitors is relatively low which rapidly causes eye fatigue. Also, the body posture is nearly unalterable. Moreover, a computer monitor cannot be shifted easily when the sitting position is uncomfortable and precisely, when a user focuses over a long period on a single spot of the monitor, the body posture is particularly tense; and this of course reinforces fatigue effects. All the interviewed learners felt that focusing over a long period on a spot of the monitor in order to follow information was ‘arduous’. This can lead to different courses of action around video clips in computer-based multimedia. The users tend not to look very long at the rather small *video frame*, but instead allow their eyes to roam. This is easily feasible because there are additional *frames* and information next to the video image, which draw the user’s attention, embedding the image in a visual surrounding which is also at the same time a rich information environment. Many learners have actually confirmed that they maybe run, but do not view very long a clip. Often, they have the subjective impression that they can still follow the contents, because they can hear the acoustic information and therefore do not miss any information. But they are inevitably less concentrated – and naturally, miss completely the visual additional information. – Apparently, an additional course of action is required regarding the testing of the possibilities of interactivity, which now can be used with moving pictures (with *time based media*).

Many users view the beginning of a production and then move forward with the slide bar over the course of the film when they think that it is worth viewing the whole clip. When they have the impression that it is worth viewing the whole film, they usually look back for the position where they 'exited'. They do not start again from the beginning, because viewing again a well-known passage is perceived as boring. But it is relatively difficult to find the exact position where a film was exited. With the navigation bar it is only possible to head approximately for a certain position, and hardly anyone keeps in mind the *time code* data when moving back and forth with the navigation bar. As a rule, the users cannot find the exact position in the film where they exited, so that they see a passage twice, or miss a part of it. Often, viewers leave the video sequence because they are not able to reconstruct the content.

However, it should be recognized (again), that these alternative courses of action only occur with videos which are embedded in a multimedial environment, where the video image is relatively small and next to the navigation bar or an additional window, which draws the user's attention. This naturally does not apply where a computer monitor with 'full-screen display' is used exclusively as 'TV-set substitute', which modifies many of the external conditions. The sitting posture changes – here the computer are only the *channel* for a television production, and will be only used as such. The behavior described does not apply when the learning process takes place in a class or a training course, and the learners are instructed to view the information simultaneously. This description already illustrates the inadequacy of such situation. Still, the social pressure that derives from the instructors or the classmates, who observe each other during this process, is apparently so big that the users tend to view the video applications until the end without intervening. Multimedia options are on the other hand part of traditional self-learning media, and in such circumstances, the observed difficulties occur almost without exception when using authentic video material.

Therefore, the idea of producing 'authentic language material' multimedia self-learning media for computers, to facilitate the learners an easier access to the target language seems to be a misunderstanding. Basically, 'authentic language material' is rather suitable for video cassettes or DVDs – however, other advantages of a computer-based multimedia product, which are of decisive importance particularly for autonomous learning, cannot be used. A video cassette or a DVD excludes for instance media changes, so that direct exercises cannot be integrated in the media. In the context of computer-based multimedia techniques, video clips with authentic language samples are rather ineffective, although its use may initially seem obvious and appropriate.

The different user behaviors when viewing video clips, depending on whether they are used alone or in a group, suggest that media-based self-learning demands a particularly high level of self-discipline. In turn, the degree of self-discipline is mostly determined individually. The example of media-based learning using 'authentic language samples on video' clearly shows the close link that exists between medial production and their constraints (and possibilities) on the one hand, and the individual learner-type on the other hand. The interaction between media-based learning material and learner types has always appeared in different contexts. In 2005, Bufe and Giessen (and analogously, for instance Bailey and Iqbal 2007) emphasized that interactive online communication (which seems to be a clear added value of the media-based language learning, as they can be produced with native speakers) suffers from the surprising fact that spontaneity is hardly possible in this context. Also, in the case of synchronous communication scenarios, like for instance video conference, disturbing delays of greater or lesser duration occur. Principally, there is also a lack of several items of additional communicative information, so that irony, annoyance or boredom cannot be detected. This can impact communication negatively.

Besides the media effects there are also other individual aspects, starting with the widely differing perceptive abilities (Montgomery 1999). Visual learners are better off when they are presented with graphical displays; whilst auditive learner types ought to acquire information rather acoustically (Ferrari and Sternberg 1998). The use of media-based learning materials will therefore never be the same; certain media may be adequate for some learners, but rather not for other learners. Therefore, it is difficult to develop general rules for the application of media. Workman (2004) was able to demonstrate that there are quality differences when working on tasks, and thus, when learning contents via *World Wide Web* or with a *CD-ROM* (Workman 2004).

In this context, learning on the WWW had a stronger social consciousness and required and induced more interactions. It should be added that presumably, on WWW the programs divert attention or only are background alternatives. In any event, media-based learning on the WWW was less structured. However, this media has proved to be positive for social learners. In contrast, learning via *CD-ROM* was rather monotonous but significantly more structured, which was positive for learners who learn introspectively. It could even be demonstrated that learners who can handle abstract contents better, are more efficient web-based learners. In contrast, learners, who favor specific information and wish to acquire this step by step, preferred learning with a *CD-ROM*. This indicated that already the decision whether the computer-based learning materials should be developed for the web or for a home computer is of importance, because of the specific advantages and disadvantages for the different learner types.

Empirical findings regarding the importance of media and learner type date back to the nineties (Fussell and Benimoff 1995), and in the meantime there are many similar observations (see for instance, Tamim *et al.* 2011), so that the assumption of Clark (1983) mentioned at the beginning, which claims that a specific media is irrelevant for the learning process, can no longer be accepted nowadays. Altogether, it can be stated that when developing media-based learning materials, an ‘only true’ method does not exist. Evidently, many results are individual, situational and context specific (Bangert 2008), nevertheless, it is possible to make statements about the context where media-based learning (in a specific media) can be used purposefully and effectively. Many attempts have been made to explain theoretically the different responses.

3. Theoretical annotations

Meantime, there are different theories regarding in particular the use of media. Already known is for instance the approaches of Herbert Marshall McLuhan (1962) or the related ‘media richness theory’ of Richard Daft and Robert Lengel (1984). Depending on how much the learners (or generally speaking: the users) are absorbed by a learning medium, Daft and Lengel speak about different degrees of “media richness”: Less ‘rich’ media is not intensive enough to achieve an overall focusing. Examples for this are for instance discussions forums, chats, e-mail, or the like. Other medial deficits, which may cause that a medial platform looks ‘weak’ is for instance the lack of direct feedback within the medium used. The result is almost unavoidably attention deficits and uncertainty regarding the tasks to be completed. Subsequently, using ‘weak’ media means that the process of learning (self-learning, but naturally even more in the case of collaborative learning, see also Mason 2004) demand greater cognitive efforts, which already start determining what is actually intended and to what extent this serves what one wants. This is perhaps the reason why more self-discipline is required in the context of medial learning than in traditional learning situations.

Relatively new though is the attempt of linking media theoretical statements with studies on learner types. These considerations did not play a role for a (too) long time (Flavell 1992; Sternberg and Grigorenko 1997), although in principle there were many reliable statements about the different cognitive learner types (Grigorenko and Sternberg 1995). These studies however were usually related to traditional instruction, but it should be noted that there are marked differences between information processing and learning (Rehder and Hoffmann 2005). Its connection with media implementation was first mentioned in the nineties (for instance Pillay 1998). Crucial here is how a learner collects and processes information (Hayes and Allinson 1998) and subsequently addresses the problems and makes pertinent decisions (Gardner 2009). A decisive theoretical approach in this context is the ‘cognitive load theory’ (Hazeltine *et al.* 2006). Related ideas came from Robert J. Sternberg (1997) with his quite complex and not always easy to bring into operation “theory of mental self-government”. This theory assumes that learners, when under ideal (and free) conditions, organize their learning process in accordance with their cognitive abilities. This leads to various forms of mental representation or diverse codings.

Different learners need therefore different learning situations and strategies. Some can learn better in the context of interactive group processes, others need quietness in order to be able to concentrate. We have chosen this example because it enables (first theoretically) a link to the above mentioned media theories. The group mentioned first will probably profit clearly from the diverse medial learning forms, for instance from discussion forums. For introspective learners they are on the contrary an impediment in the learning process. Another example refers a well known observation concerning the fact that different learners can learn best when observing processes

(Bandura 1978). Apparently, mirror neurons are activated when they can observe the efforts of other learners. This increases their self-motivation and ultimately their learning achievements. Here, it can be assumed that media samples can have a positive effect (for instance, from television programs). On the other hand, other learners must make own experiences that can be recorded and processed successfully. Thus, mediated communication constitutes a limitation for them. Nevertheless, it may be that learners who need individual concepts when learning have an advantage through, and in online-learning environments – at least in comparison with the ‘observing learner type’. So we have here – at least theoretically – a specific allocation of learner type and diverse scenarios of medial learning.

Furthermore, different learner types require respectively a varying density and extensive amount of information in order to be able to profit from instructional and learning efforts. This information is necessary to assess the efforts, the problems and the effectiveness of the respective learning process within metacognitive processes (Hayes and Allinson 1998). Maybe this can be explained with the findings of Baruch and Nicholson (1997), who found out that learners with a strong tendency to uncertainty avoidance – which also have a very limited willingness to take risks and to get along without explicit certainty – feel rather uncomfortable with self-learning media. Additionally, there are parallels to other, above mentioned findings: Since online media increases the level of ambiguity with regard to both the tasks and the expectations on the respective learner (and the learners on themselves), learners with a low level of tolerance regarding uncertainty avoidance are here at a disadvantage, while learners with a high level of tolerance regarding uncertainty avoidance can even generate additional advantages.

Obviously, it is desirable to know, if and how media-based learning materials can be used appropriately and efficiently. In assessing whether its use is in fact appropriate, the already described finding, that media-based learning is basically more time-consuming than traditional learning seems at this point particularly relevant. According to this, it is important both for the instructors and the learners, to use the media-based learning materials in such a way that the increase in value of the content rises accordingly and the majority of the learners benefit from it.

A systematic approach must take into account (at least) following aspects:

1. What is the effect of the medium: book, film (on computers, television sets, smart phones?), CD-ROM or DVD, VoIP (e.g. Skype), learning platforms, apps?
2. Which are the contents: e.g. which language is to be used? Grammar, regional studies or pronunciation practice? Grammar for native speakers, acquisition of the first foreign language, plurilingual instruction?
3. Who are the learners: visual, auditive or kinesthetic learner types? A child or an adult learner? Monolingual, bilingual or maybe multilingual learner? Does gender eventually play a role? Or possibly also cultural characteristics?

However, it is questionable whether a systematic approach which can link together contents, user type and medium can be developed. However, as stated above, for me this seems be hardly possible since the above mentioned variables and their interactions give rise to too many differing conditions. Other, constantly new variables, can be added to this manifold and largely not yet investigated interactions between the described three main variables. This includes not least technical developments that continuously change the media itself, setting off new conditions.

One possible reaction is to have always an insight into the effects of the different variables. This is not so ‘new’ (and less difficult to implement) as it sounds, because it is a fact that every form of instruction needs an adaptation process between instructor and learner. It is therefore important to trust the intuition of the instructors (and the learners) and not to promote media-based learning where its use may be contraproductive or problematic regarding the effort-benefit relation, only because using media is still ‘stylish’ and ‘fashionable’.

References

Bailey, Brian. P.; Iqbal, Shamsi. T. 2007. Understanding Changes in Mental Workload during Execution of Goal-directed Tasks and its Application for Interruption Management, *ACM Transactions on Computer-Human Interaction* 14(21): 21–28.

- Bandura, A. 1978. The Self-system in Reciprocal Determinism, *American Psychologist* 33: 344–358.
- Bangert, A. W. 2008. The Influence of Social Presence and Teaching Presence on the Quality of Online Critical Inquiry, *Journal of Computing in Higher Education* 20: 34–61.
- Baruch, Y.; Nicholson, N. 1997. Home, Sweet Work: Requirements for Effective Home-working, *Journal of General Management* 23(2): 15–30.
- Bileišis, M. 2014. Public Sector Control as a Factor in Entrepreneurial Policy: the Case of Lithuania, *Entrepreneurship and Sustainability Issues* 1(3): 151–161. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.3\(4\)](http://dx.doi.org/10.9770/jesi.2014.1.3(4))
- Bufe, W.; Giessen, H. W. 2005. *Videoconferencing grenzübergreifend - La visioconference transfrontaliere* [Cross-border videoconferencing]. Paris: L'Harmattan.
- Caurkubule, Ž.; Rubanovskis, A. 2014. Sustainable entrepreneurship through motivation: case of Latvian companies, *Entrepreneurship and Sustainability Issues* 2(1): 43–48. DOI: [http://dx.doi.org/10.9770/jesi.2.1\(6\)](http://dx.doi.org/10.9770/jesi.2.1(6))
- Clark, Richard E. 1983. Reconsidering Research on Learning from Media, *Review of Educational Research* 53(4): 445–459.
- Daft, R. L.; Lengel, R. H. 1984. Information Richness: a New Approach to Managerial Behavior and Organizational Design, in Cummings, Larry L. and Staw, Berry M. (Eds.). *Research in Organizational Behavior*. Homewood, IL: JAI Press: 6: 191–233.
- Ehlers, Ulf-Daniel. 2004. *Qualität im E-Learning aus Lernericht. Grundlagen, Empirie und Modellkonzeption subjektiver Qualität* [Quality in e-Learning from Lerner view. Grand principles, empirical findings and model conception of subjective quality] Wiesbaden: VS-Verlag.
- Ferrari, M.; Sternberg, R.J. 1998. The Development of Mental Abilities and Styles, Damon, W. J.; Kuhn, D.; Siegler, R. S. (Eds.). *Handbook of Child Psychology*. New York: Wiley, 899–946.
- Figurska, I. 2014. Sustainable entrepreneurship: localization, acquiring and use of knowledge sources in competitive organization, *Entrepreneurship and Sustainability Issues* 1(4): 210–222. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.4\(3\)](http://dx.doi.org/10.9770/jesi.2014.1.4(3))
- Flavell, John H. 1992. Cognitive Development: Past, Present, and Future, *Developmental Psychology* 28: 998–1005.
- Fussell, S. R.; Benimoff, Nicholas I. 1995. Social and Cognitive Processes in Interpersonal Communication: Implications for Advanced Telecommunications Technologies, *Human Factors* 37: 228–250.
- Gardner, Howard. 2009. Fünf Kompetenzen für die Zukunft [Five skills for the future], in Giessen, Hans (Eds.). *Medienpädagogik: Emotionale Intelligenz in der Schule. Unterrichten mit Geschichten* [Media Education: Emotional intelligence in school. Teaching with tales]. Weinheim; Basel: Beltz-Verlag, 138–149.
- Giessen, Hans W. 2004. *Sprachnetzwerke in Grenzübereichen*. Saarbrücken: LPM.
- Giessen, Hans W. 2006. Videosegmente als authentische Lehrmaterialien für den Sprachunterricht in computergestützten Multimedia-Produktionen? [Video segments as authentic teaching materials for language teaching in computer-based multimedia productions?] Available on the Internet: <http://www.vcp-landau.de/bzf/2006_45/07_Giessen_091-096.pdf>.
- Grigorenko, E. L.; Sternberg, R. J. 1995. Thinking styles, in Saklogske, Donald H.; Zeidner, Moshe (Eds.). *International Handbook of Personality and Intelligence*. London: Plenum Press, 205–229.
- Hayes, J.; Allinson, Ch. W. 1998. Cognitive Style and the Theory and Practice of Individual and Collective Learning in Organizations, *Human Relations* 51: 847–871.
- Hazeltine, E.; Ruthruff, E.; Remington, R. W. 2006. The Role of Input and Output Modality Pairings in Dual-task Performance: Evidence for Content-dependent Central Interference, *Cognitive Psychology* 52: 291–345.
- Išoraitė, M. 2013. Motivation tools through lenses of prospective employees, *Entrepreneurship and Sustainability Issues* 1(2): 116–123. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(6\)](http://dx.doi.org/10.9770/jesi.2013.1.2(6))
- Kariya, S. 2003. Online Education Expands and Evolves, *IEEE Spectrum* 40: 49–51.
- Laužikas, M.; Mokšėckienė. 2013. The role of creativity in sustainable business, *Entrepreneurship and Sustainability Issues* 1(1): 10–22. DOI: [http://dx.doi.org/10.9770/jesi.2013.1\(2\)](http://dx.doi.org/10.9770/jesi.2013.1(2))

- Lewin, K. 1942. Field Theory of Learning, *Yearbook of the National Society for the Study of Education* 41(2): 215–242.
- Mason, R. 2004. Online Education Using Learning Objects, *British Journal of Educational Technology* 35: 752–754.
- McLuhan, Herbert Marshall. 1962. *The Gutenberg Galaxy: The Making of Typographic Man*. Toronto: University of Toronto Press.
- Montgomery, De Maris A. 1999. Human Sensitivity to Variability Information in Detection Decisions, *Human Factors* 41: 90–105.
- Pillay, H. 1998. An Investigation of the Effect of Individual Cognitive Preferences on Learning Through Computer-based Instruction, *Educational Psychology* 18: 171–182.
- Pitman, A. J.; Gosper, M.; Rich, D. C. 1999. Internet-Based Teaching in Geography at Macquarie University: An Analysis of Student Use, *Australian Journal of Educational Technology* 15: 167–187.
- Raudeliūnienė, J.; Tvaronavičienė, M.; Dzemyda, I.; Sepehri, M. 2014. Sustainable entrepreneurship through energy stewardship: role of values and behavioral patterns, *Entrepreneurship and Sustainability Issues* 2(2): 107–117. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.2\(6\)](http://dx.doi.org/10.9770/jesi.2014.2.2(6))
- Rehder, B.; Hoffman A. B. 2005. Eye tracking and Selective Attention in Category Learning, *Cognitive Psychology* 51: 1–41.
- Schulman, Allan H.; Sims, Randi L. 1999. Learning in an Online Format versus an In-class Format: An Experimental Study, *Technological Horizons in Education – T.H.E. Journal* 26(11): 59–65.
- Scott, D.; Durnell Cramton, C.; Gauvin, S.; Steinke, G.; Patterson, K. 1997. Internet-based Collaborative Learning. An Empirical Evaluation. *Proceedings 3rd Ausweb Conference*, Lismore, Australia Available on the Internet: <http://ausweb.scu.edu.au/proceedings/donscott/index.html>.
- Sternberg, R. J. 1997. *Thinking Styles*. New York: Cambridge University Press.
- Tamim, R. M.; Bernard, R. M.; Borokhovski, E.; Abrami, Ph. C.; Schmid, R. F. 2011. What Forty Years of Research Says About the Impact of Technology on Learning: A Second-Order Meta-Analysis and Validation Study, *Review of Educational Research* 81(1): 4–28.
- Tarabkova, L. 2014. Model of motivating linked-up with education, *Entrepreneurship and Sustainability Issues* 2(1): 12–18. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.1\(2\)](http://dx.doi.org/10.9770/jesi.2014.2.1(2))
- Turkle, Sh. 1984. *The Second Self: Computers and the Human Spirit*, Cambridge, Mass.: MIT-Press.
- Usip, Ebenge E.; Bee, R. H. 1998. Economics: A Discriminant Analysis of Student's Perceptions of Web-Based Learning, *Social Science Computer Review* 16: 16–29.
- Wahl, M.; Prause, G. 2013. Toward understanding resources, competencies, and capabilities: business model generation approach, *Entrepreneurship and Sustainability Issues* 1(2): 67–80. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(1\)](http://dx.doi.org/10.9770/jesi.2013.1.2(1))
- Wallace, David R.; Mutooni, Ph. 1997. A Comparative Evaluation of World Wide Web-based and Classroom Teaching, *Journal of Engineering Education* 86: 211–219.
- Ward, M.; Newlands, D. 1998. Use of the Web in Undergraduate Teaching, *Computers and Education* 31: 171–184.
- Workman, M. 2004. Performance in Computer-based and Computer-aided Education: Do Cognitive Styles Make a Difference?, *Journal of Computers in Human Behavior* 20: 517–534.
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**ENTREPRENEURSHIP CONDITIONS: ENERGY RESOURCES'
PRICES AND ENERGY CONSUMPTION PECULIARITIES IN DEVELOPED COUNTRIES²**

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Abstract: In the society man uses energy intensively, human being is completely dependent of energy resources he/she utilizes. Nowadays the society of consumption and production leads to a daily abundant use of available resources on earth. It turns into many forms, such as light, heat, electrical, mechanical, chemical and nuclear. At the end of 20th century, it was almost unanimously agreed, abundant use of these resources have a negative impact on the planet, like the global warming or the greenhouse effect. The reserves of fossil fuels started to show signs of extinction. Due to indicated reasons, the development of many renewable energies have been started. Anyway, a question what energy composition or “mix” is the best, remains open. We raise hypothesis, that energy mix used by a country, depends on availability of particular resources and their prices. Hence, the paper is devoted to analysis of energy resources structure and their prices in four developed countries: France, Japan, USA and Germany. Insights about validity of raised hypothesis are being formulated.

Keywords: energy resources, energy mix, energy prices, impact, developed countries, entrepreneurship conditions, competitiveness

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1. Introduction

The industrial era of energy resources began in the late seventeenth century in England, and led to an unprecedented scale exploitation of natural resources of the planet. Before the nineteenth century the human being was available to face the necessities of the time just with muscular strength of animals and of itself, through levers and wheels which there also called natural resources. The strength was the first energy to be founded, after was the coal, oil and natural gas. In that time these sources were the revolution of society. The people started to use the energy resources in small portions that allowed to man use and consume energy in large quantities and this was the symbol of progress (Peres da Silva *et al.* 2003)

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2. Short characteristics of energy resources

The energy resources can be classified in two categories; renewable and non-renewable. The renewable energy is available instantly and almost infinite in the planet. In the other hand, there are some limitations in terms of the amount of energy that can be extracted. This type of energy has different sources, such as Hydropower, there is the use of the water; Geothermal Energy, that use the natural heating inside the planet; Wind Energy obtained by moving air (wind); Solar Energy that is captured by the light that the sun emit and Biomass that is the mass of leaving or recently dead plants and animals, along with their wastes. The main purpose of theses previous sources is to produce electricity. Can be referred that these energies resources has negative impacts an on economic and environmental scale. In a general way consists in big costs for installation of the centrals, some visual, sonorous and air pollution. In the opposite side is the non-renewable energy there his use has an end, in other words his demand is higher than his supply. The principal non-renewable resources are Coal there is carbon with organic and some inorganic compounds; Oil that has a mineral origin and is derived from the processing of organic matter; Natural Gas there is a hydrocarbon in form of methane and some other gases and Nuclear Energy there is created from radioactive minerals like uranium and thorium which produce a huge amount of heat. These resources also can be called as dirty energy, since its use has caused significant damage to the environment and society like destruction of ecosystems, reduced agricultural productivity, acid rain and others.

3. Energy consumption in developed countries

The reserves of the different sources of energy are not available everywhere in the same quantity on the surface of the earth. That's why every country must make the best use of the reserves that have. Energy efficiency (intensity) is related to its innovative use (e.g. Dudzevičiūtė, Tvaronavičienė 2011; Dudzevičiūtė 2013; Ala-Juusela *et al.* 2014; Guruz and Scherer 2014; Cuneo *et al.* 2014; Barberis *et al.* 2014; Raudeliūnienė *et al.* 2014) and is one of factors affecting energy security of each country (Lankauskienė, Tvaronavičienė 2012; Tvaronavičienė 2012; Mačiulis, Tvaronavičienė 2013; Vosylius *et al.* 2013; Baublys *et al.* 2014; Raudeliūnienė *et al.* 2014; Vasiliūnaitė 2014; Grybaitė 2011). Comparison of energy resources consumption in developed countries will be done by taking cases of United States of America, France, Japan and Germany; composition of energy used will be juxtaposed in two different years. All selected countries are economically well developed and have access to different types of sources to produce electricity.

3.1. France

This European country has the fifth largest economy and is known throughout the world as a country, which relies on the nuclear power. The consumption of the different energy resources in France in 2010 is presented in Figure 1.

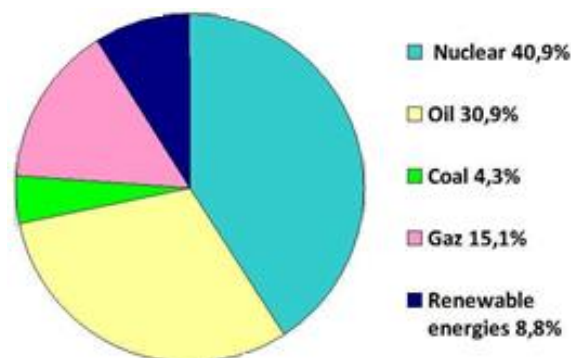


Fig.1. Consumption of France in 2010

Source: Ministry of ecology, sustainable development and energy

Nuclear energy comprises 40,9% of whole energy consumption; oil, respectively comprises 30,9%, with coal 4,3%, and gas comprising 15,1%. Renewable energy share in total consumption is 8,8%. France is one of the world's largest nuclear power consumers. It could be pointed out, that nuclear energy as a non-renewable resource has been the most used resource for electricity production. On the other hand, the low percentage of coal in the whole energy mix (recall, just 4,3%) could be explained by its comparative inefficiency. The structure of energy resources used in 2012, according to the *SOeS Key Figures*, is the same, so the France maintains the presented pattern of energy consumption.

3.2. United States of America

The United States of America could be called the world's the first largest economic power. The structure of different energy resources used in 2011 is the following: oil comprises 36%, coal comprises 20%, natural gas comprises 25%, and renewable energy, respectively, comprises 9% (Figure 2).

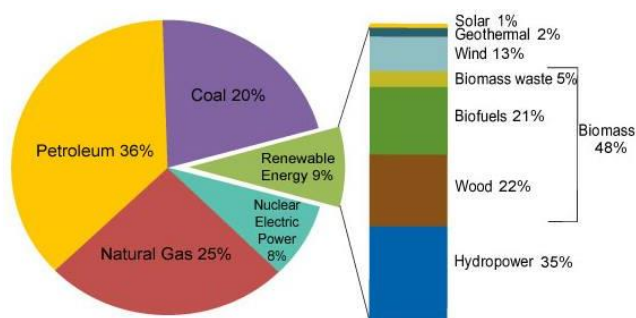


Fig.2. Consumption of USA in 2010

Source: AEI American Enterprise Institute

Attention needs to be drawn to the fact, that nuclear power comprises only 8%. The most consumed resource is oil (36%). Oppositely, nuclear energy is much less consumed with only 8% of the global energy consumption. In year 2012, according to the *EIA Energy Information Administration*, the consumption pattern the same, with 36.48% for oil, 27.34% for natural gas, 18.27% for coal and still 8% for the nuclear energy (Figure 3). The renewable energy still comprises estimated 9% of total consumption. As it was already mentioned, USA is maintaining the same structure of different energy sources.

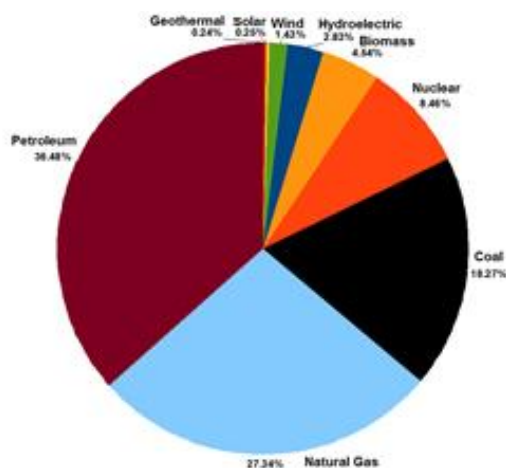


Fig.3. Consumption of USA in 2012

Source: AEI American Enterprise Institute

3.3. Japan

Japan is one of the three the largest economy powers in the world. According *EIA International Energy Statistics* Japan in year 2010 consumption comprised 42% of oil overall energy resources consumption, coal, respectively, comprised 22%, natural gas - 18%, nuclear - 13%, and renewable energy - 4% (Figure 4).

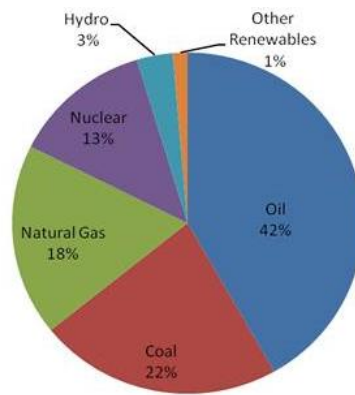


Fig.4. Consumption of Japan in 2010

Source: EIA International Statistics Agency

The most consumed resource is oil. It needs to be mentioned that Japan does not have oil reserves and therefore has to rely on import of this strategic resource. One of the less consumed resources in Japan are other renewable energies like geothermal energy and wind energy (about 1% of total consumption. In 2012, according to the *EIA International Energy Statistics*, structure of consumption of the different types of energy resources insufficiently changed (Figure 5).

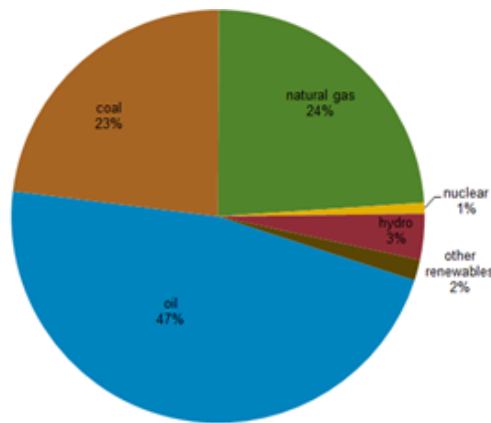


Fig.5. Consumption of Japan in 2012

Source: EIA International Energy Statistics

Juxtapose of statistics for year 2010 and 2012 reflects shrinking of nuclear energy use. The reason is a huge disaster in Fukushima nuclear station that brought negative consequences. So why Japan statistics indicate decrease of the consumption of nuclear power.

3.4. Germany

This country is the largest and most powerful national economy in Europe. According to the *AEI American Enterprise Institute*, in 2010 Germany consume 36% of oil, 23% of natural gas, 24% of coal, 10% of nuclear energy, 1% of hydropower and finally 6% of other renewable energies. The most consumed resource in Germany was oil, that it's about 36% because is the fifth-largest consumer of oil in the world, they import two-thirds of its energy consumed. Germany is also the third-largest consumer of natural gas in the world with 23% of consumption in this year. The reason why the country have a small quantity of hydropower consumed (1%), it's because they only adopted the renewable energy recently. In 2012, according to the *energy matters euanmearns*, the pattern of energy

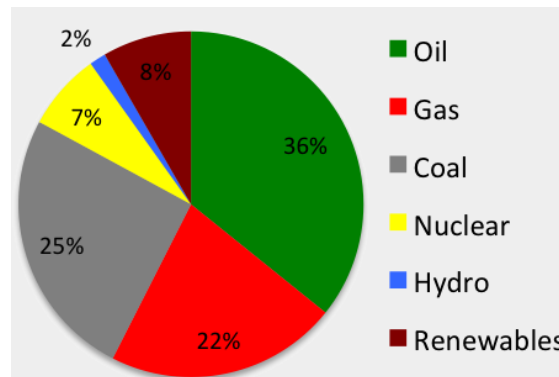


Fig.6. Consumption of energy resources Germany, year 2012

Source: Energy matters euanmearns

consumption changed for very slightly (natural gas comprised -22%, coal -25%; nuclear energy -7%, hydropower - 2%, other renewable energies, respectively, 8% and a share of oil consumption remained the same, as in year 2010 (Figure 6).

4. Price, as crucial factor impacting consumption pattern

Economy of each country is affected by energy efficiency, and, as we assume, price, of energy resources used. Let us take a look at comparison of energy resources prices in countries, selected for our analysis, i.e. France, Japan, USA and Germany. Let us glance at prices of energy resources provided in Table 1 (average of years 2011 and 2012 is being provided).

Let us start our comments with oil. The regular fuel SP95 was chosen as a representative, since it is the most commonly used in all the world. According to the *FIA Automobile Club*, in 2012 the price (euro per liter) of the fuel SP95 in France is 1,52; in USA 0,77; in Germany 1,56; and in Japan 1,59. It can be concluded that the higher price is in Japan. Let us recall, that Japan does not have reserves of fossil fuels and must import substantial amounts of crude oil. Due to some nuclear problems that Japan suffered in the past, they changed their energy policy and increased the consumption of oil. As the demand increases, *ceteris paribus*, the price rises too. This phenomenon has negative impact on the competitiveness of Japan since heavy industry uses a lot of oil. USA has the cheapest price of oil. It is determined by various factors, including tax policy. Way, Any this allows USA to sell their own gasoline to other countries at higher price. Consumption within countries at internationally competitive prices does not push prices of finished goods or services up. France and Germany have rather similar prices of fuel, most likely because of similar governmental approach.

Natural gas price was indicated average price of 2011, provided the *World Bank Commodity Price Data*. The price is indicated in million per BTU. In France the price is 9,3; in USA is 3,19; in Germany is 10,4 and in Japan, respectively, 16,2. Japan has the higher price because they have small reserves of natural gas so country has to

import big amounts of natural gas for inner needs. Japan is the second biggest importer of natural gas in the world. High price needs to be compensated by energy efficiency. This is the way Japan follows. USA, on the contrary, has the cheapest price. Difference between Japan and USA in this respect is considerable. Germany and France has more similarities to Japan than to USA.

Biomass, nuclear energy, solar energy, hydropower, geothermal energy and wind energy, are resources, which are used for production of electricity. However each resource has different level of availability and affordability (costs) in the different countries and this factor partly causes contrast in prices. The measure is expressed in price for hour in megawatt. The source, which was used is *EDF Electricité de France, DLA Piper and European Comission*; average data for year 2011 was taken. The next graphic shows the difference between prices through the division of the energy resources to produce electricity. In table 1 the lowest price is presented in red color.

Table 1. Prices of energy resources in selected developed countries

Prices	France	USA	Germany	Japan
Electricity from Biomass (Mw/h/€) in 2011	43.4	81.9	70	137.8
Electricity from Nuclear energy (Mw/h/€) in 2011	49.5	76.1	53.5	35.1
Electricity from Solar energy (Mw/h/€) in 2011	229	194.1	125	280.4
Electricity from Hydropower (Mw/h/€) in 2011	75	67.1	81.3	173.1
Electricity from Geothermal energy (Mw/h/€) in 2011	31.8	38.24	48.2	187.3
Electricity from wind energy (Mw/h/€) in 2011	82	63.86	100	158.2

Sources: EDF Electricité de France, DLA Piper and European Commission

It can be concluded that Japan has the higher price of electricity, produced by using biomass, solar energy, hydropower, geothermal energy and wind energy. During 30 years Japan developed cheap efficient nuclear factories, but with Fukushima accident in 2011, the country they decided to reduce their production of nuclear energy. Anyway nuclear power for energy production purposes is still being used. Considering wind energy, Japan doesn't have good places to catch the powerful wind to produce this type of energy. France and Germany are the two largest producers of renewable energy in Europe. France is cheaper than Germany in almost all that resources, except solar energy. Besides that France is the cheapest in biomass because the country has a lot of agriculture power and also geothermal energy because it's possible to find geothermal deposits in many parts of its territory. Germany is the cheapest in solar energy because industry of photovoltaic panel is very powerful. It is the first producer of solar energy (76.8% of world production). Finally, USA is the most expensive in nuclear energy because of political priorities' reasons (focus on in fossil fuels is being put). Also it can be concluded that USA is the cheapest in hydropower and wind energy because they are developed in these two resources and use that electricity for domestic consumption.

Finally, about **coal**. It is presented in average price of year 2012. The price is indicated in euros per ton: for France it is 64,3; for USA - 55,8; for Japan – 67,9 and for Germany, respectively, 67,8. The cheapest price belongs to USA because they have a lot of reserves and use it for production of electricity. It have been increasing through years and it been used since 1882. While Germany, France and Japan have more or less equal prices of coal.

Conclusions

Energy resources use patterns, energy consumption peculiarities in different countries depends on variety of factors, such as, level of development of the country, its size in terms of population, the levels of consumption and production of private and public sectors and also the fluctuation between supply and demand, economic policy, and many other factors. Anyway, countries can be divided in two categories, like the ones with low reserves of fossil energy and the others with high level of reserves. Countries with low reserves of fossil resources need to import more in order to produce and to be more competitive. On the other hand, import of energy resources diminish international competitiveness of a country, unless it is extremely energy efficient, as Japan. About the other category of countries which have high reserves of fossil energy they have more competitiveness because they export must more than import. I could be concluded that among the four analyzed countries, United States of America, could be recognized as being in the most favorable position, because it has the lowest prices of all energy resources. In order to develop sustainable futures, entrepreneurs have to be aware and take into account countries difference in field of energy prices and energy consumption patterns.

References:

- AEI American Enterprise Institute (online). Available at: <<http://www.aei.org/publication/the-costs-of-german-fear-energy-fact-of-the-week>>.
- Ala-Juusela, M.; Short, M.; Shvadron, U. 2014. Tools to support sustainable entrepreneurship in energy positive neighbourhoods, *Entrepreneurship and Sustainability Issues* 2(2): 49–59. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.2\(1\)](http://dx.doi.org/10.9770/jesi.2014.2.2(1))
- Barberis, S.; Di Fresco, L.; Santamaria, V.A.; Traverso, A. 2014. Sustainable entrepreneurship via energy saving: energy harvester exploiting seebeck effect in traditional domestic boiler, *Entrepreneurship and Sustainability Issues* 2(2): 86–97. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.2\(4\)](http://dx.doi.org/10.9770/jesi.2014.2.2(4))
- Baublys J.; Miškinis V.; Konstantinavičiūtė I.; Lekavičius V. 2014. Aspirations for sustainability and global energy development trends, *Journal of Security and Sustainability Issues* 3(4): 17–26. DOI: [http://dx.doi.org/10.9770/jssi.2014.3.4\(2\)](http://dx.doi.org/10.9770/jssi.2014.3.4(2))
- BP Statistical Review of World Energy (online). Available at: <<http://www.bp.com/content/dam/bp/pdf/Energy-economics/statistical-review-2014/BP-statistical-review-of-world-energy-2014-full-report.pdf>>.
- Cuneo, A.; Ferrari, M.L.; Traverso, A.; Massardo, A.F. 2014. Sustainable district development: a case of thermoeconomic optimization of an energy hub, *Entrepreneurship and Sustainability Issues* 2(2): 74–85. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.2\(3\)](http://dx.doi.org/10.9770/jesi.2014.2.2(3))
- DLA Piper (online). Available at: <<https://www.dlapiper.com/en/japan/sectors/energy>>.
- Dudzevičiūtė, G. 2013. Energy intensity in the Lithuanian manufacturing sector, *Journal of Security and Sustainability Issues* 3 (2): 77–85. [http://dx.doi.org/10.9770/jssi.2013.3.2\(6\)](http://dx.doi.org/10.9770/jssi.2013.3.2(6))
- Dudzevičiūtė, G.; Tvaronavičienė, M. 2011. Measurement framework of innovation activity: theoretical approaches' analysis, *Journal of Security and Sustainability Issues* 1(1): 61–73. DOI: [http://dx.doi.org/10.9770/jssi.2011.1.1\(6\)](http://dx.doi.org/10.9770/jssi.2011.1.1(6))
- EIA International Statistics Agency (online). Available at: <<http://www.eia.gov/countries/cab.cfm?fips=JA>>.
- Energy Matters (online). Available at: <<http://euanmearns.com/germany-energiawende-kaput/>>.
- EDF Electricité de France (online). Available at: <<http://france.edf.com/france-45634.html>>.
- FIA Automobile Club (online). Available at: <http://www.automobile-club.org/files/SeDeplacer/prix_carburants.pdf?2014-11-16>.
- Grybaitė, V. 2011. Towards measurement of sustainable development: systems of indicators, *Journal of Security and Sustainability Issues* 1(1): 17–24. DOI: [http://dx.doi.org/10.9770/jssi.2011.1.1\(2\)](http://dx.doi.org/10.9770/jssi.2011.1.1(2))
- Guruz, R.; Scherer, R. 2014. Sustainable energy entrepreneurship through architectural design: a key point controlled method, *Entrepreneurship and Sustainability Issues* 2(2): 60–73. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.2\(2\)](http://dx.doi.org/10.9770/jesi.2014.2.2(2))
- Lankauskienė, T.; Tvaronavičienė, M. 2012. Security and sustainable development approaches and dimensions in the globalization context, *Journal of Security and Sustainability Issues* 1(4): 287–297. DOI: [http://dx.doi.org/10.9770/jssi.2012.1.4\(5\)](http://dx.doi.org/10.9770/jssi.2012.1.4(5))

Mačiulis, A.; Tvaronavičienė, M. 2013. Secure and sustainable development: Lithuania's new role in taking the Presidency of the EU, *Journal of Security and Sustainability Issues* 3(2):5–13. DOI: [http://dx.doi.org/10.9770/jssi.2013.3.2\(1\)](http://dx.doi.org/10.9770/jssi.2013.3.2(1))

Ministère de l'écologie, du développement durable et de l'énergie [Ministry of ecology, sustainable development and energy] (online). Available at: < <http://www.developpement-durable.gouv.fr/Prix-du-gaz-et-de-l-electricite-en.html> >.

Peres da Silva, E.; Carlos Camargo, J.; Sordi, A.; Resende Santos, A.M. 2003. Available on the Internet: <<http://www.multiciencia.unicamp.br/art04.htm> >.

Raudeliūnienė, J.; Tvaronavičienė, M.; Dzemyda, I. 2014. Towards economic security and sustainability: key success factors of sustainable entrepreneurship in conditions of global economy, *Journal of Security and Sustainability Issues* 3(4): 71–79. DOI: [http://dx.doi.org/10.9770/jssi.2014.3.4\(7\)](http://dx.doi.org/10.9770/jssi.2014.3.4(7))

Raudeliūnienė, J.; Tvaronavičienė, M.; Dzemyda, I.; Sepehri, M. 2014. Sustainable entrepreneurship through energy stewardship: role of values and behavioral patterns, *Entrepreneurship and Sustainability Issues* 2(2): 107–117. DOI: [http://dx.doi.org/10.9770/jesi.2014.2.2\(6\)](http://dx.doi.org/10.9770/jesi.2014.2.2(6))

Tvaronavičienė, M. 2012. Contemporary perceptions of energy security: policy implications, *Journal of Security and Sustainability Issues* 1(4): 235–247. DOI: [http://dx.doi.org/10.9770/jssi.2012.1.4\(1\)](http://dx.doi.org/10.9770/jssi.2012.1.4(1))

Vasiliūnaitė, R. 2014. Sustainable development: methodological approaches toward issues, *Journal of Security and Sustainability Issues* 3(3): 69–75. DOI: [http://dx.doi.org/10.9770/jssi.2014.3.3\(6\)](http://dx.doi.org/10.9770/jssi.2014.3.3(6))

Vosylius, E.; Rakutis, V.; Tvaronavičienė, M. 2013. Economic growth, sustainable development and energy security interrelation, *Journal of Security and Sustainability Issues* 2(3): 5–14. DOI: [http://dx.doi.org/10.9770/jssi.2013.2.3\(1\)](http://dx.doi.org/10.9770/jssi.2013.2.3(1))

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ENTREPRENEURSHIP AND BLOG MARKETING

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Abstract. Article analyse blog marketing theoreticla aspects. Blogging is no longer just an individual's hobby; it has become an influential tool impacting sustainability of entrepreneurial activity. It has created an even playing field among businesses, allowing to compete with the Fortune 500 companies. You do not need millions of euros to maintain a blog; it simply requires someone educated in your field or even willing to do research in order to consistently update and educate your readers. In the presented paper blog marketing peculiarities are being discussed.

Keywords: entrepreneurship, blogs, blogs marketing, marketing

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JEL Classifications: M31, M37

1. Introduction

Sustainability of entrepreneurial activity depends on creativity and innovations (Laužikas, Mokšėckienė 2013; Wahl, Prause 2013; Raišienė, Jonušauskas 2013; Tvaronavičienė 2014; Caurkubule, Rubanovskis 2014). (Blogging has been a steadily increasing practice for most companies over the past few years, regardless of size, specialty and location. Blogs are part of a company's owned media. Blog content is owned by your organization and can be integrated into company website. Unlike other third-party and social media outposts, you don't need to worry about whether they'll disappear or go o firm's owned media, blogs offer a branded context for your communications through the use of blog design elements that can be exported with the content. You can extend your brand without paying for third party media. Blogs integrate your brand into your content marketing. Beyond the blog's branded context, blogs create a blog personality with a unique voice. They offer communications transparency and the opportunity to write in a conversational tone that makes your brand feel "human". Just be sure to avoid content that is clearly self-promotional, and ensure your blog personality is integrated with your brand personality across other social media platforms. Objective of this article – blogs marketing. Main purpose of article – analyses blogs marketing theoretical aspects. Research methods – literature study and analyses methods.

2. Blogs theoretical aspects

As stated Neti (2011) social media, today, is among the ‘best opportunities available’ to a brand for connecting with prospective consumers. Social media is the medium to socialize. These new media win the trust of consumers by connecting with them at a deeper level. Social media marketing is the new mantra for several brands since early last year. As states Rockey (2013) we learned a lot about our constituents' interests and needs through the blog, and we have been able to highlight behind-the-scenes data, actively engage the community in policy-making and provide insight into our decisions. Without public input, effective and impactful policy cannot be created. The logging experience has convinced that using social-media platforms is one effective way for science-funding agencies to successfully support research. Social media includes a variety of applications that, using technical terms, allow consumers to post, tag, digg, blog. This content created by social media is a type of newly generated resource for online information that is created, spread, and used by consumers desiring to educate each other about products, brands, services, and problems (Xiang and Gretzel 2010). Vinerean *et al.* (2013) noted that social media allows customers and prospects to communicate directly to your brand representative or about your brand with their friends. However, the obvious question is: who are the people interacting online and how engaged are they in online activities? The Internet and especially social media have changed how consumers and marketers communicate. Advantages of internet is that it enables businesses to reach a worldwide customer population and help select, and purchase products and services from businesses around the world (Al Kailani and Kumar 2011).

Since 1998, weblogs (or ‘blogs’) have gained increasing notice in the cyber space community because even people without programming experience can also easily update and publish their personal websites (Blood (2002)). More and more foreign educators have applied this user-friendly technology to classroom instruction and language learning (Campbell (2003)); however, it seems that relatively few English teachers have ever used blogs in an EFL writing class here in Taiwan. As stated Wen-shuenn Wu (2008) there are many websites featuring free blog hosting services. Creating a blog at Blogger will be used as an example here to give clear instruction. After you enter Blogger website (<http://www.blogger.com>), it will take you only about ten minutes to create a personal blog. Blogger offers 3 easy steps to create a blog – (1) create an account, (2) name your blog, and (3) choose a template. In the first step, you only have to fill in all the basic information such as user name, password, and email, etc. Then, you have to give your blog a title and decide its URL address.

Even for technology experts, statistics on blogging may be somewhat surprising. The blogosphere, which is the term for the collection of all blogs on the Internet, is made up of more than 60 million individual blogs, and the number is growing daily (Tanuja Singh *et al.* (2008). There are approximately 50,000 - 70,000 blogs launched every day, with 29,100 updates every hour (Martin (2005). Approximately 90% are U.S.-based (Martin (2005), although blogs are also gaining momentum in the UK, across Europe, and in Asia, particularly in China despite recent attempts to regulate content.

As state Pal and Kapur (2010) corporate blogs present a more human face to the organization and its business and provide an opportunity for interaction with stakeholders, employees and consumers. Blogs have been successfully used in mature markets and present new opportunities and challenges for their adoption and efficient use by companies operating in emerging markets. Schmidt (2007) stated, that “in order to fully explain aspects of social life, one has to connect the micro-level of individual action and the macro-level of social structures by explaining the mechanisms of how the macro-level structures are framing the micro-level actions, and how the micro-level actions are in turn (re)producing the macro-level structures”. Applied to the of blogs, this approach follows to the idea of blogging practices, which in the most general sense consist of individual episodes in which a blogger uses specific software to attain specific communicative goals.

Exist differences in writing style between male and female bloggers (Schler *et al.* 2006), and Herring and Paolillo (2006) have shown that these differences can mainly be explained by differing blog genres. Schmidt (2007) stated that speaking in one’s own personal voice and being open for dialogue rather than engaging in one-way-communication are core elements readers have come to expect from blog communication, be it in private online journals, corporate blogs, or political blogs. As Pedersen and Macafee (2007) stated, that “is now possible to make

money from blogging by selling advertising space on one's blog, the perception that women's blogs are less popular than men's puts women bloggers at an economic, as well as a social, disadvantage". There was the establishment of the BlogHer movement in the U.S. (<http://blogher.org/>), with the mission to create opportunities for women bloggers to gain exposure, pursue education, and create community. As Eltantawy (2013) stated that the final paper, Courtney C. Radsch and Sahar Khamis's "In their own voice: technologically mediated empowerment and transformation among young Arab women", offers up the findings from a qualitative feminist study of Arab female activists. The paper presented in-depth interviews with over twenty Arab female bloggers, citizen journalists, and activists to argue that these female activists utilize social media to make their voices heard and create new forms of leadership and empowerment. Arab women's cyberactivism has proved to be a valuable alternative source of news for journalists around the world who are interested in more nuanced insights into the Arab Spring uprisings.

The blogs can be divided in three large categories, depending on their subject daily (Tanuja Singha *et al.* 2008):

- personal – where subjects of personal interest are debated (approximately 80% of all blogs are included here);
- occupational –centred upon subjects relating to a profession and to professional training, but without being written from the stand of an official spokesman of a company (many times the occupational and personal blogs are mixed when it comes to the chosen subject);
- corporate –blogs officially maintained and supported by the company the blogger is a part of (approximately 12% of bloggers blog in an official capacity for their company).

Blogs assigned to specialized websites or general areas of the site which are posted frequently appear in publications, arranged in chronological order, which the authors of the so-called bloggers (blogger) express their thoughts, describe events, sightings, spread their ideas and opinions. Blogs mostly commented on the chosen topic content such as music, movies, food, politics, or news, and many bloggers act as personal diaries. A typical blog consists of text, images and links to other blogs, web pages or other blog with topics relevant information. Blog posts consist of name, the main part link - the full article or blog URL address, date - record the date and time. Additional parts – comments. A person who regularly makes out a blog called blogger (called blogger). All blogs consist of the so-called blogosphere (blogosphere). It may consist of various elements. Generally blogosphere is a relatively new web subculture phenomenon satisfies the social, psychological and informational communication needs of second generation web component.

As stated Filimon *et al.* (2010) the blogs can be divided in three large categories, depending on their subject:

- personal –where subjects of personal interest are debated (approximately 80% of all blogs are included here);
- occupational –centred upon subjects relating to a profession and to professional training, but without being written from the stand of an official spokesman of a company (many times the occupational and personal blogs are mixed when it comes to the chosen subject);
- corporate –blogs officially maintained and supported by the company the logger is a part of (approximately 12% of bloggers blog in an official capacity for their company).

In 1994 Justin Hall first created a blog. Later, a similar form of magazines began to fill many of the other companies in the IT sector workers, journalists and writers. The blogs became popular very bad appearance of automated systems such as LiveJournal, Blogger, Open Diary. The greatest role in the formation of the Lithuanian blogosphere has Blog.hardcore.lt and Blogas.lt blog hosting service. Most blogs are text, but popular and PHOTOBLOG and other forms of evil. Blogs are one of the social, civil, popular journalism part.

3. Blog marketing

As noticed Assaad and Gómez (2011) "a blog (a blend of the term "web log") is a type of website or a part of a website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video." When you know a blog, you should think about blog marketing. According Filimon *et al.* (2010) the relation between blogs and marketing are closely related:

1. the role of blog/blogs in the marketing policy promoted by the company (the blog is seen here as being an instrument used to promote the products/services of a company/organization);

2. the role of the marketing in promoting blogs (the blog is seen here as a product that must be promoted through different marketing tools).

Blog marketing means implementing a marketing strategy to grow and scale the impact of your blog. Your blog becomes a more effective individual marketing asset within your business. Blog marketing' meant "using a blog to market your business." Your business was the center of your galaxy, and your various marketing assets – email, social media, landing pages. Among the top business blog goals are to:

- Build the brand by providing content to support your offering. This information should engage prospective customers.
- Expand reach by offering prospective buyers solutions to their product needs through a variety of content forms such as checklists and how-to videos.
- Support sales by giving potential buyers useful information. The specifics depend on your products. It can be a 360-degree video to show clothing details and fit or a list of technology specifications.
- Position senior executive(s) by spotlighting their thought leadership. This can be important for firms that are strongly associated with their founders. It requires buy-in and commitment from executives to actively post.

There are three critical steps in blog marketing that will teach you:

- 1) Get Your Blog, discovered, attract brand new readers and traffic to your blog.
- 2) Converting visitors into subscribers convert visitors into subscribers who stick around and keep coming back.
- 3) Leveraging evangelists, tap into the networks of your current subscribers and evangelists to share your content and attract a brand new audience.

Some companies use blog for tactical task. Companies that use blogs as a marketing tool to specifically drive traffic to their site, or as a promotional tactic, can be classified as tactical use companies. This category includes companies such as Budget Rent A Car, Honda, and Guinness. For example, the Budget Rent A Car company blog enables users to post stories of travels and adventures while also offering them the ability to register for gifts and other promotional offerings. This type of blog clearly uses the medium in an integrative manner, but also links customers with specific promotional events. More and more people are building blogs, and that means there are lots of blogs competing for the same eyeballs and your blog is just one of many. Try finding accurate figures on how many blogs there are and you will know it's impossible to find a verifiable number because bloggers and their blogs come and go. Look around. It's certainly a disheartened moment when you see blogs with quality articles that have been abandoned by their creators.

Important things in blogs marketing are:

1. Target your content to a specific readership. Unless you want to throw all of your marketing budget and precious time on people who could care less about your blog, then you must pay attention to determine the preferred audiences to whom you would like to target. Before posting any piece, determine if it hits the sweet spot of your demographic.
2. Be original, be honest. Don't follow the herd within your sphere of interest. Followers aren't innovators and innovation keeps readers reading. So, don't simply spin the same old post. Take an original slant on a common topic. Be honest. Verify your facts and provide links to additional verification. Readers trust you to be a good reporter, instructor, mentor or inspiration so keep it honest at all times.
3. Don't be afraid of a little controversy. Controversy sells. You and I know that. If it is a part of your business model, be prepared to engage others with differing opinions because, guaranteed, lots of readers will disagree, and you may even encounter a few trolls and haters who frequent blogs for no other purpose than to post inflammatory garbage.
4. Post as a guest blogger. Don't post to just any blog within your realm. Submit your best pieces to the prestigious blogs – the ones that already have a substantial following. For example, Hongkiat.com is considered by industry insiders to be one of the best blogs for designers, marketers and freelancers. Getting one of your posts published on a top of the line blog is a great way to drive traffic to your blog where readers can find tons of content – all your archives – just waiting for a bookmark.

5. Simplify subscriptions. Don't hide your RSS button down the page together with your WordPress theme credit links, make them visible & clear for your reader's eyeballs.
6. Social Media Marketing. The expansion of social media and the evolution of multi-generational media apps are only going to pick up steam. Social media sites have taken off, providing bloggers with an arsenal of tools based on the guerrilla-marketing axiom: Use the resources of others to your advantage. A few years back, Twitter didn't exist. Today, not only is it ubiquitous, it spawned a whole new level of web innovation and interactivity. Follow the rules & open accounts at Facebook, LinkedIn & Twitter. Every time you make a new post to your blog, let your readers know about it by posting to these popular sites. Update your status with interesting & latest news that fascinates your readers.
7. Create different profiles for each social media site. On LinkedIn, you want to be all about business. On Facebook, show a little of your personality – the carbon-based life form behind the blog. On Twitter, shine the spotlight on your blog. Each profile should be designed to show a different facet of you and your expertise.
8. Don't oversell. Teach, too. If you post to social media sites all day long, flogging your latest blog post, it won't be long before your Facebook friends hit the hide button next to your name. It can't be all selling and no sizzle. Instead, post information on a new blog piece, but also post news from other sites that you think will benefit your readers. Know when to stop pushing for a larger readership and when to start giving away information to drive more readers to your blog.
9. Long tail keywords get you found. If you maintain a book review blog, a broad keyword like books will keep you buried in the backwash of Google's SERPs. Instead, narrow the focus of a search engine search through the use of terms and phrases, broadly referred to as long tail keywords. So, instead of using "*books*" as a primary keyword, use a long-tail keyword like "*independent book reviews*" or "book reviews of current bestsellers." Sure, not as many people will use these long tails when conducting a search but those who do will discover your blog at the top of page 1. And that's just where you want to be.
10. Optimize your blog – Both for readers & bots. Cut the clutter of 23 affiliate banners, animated adverts and other distractions. Remember, your site should be attractive to human sensibilities. Indeed, it's important to look good to readers who follow you. It's just as important to look good to search engine spiders. Conduct keyword research using tools like Google's keyword generator that provides keywords used by actual Google users over the past 30 days. Place those keywords in headlines, sub heads and a few of them in your blog posts. If you don't know much about SEO, grab yourself a cup of coffee & start reading the comprehensive list of search engine ranking factor provided by Seomoz. The pace of innovation is only going to increase in this new decade so, if you're standing still you're losing ground to competitor bloggers. Stay current, use all the new tools and follow all the new rules.

Blog marketing also deals with promotion. As noticed According Filimon *et al.* (2010) the promotion of a blog can be done through methods such as:

- posting comments on other blogs relevant for the topic of your own blog;
- by optimizing the blog's content in order to have a better position in the results given by search engines when certain key words are looked for ;
- taking into consideration the major role that search engines grant to the number of links made for a certain blog/post in assessing the rank of that certain blog.;
- promoting the blog on socialization networks, such as: Facebook, My Space, Twitter;
- promoting it with the help of short videos (exciting, interesting, fun) posted on YouTube, Google Video or other sites of video hosting;
- carefully monitoring and studying the traffic generated by the blog - by using specialized tools, such as Google Analytics, StatCounter, SiteMeter.

According Onalytica (2006) data on table 1 shows the 20 most influential authorities on the topic "blog marketing". The table also shows their popularity.

Table 1. The most influential authorities on the topic “blog marketing”

Name	Website	Influence	Popularity
NY Times	www.nytimes.com	10.45	10.45
Hyku	www.hyku.com	8.79	2.28
Seth Godin	sethgodin.typepad.com	8.62	8.89
Micropersuasion	www.micropersuasion.com	7.22	10.21
Businessweek	www.businessweek.com	7.03	9.13
Clickz	www.clickz.com	7.01	7.68
Wired News	www.wired.com	6.66	7.32
Next Level Biz Tips	nextlevelpartner.typepad.com	6.31	2.76
WebPro News	www.webpronews.com	5.83	6.84
Search Engine Watch	blog.searchenginewatch.com	5.76	5.52
Fast Company	www.fastcompany.com	5.23	4.44
Top Rank Results	www.toprankresults.com	5.17	4.80
Marketing Sherpa	www.marketingsherpa.com	4.72	5.04
ProBlogger	www.problogger.net	4.66	5.40
AllBusiness	www.allbusiness.com	4.42	1.68
Gaping Void	www.gapingvoid.com	4.08	4.20
Buzzmachine	www.buzzmachine.com	3.95	5.04
Church Of The Customer Blog	customerevangelists.typepad.com	3.94	3.84
Twist Image	www.twistimage.com	3.81	1.20
Adrants	www.adrants.com	3.81	5.28

Source: Analytica (2006)

The table shows that New York Times is the most influential authority on “blog marketing”. Interestingly enough it is also the most popular.

4. Blog Marketing Strategies

Regardless of your product, blogs can be an integral part of a marketing strategy. This doesn't necessarily mean running out to start one. There are other ways to harness this fast-growing medium's power:

- Gather market intelligence. Monitor public buzz to determine how your brand and close competitors are faring. Knowing where, why, and how you're being trashed (or praised) in a public forum allows you to respond appropriately -- and quickly. Any angry customer or disgruntled former employee can launch a blog at no cost. They may even get higher search rankings than your brand.
- Engage bloggers by commenting on key business topics. Read blogs related to your product or company to understand the blogger's perspective and audience. Strategically respond to postings to initiate dialogue. More genuine than a PR pitch, this approach can also help correct misinformation.
- Advertise on blogs to reach influencers, target a niche audience, or extend a media buy's reach. Though only about 25 percent of Internet users (about 32 million) currently read blogs, they tend to influence other's thinking. Bloglines readers check an average of 20 blogs daily. Informal BlogAds research shows blog readers are high consumers of expensive, well-researched content, such as *The Economist* and *The New Yorker*. Blogs vary in size, approach, and ad opportunities. You can advertise directly on a blog that reaches your target market or through an advertising network such as BlogAds or Pheedo. Banners and text copy must be contextually relevant. As users visit often, it's important to change ad content frequently to prevent impression fatigue. One option is create a dialogue with a series of related ads.
- Humanize your company with corporate blogs. One or more employees, the CEO included, may blog. Corporate blogs require a level of transparency. As a result, they may not work for all types of companies. Corporate bloggers must have access to, and support from, senior management, PR, and legal.
- Build business or brand by connecting with consumers. Both small businesses and major corporations can use blogs to build closer relationships with their customers. Best Buy created the entertaining Slothmore Institute. The only connection to Best Buy is the sponsored ads.

Blogs help in brand building for the company by employee bloggers & co-branding by consumers/ online audience. There are many companies where employee bloggers attract attention by posting fresh and interesting information that in turn improves the image and reputation of the company daily (Tanuja Singha *et al.* (2008)).

There is some blogs marketing steps:

- 1) Define your business goals. Get specific about it. Maybe you want to double your income. Maybe you want to double your email list.
- 2) Define your existing audience and your ideal audience. Now that you've defined what you're going to do, define who you're doing it for. I.e.: Who's your ideal customer, client, or reader?
- 3) Determine what's worked best in the past. Basically, this means doing a content audit. Now – don't panic. Content audits are not like tax audits.
- 4) Determine what content marketing tactics might work that you haven't tried yet.
- 5) Determine how much time and resources it will take to create the content you want, given the results you've been getting thus far.
- 6) Trim your plan down to fit the hours you actually have.
- 7) Plan out what your progress will look like, day by day, for the next three months.

Conclusions

Blogging was initially used as a unique platform to share a person's thoughts, feelings, opinions or experiences – an online journal or diary with a minimal following. Today it has grown into a platform used by millions, everyone from individuals to businesses. The simplicity of a blog makes it easy for anyone to launch a blog and become a self-proclaimed “expert.” But how is it important in the business world?

A company blog can:

- Improve Your Website's SEO (search engine optimization)
- Increase Traffic to Your Website via inbound links
- Enforce Your Brand as an Expert in a Particular Field

One of the most recently recognized benefits of blogging as a business is a blog's ability **to** improve your website's SEO. As discussed in “Google's Love for Content,” Google has recently improved their algorithm to heavily focus on a website's content and frequency of posts/updates. Therefore if a blog is well-managed, meaning regularly updated and based on relevant topics to your business, it will increase your website's SEO. A company blog will also allow you to increase the number of relevant inbound links that will direct readers to the main parts of your website. This, along with SEO, will allow you to increase traffic to your website and the length of time that visitors spend on your site. Another benefit to having a company blog is that it's content gives your customers or readers the confidence to trust in you and your brand as an expert in your particular field. Many times this benefit is overlooked. There are readers at the other end of your blog, whether or not this is your main reason for building one. Keeping this in mind, you will be able to enforce a stronger brand connection with your readers and hopefully encourage those readers to return to your site for other relevant information or even purchases.

References

- Al Kailani, M.; Kumar, R. 2011. Investigating Uncertainty Avoidance and Perceived Risk for Impacting Internet Buying: A Study in Three National Cultures, *International Journal of Business and Management* 6(5): 76–92. DOI: <http://dx.doi.org/10.5539/ijbm.v6n5p76>
- Assaad, W.; Gómez, J.M. 2011. Social Network in marketing (Social Media Marketing) Opportunities and Risks, *International Journal of Managing Public Sector Information and Communication Technologies (IJMP ICT)* 2(1): 13–22.
- Blood, R. 2002. Weblogs: A history and perspective, in Editors of Perseus Publishing (Eds.). *We've Got Blog: How Weblogs are Changing Culture*. Cambridge, MA: Perseus Publishing, 7–16.
- Campbell, A. P. 2003. Weblogs for use with ESL classes, *The Internet TESL Journal* 9(2). Available on the Internet: <http://iteslj.org/Techniques/Campbell-Weblogs.html>.

- Caurkubule, Ž.; Rubanovskis, A. 2014. Sustainable entrepreneurship through motivation: case of Latvian companies, *Entrepreneurship and Sustainability Issues* 2(1): 43–48. DOI: [http://dx.doi.org/10.9770/jesi.2.1\(6\)](http://dx.doi.org/10.9770/jesi.2.1(6))
- Eltantawy, N. 2013. From veiling to blogging: women and media in the Middle East, *Feminist Media Studies* 13(5): 765–769. DOI: <http://dx.doi.org/10.1080/14680777.2013.838356>
- Filimon, S.; Ioan, A.M.; Alexandru, R.L.; Ruxandra, R. 2010. Blog marketing - a relevant instrument of the marketing policy, *Annales Universitatis Apulensis Series Oeconomica* 12(2): 760–765.
- Herring, S. C.; Paolillo, J. C. 2006. Gender and genre variation in weblogs, *Journal of Sociolinguistics* 10(4): 439–459.
- Johnson, A. 2004. Creating a writing course utilizing class and student blogs, *The Internet TESLJournal* 10(8). Available on the Internet: <<http://iteslj.org/Techniques/Johnson-Blogs>>.
- Laužikas, M.; Mokšėckienė. 2013. The role of creativity in sustainable business, *Entrepreneurship and Sustainability Issues* 1(1): 10–22. DOI: [http://dx.doi.org/10.9770/jesi.2013.1\(2\)](http://dx.doi.org/10.9770/jesi.2013.1(2))
- Martin, J. 2005. Blogging for dollars, *FSB: Fortune Small Business* 15(10): 88–92.
- Neti, S. 2011. Social media and its role in marketing, *International Journal of Enterprise Computing and Business Systems* 1(2): 1–15.
- Onalytica. 2006. Influence and popularity on the topic of “blog marketing”. Available on the Internet: <http://www.onalytica.com/system/resources/W1siZiIsIjIwMTMvMDQvMjMvMDkvNDgvMTQvMTkvSW5mbHVlbnNIX2FuZF9wb3B1bGFyaXR5X29uX3RoZV90b3BpY19vZl9ibG9nX21hcmtldGluZy5wZGYiXV0/Influence_and_popularity_on_the_topic_of_blog_marketing.pdf>
- Pal, S.P.; Kapur, V. 2010. Blog Marketing Strategies for Mature and Emerging Markets, *International Journal of Innovation, Management and Technology* 1(4): 411–418.
- Pedersen, S.; Macafee. C. 2007. Gender Differences in British Blogging, *Journal of Computer-Mediated Communication* 12: 1472–1492.
- Raišienė, A.G.; Jonušauskas, S. 2013. Silent issues of ICT era: impact of techno-stress to the work and life balance of employees, *Entrepreneurship and Sustainability Issues* 1(2): 108–115. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(5\)](http://dx.doi.org/10.9770/jesi.2013.1.2(5))
- Rockey, S. 2013. Transparency: Two years of blogging the NIH, *Nature* 493: 298–299. DOI:10.1038/493298a
- Schler, J.; Koppel, M.; Argamon, S.; Pennebaker, J. 2006. Effects of age and gender on blogging. Paper presented at the workshop *Computational approaches to analyzing weblogs Stanford University*.
- Schmidt, J. 2007. Blogging Practices: An Analytical Framework, *Journal of Computer-Mediated Communication* 12: 1409–1427.
- Singha, T.; Veron-Jackson, L.; Cullinane, J. 2008. Blogging: A new play in your marketing game plan, *Business Horizons* 51: 281–292.
- Tvaronavičienė, M. 2014. If industrial sector development is sustainable: Lithuania compared to the EU, *Entrepreneurship and Sustainability Issues* 1(3): 134–142. DOI: [http://dx.doi.org/10.9770/jesi.2014.1.3\(2\)](http://dx.doi.org/10.9770/jesi.2014.1.3(2))
- Vinerean, S.; Cetina, I.; Dumitrescu, L.; Tichindelean, M. 2013. The Effects of Social Media Marketing on Online Consumer Behavior, *International Journal of Business and Management* 8(14): 66–79.
- Wahl, M.; Prause, G. 2013. Toward understanding resources, competencies, and capabilities: business model generation approach, *Entrepreneurship and Sustainability Issues* 1(2): 67–80. DOI: [http://dx.doi.org/10.9770/jesi.2013.1.2\(1\)](http://dx.doi.org/10.9770/jesi.2013.1.2(1))
- Wen-shuenn Wu. 2008. Using blogs in an EFL writing class, in Priya, S. (Ed.). *Netlingo: The metamorphosis of language*, 86–99.
- Xiang, Z.; Gretzel, U. 2010. Role of social media in online travel information search, *Tourism Management* 31: 179–188.

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