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ABOUT ICEM-2017 CONFERENCE

The 22nd International Scientific Conference “Economics and Management, ICEM-2017” takes place in Riga, Latvia on May 10-12, 2017 and is held by Faculty of Engineering Economics and Management of Riga Technical University.

The aim of the conference is to provide a platform for discussion on diverse changes in economics and management fostered by technology development, innovation and global challenges what leads us towards next industrial revolution.

The general theme of ICEM-2017 conference is Facing 4th Industrial Revolution.

The conference “Economics and Management, ICEM-2017” is organized by School of Economics and Business of Kaunas University of Technology (Lithuania), Faculty of Business and Management of Brno University of Technology (Czech Republic), Tallinn School of Economics, Business Administration of Tallinn University of Technology (Estonia) and Faculty of Engineering Economics and Management of Riga Technical University (Latvia).

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EFFICIENCY OF GOVERNMENT SUPPORT FOR LITHUANIAN SOCIAL AND ECONOMIC DEVELOPMENT

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Abstract

The aim of the article is to analyse Lithuanian government authorities shared support from European Union (EU) Structural Funds in the context of cooperation between University-Government-Industry for gradually reduction of the social and economic development differences between Lithuania and other EU member states, individual regions and social groups. For research were used data about Lithuanian companies' regional activity from Amadeus data base. As well as were analysed structural EU funds support in 2017-2013 for Lithuania.

Keywords: University, Government, University, EU funds, Lithuania.

Introduction

Lithuanian government authorities in 2007 - 2013 years successfully administered more than 7 milliards euro from structural EU funds. This support was designed for rapid improvement of the international investments, work and living conditions in Lithuania, and other economic benefits which could reach all of the country's population (Enterprise Lithuania. *European Union support for business creation Structural funds).* In 2007-2013 EU priority support areas in Lithuania were: Environment, Energetics, The information Society, Cultural heritage and nature preservation, Science research and technological development, Regional and social cohesion, Health care, Technical support, Transport, Tourism, Employment and social inclusion, Business, Public Administration and Education (EU Structural Assistance 2007-2013 Priorities and Measures.). Above mentioned priority support areas were set in the strategy for the implementation of four action programs:

1) Human Resources Development Program;
2) Economic Growth Program;
3) Cohesion Action program;
4) Technical Assistance Operational Program.(EU Structural Assistance 2007-2013. *Strategy and Action Programs).*

Discussion and Conclusions

Lithuanian companies and government institutions took a part in all four EU structural funds Action programs. Totally during 2007-2013 were prepared 12977 applications from companies/universities/colleges/government institutions in order to get EU structural support EU (Structural Assistance 2007-2013. *Received and evaluated applications).* Through 7 years period more than 7 milliards euro (7 142 618 169,7 €) were invested in Lithuanian Social and Economic development. Overall most popular action program was Economic Growth Program, which received 42.82 % of all applications, and more that 3 milliards euro were devoted to this action. Not so successful was Technical Assistance Operational Program, which acquired only 0.41% of all applications. For this program during 7 years period from 2007 till 2013 were received only 53 requests, but all of them were approved and financed.

Most active Lithuanian regions absorbing EU support were Alytus, Birštonas and Ignalina. In these regions more than half of the government, educational and private organizations applied for structural funds.

Most passive regions were Panevezys, Taurage and Silute in which less than 10% of regional companies/government/educational institutions applied for EU support.

Analysed Lithuanian Universities and Colleges participated in all EU structural fund action programs except Technical Assistance Operational Program. Lithuanian colleges distinguished by the fact that during 2007-2013 year period totally prepared 9 applications for Economic Growth Program, but none of them were approved and financed. Both institutions Universities and Colleges were active preparing applications for Human Resources Development Program. From Universities side 75 % of all successful applications and from Colleges side 69% from all the successful applications were dedicated to this program.

As the result 2007 and 2013 years **investments made by the EU Structural Funds significantly contributed to the national Lithuanian GDP growth, increasing it by 20% on average**. It is estimated that each invested Euro brought 1,38 euro of nominal GDP in returns. It is expected, that this return on investment will continue growing and by 2020 will reach 1.6 euro (according to new investment program in 2014-2020).

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Enterprise Lithuania. *European Union support for business creation Structural funds.* Retrieved from http://www.verslilietuva.lt/lt/verslo-pradzia/verslo-pradzia-pirmieji-zingsniai/verslo-pradzia-pirmieji-zingsniai-galimi-finansavimo-saltiniai/europos-sajungos-parama-verslo-steigimuiInnovative Milieus, Ecosystem and Regional Development

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Abstract

This article presents the concepts of innovative milieu, ecosystem and a model that is used to manage regional development. The paper finds out two major aspects; how innovation milieu transforms regions and discusses the local ecosystems on regional development. It further points out the challenges that are experienced in the implementation of an innovative milieu.

Keywords: Innovative Milieus, Ecosystem, Regional Development

Introduction

Regional disparities have been experienced in many areas across the globe. Regions have merged and formed unions that experience new entrants an aspect that influences their ranks in the regional classification. Sectors that received poor new entrants have their income per capita significantly affected due to the change in attribution level criterion (Almatova, 2011). It's noted that, despite the existence of regional policies, the gap that exists between the regions grow larger an aspect that is attributed to economic activities that are comprised of spatial inequalities and disparities.

Regional science plays a critical role in social, cultural and economic dynamic spaces that present the concept of the milieu. The scientists have termed it as 'milieu effect' a factor that is termed as one of the contemporary issues of regional socioeconomic dynamics. Earlier on, several approaches were used in explaining the dynamism of some local spaces an aspect that doesn't count in the modern era due to the development of new strategies (Crevoisier, 2009). For instance, the western regions implemented regional policies that are by the need and circumstance thus offering a variety of assets. Some of these assets are; transportation infrastructures, fair distribution of natural resources, social, cultural facilities, improved education systems, investments amongst other factors. However, a shortage of diverse strategies to be implemented to promote dynamism is experienced despite placing a variety of strategies in place (Crevoisier, 2009). This aspect brings forth development in these regions.

Under this scope, another approach is known as "innovative milieu" is coined by scientists disclosing a new field for modeling. This method is proved to bring forth change in the regional growth as it influences external effects, favorable creation as well as promoting the dynamic, productive system. Aydalot (1986) hypothesizes that a local environment that presents an ecosystem plays a critical role in innovation incubation thus acting like a prism in which innovation catalysts take part giving the space a clear complexion. Further evaluating the principal components of innovation, the author identifies collective behavior and internal structure of an organization as the key elements.

This article presents the concepts of innovative milieu, ecosystem and a model that is used to manage regional development. The paper finds out two major aspects; how innovation milieu transforms regions and discusses the local ecosystems on regional development. It further points out the challenges that are experienced in the implementation of an innovative milieu.

Discussion

The global environment is changing every new day with increasing demands resulting to competition an aspect that puts both national innovation systems as well as the regional developers in a struggling position to meet them. Significant structural changes have been experienced in many countries with major concerns on the economic shifts from manufacturing to services. Further, the innovation landscape is shaped by the waves of socio-technical development. Developing and strengthening the local innovation ecosystems is deemed to support structural change and innovations (Tammi, Mustajärvi and Rasinmäki, 2016).

To adequately explain these concepts, a theoretical framework is used through a review of the literature. As per Maillat (1992), the innovative milieu is described as a combination of social, cultural, economic and political factors that occur in a particular geographical setting. An innovative ecosystem involves utilization of knowledge and competence to attain some degree of conceptualization that aims at improving an existing state or entirely providing a solution to an existing problem. The innovation ecosystem is directly linked to innovation hub that is used to refer to a global network connection that aids in creating value in the world economy (Tammi, Mustajärvi and Rasinmäki, 2016). This concept relates to the models of regional innovation systems like learning regions where the logic behind the construction of regional innovation systems is the same. The development of the systems can either be localized, path-dependent, learning processes or regionalized national innovation systems.

Further, an innovation ecosystem would comprise of dynamic processes that are aimed at producing solutions to different challenges. The world is experiencing numerous problems ranging from incurable diseases to harsh climatic conditions. Innovation ecosystems, therefore, provides a promising platform to find amicable solutions to these problems. These problems are not experienced in all the regions in the world as each region experiences a different problem. However, the global warming effect is experienced worldwide (Guesnier, 1998).

Innovation milieu can as well refer to global networks and technological platforms that trace its roots in industry and business sectors. The culture of innovation began during the industrial era a time when cities and metropolitans were being built. For instance, the rise of United Kingdom would represent as a real picture of innovation milieu (Guesnier, 1998). In the current times, the concept has gone to other levels with the Silicon Valley being one of the most recent concepts of innovation ecosystems. Silicon Valley brings forth an important aspect of advancing global economy and network. This brings regional development in the regions where the hubs are being set.

Another aspect that influences innovative milieus is meso-economy an element that is used to explain the internal components of the system. Meso-analysis helps in explaining the micro and macro analysis of the economic aspect of a region (Pitkänen, 2010). The economic dimension of a country is very critical as it describes the financial position of a country. The region is considered economically stable if their socioeconomic factors are stable. Regions with poor governance have weak economies as well as the ones that don't embrace innovation (Kalenskaya, 2014).

Regions have experienced challenges in leadership that don't build favorable conditions for innovation. Long-term structural changes are required to embrace change for a positive impact in the modern society. The modern society faces many challenges that hinder systematic innovations like energy crisis, weak healthcare systems, waste systems among others (Kalenskaya, 2014). The systematic view is required in a bid to change a city into an innovation ecosystem. These factors are key determinants of regional development.

Transitions in sociotechnical systems are directly related to ecosystem innovations that may take decades to be seen. For instance, the transformation of a rural area into an industrial hub would take decades. The transition doesn't rely on technology only but also other factors like societal and cultural changes. Modern day systematic innovation strategies are an essential part of national development strategy even though some lack practical guidelines (Tammi, Mustajärvi and Rasinmäki, 2016). Evaluating the general scenario of the innovation ecosystem, it's found that technological possibilities, politics, market trends, consumer behavior, and competitor behavior affect innovation for regional growth as well as the cultural context of beliefs and values.

Another strategy that may be used to explore systematic change and innovation is the adoption of technologies such as the use of renewable energy sources and healthcare reforms using information technology concepts. Technology is applicable in diverse areas to spearhead the regional development, and it's important for the users to consider the maturity, costs, as well as legislations that may govern a particular technology (Tammi, Mustajärvi, and Rasinmäki, 2016). Also, the general values of the society may influence practical frameworks like the climate change awareness and escalating energy demands. Geels (2010)

reveals that for a region to address the challenges, it may need some extra dynamics that are related to the society and consumer behavior.

Ecosystem innovation works in cases where we have experiences and feedback. To successfully implement a structure, a single innovator wouldn't make it alone rather he would need a team that has a know-how for successful implementation of any technology (Kennedy, 2000). Ecosystem users depend on others like resources and expertise for a complete cycle. Moreover, a systematic innovation in an ecosystem would see changes being actualized in phases and different sectors.

Conclusion

Innovation milieu is an important aspect when it comes to regional development. The concept is spearheaded by the changing technological aspects that allow innovation to take acute phases in a very short period. Innovation is used to find solutions to challenges that regions face as well as the addressing global issues. Energy crisis and changing climatic conditions are some of the factors that influence regional development. Silicon Valley is a modern-day innovation ecosystem that has seen old fashioned cities being transformed to a high-tech economy hubs. Regional development is highly influenced by innovation milieu and ecosystem even though other socioeconomic factors play a critical part.

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DIGITAL MARKETING SKILLS AND KNOWLEDGE AS A SUCCESS FACTOR FOR COMPANY DEVELOPMENT

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Abstract

Digital marketing is considered to be the fastest growing marketing segment. However, despite rapid growth, the level of awareness of services provided in the sector efficiency is very low. It can be largely attributed business leaders, employees, etc. specialistы lack of the knowledge, skills, competences, as well as an understanding of digital marketing.

Keywords: Digital Marketing, skills, knowledge.

Introduction

A number of researches it is estimated that already by 2020 in digital marketing budget will exceed the traditional marketing channel to the overall budgets (Pwc, 2016). UK total digital marketing cost amounted to 40% of all marketing costs in 2015 (Chaffey, 2016). There is a lack of research that would allow advertisers to adopt a decision on the digital marketing channels. Digital marketing features provides a greater amount of information to the marketing communication process, which leads to complicated the decision-making process, because each target representative offers the opportunity to compare products and discuss their quality. The sector is characterized by specific communication conditions: feedback and possibility of reaching the global target group. Specific digital marketing tools and functionality needs for specific knowledge. The PwC forecasts indicate that digital marketing will become the largest marketing segment already in 2019. Is expected growth of the sector from 135,42 bill. in 2014 to 239,87 bill. in 2019, surpassing TV advertising and became the largest forces best practices segment. Marketers spend about 60% of their time working with digital marketing tools; 28% of the world's advertisers have reduced the channel marketing budget to increase digital marketing budgets, 71% of advertisers plan to increase digital marketing budgets in 2016 year. There are also negative trends: 50% of companies using digital marketing tools have not developed digital marketing strategy; 63% notes that have not developed data collection system for data storage, on which to base strategic decisions; 83% of the notes has experienced low-quality social media marketing communications; 8% of the companies are employed e-mail marketing specialists, despite the fact that it is judged that the channel with the highest direct return. The research published by the «E-commerce consumer behavior model in Latvia» highlighted the user behaviour changes in the attitude of the average resident of Latvia much more are starting to use multiple online devices, thereby creating new challenges for advertisers such user goals. In the period from 2013 up to 2014 for the Latvian e-commerce page visit the source of the increase in volumes of the highest position occupies the contextual advertising, which increased from 15% to 21% of the total e-commerce visitor volume. The company's Digital Journey by the research Successful DigiCilvēks (Digital Journey, p. 39). Latvia focuses on the digital marketing specialists competences, as well as compares the digital marketing specialists' competence in the global and Latvian level. The most important carried out by the conclusion of the reserch finding is the low difference in the level of Latvia and the global Internet marketing market, which means that the sector is the same principles, requirements, techniques and instruments, that indicate the rapid change of the level of adoption. In fact, the Latvian Internet Association of the study of the most Effective ways to attract customers to the internet, is to search the system data it is estimated that despite the highest efficiency rating from the companies to the acquisition of digital marketing tools is only the second point after the usage capacity of Latvian companies used marketing tool in the top (Ščeulovs, Gaile-Sarkane, 2014).

Methodology of Research

State-of-art review, empirical research method: interviews with experts of the respective industry.

Findings/Results

Latvian digital marketing expert interview results indicate over the past years, knowledge on digital marketing offered by the tools of improvement, as well as the services increase in popularity. Particular popular digital marketing channels are the financial sector and retail and wholesale sectors, as well as IT sector companies. Expert interview, the result was obtained information about the digital marketing channel performance understanding the factors based on based on two characteristics: factors that describe the first interaction with the ad and purchase related factors. Factors play an important role-specific knowledge, competences and skills to work in the digital marketing field.

Conclusions

Despite the high digital marketing industry growth globally most companies, even the understanding of the Internet marketing importance, are unable to effectively and successfully apply. This indicates the companies' digital marketing skills and knowledge gaps and a lack of appreciation of the digital marketing tool of application possibilities. It requires specific knowledge, competencies and skills. Businesses insufficient awareness of digital marketing channels the options to use, confirming the need for additional research in this area in both the global and the Latvian scale. The examination of the Latvian enterprises in the e-environment in a global context and based on the previously collected statistics are needed in addition to the studies, which should focus on new entrants to the market attraction of an e-environment for use, as well as assistance in digital marketing strategy development. The current situation of the enterprises in the e-environment the market is in the growth stage, however, the overall development of the market and knowledge of the digital marketing tools the knowledge level is low. Digital marketing channels economic efficiency consider to various sectors to be able to serve as one of the support elements of both Latvian companies digital marketing strategy creation and digital marketing industry enterprises of its services, facilitation and the usage of the necessity foundation on.

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RISK MANAGEMENT FRAMEWORK FOR INTEGRATED MANAGEMENT SYSTEMS

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Introduction

There is a high level of uncertainty in nowadays fast changing global business environment that causes challenges for management decision making process. Management of organizations employs set of risk management practices to deal with these uncertainties and to ensure achievement of strategic objectives and fulfilling its mission. There are exiting Enterprise Risk Management (ERM) frameworks that provide a comprehensive and systematic approach to proactive and holistic risk management. Additionally companies extensively use Management System (MS) standards to enable implementation of structured approach to their activities in order to achieve their objectives. The most popular Management System standards developed by International Organization of Standardization (ISO) are ISO 9001 - Quality management systems and ISO 14001 - Environmental management systems. MS standards are frequently unified into one efficient Integrated Management System (IMS). In this paper, authors identify and describe main risks in management decision-making process and analyze, if the existing ERM frameworks are applicable for dealing with these risks from IMS perspective. These analyses serve as a starting step for developing criteria based model for optimal choice of risk management framework for IMS implementation, based on specific company's qualities. This study allows getting insight in the main risks related to management decision making process and application of risk management frameworks for handling these risks. It will serve as bases for further development of decision-making model for selection of risk management framework based on specific company criteria and taking into account IMS perspective.

Methodology of research

Digital online databases were used to identify current state of research on ERM and IMS: Web of Knowledge, Emerald In-sight, Scopus, Science Direct and social networking site for scientists and researchers ReasearchGate. Key words used for search: "Enterprise Risk Management", "Risk management frameworks", "Management Systems", "Integration". Based on literature review were developed criteria for comparison of ERM frameworks. Afterwards semi-structured interviews with top management and risk management experts of selected companies were carried to take advantage of their expertise with risk management frameworks in identifying main risks in management decision making process and determining the main criteria for choosing specific framework.

Results

There is a considerable amount of research and publications regarding risk management frameworks and IMS. Two most commonly used risk management frameworks are ISO 30001 and COSO (The Committee of Sponsoring Organizations of the Treadway Commission). There are certain similarities as well as significant differences among frameworks. Interviews with the experts showed that one of main challenges in management decision-making process is that different risk management approaches are used in different business areas and there is no unified enterprise wide risk management solution. In addition, the IMS requirements are not always taken into account when choosing risk management approach. It could be

feasible to develop a logical decision making model, applicable for the selection of companywide risk management framework based on the unique qualities of each specific company.

Conclusions

It could be feasible to develop a logical decision making model, applicable for the selection of companywide risk management framework based on the unique qualities of each specific company.

Keywords

Integrated Management Systems, ISO 9001, ISO 14001, Decision making, Management Systems Standards, Risk Management Framework, Enterprise Risk Management

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DZĪVOJAMO RAJONU IETEKME UZ PILSĒTVIDES ILGTSPĒJĪGO EKONOMISKO ATTĪSTĪBU

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Abstract

Šodien, kad urbanizācijas process un tā radītās sekas kļūst aizvien aktuālākas, pieaug pilsētu un pilsētvides ietekme uz valsts sociāli ekonomisko attīstību. Savukārt, pilsētvides ilgtspējīgu ekonomisko attīstību būtiski ietekmē dzīvojamo rajonu vide. Līdz ar to svarīgi izpētīt un novērtēt kāda ir nozīme dzīvojamiem rajoniem un to iedzīvotājiem pilsētvides un valsts ilgtspējīgā ekonomiskā attīstībā un kā var uzlabot līdzšinējo dzīvojamo rajonu vienmērīgu attīstību, kas uzlabos dzīves un darba vidi. Kā viens no noteicošiem faktoriem pilsētas, dzīvojamo rajonu ilgtspējīgai attīstībai ir iedzīvotājs, kurš ir svarīgs gan sociāli, gan ekonomiski pilsētvides attīstībā. Šī pētījuma ietvaros tiks apskatīts, dzīvojamo rajonu kopējais raksturojums un tiks analizēts, kādi ir noteicošie faktori iedzīvotāju skaita izmaiņām un to migrācijai, kā arī kādi ir galvenie bremzējošie faktori vienmērīgai, ilgtspējīgai un ekonomiski progresējošai pilsētas attīstībai.

Keywords: pilsētvide, ilgtspējīgā attīstība, Rīga, iedzīvotāji, dzīvojamais rajons

Introduction

Šodien tiek pievērsta pastiprināta uzmanība pilsētas ilgtspējīgai attīstībai, jo aktuāla problēma ir iedzīvotāju migrācija, kur iedzīvotājs ir pilsētvides ilgtspējīgas ekonomiskās attīstības kodols un pamats. Svarīgi atcerēties, ka pilsēta ir sociāli ekonomiskās attīstības un pašvaldību uzlabošanas veicinātāja, kuras pamatā ir iedzīvotājs. Ņemot vērā, ka gan Rīgā, gan arī valstī kopumā iedzīvotāju skaits sarūk, kuras pamatā ir migrācijas problēma. Rīga ir lielākā un viena no ekonomiski bagātākām pašvaldībām, tai skaitā valsts galvaspilsēta, tad tai jābūt kā paraugam un balstam blakus esošām pašvaldībām. Būtiski ir atcerēties un ievērot Rīgas ilgtspējīgas attīstības stratēģijas līdz 2030.gadam nostādnes, kurās teikts, ka dzīvojamo rajonu attīstīšanas galvenais mērķis ir radīt priekšnoteikumus līdzsvarotai sociāli–ekonomiskai un telpiskās attīstības ieviešanai Rīgas pilsētas administratīvajā teritorijā. Rīgas pilsētā identitātes stiprināšanai dzīvojamos rajonos būtu jāveicina esošajam pilsētas centram pakārtotu daudzfunkcionālu vietējo centru attīstību kā esošajos, tā jaunajos rajonos, atbalstot teritoriālo līdzsvaru un dzīves vides uzlabošanu visā Rīgas aglomerācijā. Jāņem vērā, ka vidēji pilsētā ekonomiski aktīvo iedzīvotāju ir 60% un nodarbināto iedzīvotāju ir nedaudz pāri 40% no kopējā Rīgas pilsētas iedzīvotāju skaita, kas ir būtiski rādītāji pilsētas ilgtspējīgai attīstībai.

Viena no pilsētas ilgtspējīgās ekonomiskās attīstības atslēgām ir rīdzinieku apzināšanās par piederību savam dzīvojamam rajonam, tās piedāvātajām iespējam, un nākotnē tas uzlabotu situāciju dzīvojamos rajonos, samazinot pieprasījumu pēc pārvietošanās uz citiem dzīvojamiem rajoniem, lai saņemtu pakalpojumus, kas nav pieejami savā rajonā, kā arī samazinātu tendenci migrēt uz Rīgas piepilsētām, jo piemēram, Ogrē, Salaspilī un Jūrmalā (Kauguros) dzīvokļu cenas par vienu kvadrātmetru ir zemākas par 30-50% nekā Rīgā gan jauno projektu tirgū, gan sērijveida dzīvokļu tirgū. Tas nav vienīgais faktors iedzīvotāju migrācijai, cits faktors ir iedzīvotāja piederības trūkums savai pilsētai, savam dzīvojamam rajonam, ja netiek apmierinātas iedzīvotāja pamatnepieciešamības, tad iedzīvotājs izvēlas sev citu dzīves vietu, kur viņš tiek ievērots un novērtēts. Protams, visam ir mērs un katra iegriba nevar tikt ievērota un apmierināta, bet analizējot Rīgas pilsētas dzīvojamo rajonu struktūru un raksturojumu, jāsecina, ka nevienmērība pilsētā ir acīmredzama. Ja vienam iedzīvotājam ir iespēja attīstīties un pilnvērtīgi atpūsties sava dzīvojamā rajona ietvaros, bet citam tāda iespēja tiek liegta, tad rodas jautājums, kāpēc ir tāda nevienlīdzība. Kā piemēru jāmin Mežciems, kur pirmskolas izglītības izglītības iestāžu skaits ir mazāks nekā Skanstē, kur iedzīvotāju skaits ir 10 reizes mazāks. Savukārt, ja tiek pētītas kultūras iestādes dzīvojamos rajonos, tad parādās neizprotama

aina, kultūras iestādes lielākos pilsētas dzīvojamos rajonos nav pieejamas, bet Bukultos, kur ir 600 iedzīvotāji ir kultūras centrs, bet Ziepniekkalnā, kur ir 33 tūkstoši iedzīvotāji, nav sava kultūras centra, tāpat Purvciemā nav, bet Brasā, kur ir trīs līdz četras reizes mazāk iedzīvotāju nekā Purvciemā un Ziepniekkalnā ir četras kultūras iestādes. Protams, Rīgas ietvaros var aizbraukt uz blakus esošo dzīvojamo rajonu vai Centru, kur ir nepilnas simts kultūras iestādes, bet, tomēr, lai iedzīvotājam būtu iespēja savā dzīvojamā rajonā attīstīties un radoši pilnveidoties, kultūras iestāde nereti ir tā vieta, kur tiek organizēti dažādi pasākumi gan bērniem, gan pieaugušiem, gan vecāka gada gājuma iedzīvotājiem, lai iedzīvotājs līdzdarbotos un justos savā dzīvojamā rajonā, pilsētā komfortabli un viņam ir iespēja apmeklēt kādu skaistu kultūras izglītojošu pasākumu un just savu piederību tam.

Pētījuma ietvaros tika arī apskatītas aptaujas, kuras veica 2014.gada SKDS (Tirgus un sabiedriskās domas pētījuma centrs), kur labi parādās, ka Rīgas iedzīvotājiem patīk sabiedriskie pasākumi un tos labprāt apmeklē, tie ir 69% no respondējamo skaita, kas arī parāda kultūras iestāžu nepieciešamību un pamatotību. Kā arī, diemžēl, iedzīvotāju iesaistīšanās sava dzīvojamā rajona attīstībā, uzlabošanā ir kritusies par 50% (salīdzinot veikto aptauju 2014.gadā ar 2010.gadu). Kā arī pētījuma autore 2015.gada martā veica lielāko dzīvojamo rajonu (Ziepniekkalns, Pļavnieki, Purvciems, Ķengarags un Imanta) iedzīvotāju aptauju, kuras rezultātā tika konstatēts, ka pilsētas attīstība notiek neievērojot pilsētas attīstības programmu un stratēģiju, jo iedzīvotājiem nav nodrošināti vienlīdzīgi dzīves apstākļi, tas izpaužas ar to, ka Ķengaragā uz deviņiem pagalmiem ir tikai viens bērnu laukums, bet Imantā katrā trešajā pagalmā ir laukums, tad tas rada nevienlīdzības sajūtu iedzīvotājos. Līdz ar to, rodas atpakaļejošs efekts, iedzīvotājs paliek kūtrs un nevēlas piedalīties jebkādās aktivitātēs, kas saistās ar pilsētvides attīstību. Tas viss atainojas arī aptaujāto vidū un iedzīvotāju skeptiskā attieksmē.

Methodology of Research

Pētījumā tiek izmantotas vispārpieņemtas zinātniskās metodes - loģiski-konstruktīvā metode – izsakot spriedumus, analizējot rezultātus, monogrāfiskā jeb aprakstošā – tika veikta parādības detalizētu izpēte, apkopojot informāciju un pamatojoties uz daudzveidīgas literatūras apskatu, raksturojot ne vien parādību pašreizējo stāvokli, bet arī to, kādas pārmaiņas notikušas laika gaitā, analīzes un sintēzes metode.

Findings/Results

Ņemot vērā iepriekš minēto, jāsecina, ka, pilsētvides, dzīvojamo rajonu ilgtspējīgo ekonomisko attīstību vistiešākā veidā nosaka un ietekmē kopējie sociālekonomiskie apstākļi valstī. Jāņem vērā arī tas, lai Rīga turpinātu augt, attīstīties, vairāk jāpievērš uzmanība kā piesaistīt jaunu iedzīvotāju ienākšanu pilsētā un noturēt tagadējos iedzīvotājus, radot tajos motivāciju līdzdarboties pilsētas attīstībā, pilnveidojot savu apkārtējo dzīves vidi un radot tajos savu piederību savam dzīvojamam rajonam un pilsētai kopumā.

Conclusions

Rīgas pilsētvides, dzīvojamo rajonu un valsts ilgtspējīgas ekonomiskās attīstības balsts un pamats ir iedzīvotājs, līdz ar to iedzīvotāju līdzdalība pilsētas, valsts plānošanas un attīstības dokumentu izstrādē un pašas pilsētas attīstībā ir svarīga un nepieciešama, jo pilsētas attīstības un plānojuma dokumenti var ierobežot personas tiesības uz labvēlīgu vidi, tāpēc ir ļoti svarīga sabiedrības līdzdalība ne tikai plānošanas dokumentu izstrādē, bet arī citos pilsētas, valsts attīstības jautājumos, kas tiešā veidā skar pašu iedzīvotāju.

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CHARACTERISATION OF R&D PERFORMING ENTERPRISES

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Abstract

In the R&D and innovation related literature, the term "R&D performing enterprise" is not a definitive one. Various terms are used and numerous classifications have been developed based on institutional sectors, ownership, affiliation, main economic activity, size, geographical location, R&D capability and intensity, R&D regularity and other characteristics. The aim of this study was, firstly, to summarise the current state of understanding of R&D performing organisations; and, secondly, to establish a theoretical framework for the author's PhD project investigating factors affecting long-term survival and growth of small and medium-sized R&D performing enterprises.

Keywords: R&D performing enterprise, R&D services, knowledge-intensive business services, KIBS, T-KIBS.

Introduction

Need for cost and time-savings, lack of in-house resources, globalisation and increased speed to market are a few factors that are causing more and more enterprises to review efficiency of their business processes, including their R&D organisation and spending. This has caused changes in the R&D market leading to an increasing number and diversity of organisations performing R&D activities.

In the R&D and innovation related literature, the term "R&D performing enterprise" is not a definitive one. Therefore, the aim of this study was to summarise the current state of understanding of R&D performing organisations and to establish a theoretical framework for the author's PhD project investigating factors affecting long-term survival and growth of small and medium-sized R&D performing enterprises.

Understanding the complexity of the R&D market is of importance for both public and private sector organisations, but especially for the governments, who should ensure that their programmes and policies do not hinder or penalise industry's preferences as between outsourcing or in-house solutions, and provide equal opportunities for all R&D performers in accessing public funding.

Methodology of Research

This study is based on the qualitative content analysis of literature overview. EBSCO, Science Direct and Web of Science data basis were used to conduct the literature overview. English language articles published in peer-reviewed journals were reviewed. Search terms "R&D performing enterprise", "R&D performing firm", "R&D performing organisation", "R&D enterprise", "Science-based firm", "R&D service firm" were used.

Findings/Results

In general, two main groups of R&D performing enterprises can be differentiated. Firstly, enterprises which conduct their own R&D activities either in-house or externally, and do it in different forms such as subcontracting, resourcing, collaboration and cooperation. Secondly, enterprises who are R&D service providers. There are also companies who can be regarded as hybrid structures synthesising the elements of both - carrying out own R&D activities and offering R&D services to the third parties.

The first group of R&D performing enterprises are frequently named as science-based businesses, science-based entrepreneurial firms, R&D based firms, science and technology based firms, R&D performers, R&D performing firms. The attempt to create value from newly established or as-yet unproven scientific principles (Lubik, et.all, 2016; Miozzo, et.all., 2011), transformation of scientific knowledge into basic or application specific technologies (Fontes, 2005), exploitation of scientific discoveries for the

development of new or improved products, operations, methods or systems (OECD, 2015) are key drivers of R&D activities of these enterprises.

R&D performing enterprises can be found in both manufacturing and service sectors, with the last one receiving growing interest by the research community and R&D and innovation policies (Chang, 2012; Jankowski, 2001). They are of different sizes – micro, small, medium sized and large, and institutionally can belong to business, government, higher education, private non-profit and rest of the world sectors (OECD, 2015).

R&D performing enterprises are also grouped based on R&D capabilities (Vedovello, 1998; Arundel, 2008); R&D intensity (Vedovello, 1998; Jankowski, 2001; Peneder, 2003; Archibugi, 2001) and regularity - performing R&D on a continuous basis and performing R&D intermittently (Huang, 2011). R&D intensity, measured by enterprise's R&D expenditure, is the most common metric used to evaluate a firm's strategic commitment and dependence on a programme of R&D to achieve its business goals (Jankowski, 2001).

The growing tendency towards outsourcing research and innovation has created a new category of R&D performing organisations, in the literature referred to as knowledge intensive business services (KIBS). R&D services are defined as a subset of new technology based KIBS or T-KIBS (Chiesa, et.all., 2004; Probert, et.all., 2013), also called Contract Research Organisations (Gallaher, et.all. 2006) and Research and Technology Organisations (OECD, 2015), which are contracted by third parties to carry out bespoke R&D projects, thus contributing to the development of client sectors. These companies are characterised by professional knowledge or expertise related to a specific technical or function domain, intensive use of information technology, supply of a combination of codified and tacit knowledge (Probert, et.al., 2013). They perform R&D for either manufacturing or service industries.

Conclusions

The current R&D sector consists of high diversity of R&D performing enterprises which are studied along many dimensions, for example, institutional sectors (business enterprises, government, higher education, private not-profit), ownership (private, public, joint ventures), affiliation (domestic, foreign, private, public), main economic activity, size, R&D capability and intensity, R&D regularity and other characteristics.

In her PhD project, the author will further study knowledge intensive business services (KIBS), and, more specifically, factors affecting long-term survival and growth of **privately- owned small and medium-sized business enterprises providing R&D services**.

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TRANSDISCIPLINARY WORKING FOR ENVIRONMENTAL RESEARCH: CASE OF AN R&D PERFORMING ORGANISATION FROM LATVIA

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Abstract

Current environmental problems are complex and require the fusion of expertise from a diversity of backgrounds and sectors. The aim of this research was to assess which of the principles of transdisciplinarity proposed by the researchers of the Canadian AGE-WELL Network of Centres of Excellence are practiced in environmental and natural resource related problem solving projects carried out by a Latvia==-based R&D performing organisation.

Keywords: transdisciplinarity, innovation, R&D, environmental research

Introduction

Current environmental problems are too complex to be solved with routine or conventional efforts, and creating effective solutions requires many skills, integration of different disciplinary, experiential and professional perspectives, and collaboration among multiple stakeholders. The fusion of expertise from a diversity of backgrounds and sectors is required, not just to create new ideas, but to imagine innovative, non-existent solutions. Transdisciplinarity is often suggested as an appropriate form of collaboration for tackling complex real- world problems (Lang, et al. 2011). In 2016, the researchers of the Canadian AGE-WELL Network of Centres of Excellence published a paper in which they proposed a set of principles that facilitate transdisciplinary collaboration in the context of developing assistive technologies. According to the authors, the proposed principles are applicable across disciplines and sectors and are flexible to suit different design contexts (Boger, et.al., 2016). The aim of this study is to identify which of the principles of transdisciplinary collaboration given by the AGE-WELL researchers are practiced in environmental research by an R&D performing enterprise in Latvia.

Methodology of Research

This study is based on two in-depth interviews with the founder and the leading researchers of a small, Latvia-based environmental R&D performing organisation, carried out in February 2017. The organisation was established in 2008, and currently employs 22 young and well-established specialists of various backgrounds. The organisation carries out own initiated as well as commissioned research and development activities in the fields of lake water management, biodiversity assessment, forest management, wild animal ecology, habitat modelling, and others.

Findings/Results

In their seminal paper, Jahn, T. et al. define transdisciplinarity as “a critical and self-reflexive research approach that relates societal with scientific problems; it produces new knowledge by integrating different scientific and extra-scientific insights; its aim is to contribute to both societal and scientific progress; integration is the cognitive operation of establishing a novel, hitherto non-existent connection between the distinct epistemic, social–organizational, and communicative entities that make up the given problem context” (Jahn, T., et al., 2012). Boger, J. et al. (2016) have grouped the principles of transdisciplinary collaboration into four main domains: complexity and holism, relationships, communication and transformation which overlap with many of the elements listed in the definition of transdisciplinarity given above. These principles are presented and applied to the practise of the studied environmental R&D performing enterprise.

Table 1. The application of the principles of transdisciplinary collaboration by the studied R&D organisation

Domain proposed by Boger, J, et.al.	Principles of transdisciplinary working proposed by Boger, J, et.al.	Principles used by the studied environmental R&D organisation
Complexity and holism	- Address wicked, needs-driven, real world problems. - Have an attentiveness and appreciation of complexity. - Cross ideational borders. - Have a common understanding of problems. - Share goal creation.	- The environmental problems to be researched and solved are not invented; instead, identified through participatory process involving in-house as well as external field practitioners and researchers. - Environmental solutions proposed are customised taking into consideration specifics of the problem locality. - Biologists, remote sensing scientists and engineers jointly attend nature objects to raise understanding of the basic concept of each other's native areas of interest. - The problems are investigated and goals set as a team.
Relationships	- Engage in ongoing inter-sectoral and technology-user involvement. - Challenge accepted ways of researching and working. - Foster trust and respect. - Maintain high-levels of tolerance, commitment, and resilience.	- Continuous end user involvement is ensured in the development and testing of the proposed environmental solutions. - Co-creation and citizen science approach is used in some projects. - Strong focus is placed on face-to-face communication to strengthen mutual trust and foster openness and participation of young researchers is encouraged.
Communication	- Engage in clear, transparent and ongoing communication. - Agree on shared vocabulary. - Use frameworks and methodologies as appropriate.	- Information transparency ensured through online project management systems; - Team members are educating each other on acceptable terminologies, and, in some cases, create, new terms and phrases. - The developed prototypes and approaches are evaluated in real-world environments involving main stakeholders.
Transformation	- Critically identify and challenge assumptions, at both personal and project level. - Achieve outcomes that have a transformative, real-world impact. - Push beyond common grounds to establish a deeper level of understanding. - Practice accessible knowledge translation. - Maximize impact.	- The assumptions are challenged by involving end users, external experts and practitioners in the project design and implementation phases; before carrying out large-scale experiments, pilot-studies are used. - In some projects the taken nature conservation activities have led to substantially improved environmental conditions. - The application of advanced remote sensing technology for deeper understanding of environmental processes, thus revealing previously unknown areas of research. - Involvement of artists to challenge the perspectives of researchers. - The transdisciplinary nature of the project is conveyed through joint articles, presentations at various events. - Sharing of knowledge with public

		through websites, educational sessions, social networks. - The organisation is considered as advancer of use of modern technology (satellites, airborne remote sensing, drones, digital solutions etc.) in ecological studies and nature management.

Conclusions

Transdisciplinary approach is needed to solve complex environmental problems such as loss of biodiversity, habitat degradation, water and air pollution, etc. The case-study demonstrated that the principles of transdisciplinary collaboration for developing assistive technologies are also used in environmental research and development processes. However, more and deeper studies are needed to test, refine and validate the principles of transdisciplinary working.

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PĒTĪJUMU IETEKME UZ UZŅĒMĒJDARBĪBAS VIDES KONKURĒTSPĒJU

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Anotācija

Uzņēmējdarbības vides konkurētspēja ir viens no priekšnosacījumiem Latvijas tautsaimniecības attīstībai – jo labāki apstākļi zinātnisko pētījumu rezultātā radīti uzņēmējiem, jo lielākas investīcijas tiek ieguldītas tautsaimniecībā, kas palielina jaunu darba vietu rašanos un līdz ar to nodrošina labklājību iedzīvotājiem. Ikviens uzņēmējs savā ikdienas darbībā, saskaras ar problēmu, ar patērēto laiku, kas ir jāpavada meklējot precīzo, pareizo un aktuālo informāciju, kādas papildus prasības nepieciešams izpildīt no valsts administratīvā bloka uzliktā sloga, tā vietā, lai attīstītu uzņēmējdarbību, lai atbalstītu zinātnieku noturēšanu un atgriešanu Latvijā, lai veicinātu nodarbinātību, līdz ar to ceļot valsts dzīves līmeni kopumā. Rakstā tiek apskatīts kā zinātnisko pētījumu praktiskā un teorētiskā vide ietekmē uz uzņēmējdarbības konkurētspēju. Priekšizpētē ir secināms, trūkst inženieru un eksakto zinātņu absolventu ar darba tirgum atbilstošām zināšanām un prasmēm, ka potenciāli nozīmīgiem investīciju, it īpaši starpnozaru, kā arī importu aizvietojošiem projektiem un to ieviešanai, jaunu ražotņu izveidei, atbalsts uz intelektuālo īpašumu balstītiem Latvijas zinātnisko institūciju un inovatīviem komersantu projektiem, to tālākai virzīšanai, iztrūkst nepieciešamais kvalifikācijas līmenis ražošanas sektorā. Galvenās rekomendācijas par uzņēmējdarbības vides uzlabošanu ir saistītas ar uzņēmējdarbības atbalsta instrumentu attīstīšanu, efektīvas infrastruktūras nodrošināšanas mehānisma izveidi un citiem aspektiem.

Atslēgvārdi: *Uzņēmējdarbības vides konkurētspēja*

Ievads

Kopš 1999.gada tiek sagatavots un Ministru kabinetā tiek apstiprināts ikgadējais Uzņēmējdarbības plāns, kas paredz uzņēmējdarbības regulējošo normatīvo aktu un valsts pārvaldes sniegto pakalpojumu pilnveidošanu, tādējādi veidojot konkurētspējīgu Latvijas uzņēmējdarbības vidi arī pasaules mērogā. Lai novērtētu veikto reformu ietekmi, Latvijā izplatītākie instrumenti ir starptautiskie pētījumi *Doing Business* un *Globālās konkurētspējas indekss*, ar kuru palīdzību tiek izzināts Latvijas uzņēmēju viedoklis par to darbību kavējošiem faktoriem, kā arī apzināts uzņēmēju viedoklis par administratīvo slogu radošajām prasībām. Uzņēmējdarbības vides konkurētspēju stratēģijas izstrādē būtu ieteicams ņemt vērā ne tikai kaimiņvalstu un citu reģiona valstu pieeju investoru piesaistei, uzņēmēju finansiālo investēšanu zinātniskajos pētījumos, bet arī starptautisko organizāciju identificētos piesaistes politikas un īstenošanas aspektus. Piemēram, Ekonomiskās sadarbības un attīstības organizācija (OECD) ir izstrādājusi vairākus uz investīciju piesaisti attiecināmus metodiskos norādījumus valstu rīcībpolitiku reformām (Policy Framework for Investment, Checklist for Foreign Direct Investment Incentive Policies un citus dokumentus), kuros ietvertie norādījumi ļauj attīstīt katrai valstij individuāli pieskaņojot piesaistes stratēģiju, vienlaikus norādot uz galvenajiem aspektiem, kas ir svarīgi potenciālajiem investoriem visā pasaulē. Tāpat Stratēģijas izstrādes laikā būtu jāņem vērā Pasaules Bankas izstrādāto investīciju veicināšanas instrumentu kopums (Investment Generation Toolkit), kas ietver informatīvu materiālu par vairākiem investīciju piesaistei svarīgiem aspektiem. Uzņēmējiem sadarbība ar zinātniskajām institūcijām ir sadarbības līgumu slēgšana, zinātnisko institūciju un universitāšu, kompetenču centru, publicitāte POLARIS ietvaros ārvalstīs, informācijas gatavošana par aktuālajām pētniecības tendencēm POLARIS nozarē, ideju komercializēšanas process Latvijas idejām. Atbalsts uz intelektuālo īpašumu balstītiem Latvijas zinātnisko institūciju projektiem, to tālākai virzīšanai, "proof of concept" tipa atbalsts, atbalsts tiesību nostiprināšanā un aizsardzībā, palīdzība partneru un investoru piesaistīšanā šādiem projektiem. Uzņēmēju investīciju projektu priekšizpēte un projektu aprakstu noformēšana Latvijas investīciju projektu „portfelim" tikai pastiprina uzņēmējdarbības efektivitāti un veicinās zinātnes un ražošanas integrāciju.

Portāla latvija.lv uzņēmējdarbības sadaļas pilnveidošanas mērķis ir nodrošināt visaptverošu, skaidri strukturētu, aktuālu, viegli pieejamu informāciju par visiem uzņēmējdarbības dzīves cikla posmiem,

nodrošinot iespēju, ka visas procedūras un pakalpojumi uzņēmējiem būtu pieejami elektroniski tiešsaistes režīmā. Šajā formātā tiek nodrošināta daudzpusēja sadarbība starp zinātniskajām institūcijām un nevalstiskajām organizācijām, kas pārstāv uzņēmēju intereses. Paralēli šiem sadarbības mehānismiem, investīciju piesaistes procesā ir iesaistīti arī citi dalībnieki – gan valsts un pašvaldību institūcijas, gan privātā un nevalstiskā sektora pārstāvji. Šie dalībnieki ne tikai īsteno atsevišķus investīciju piesaistes pasākumus individuāli, bet arī attīsta divpusējas sadarbības attiecības ar citām iesaistītajām pusēm. Nepieciešams vienoties par dažiem konkrētiem aspektiem, kas padara Latviju par investīcijām pievilcīgu vietu. Turklāt šiem aspektiem ir jābūt saistītiem ar prioritātēm un pasākumiem, kas tos vēl vairāk izceltu un stiprinātu ilgtermiņā.

Pētniecības metodes

Pētījumā tiek izmantotas vispārpieņemtas zinātniskās metodes - loģiski-konstruktīvā metode – izsakot spriedumus, analizējot rezultātus, monogrāfiskā jeb aprakstošā –tika veikta parādības detalizēta izpēte, apkopojot informāciju un pamatojoties uz daudzveidīgas literatūras apskatu, raksturojot ne vien parādību pašreizējo stāvokli, bet arī to, kādas pārmaiņas notikušas laika gaitā, analīzes un sintēzes metode. Tika veikta izpēte izmantojot kvalitatīvās pētījumu metodes, iegūtā informācija ļauj atklāt jaunus piesaistes procesa aspektus, nevis izdarīt vispārinājumus secinājumus. Zinātnisko pētījumu praktiskās un teorētiskās vides ietekme uz uzņēmējdarbības konkurētspēju tiek izmantotas salīdzinošā jeb komparatīvā metode.

Atklātie trūkumi un rezultāti

Lai gan izvērtējuma ietvaros bija iespējams iegūt informāciju par to, kā izpaužas savstarpējā sadarbība, piemēram, informācijas apmaiņa vai zinātnisko pētījumu izstrādes rezultātā kopīgu pasākumu īstenošanā tika sekmēta preču un pakalpojumu, ar augstu pievienoto vērtību, īpatsvara pieaugums eksportā, veicināta Latvijas uzņēmēju konkurētspēja globālajos tirgos, sadarbības efektivitātes un rezultātu novērtēšanu nebija iespējams veikt, jo uzņēmēji neuzskaita izdevušos un neizdevušos investīciju projektus, kuros ir bijušas iesaistītas zinātniskās institūcijas.

Secinājumi

Lai nodrošinātu pievilcīgas uzņēmējdarbības vides radīšanu, kas balstīta uz zinātnisko pētījumu rezultātiem, sistēmiskām un pārdomātām reformām, un nodrošinātu ne tikai likumdošanas procesa caurskatāmību, vienkāršību un nedublēšanos, bet arī noteiktu tikai tādu normu ievērošanu, kas neapgrūtina uzņēmumu darbību no uzsākšanas līdz izbeigšanai, un veidotu tādus valsts pārvaldes pakalpojumus, kas būtu ērti lietojami un atbilstoši tirgus vajadzībai nepieciešams skaidri identificēt zinātnisko pētījumu ietvaros piesaistes procesa dalībnieku lomas un pienākumus, t.sk. nepieciešamību savstarpēji sadarboties norādot katras iesaistītās puses pienākumus. Nepieciešams izveidot atsevišķu mājas lapu, kas būtu pieejama no uzņēmēju puses kā investoru piesaiste zinātnisko pētījumu izpētei. Uzņēmējam, kas ir investors zinātnisko pētījumu izpētē, ieviest un piemērot nodokļu maksāšanas procesa novērtējumu, kas identificētu iespējas atvieglot/samazināt ar nodokļu maksāšanu saistītās procedūras. Papildus ir ierosinājums turpināt darbu pie neatkarīgas mediācijas ieviešanas nodokļu strīdu risināšanai. Ņemot vērā ar starptautisko konkurētspēju saistītos izaicinājumus, ka arī uzņēmumu identificētās problēmas, nepieciešams turpināt reformu ciklu un īstenot uz tautsaimniecības attīstību ilgtermiņā vērstus pasākumus, tādējādi veidojot konkurētspējīgu Latvijas uzņēmējdarbības vidi arī pasaules mērogā. Organizēt potenciālo investoru, investoru interešu pārstāvošo kompāniju vizītes Latvijā, zinātniskās pētniecības iestādēs un pašvaldībās, kurās varētu tikt īstenoti investīciju projekti. Uzņēmējiem ir jāveicina sadarbība ar zinātniskajām institūcijām, kas paplašinās iespējas - sadarbības līgumu slēgšanā, zinātnisko institūciju un universitāšu, kompetenču centru informācijas pieejai, publicitātes POLARIS ietvaros ārvalstīs, informācijas pieejamību par aktuālajām pētniecības tendencēm POLARIS nozarē, ideju komercializēšanas procesu Latvijas idejām. Atbalsts uz intelektuālo īpašumu

balstītiem Latvijas zinātnisko institūciju projektiem, to tālākai virzīšanai, "proof of concept" tipa atbalsts, atbalsts tiesību nostiprināšanā un aizsardzībā, palīdzība partneru un investoru piesaistīšanā šādiem projektiem. Investīciju projektu priekšizpēte un projektu aprakstu noformēšana Latvijas investīciju projektu „portfelim".

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WHAT CAN LATVIA LEARN FROM FINLAND, IRELAND AND THE NETHERLANDS IN OVERCOMING THE MAIN CHALLENGES OF THE CONSTRUCTION INDUSTRY?

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Abstract

The following five main challenges for the Latvian construction industry were determined while performing a quantitative analysis of the situation: a) shrinking population, b) expenses involving labor costs and wages, c) lack of proper education, d) distrust of the main population towards the state governed institutions, and e) receipt and distribution of EU funds and overall state foreign policy.

Part of the described challenges could be attributed to the economy in whole, while the last one was studied only as related to construction industry. Comparing the similar data for the four countries under discussion, a few short-term and long-term recommendations were suggested to improve the situation in Latvia. The findings provide a broad field for the further studies and researches which may contribute to the development and improvement in one particular field or lead to a strategy for the whole industry.

Introduction

While being a small European state, Latvia nevertheless plays an important role in the transit business, which connects the so-called “Old Europe” and other countries with Russia, Ukraine, Belarus, Kazakhstan; the direct train route from China had been recently opened, significantly contributing to the expansion of this developing transit network to different manufacturing areas.

Five macro and micro economic challenges determine the construction industry in Latvia:

a) Shrinking population, b) expenses involving labor costs and wages, c) lack of proper education, and on the global level, d) distrust of the main population to the state governed institutions, and e) receipt and distribution of EU funds and overall state foreign policy.

a) The first challenge: Shrinking population

According to the official statistics the population of Latvia decreased for the last decade by 258 917 persons (more than 11%) or according to the unofficial data by 450 000 (22%) if it has a ground. The two main contributing factors causing such a dramatic outcome are: the negative natural growth of the and emigration. The increase of population in other three countries varies from 4% (Netherlands and Finland) to 12% in Ireland.

b) The second challenge: Labor costs and wages

The net wage/labor costs ratio in Latvia is similar to that in Finland, Ireland and the Netherlands, however the triple difference in the salaries should be partly corrected by the living costs index (approximately 1.8), making the net average salary of Latvian worker at the approximate level of 18 900 EUR per annum, which greatly differs - between 55% to 65% -from the average salary in the countries observed here.

c) The third challenge - Lack of proper education

The Netherlands has ranked 12 universities, where seven of them are placed as the top 100 educational establishments in the world, as described by the Times Higher Education World University Rankings of

2016-2017; Ireland and Finland each have 9 ranked universities where at least one is ranked as the top 100 educational establishment, while Latvia has only two universities ranked at all and placed at the 801st +. The low level of education creates a vicious circle, where not skilled and not motivated young specialists are not able to perk up the economy and contribute to the development of any industry and the state, as such.

d) The fourth challenge - Distrust of the main population to the state governed institutions

Latvia and Ireland both have approximately similar level of trust and/or distrust expressed by the main population in national institutions and corruption perception rate, while population in Netherlands and Finland trust their national institutions three to four times more, and significantly less accept corruption. The single bidder percent in public procurements in Latvia is the highest among the 4 observed countries. However, despite that integrity framework index of Latvia is similar to the average one in EU, but is still lagging behind the other three rivals, that have much better business environment in terms of administrative simplicity, auditing standards, public integrity, trade openness, judicial independence and e-governmental services.

e) The Fifth challenge - Receipt and distribution of EU funds and the state foreign policy

Transit business significantly affects Latvian economy. When data of the total volume of loaded and unloaded cargo in the seaports is compared as of 2013 and 2016, it shows that the volume had shrunk by more than 11%. At the same time, railroad and truck cargo traffic (2013 vs. 2015, the latest available data) practically has not changed. The other significant point that affects Latvian economy is the receipt and distribution of the EU funds. The construction industry shrunk by 18% in 2016 mainly due to the lack of the receipt and distribution of the EU funds. Other countries we observe here are not dependent on the EU funds for their construction industry and are minimally affected by the mutual sanctions applied by the EU towards Russia.

Methodology of Research

Quantitative research method was chosen to analyze and compare data for each country.

Findings, conclusions and recommendations

The challenges described above are more related to the state governing policy than distinctive to a particular industry. The state has to establish a policy of national priorities with pertinent legal frame allowing execution of this policy for many years to come. The most critical problems for Latvia are demographic and educational ones; Latvia has to act immediately to improve the situation, otherwise there will be nothing left to be developed and/or improved. The phenomena of the “Lost generation” badly affect the competitiveness of the construction industry in Latvia. Income including wages and taxes and perception by the majority of the state governed institutions are direct consequences of the demographic and educational problems, and as long as low level of integrity and remaining former soviet mentality and approach prevails, the population will continue living in the past, with no trust in the power of law, and avoiding paying taxes. The ability of the state to enforce the tax collection policy and overcome the grey economy is the key factor to the future development of the state, in general, and the industry under discussion, in particular. The receipt and distribution of the EU funds, their wise planning and managing on even and regular basis, and the implementation of the beneficial to the state foreign policy are extremely important having, both short-term and long-term impact on Latvian economy. The loss of 3 years of the last EU funds period (2014-2020) will cause a bubble and a crisis in the construction industry due to the lack of the personnel. Latvia would greatly benefit if its dependence on the EU funds in certain industries would be reduced; it should become the main goal of the state.

As a EU member, Latvia has to maintain the adopted foreign policy, however, EU gives a certain autonomy to its members, and local governments always have few options how to keep the balance between the economic and political benefits.

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FOURTH INDUSTRIAL REVOLUTION IMPACT ON SEAPORT DEVELOPMENT

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The Fourth Industrial Revolution in various economy sectors has come in different ways. In some industries, changes happen too slow and new technologies and robotics is only a distant future. One of those industries or infrastructure objects, where innovative solutions are not imposed, are seaports.

Not only in Latvia, but also throughout the world port is one of the most important components of maritime transport. Latvia for centuries is considered as a transit country due to freight and passenger transports in the sea. As well as due to the advantageous geographical location or geographical position – Latvia is located on the Baltic Sea.

There are three major ports in Latvia – Freeport of Riga, Freeport of Ventspils and Liepaja port, as well as seven small ports – Engure, Lielupe, Mersrags, Pavilosta, Roja, Salacgriva and Skulte, which all are located along the Latvian sea border. Most of the small ports are located on the coast of the Gulf of Riga. Ventspils, Liepaja and Riga ports mostly are dealing with transit cargo handling and processing, but small ports mainly specialise in timber cargo shipment from Latvia to Scandinavia, as well as other European countries.

The volume of transhipped cargo in the small ports is only 2% of the total transhipped volume in Latvian ports, but they are important elements of the economic development in coastal regions. Small ports in Latvia are of local importance, and most of these ports also functions as a yachts and fishing ports. But in recent decades, in some of the small ports the number of fishing vessels has decreased, in some of them – even fivefold.

Ports in general have a huge potential for job creation and investment attraction. In their territories are companies, which operate in various industries – such as energy production, car and steel industry, different logistics companies, etc. Of course, port is also a place where gather companies, which operates in the maritime-related sectors, like fishing and fish processing, shipbuilding, companies that operates with water treatment plants, etc. (Eiropas jūras ostas 2030: gaidāmie izaicinājumi, 2017).

Port throughput capacity (cargo turnover) have significantly increased over the last 10-20 years, particularly in the container transport sector, for that reason – there is need for new port infrastructure development at the existing installations and facilities, or investments in new technologies. Ports are capital intensive infrastructures, which is associated with many economic influences. Port development and world trade are closely linked. Public sector often provides a significant capital investment in port development (via the port authority or various funds), in order to identify specific and measurable economic impact and benefits arising from these investments.

The economic impact refers to a wide variety of changes, which is caused by infrastructure investment projects, but the economic benefits can be measured directly – in terms of value of money. Many of these impacts can be assessed only after when investments are made in port infrastructure and when have been determined its benefits. However, modern forecasting models can be risky and lead to inaccurate assessment, because port prediction models are often inaccurate – they do not include various aspects, for example, economic and political situation in the country, the availability of resources in the region, etc. Most important changes affecting the operations of port and maritime transport:

• economic changes. Maritime trade has increased considerably, partly thanks to a massive redistribution of outsourcing and partly due to economic growth. This points to the growing importance of logistics, to sort out the complicated distribution system;

• technical changes. One of the most important technical changes in recent decades has been an increase in the size of the vessels, so to be able to transport greater cargo. As an important factor should also be mentioned the increasing level of specialization of ships (for example, container ships, bulk carriers and

car carriers, cruise ships, etc.), that requires special port terminal facilities and wharves. All of the above has been the basis for the port to modernize and improve their infrastructure, thus adapting to different requirements;

• organisational changes. Maritime and port industries are increasingly controlled by large shipping companies and terminal operators, who have joined together in strategic alliances. Their aim is to ensure a high level of vertical and horizontal integration level, which improves the performance of port transport chain. This has led many ports to set up inland terminals (Rodrigue, 2013)(Rodrigue, 2013).

• innovative solutions in port infrastructure.

One of seaport mission is to move cargo safty and quickly through the port.

Wireless Mobility

It is increasingly being used in wireless devices for more convenient and faster to process information. For example:

- Use of wireless handheld computers for dock workers drīves cargo processing efficiency
- GPS and Wi-Fi can be controlled cranes, forklifts and trucks
- using wireless internet data can be sent by all seaport and not only
- dock workers can use the tablet with Wi-Fi for faster information processing and passing on.

Unfortunately, ports of Latvia still are not as modern equipped with latest technology and robotic loaders and cranes. It would be a great Opportunity to raise the Competitiveness of Latvian ports in the region.

There are systems that can help port provide ways to generate new revenues and provide added value to existing tenants in port areas. The same network port use for the operations and security, can also be used for provision network services such as internet access or IP telephony for the seaport's tenants. This provides cost savings for tenants, giving them the opportunity to improve their operational efficiency. This system common communication infrastructure allows port authority to use the same network resources to transmit data, audio and video. This network can also provide value-added services to tenants, such as internet access, telephone line, etc. By providing fast and reliable network connection and telephone line, port authority has opportunities to increase income while at the same time reducing communication costs for tenants.

Further successful development of Latvian ports and the improvement of their competitiveness is only possible by using smart technologies, that would significantly reduce port costs for businesses and improve their competitiveness in the region. Saved funding would allow enterprises to grow, create new jobs, which would have a positive impact on the overall economy in city and country.

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SCIENCE COMMUNICATION BARRIERS IN CONTEXT OF UNIVERSITY – INDUSTRY COOPERATION

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Abstract

More and more importance is given to the third generation university concept which is characterized by new role to the agenda, the traditional roles of education and science joins a third - commercialization or transfer of research results to industry. Therefore, it is changing not only the university, but also the scientist's role, finding the need to communicate outside their usual environment, to engage in their own research results transfer to commercial product and to establish cooperation with the industry.

Aim of the study was to identify factors that influence the formation of barriers to university - industry communication context. Qualitative and quantitative research methods were applied to the research.

Key findings emphasize the important role of science communication in cooperation between university and industry. The main barriers to scientists and industry communication process are identified.

Keywords: Science communication, barriers, communication process.

Introduction

Transfer of research results to the industry, what we can define as well as a technology transfer or commercialization, is important for the country and society, it develops strong growth and competitiveness. Due to high-tech development and implementation of the latest achievements and knowledge for effective use is possible to increase productivity and return on resources. While these activities we can identify as very important for each country and for the development and well-being of society, transfer of research results is slow, it points to certain barriers and disincentives in the process.

Moreover, we need to take into account it is not just an economic mechanism or a technical process, it is also a social phenomenon that involves communication processes between the different actors. The process of communication involves the university, industry, society. It is a complex multistage process that directly affect development and implementation of the university third mission concept.

For the future development it is essential to identify the principles of science communication process and barriers to be able to build a successful cooperation between industry and science.

Methodology of Research

Qualitative and quantitative research methods were applied to the research, including literature overview, expert interviews.

Findings/Results

The research identified a number of factors that affect science communication and indicated high impact of the each element of communication process, their quality and restriction of noise.

Communication can be defined as the process of transmitting information and common understanding from one person to another (Keyton, 2011). Communication process conceptual model description offers Harold Lasswell: "Who (says) What (to) Whom (in) Which Channel (with) What Effect", also known as the "5W" model (Wenxiu, 2015). According to this model of communication process consists of five elements - communicator (who), the content or information (say what), medium (through any channel), the audience (who), the effect (with some changes). In latest researches we can find fundamental addition element - feedback. Without feedback we are not able to identify if the receiver received and/or understood message or not. Other important additional element is noise or barriers which can impact all process. We can identify four types or barriers in communication process: process barriers, physical barriers,

sematic barriers and psychosocial barriers (Eisenberg, 2010), in addition, each of these barriers include sublevels.

Science communication process we can identify as a process involving a sender and receiver, who encodes and decodes the message and as the result is feedback. Senders and receivers are actors involved in communication process and they are different, each of them has its own purpose and interests. Sometimes, the sender does not understand why the recipient refuses to accept the message, but the sender is often not properly encoded message or not selected the correct channel. Common trends indicate that disturbance in one or several communication process elements form the barriers.

The relation between science, industry and society is remarkably important: society and industry needs science as a driver for social, economic and political success (Jucan & Jucan, 2014). In university – industry communication it is essential for both sides to raise awareness of the importance of sender's and receiver's responsibilities (Lunenburg, 2010) and to develop the basic principles of science communication.

Conclusions

Science communication is a process that transmits the certain message from sender to receiver, including a number of other elements - encoding, decoding, noise, feedback - whose activities at each stage can be disrupted, thus creating barriers. As shown in the interviews carried out during research, science communication has a key role in university - industry collaboration, at the same time it is stated that at present it is in the stage of the development and in communication involved actors feel bilateral barriers related to information encoding and decoding, however, both parties refers strong interest and readiness to participate in the process.

Universities need to think in long term and to develop skills to build a collaborative environment. Process must involve all actors - scientists, industry, society - and common development aim must create a new kind of multifunctional and adaptive science communication process that breaks the existing barriers and avoid creation of new ones.

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NEW ENGLAND UNIVERSITY ACCELERATION STRATEGY MODEL FOR REGIONAL INNOVATION ECOSYSTEM - ADVANTAGES AND DISADVANTAGES

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Abstract

At the moment Baltic region, based on global tendencies, are building unique adjusted entrepreneurial and innovation driven ecosystem and they are one step before approbation of acceleration programs with more than 60 million EUR value. It's strongly important to define competitive advantage and unique selling point for specific region compete with other market.

Research identifies best practice of acceleration program implementation design model, that includes main region factors and specific differences, what strongly influence accelerator implementation strategy and model of work.

Introduction

First accelerators have been established in beginning of 21st century in USA (Y Combinator, started in Cambridge, Massachusetts, in 2005, and then later moved to Silicon Valley) and mainly was focused on fast growing, IT based product development what was related to specific accelerator program fixed time frame design.

During last 10 years, accelerators accelerate driven IT based products as independent connection point for private investment market, education sector and business network. Based on market overview, in last two years was observed a new global trend - accelerator programs start experiment in different specifications as, for example, in Healthcare (Techstars Healthcare Accelerator, in partnership with Cedars-Sinai established in 2015, Los Angeles, CA) or IoT (Techstars Internet of things, established 2016, NYC, USA), hardware (HAX accelerator, SHENZHEN, CHINA, established 2015, Shenzhen, China).

Beginning of accelerate program creation, the working model were based on that period policies (if in acceleration program were involved state aid support instruments), interest of private and corporate investors or individual market players position. Mainly in the program design were excluded regional stakeholder process or economic data overview.

Massachusetts Institute of Technology (MIT) have been involved in developing and engaging Silicon Valley ecosystem. MIT have been announced as one of the most entrepreneurial universities in the world for over 100, MIT success, based on researches is counted on unique MIT's supportive organisational culture and open resources and availability. Based on MIT knowledge and experience, in year 2012 were established MIT Regional En-trepreneurial Acceleration Programme with primarily aims to assist regions to design and implement sustainable acceleration program for a more engaged entrepreneurial driven ecosystem. In MIT Regional En-trepreneurial Acceleration Programme were identified five stakeholders, who have been involved in two years long design period –regional universities, entrepreneurs with high experience in high tech technologies or other RIS3 themes, government, start-up ecosystem support players and regional cooperation/ companies representative with high impact to regional economics.

On behalf, the relationship between radicalness of technology and the survival of a new venture is moderated by concentration within the industry, i.e. radicalness increases the likelihood of start-up survival more in fragmented markets than in concentrated markets. The survival of a new technology company requires the creation of the marketing and manufacturing assets necessary to exploit the technological opportunity, and the possession of a valuable technology that undermines the advantages of established firms and that can be protected against immediate imitation by others (Gans and Stern, 2003; Venkataraman, 1997).

The two-year MIT REAP programme hosts up to eight regional teams that form a Cohort and provides them with an engaging environment to develop a regional action-based strategy towards accelera-tion of IDE. This process takes place in six phases, which start with the teams undertaking data-driven diagnoses by assessing strengths and weaknesses of their entrepreneurial ecosystems. After measuring entrepreneurial quality, the teams develop an understanding of their comparative ad-vantage as an innovation ecosystem. Next, the teams design an acceleration strategy that will al-low them to catalyse a measurable and sustainable change in their regions. Finally, they put their strategy into action and measure their impact through qualitative and quantitative measures using the REAP dashboard.

In the Baltic States first accelerators appear in the market only in 2012 and were closely connected with universities and science based institutions with an aim to gain and use human, knowledge and infrastructure recourses. Before support system was based on business incubators, labs, pre-seed funds and still market is uneducated about accelerator value proposition and differences between business incubators and investment funds.

Research aim assets base on MIT model, identify Baltic region stakeholders and key factors that affect scheme and strategy of implementation and cooperation with EU market: education level rate and fact that more than 35% students are studying engineering, labour costs, infrastructure (compact and development laboratories, research recourses), geographical location (between East and West Europe and logistic system), etc.?

Methodology of Research

Aim of the research is define specific indicators and features, that affected establishment and developing process of accelerator program implementation in Baltic states and additional satisfy needs of the specific region. Theoretical research part is based on systematic literature review and state of art review. On the bases of theoretical research questioner for field analyses ware created.

Most important stakeholder groups were identified and surveyed. Results were processed by applying SPSS.

Findings/Results

As the results, specific key features that influence accelerator modelling in the Baltic region and recommendations for implementation of program was developed.

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ANALYSIS OF INTELLECTUAL CAPITAL ELEMENTS AT UNIVERSITY STRATEGIES

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Abstract

The principal objective of the research is to identify main intellectual capital elements and analyse its significance at university strategies in the Baltic States.

For the research and data processing of intellectual capital element, a systematic literature analysis and quantitative research method applied. In order to compare intellectual capital elements at universities strategies and literature, also comparative data analysis used.

Author concluded that there are relation between intellectual capital elements at literature and university strategies, however relation is not clear and affirmative.

Keywords: intellectual capital, strategies, universities, Baltic States.

Introduction

Higher education sector are the main creator of knowledge and it is playing an increasingly prominent role of intellectual capital and it`s development.

Universities have significant role in the several knowledge-society processes - intellectual capital creation, development, transfer, and application (European Commission, 2003). Therefore, it is important to identify and evaluate intellectual capital.

Intellectual capital measurement is essential for organizations in strategy formulation and evaluation and universities obtaining when carrying out evaluation of intangible assets (Todericiu, Serban 2015). Some authors offer universities to develop models for intellectual capital management (Ramirez and Gordillo, 2014), others for strategic decision making according to intellectual capital elements (Secunda, Margherita, 2010). Before the evaluation, it is necessary to start with the identification process of elements at university strategies.

Intellectual capital evaluation process at universities in Latvia and Baltic States practically not exist. Several components of intellectual capital concept are analysed separately for specific purposes, instead of analysis of intellectual capital as a unified concept.

Evaluation and analysis of the intellectual capital at universities are meaningful in order to develop intellectual capital and define priorities. Firstly, we need to identify intellectual capital elements at universities, before specific instruments for management offered.

The principal objective of the research is to identify main intellectual capital elements from literature, well-cited articles and compare with intellectual capital elements at university strategies.

Intellectual capital is complex definition and it consists from several elements. There are countless intellectual capital concept definition of the different elements, typologies, but most faced with three main categories, elements of IK characterization: human capital, structural capital and relational capital (Bontis, Nick, 1999).

Some authors using factor analysis of intellectual capital component and shown elements by their importance: experienced and innovative human capital 41%; structural capital 35%; relationship capital 24% (Gregorio Martin de Castro, 2008).

Methodology of Research

For the research, qualitative and quantitative research methods applied. Systematic literature analysis and content analyses methods used to identify intellectual capital most common components from high-cited articles about intellectual capital elements and structure.

In order to analyse intellectual capital elements at strategies of universities, content analysis and comparative data analysis is used.

Article fragments selected to answers the research question: what elements characterize the intellectual capital concept? As priority selected articles that created the new theoretical concept of the intellectual capital. Content analysis categories established for all text fragments together. Most often used elements selected and as a result the elements sorted by frequency. From the analysis-removed elements, which are not directly attributable to the studied object.

Limitation of research bounded with the availability of information - relatively large part of the universities have not strategies, or not published in English. Universities at the Baltic States has no intellectual capital strategies.

Findings/Results

Through content analysis and systematic analysis of the literature and articles, author conclude that there are countless intellectual capital concept definition with a variety of elements, categories, typologies, but most are faced with three main categories of intellectual capital elements of characterization: human capital, structural capital and relational capital.

Author obtained most frequently prevailing intellectual capital elements at result of the literature and research paper analysis. The most frequent elements are “process”; "organization"; "relational"; “operation”; “knowledge"; “management”; “innovation”; "structural"; "employees"; “research”; "human"; “information”; “products”; “skills”; “technology”; “culture” and other elements.

According content analysis at university strategies, there was removed main characterizing intellectual capital over categories – “human” capital, “structural” capital and, “relational” or “organizational” capital. Analysis show that in literature comparison with strategies, there are common elements such as: “employees”; “knowledge”; “culture”; “management”; “innovation”; “competencies”; “technology”; “research” and others.

Conclusions

From the results, we can conclude that part of the intellectual capital concept key components are included at university strategies and part of them are not included. Research not affirm strong relation between intellectual capital elements from literature and university strategies.

Taking into account that relation is not strong, necessity for separate intellectual capital strategies are under discussion. In case of strong relation, with lot of common elements, there is no need to develop intellectual capital strategy like autonom policy planning document. Author recommends to develop intellectual capital chapters to the universities strategies, to pay more attention on intellectual capital issue.

According to analysis of intellectual capital elements at strategies, further research will be carried out on intellectual capital management process.

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DIVERSITY OF OWNER MANAGED SMALL AND MEDIUM ENTERPRISES

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Abstract

This article explores the diversity of owner-managed small and medium enterprises. Literature review using overview method outlined several patterns of SME owners-managers. Interviews conducted with selected SME business owners-managers outlined factors what have influenced their role in company, behaviour and way they make decisions on enterprise development.

Eight types of owners-managers of the SMEs are described in this article. Each type is enlightened with relevant enterprise situation or owner own circumstances.

This research provides preliminary insight in problematics of management of small and medium enterprises. Research shall continue with more in depth analysis of literature and SME management practices.

Keywords: Small and Medium Enterprises, Management, Owners-Managers, Family business.

Introduction

SMEs in Europe represents up to 99% of all businesses and provide two-thirds of the total private sector employment. A large proportion of private-sector enterprises is owned and at the same time managed by individuals or by families. Significance of the SMEs are growing, so growing is number of research on SMEs and SMEs ownership.

Research on SME owners-managers and topicality in this area has changed over last 40 years from managerial issues, systemic approaches in enterprises to psychological and behavioural aspects of individuals and groups. There is high diversity in SME sector with different forms and history of ownership – founder, single owner, family business, or partnership, however there is no formal classification developed yet.

This research aims to provide preliminary insight in classification of the owner-managed SMEs.

Methodology of Research

Literature review using the overview method was undertaken to identify different types of owners-managers of the SMEs. Situations and findings were discussed with owners-managers of several Latvian and European enterprises to contribute to further development of classification.

Findings/Results

Literature review showed broad variety of terminology with a similar meaning in area of owner-managed SMEs. Terminology has developed and broadened over time along with the topicality of research.

Some early research on Owners-managers of SMEs focused on managerial and supervisory issues in management (Deeks, 1970), financial control (Dhaliwal, Salamon, & Dan Smith, 1982) and investment decisions (James, 1999). Later systemic approach to business become point of interest (Wang, Walker, & Redmond, 2007). Since 1990-ties cultural, psychological and behavioural aspects are studied more. Edgar H Schein (Schein, 1995) looked in to the Role of the Founder in Creating Organizational Culture. Multiple studies on decision making and owner behaviour took place.

Recent research explore the extent to which owner-manager views associated with success, subsistence, hedonism and paternalism affect their entrepreneurial behaviour (Jaouen & Lasch, 2015) and how the motivation of owner-managers is related to the growth of their businesses (Wahlgrén & Virtanen, 2015).

It is noticed that these and other authors use different ways to describe enterprises, owners and situations. As result of this research, eight types of owners-managers of the SMEs are summarised in Table 1. Each type is enlightened with relevant description of enterprise situation or ownership circumstances.

Table 1. Diversity of the Owners-Managers of the SMEs

	Type of Owner-manager	**Description of relevant situations in enterprise**
1	Single founder-manager	Company, which is permanently managed by its original founder. In some occasions owner has returned to company management after unsuccessful experience with hired manager.
2	Co-founder – manager	Company, which was established by several founders, and one of founders act as manager or CEO.
3	Manager co-owner	Company is managed by person who owns minority of shares of company as part of motivation package or agreement
4	Investor-manager	Company is managed by person who become owner as result of management buyout or investment in enterprise
5	Business "cluster" owner	Group of smaller companies or organisations working closely in related business, established or owned by the same person
6	Multi-business owner	Several companies in diverse businesses which are owned and managed by the same person, usually part-time or unequally.
7	Family business	Enterprise which belongs to family, employs several family members in management and key positions
8	"Forced-to-be" owner-manager	Company has changed its owner-manager as result of inevitable event (sickness, death, divorce), crisis situation or other irresistible offer (present)

Interviews conducted with selected SME business owners-managers outlined factors what have influenced their role in company, behaviour and way they make decisions on enterprise development. It is noted that each owner-manager also use different terminology to describe their own role, such as founder, partner or CEO and to emphasize their certain behaviours or intents.

Conclusions

Eight types of owners-managers of the SMEs are described in this article. Each type is enlightened with relevant enterprise situation or circumstances of owner own life. These factors have influence on behaviour of owner-manager. This research provides preliminary insight in problematics of management of small and medium enterprises. Research shall be continued with more in depth analysis of literature and SME management practices.

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CONFORMITY DOCUMENTATION - DOES IT MEAN THAT THE PRODUCT IS SAFE?

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Abstract

This document presents abstract of research paper aimed to analyse where the conformity assessment documents, that are the results of the manufacturers performed product's conformity assessment evaluation, ensure the safety of the products. This study was conducted based on the data on unsafe non-food products found on the European Union market during 2005-2016 and the testing results of the electrical appliances performed by Latvian market surveillance authority during 2014-2016. The analysis of the conformity assessment procedures required by so called "New Approach Directives" were performed through the prism of found unsafe products. The possible correlation between the applicable conformity assessment procures and found unsafe products were identified.

Keywords: ICEM-2017, market surveillance, injury data,

Introduction

Product safety plays a significant role for society. The availability of non-compliant or unsafe products on the market no only negatively influence the interests of the consumers but also affect the businesses. The corrective actions in case of unsafe products are costly, like investigation cost, communication cost, logistic costs, disposal costs of returned products and others (Tang, C.S. (2008)). To ensure the product safety and at the same free circulation of the products within the European Community the so called "New Approach" in the legislation were applied. One of the main principle of the "New Approach" is that the legislative act determent the essential requirements and conformity assessment procedures for evaluation the compliance of the product to the applicable requirements. The results such evaluation is the conformity assessment documents. The product must meet the essential requirements in order to be placed on the Community market. Despite the existing system, since 2005 more than 20000 measures were taken against found unsafe products (RAPEX, 2017) The topic of the product safety is not new and different authors have identified possible reasons that influence the compliance of the products. However, there is still gaps that pose a question of the influence of the applicable conformity assessment procedure to the compliance of the products. The aim of the study is to answer on the question does the existence of the conformity assessment documents, ensure the safety of the products?

Methodology of Research

The research employed qualitative and quantitative research methods: literature review, analysis of regulations and binding documents, logical constructive analysis and comparison, statistics of the product compliance.

Findings/Results

To ensure that only safe products are available on the market in the environment of free circulation of products within the European Community market the "New Approach Directives" were created. The directives determine essential health and safety requirements, common requirements for specific product groups and define conformity assessment procedures to evaluate and ensure product compliance. Only products that meet the essential requirements can be placed on the market and this is responsibility of the

manufacturer or importer. Despite the existing system, since 2005 more than 20000 measures were taken against found unsafe products (RAPEX, 2017). Different authors focused their attention to the question of the products safety from different perspectives: risk management, market surveillance, global supply chains, liability doctrines (Liepiņa R (2014), Maruchek A. (2011), Baram M. (2007)). The is not a lot of research done from the perspective of conformity assessment procedure and its influence to the compliance. The research question is do the existence of the conformity assessment documents ensure the safety of the products?

Analysing the data of found unsafe products in the European Union in the period from 2005 to 2016 and the applicable conformity assessment procedure, it was concluded that that there is a link between the applicable conformity assessment procedure and the amount of found unsafe products in particular product group. The common element of the products group that showed the high value of found non-compliances is the absence of the direct involvement of accreditation in the process of the conformity assessment. The study identifies higher non-compliance level in the groups of products where is no requirement to involve third party, notified body, in the process of the product evaluation. Main part of found unsafe product is manufactured outside the Community market, this highlighting the challenges that companies face in the time of the globalization. The importers plays the significant role to ensure compliant of the imported products. The conformity assessment documentation and particular the product declaration of conformity evaluation is a way how the importers verify the compliance of imported products.

The study of the electrical appliances market surveillance results showed that the Latvian market surveillance authority pay attention to the product entering the Community market, 46 % of the samples of the electrical appliances tested by Latvian market surveillance authority from 2014 till 2016 were taken at the border. It is identified that the non-compliances increase in cases when the samples for testing were taking after repeated request for release of the good for the free circulation in the Community market. In 86% of such cases the testing results were negative. The analysing of the data identified the lack of trust to the conformity assessment documentation, taken into the applicable conformity assessment procedure. The data showed that the existence of the conformity assessment documentation does not meet that the product is safe.

Conclusions

The research identified correlation between the applicable conformity assessment procure and the amount of found non-compliant or unsafe products in particular product group. The involvement of the third party, like notify body or accredited laboratory, in the process of the evaluation of the product paly significant role especially in cases when the manufacturer of the product is located outside the Community market. More than a half of the product relies for free circulation of which were not authorised due to the safety issues, were ensured with conformity assessment documents, like declaration of conformity and also test reports. That gives the possibility to conclude that simple evaluate of the conformity assessment document do not ensure the safety of the product itself. The research indicated the need of the improvement of the procedures that can ensure the compliance of the product from the perspective of the product importer/distributer.

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CHANGE MANAGEMENT IN OPERATIONS IN BANKING SECTOR DURING 4TH INDUSTRIAL REVOLUTION

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The latest statistics and researches shows that world is going through the major changes, through 4th industrial revolution. This affects all organizations no matter what is their field of activity. Banking sector is not an exception- this industry is already going through the high technology development. The great example is a blockchain technology introduction in the financial world.

The organizational changes in the bank organizations are inevitable. The paper seeks to detect the main operations employee's competences in order to highlight the key staff for the transition period. Reflecting on the competences a clear change management model is created applicable for the Operations banking reorganization. Next, descriving the method, presenting the research stages and finally presenting the conclusions.

4th industrial revolution is already here. Those who are connected at work to the most innovative companies already ask themselves what to do next? What will happen in the nearest future? Will these people be pushed away from their current positions to the unknown? This is the most valuable and painful problem to many hired personnel, but this question will pop up sooner or later to all of us.

The fourth industrial revolution is unfolding and is mostly based on robotization (with supporting IT structures), which confers a higher level of flexibility in terms of the locations, the manufacturing processes, the scale and scope of the output, and the customization of the products. Robotization goes beyond mechanization by enabling machines to perform more complex tasks and being able to adapt to a redefinition of these tasks. Machines are therefore getting similar to the flexibility of human labor. (Rodrigue, Jean-Paul, 2017).

What is 4th industrial revolution? It is close cooperation between virtual and real worlds, it is all about robotics, artificial intelligence, 3d printing, biotechnologies and many other technologies we could only dream about just a couple of years ago. But now, it is all here. And this is only beginning- according to statistics, revolution is yet to come. Companies are investing huge amounts of money into innovations.

According to Eurostat statistic report the expenditure spent on research and development is growing from year to year and business enterprise sector is the one most active

Every year from everywhere we hear so many examples how robotics and artificial intelligence is already amongst us. For example, car industry - Google self driven cars. Could you even imagine some time ago that your car could drive you wherever you need? Now it is a reality. Nowadays robots exist almost in every industry. They are involved in all the processes that relate to the 3 Ds- dirty, dangerous and dull work. Robots do this kind of work in the most effcieint and precise manner. They are not afraid of routines, theye do not lose any focus while doing repetitive tasks, robots feel convenient working with dirt and they are not afraid of the physical risks at work. From this perspective, robots are much better than humans- performing tasks much longer and much efficient.

Will banking stay the same as now? When mentioning industrial revolution banking sector comes the last to the mind, but in reality banking operations are doing exactly the same as factories do. There are a lot of repetitive manual tasks performed by humans that needs automatization.

In financial world revolution is already happening. With blockchain technologies, fintech and many other things. Traditional banks are in danger and banking job in the traditional way we see it is under the question. People are becoming really get used to the new digital experiences provided by Google, Facebook and others, so they are expecting the same from the financial institution as well that causes a big challenge to the banking industry. FinTech is riding the waves of disruption with solutions that can better address

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customer needs by offering enhanced accessibility, convenience and tailored products. But Fintech does not have so many resources as banks do- both in funding resources and client base, so banks are ready to use this advantage and invest in the new technologies.

Banks take advantage of their investment capacity comparing to the smaller start ups developing their financial technologies. They understand they need to invest in innovation and IT sector huge money to stay competitive on the market and not disappear. By that, they are raising customer satisfaction as well. Nowadays, people are so get used to the new technologies, smart phones, mobile applications that sets new standards for customer experiences. Clients no longer want to physically come to the branch office to transfer the funds to their relatives or business partners, they want to do this online. Clients want to use all the benefits internet can provide. In this way, banks are forced to close down the branch offices making a shift to online support.

The integration of industry 4.0 concepts in production systems causes changes in the job design for employees. Previous technology orientated work tasks are converted into process orientated tasks with frequently changing contents. In contrast to the Computer Integrated Manufacturing concept of the 1980s the aim of the industry 4.0 is to focus the human in the working system. Thereby, it leads to the combination of automated processes and manual tasks in hybrid systems. Automation can result in positive scale effects from standard sequences of high volume processes. Educated employees are necessary to execute complex manual tasks and to control and manage machines and processes. Humans and machines can be complementary in a socio-technical system and take advantage of their special potential. Therefore, an increasing number of human machine interfaces will be realized in future industrial production systems. (Dombrowsk UweI, Wagner Tobias, 2014).

Changes of the job profile and competences Kurz, C.: Work in industry 4.0 - Better then cheaper as a sustainable design perspective. Original citation: "*Arbeit in der Industrie 4.0 – Besser statt billiger als zukunftsfähige Gestaltungsperspektive*". (Dombrowsk UweI, Wagner Tobias, 2014)

Using robotics in the bank employees everyday duties reduces human error risk, improves work quality and makes processing time tend to seconds. Depending on the level of automatisation, cost for process analysis, robotic solution development and implementation may vary. But although the price for robotic implementation is high, it is worth it in the longer perspective- banks will need much less number of employees to perform the same tasks on the daily basis, less errors will end in less financial and reputation losses, less employees will result not only in less salary paychecks, but also in less tax expenses.

In this way, employees performing basic routine daily tasks are under the danger. Those who perform support functions for the customers feel themselves much safer since it is much harder to develop an electronic solution for assisting the clients via phone or e-mail. However, SEB bank, mentioned before, is already rea dy with the solution. In 2016 they came with the announcement that robot Amelia is already designed that is a new digital employee at the bank's internal IT support. Amelia is able to provide IT help to SEB employees just like the real human SEB employees working in internal IT support desk. The plan is to introduce Amelia to the external clients with time as well. When this will happen, SEB employees will no longer be needed to assist the clients, Amelia will be there for the clients, answering their phone calls, e-mails and dealing with their problems (SEB, 2017) .

So what should bankers do for know to stay competitive on the market and do not lose the job in the banking sector? First of all, when the tendency on the 'caring' jobs is raising, current banking employees should develop soft skills in themselves. Communication and listening skills are to be developed, fast adaptation to the innovation is a must, being flexible to the client's and business demands, ability to find the correct approach. This is what to be needed to have the advisory part in you. Also to become a process expert and being able to understand and update robots on the processing part, you should dig into the processes you are performing today, to have an end to end perspective- in other words, being able to see the process from the helicopter view with all the parties involved. Another path can be to gain new knowledge in IT technologies and become the developer yourself. You will have an enormous advantage in front of the pure IT people having banking background.

How to manage operations employees during the 4th revolution, when such a great shift of competences is required? What competences do managers required in this situation?

There are several competence concepts that exist and are found in the literature. Since in this paper the main focus is on the operation management, managerial development will be in scope.

During the preparation phase managers should understand and detect the factors affecting their bank. Based on the paper, bank will invest in robotics and the number of employees will be reduced. However, there should stay specialists maintaining and updating the systems as per need. In this way, the bank's strategy should be determined and agreed on. Also very important on this stage is really to understand why there is a need for changes in the organization.

Managers should be taking into consideration automatisation, when personal touch for the clients should be the key in winning the race between the banks. Because of that the whole bank should be reorganized into client centric organization. Client list should be analyzed and grouped in the way there would be enough employees to serve each and every. Distribution of the clients can happen in many ways, the most obvious is to differentiate the clients by their size- for example for corporate banking, small corporates, middle and large corporates, the separate group could be financial institutions. Analogical distribution would be in the retail sector as well. Nowadays banks are usually divided by the products, not by the clients and to shift the organizational culture a lot of resources are needed, because employees should learn all the products to offer to the clients instead of 1 product they are handling now.

The next aspect to be considered is the approach of the person. What is the employee's way of thinking? Can the person have critical thinking? What is the way the person learns new things? For example, if the person's learning approach id just to write down and memorize which buttons when needs to be presses, then this shows that there are no deep knowledge behind that. But if the person tries to understand the whole process chain, asks "why?" questions and gets the answers to this question, then this type of thinking would be more suitable working with robotics in the future.

Manager is regarded as a role model for the staff members, so initiative should be shown from the manager side, not waiting for initative to come from employees. Manager is responsible for providing direction, empowering and motivating employees, engage in discussion and encorage critical thinking. The right path suitable for the team is to be discovered and updated by questionning the processes and the plan prepared. And, the most important, control is never taken out of the scope- there should be a trust at the team and its performance, but check is necessary to make sure whether all the milestones are reached, whether everything is going according to the plan, whether stress level of employees is manageable.

When the transformation work is over (that could last for years), organization needs to make sure that all the key performance indicators are in place and are efficient, whether all the processes are running smoothly, whether the business is stable and secure, whether employees are engaged and content and whether the knowledge is not lost, but is kept withing the bank. Only after making sure that transition period is successful and is over, bank can admit it and prepare a reward for the employees who has been involved and dedicated their time, competences and energy.

Based on the competence model developed, operations it has been formulated that management should pass 4 levels of change management during the 4th revolution. These are preparation phase, design phase, execution and sutainability phases. In the preparation phase key factors affecting the bank are detected and evaluated. Preliminary use of resources are calculated and basic strategy to be identified. At this stage should be taken the decision from the management whether organizational changes are needed. At the next design stage the whole plan of reorganization is created with the most tiny details and risk assessment based on the deep analysis of the existing resources and resources to be taken from outside the organization. At the execution phase managers basically adjust the ongoing plan implementation according to the needs, follow up on the progress and make sure that risks are avoided. When the transition perios is over, operations management is the one that makes sure that all key performance indicators are effective and controlled, whether risk management is in place and whether staff can is able to perform in the most efficient way.

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MANAGER'S COMPETENCE TO LEAD CROSS-CULTURAL TEAMS

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Abstract

Due to significant technological, economical and social changes in external environment in last decades, modern managers face challenge to lead teams that are diversified in terms of locations, disciplines, and cultures. The new status quo requires managers to assess the changes and adjust their skills accordingly; hereafter the aim of the paper is to overview professional competences that are necessary to lead the cross-cultural teams, summarize the findings and define set of factors affecting the adjustment in discussed managerial capabilities.

Keywords: professional competencies, cross-cultural teams, soft-skills, management, skills, communication competence.

Introduction

Managerial professional competences directly related to external environment, as essence of a manager job is to supervise an organization's activities, as is defined in Merriam-Webster dictionary, while Oxford dictionary describes a manger's role more precise defining it as a "person responsible for controlling or administering an organization or group of staff"; therefore, it is hardly possible to act as a manager without interaction with external environment. Hereafter, managerial competences are subject for change responding to challenges around the globe: economic downturns, technological innovations, globalization and internalization of economies as well as changes in role of SMEs (Derwik, Hellström & Karlsson, 2016; Guðmundsson, 2012; Lapiņa & Aramina, 2011; Uroševic & Grahova, 2014). Nowadays manager has to lead teams that are diversified in terms of locations, disciplines and societies (Guðmundsson, 2012; Wiek, Withycombe & Redman, 2011; Silvius, 2016; Derwik, Hellström & Karlsson, 2016; Uroševic & Grahova, 2014) and is required to make easier the diversity among various cultures and social groups (Wiek, Withycombe & Redman, 2011; Silvius, 2016). Hereafter it is interesting to recognize whether there are differences or adjustments in professional competences that need to demonstrate a manager today contrary to the ones that are believed as an acceptable a norm for the profession.Methodology of Research

The research paper's study was conducted applying qualitative content analysis method for literature overview.

Findings/Results

In 1993 Spencer and Spencer (Spencer & Spencer, 1993) developed a competency model where define ability to influence, orientation to achievement, strong analytical thinking and ability for teamwork and cooperation are one of the crucial competences for a manager. Later researchers declared that business domain knowledge (Mathews, 2007; Chen & Wu, 2011), commercial orientation (Cikmačs, 2012; Mathews, 2007) and external customer focus (Mathews, 2007), as well as crisis management and strategic planning (Ekimci & Ozkan, 2009; Cikmačs, 2012) competences are identified as demanded by knowledge intensive organizations nowadays. However literature review reveals that the vast majority or researchers believe that soft skills of modern administrators cannot be underestimated as help them to address issues of diversity (Wiek, Withycombe & Redman, 2011; Silvius, 2016), negotiation with stakeholders (Derwik, Hellström & Karlsson, 2016) as well as conflict management (Ingason, & Jónasson, 2009).

The literature overview reveals that cross-cultural teams diversity varies in terms of different groups that might be defined as followed: 1) Interdisciplinary teams; 2) Cross-national teams; 3) Virtual teams; 4) Different social groups.

Hereafter manager has to be familiar with different cultures, respect differences and be open for various cultures, following social skills and interpersonal competences have to be adjusted at a first place: 1) Communication competences; 2) Collaboration and teamwork abilities; 3) Leadership competences.

Apart from the stated earlier were revealed extrinsic and intrinsic factors that make influence and shape different sets of competences due to variety in maturity level of organization, its culture, and goals, as well as manager's personal characteristics, including emotional intelligence and intellectual flexibility.

Conclusions

The research unveils that tremendously changing environment facilitate importance of change in interpersonal skills and especially communication competences of a modern manager who has to administer and control multicultural teams that might be simultaneously varied in terms of nationalities, locations, knowledge domains and social groups. Hereafter to enhance teamwork, cooperation and collaboration within the group, manager has to demonstrate adaptability to new work processes and teams, sensitivity to diversity among the stakeholders and actively embrace it, adjusting his leadership modus operandi and demonstrating openness to different cultures.

It is worth mentioning challenges that managers face in the context of communication do not limit only with internal stakeholders, in the era of client-centric organizations, social media, and corporate conscience, the managers act as a communication bridge with 3rd parties, hence have to aware multicultural landscape within the organization and all around.

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PERSONĀLA UN PERSONĀLA VADĪTĀJA JĒDZIENU BŪTĪBAS EVOLŪCIJA MŪSDIENU VIDĒ

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Anotācija

Personāla kā organizācijas nozīmīgākā resursa loma mūsdienās arvien pieaug. Lai pētītu mūsdienu pārmaiņu videi atbilstošas personāla vadības sistēmas izveidošanas iespējas, kā atbalstu organizācijas mērķu sasniegšanai, sākotnēji tiek analizēta personāla vadībā izmantoto jēdzienu būtības evolūcija mūsdienu vidē, kas līdz ar to atklāj personāla vadības izpratnes maiņu un tendences gan Latvijā, gan ārvalstīs. Jēdzienu analīze atklāj, kā mainoties darbības videi, izmantojamām tehnoloģijām, nemitīgi pielāgojas un attīstās organizāciju izpratne par darbiniekiem un to vadīšanu darba rezultātu sasniegšanai. Mainās arī profesijas, iegūstot jaunas nozīmes un kompetences. Tendences amatu evolūcijā ir saistītas ar jaunu prasmju apgūšanu gan darbiniekiem, gan to vadītājiem.

Atslēgvārdi: kadri, personāls, cilvēkresusri, cilvēkkapitāls.

Ievads

Raksturojot personālu tiek lietoti četri jēdzieni: *kadri, personāls, cilvēkresursi* un *cilvēkkapitāls***.** Pētot šos jēdzienus, ar mērķi noskaidrot jēdzienu saturu, izpratni un attīstību, to analīze atklāj ne tikai jēdzienu evolūciju, bet arī jēdzienu izpratnes maiņu, līdz ar to personāla vadības lomas maiņu organizācijas attīstībā. Jēdziens organizācija šo tēžu ietvaros tiek lietots plašākā nozīmē, ar to saprotot gan uzņēmumus, gan valsts pārvaldes iestādes.

Pētot jēdzienu evolūciju, var secināt, ka sākotnēji organizācijās nodarbinātos vērtēja kā nozīmīgu darba resursu un galveno uzmanību pievērsa cilvēka spējām veikt noteiktas funkcijas, uzdevumus un uzticētos darba pienākumus. Tika lietots jēdziens "kadri", arī "darba spēks" apzīmējot darbaspējīgo iedzīvotāju daļu, kuri piedāvā savu darbaspēku preču un pakalpojumu ražošanai, par tiem uzskatīja visus ekonomiski aktīvos iedzīvotājus. (D.Vilne, J.Birzniece, Nordhaus D.W., Samuelsons P.A.,) [9].

Savukārt 20.gadsimta sākumā, attīstoties uzņēmējdarbības videi un valsts pārvaldei, arī akcentējot šodienas lēmumu ietekmi un atbildību nākamo paaudžu priekšā, pieaugot darbinieku iesaistei organizāciju procesos, arvien lielāku nozīmi iegūst ne tikai pats darba process un uzdevumu izpildes kontrole, bet personāla vadīšana, un arvien plašāk organizācijā nodarbināto cilvēku raksturošanai tika izmantots jēdziens „personāls". Personāls tiek uzskatīts par galveno organizācijas darbību nodrošināšanas faktoru, kas piedalās arī lēmumu pieņemšanā un īstenošanā (I.Ešenvalde, I.Forands, I.Lapiņa, I.Vorunčuka). Par personālu runā, ja raksturo cilvēkresursu kopumu, kas iesaistīti organizācijas darba procesos. Ekonomikas skaidrojošā vārdnīcā 2000.gadā gan definēti divi termini: "personāls" un "kadri", un skaidrots, ka tie ir visi organizācijā nodarbinātie, kā arī uzņēmuma vadītāji un viņu tuvākie palīgi. [4]. Gomez-Meija L.R. ar līdzautoriem uzskata, ka cilvēkresursi ir „cilvēki, kuri strādā organizācijā (saukti arī par personālu)" [6]

Cilvēki rada uzņēmuma pievienoto vērtību, peļņu vai arī to darbības rezultāts nes zaudējumus. Līdz ar to jēdzienam „kadri", kam kā sinonīms tiek lietots jēdziens „personāls", un arvien biežāk mūsdienu vadības terminoloģijā tiek lietoti jēdzieni „cilvēkresursi" un „cilvēkkapitāls". Kā atzīst Jones G.R., "efektīva cilvēkresursu izmantošana ir būtiska uzņēmuma konkurētspējas nodrošināšanā. Līdz ar to var apgalvot, ka efektīva cilvēkresursu vadīšana ir neatņemama uzņēmuma vadīšanas sastāvdaļa, lai uzņēmums sasniegtu savus mērķus. " [8]

"Cilvēkresursi" (angļu val.-human resource) un "cilvēkkapitāls" (angļu val.- human capital) ir termini, kas arvien biežāk tiek ietverti organizāciju stratēģijās, definētajās vērtībās un personāla pārvaldības politikas vai personāla stratēģijas dokumentos. Šie jēdzieni ir salīdzinoši jauni un kā pētījumu objekts tika atspoguļoti 20.gs. 50.- 60.g., pie tam par cilvēkkapitāla teorijas izstrādi T.Šulcs (T.Schultz) 1979.gadā un G.Bekers (G.Becker) 1992.gadā saņēma Nobela prēmiju ekonomikā. Saskaņā ar G.Bekera atziņām, cilvēkkapitāla

analīze var palīdzēt izskaidrot daudzas likumsakarības darba tirgū un tautsaimniecībā kopumā. Vārds „cilvēkkapitāls" tiek lietots investīciju kontekstā, ar ieguldījumiem darbinieku izaugsmē, attīstībā un darbības pilnveidošanā, jo investīciju atdeve parādās uzņēmuma darbības rezultātos. "Cilvēkkapitāla" definīcijā tiek uzsvērta indivīda izglītība, iemaņas prasmes un zināšanas, kas palielina viņa ekonomiskās darbības produktivitāti. [1]

Mūsdienu organizācijās var veiksmīgi pastāvēt visi iepriekš analizētie jēdzieni, gan kadri - darba spēks, vienkāršu procesu veikšanai, gan cilvēkresursi, kas palīdzēs sasniegt darba devēja izvirzītos mērķus. Organizācijai nozīmīgi ir atbilstoši saviem procesiem un darbiniekiem, vadīt un organizēt personālu. Organizācijas darbības pamatā ir iesaistītie cilvēki, kuru darbības tiek vadītas organizācijas izvirzīto mērķu realizēšanai. Tradicionālā personāla loma un tā vadības struktūra ir strauji mainījusies kopš 19.gs otrās puses, kad attīstījās valsts pārvaldes sistēmas, izdalot tādas funkcijas kā rutīnas darbu veikšanu, administratīvo procedūru ievērošanu un stratēģisko vadīšanu. Organizācijas konkurētspējas priekšrocību rada efektivitāte, kvalitāte, inovācijas un klientorientēta darbība.

Jēdzienu analīze atklāj ne tikai jēdzienu evolūciju, bet arī personāla vadības lomas maiņu organizācijas attīstībā, ilgtspējā Latvijā un pasaulē. Tradicionālā pieeja personāla vadībā (D.D.Dubois, 2004) balstās uz organizācijas katra amata analīzi (personāla piesaistīšanai, atlasei, novērtēšanai) un amata aprakstiem, kuros iekļauj galvenās aktivitātes, ko veic darbinieks. [3] Vairums mācību grāmatu personāla vadībā ir izstrādātas atbilstoši šai tradicionālajai pieejai (piemēram, Latvijā var minēt tādus autorus kā I.Forands, I.Ešenvelde, I.Vorunčuka) Mūsdienās darba saturs strauji mainās un pat izcili sagatavoti amata apraksti ātri zaudē savu aktualitāti, līdz ar to nepieciešamas arī jaunas pieejas personāla vadībai.

Līdzīgi kā evolucionē jēdzieni darbinieku apzīmēšanai organizācijā, izejot noteiktus attīstības posmus, attīstās un mainās arī amatu nosaukumi, kas veic darbības ar personālu, praksē tiek lietoti tādi jēdzieni kā *personāla speciālists, vecākais personāla speciālists, personāla vadītājs.* Pārmaiņas sabiedriskajā dzīvē un izglītībā, tehnoloģijās, globalizācijas ietekme, šos jēdzienus ļauj aplūkot plašāk, pielāgojot izpratni mūsdienu organizācijas prasībām. Latvijā profesijas standarts nosaka, ka *personāla speciālists* kārto personāla lietvedību; nodrošina personāla datu uzkrāšanu, veic personāla atlases procesu; piedalās personāla darba izpildes novērtēšanas un kompetenču sistēmas izstrādē un uzturēšanā; piedalās darbinieku motivēšanas un darba samaksas sistēmas izveidē un seko līdzi darba tiesisko attiecību reglamentējošo normatīvo aktu prasību ievērošanai, savukārt *personāla vadītājs* nosaka un formulē uzņēmuma personāla vadības stratēģiju, politiku un mērķus dinamiskā ekonomiskā vidē atbilstoši uzņēmuma mērķiem; analizē, novērtē un pilnveido uzņēmuma personāla vadības sistēmu; plāno un prognozē uzņēmuma personāla resursus; sadarbojas ar uzņēmuma vadību un citu struktūrvienību vadītājiem personāla vadības stratēģisko mērķu sasniegšanā. Plašākā nozīmē personāla vadīšana ir paņēmienus kopums, ar kādiem ikviens vadītājs mēģina ietekmēt savu darbinieku rīcību konkrētu mērķu sasniegšanai.

Ņemot vērā cilvēkresursu trūkumu mūsdienās, kā arī cilvēkresursu izmaksu patstāvīgu pieaugumu, personāla vadības loma strauji mainās. Ir organizācijas, kas personāla vadībā realizē tikai administratīvo funkciju izpildi, ko var veikt speciālists, savukārt, ja organizācijā tiek attīstīta personālvadības stratēģija, tad lēmumu pieņemšanā organizācijas vadītāja "*labās rokas* vai *biznesa partnera*" pozīciju ieņem arī personāla vadītājs, kas stratēģiski pārzina darbinieku motivēšanas, noturēšanas un attīstības jautājumus, un ir vidutājus starp vadību un darbiniekiem. Kā atzīst ASV cilvēkresursu vadīšanas pētnieks Dž. Dž. Filipss, tā kā cilvēkresursi sastāda nozīmīgu daļu no uzņēmuma izmaksām, tad cilvēkresursu vadīšanas funkciju lietderība var būtiski ietekmēt vispārējo uzņēmuma darbības veiksmi vai neveiksmi. Pasaulē ir uzņēmumi, kas ir cietuši neveiksmi tieši neefektīvas cilvēkresursu vadīšanas politikas dēļ. Zinātnieki L. Pikets, P. Sperovs, R. Šulers, S. E. Džeksone, P. Evanss, V. Puciks, Dž. Barsū, Dž. Heitons (Pickett, Sparrow, Schuler, Jackson, Evans, Pucik, Barsoux, Hayton,) savos pētījumos ir pierādījuši, ka cilvēkresursu vadīšana ir visjutīgākā un svarīgākā joma uzņēmumā, lai tas gūtu panākumus.

Apskatot personāla vadības struktūrvienību izaicinājumus mainīgajā vidē, profesore, publiskās pārvaldes organizāciju personālvadības pētniece K.Ban (Carolyn Ban, 2005) secina, ka, lai nezaudētu šīs profesijas nozīmīgumu, personāla vadībai no reglamentējošas un skaidrojošas struktūrvienības jākļūst par stratēģisko partneri, atbalstot organizāciju tās misijas un mērķu sasniegšanā. Šī stratēģiskā pieeja ir arī

saistīta ar jaunu varas attiecību veidošanos organizācijā. K.Ban atzīst, ka personāla vadības struktūrvienība mūsdienās organizācijā nav vairs tikai rutīnas darbu veicēja un brīvprātīga konsultāciju sniegšanas bāze, personāla vadības struktūrvienība kļūst pat integrētu daļu stratēģiskās plānošanas procesā.

Personāla vadība organizācijās ir piedzīvojusi trīs būtiskas pārmaiņas: sākotnēji tika veidoti klientorientēti personāla vadības modeļi, tad pilnveidota darbība, lai sekmētu organizācijas attīstības ietekmes un veidotu konsultāciju modeli, tagad tiek veidoti stratēģiskie personāla vadības struktūrvienību modeļi, personāla vadītāji kļūst par pilnvērtīgiem komandas biedriem, organizācijas misijas veidotājiem.

Jāatzīst, ka mūsdienās darba tirgus joprojām pieprasa gan personāla un kadru vadītājus, gan cilvēkkapitāla, cilvēkresursu vadītājus, un arī izglītības sistēma tam ir pielāgojusies, un sagatavo atbilstošus speciālistus.

Latvijā personāla speciālista kvalifikāciju, var apgūt koledžās, savukārt bakalaura studiju programmās piedāvā iegūt personāla vadītāja kvalifikāciju iestāžu un organizāciju vadībā. Personāla vadības maģistra studiju programmas sniedz padziļinātas zināšanas personāla vadības jautājumos, sagatavo izglītotus un kvalificētus speciālistus operacionālās un stratēģiskās cilvēkresursu vadības jomā. Maģistra studiju programma sagatavo personāla vadītājus, kuri spējīgi formulēt organizācijas personāla vadības stratēģiju un politiku, plānot un vadīt darbu atbilstoši organizācijas mērķiem.

Pētniecības metodes

Pētījumā izmantotas vispārpieņemtas zinātniskās metodes - speciālās literatūras un zinātnisko publikāciju kontentanalīze, objektīvai un sistemātiskai satura analīzei, lai konstatētu interesējošā jautājuma nozīmīgumu attiecīgajā laika posmā; loģiski-konstruktīvā metode - izsakot spriedumus, analizējot rezultātus; monogrāfiskā jeb aprakstošā metode– tika veikta jēdzienu detalizēta izpēte, apkopojot informāciju un pamatojoties uz daudzveidīgas literatūras apskatu, raksturojot, kādas pārmaiņas notikušas laika gaitā.

Atklātie trūkumi un rezultāti

Ņemot vērā cilvēkresursu trūkumu mūsdienās, kā arī cilvēkresursu izmaksu patstāvīgu pieaugumu, personāla vadības loma strauji mainās. Ir organizācijas, kas personāla vadībā realizē tikai administratīvo funkciju izpildi, ko var veikt speciālists, savukārt, ja organizācijā tiek attīstīta personālvadības stratēģija, tad lēmumu pieņemšanā organizācijas vadītāja "*labās rokas* vai *biznesa partnera*" pozīciju ieņem arī personāla vadītājs, kas stratēģiski pārzina darbinieku motivēšanas, noturēšanas un attīstības jautājumus, un ir vidutājus starp vadību un darbiniekiem.

Latvijā organizācijas, piesaistot personāla vadības speciālistus, lielu nozīmi pievērš potenciālo darbinieku administrēšanas un lietvedības prasmēm, kas būtībā ir sekundāras, jo funkcionālas kompetences iespējams apgūt darba pieredzes laikā. Mūsdienās arvien lielāka nozīme ir kandidāta personībai, saskarsmes prasmēm, harizmai, attīstīta loģiskai un biznesa domāšanai, potenciālam.

Secinājumi

Jo organizācija ir produktīvāka, jo labākā pozīcijā tā ir, konkurējot ar citām organizācijām. Mūsdienu mainīgās vides prasības ir izdarīt vairāk, ieguldot mazāk – mazāk laika, mazāk resursu: cilvēku, finanšu u.c. Mainās arī profesijas, iegūstot jaunas nozīmes un kompetences. Tendences amatu evolūcijā ir saistītas ar jaunu prasmju apgūšanu gan darbiniekiem, gan to vadītājiem Šādai pieejai nepieciešama personāla vadības paradigmas maiņa organizācijā.

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WHAT LATVIA CAN LEARN FROM ENGAGED UNIVERSITY CONCEPT IMPLEMENTATION CASE

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Purpose

Innovations is a term that is nowadays very often used in context of economic growth, education, science and business priorities. There are many models implemented by various countries and Latvia is still in search of the best one that would fit the financial possibilities, existing culture and most successful industries. Simon Fraser University (hereby SFU) in Canada has successfully implemented concept that improves university and industry cooperation in setting up innovation ecosystem. The concept involves universities and communities jointly identifying and pursuing opportunities and is called "engaged university". Authors research how SFU has implemented the concept – the targets, support instruments, target groups, achieved results, involved partners and institutions, actions, motivation, barriers and incentives. The concept is compared to the situation in Latvia based on the research data that was performed by RTU scientists during the project "Research of alternative models for study process and industry cooperation promotion". The research revealed main barriers and stimuli in university and industry cooperation process. Although economic and political background in Latvia and Canada are not the same there are several factors from engaged university concept that can be learned and implemented also in Latvia.

Methodology/Approach

The reference material is gathered by literature analysis describing engaged model concept and SFU implementation of this concept. Authors participated in field research examining the experience of Latvian universities and Latvian companies in study process involvement in real life problem solutions. The research also involved two surveys that revealed main barriers and stimulus for successful cooperation in innovations. Field research results are processed by applying mathematical and statistical tools (SPSS) and were discussed in focus groups. On the basis of research results recommendations for further research are developed. For completing the research, the triangulation method is applied – theoretical background is formed on systematic literature review (state of art method). Theoretical investigations are approved by field research, qualitative and quantitative data analysis methods.

Findings

The results of research confirmed rising necessity for dynamic interaction of education, research and community. It is a strategic step towards new innovation ecosystem and takes both, financial investment and culture change. Further research can be performed to reveal instruments how engaged university concept disseminates knowledge and breakthrough ideas for the benefit of society and how to increase interest from society in research and its outcomes.

Research Limitation/implication:

The research is based mainly on data acquired from literature and higher education and research institutions in Latvia and Simon Fraser University in Canada.

Originality/Value of paper

Engagement is a two-way process that involves listening and interaction for a common goal to create a mutual benefit. This new approach is breaking historic and traditional barriers between universities and industry. The findings can be applied in study process and improvement of university industry cooperation for new innovation ecosystem development.

Keywords: engaged university, innovation ecosystem, university industry cooperation, higher education and research.

FINANCING R&D IN CHANGING ENVIRONMENT: DEFINING INVESTMENT EFFICIENCY IN LATVIA

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Abstract

Research shows that definition of research related investment efficiency is important instrument for research organizations and innovation and development orientated SME's. Simultaneously it is gaining high importance to develop state-specific development strategy which will help to overcome past slowdown and increase outcome from research and innovation. Though there are a number of data and studies on financing R&D and innovation outputs in developed countries, no detailed and systematic analysis has been elaborated on the effectiveness of spending the public funding which are realized in small economies.

Keywords: Innovation input-output, research and development (R&D) input-output, return on investment in R&D, investment efficiency.

Introduction

In practice, there is a dichotomy, which determines how public money is invested for research, innovation and development (R&I&D). There are countries where investment in research exceeds 3% of GDP and therefore that leads to the country's competitiveness (e.g., Finland, Sweden, Switzerland). It should be noted that similar evidence of progress can be recognized in certain industries, e.g., pharmaceuticals, ITC, smart materials.

Latest international assessment for Latvian scientific institutions which was carried out in 2013. This external evaluation process discovered most of challenges our researchers and innovators are facing here. Experts devoted high attention to the situation that both scientific organizations and businesses do not have any analytical tool which would be used for investment in R&I&D return assessment. Analysing latest trends and data it was found that Latvian researchers and businesses still are facing three major problems:

1) low participation rate in international research cooperation;
2) main focus on national-level research activities that as rule do not contribute to the international visibility and competitiveness development;
3) low rate of publications in international peer-reviewed scientific journals.

Evaluation results are in tune with the Innovation Union Scoreboard, which Latvia ranks Latvia as one of the last in the by research system efficiency, excellence, openness and involvement in international cooperation.

Data analysis are discovered that research funding in Latvia is the smallest compared to neighbouring countries and other EU member states and even with some decreasing trend if we are looking to specific areas. As obvious looks necessity to increase the number of projects applied for international co-operation programs, which, in turn, should develop the number of supported and funded research activities, thereby promoting our scientific organizations and businesses.

Overall analysis on Latvia's R&I&D results 2006-2015 mostly using EC 7th Framework Programme performance data discovers number of bottlenecks and challenges:

- projects are concentrated in a few areas of research, such as information and communication technologies. E.g., language technology has attracted 43% of total ICT funding. Health sciences research projects are concentrated in one area - infectious diseases (~80% of the total funding by 7th Framework

Programme). At the same for research of heart and vascular diseases got only 12% of total funding available for health related research.

- Latvia is only fragmentally not involved in activities that focus on a number of topical EU's strategic objectives;
- Latvia's science and applicable research funding is unsatisfactory low;
- Number of innovative SME's is insignificant, big companies practically do not participate in the international research projects;
- Over than 60% 7th Framework Programme funding was tied to capital city Riga;
- SME's and research organizations in particular don't have practice to evaluate results of research in economic terms.

Thus it is important to give definition and model which will be used by all involved parties in order find out investment in R&D efficiency. During research it was discovered that does not exist unique evaluation model, you need to consider specifics of research organizations and business..

Methodology of Research

Applicable statistics and other relevant data has been analysed to find out correspondence for R&D input and output quantitative and qualitative results for different industries.

Findings/Results

Recognition of relationship for R&D input and output in order to find out the measurement for investment efficiency.

Conclusions

The paper extends applicable theoretical foundation and comprehension of elements and factors affecting investment decision process which influences R&D. Research findings will provide grounds for development of applicable model that would assist for government authorities and businesses to decide the most economic output before investing in R&D and innovation.

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