POLITECHNIKA LUBELSKA

Innovativeness and entrepreneurship

Clusters. Management

Good practices in the World

edited by
Ewa Bojar
Korneliusz Pylak

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Innovativeness
and entrepreneurship

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INTRODUCTION

The aim of the book is to present different aspects of innovativeness and entrepreneurship performance and support. The book presents different points of view from different countries (Poland, Portugal, Romania, Russia, Spain, Ukraine) and regions. The reader will find a lot of interesting development measures strategies and descriptions of how clusters, networks and corporations function, especially in the context of competitiveness and innovation. The case studies present various analyses of the economies of the countries and regions and their activity in the creation of qualitatively new mechanisms of regional development.

Clusters have become an increasingly popular concept over the few last years, which is reflected in a growing number of clusters' support policies and initiatives on the EU, national and regional level. It is widely accepted that clusters can contribute to the improvement of competitiveness and innovativeness of regional economies. This thesis is confirmed in the first chapter on the influence of existing clusters on each region's economic performance and, more precisely, the relationship between the development level and the presence of clusters and their characteristics. This analysis is done for Romanian regions. The authors analyse 40 clusters and describe 15 of them in-depth. This research confirms the importance of cluster development for speeding up regional growth. Nevertheless, there is no single recipe that can meet the needs of all clusters; on the contrary, successful cluster policies need to take into account the specific regional context. Considering the still incipient stage, local production systems of industrial district type seem to be the most appropriate organisational form for clusters development in many cases for the Romanian regions, with a special emphasis on 'soft' measures, able to strengthen the local networks and to ensure cluster identity.

The second chapter presents the role of clusters and networks of creative industries in regional innovation systems on the empirical basis of the European regions. The chapter presents the authors' methodology of analysing management in creative clusters and networks consisting of three elements: social network analysis of the cluster, competence map of the network and identification of network of activities. The behaviour of the creative network and clusters was analysed as well as the methods of analysing knowledge management in these environments. In order to better understand the nature of the knowledge management in creative industries and the network existing in these sectors we have to realize the value for the whole society given by the creative sector and the informal character of knowledge transfer. For this reason the analysis of knowledge management reveals several problems affecting the research process.

The third chapter presents the integration of Russian banks in the formation of inter-regional clusters. Development of inter-regional clusters is a promising new form of development in the Russian economy. Financial infrastructure affects their development. Due to this, there is great interest in questions of influence of integrational clusterization processes on Russian regional banks. Additionally, in order to explore the macro-economic state of the Russian economy and its competitiveness, the authors track the development of the main structural elements of the financing and banking system, because of its key role in providing economic activity in the country, especially in the period of formation of cluster development for the modernization of the economy. The authors conclude that for successful integration of Russian banks in the global financial system and improvement of the competitiveness of Russian credit institutions, intensive approaches in the implementation of banking strategy have to be used in the long term. The introduction of new business models of banking institutions, the use of various types of lending, and new technologies will make banking transparent and open to customers, thereby increasing its investment attractiveness. An important component in this process should be the legislative support and financial development of interregional clusters.

The fourth chapter sheds light on the localisation economies in the tourism sector in Spain. This chapter places a special emphasis on analysing the tourist districts a coastal area of Spain and the extent to which the degree of business agglomeration at each destination affects hotel profit. The authors conclude that hotels situated at destinations with a higher degree of agglomeration are less profitable, probably due to the greater rivalry that exists between nearby competitors. However, in accordance with the theory of tourist districts, one could expect a positive effect.

The next chapter presents knowledge creation processes in multinationals. The aim of this chapter is to find the main variables impacting multinationals knowledge creation capability. The authors used a mixed research method combining qualitative and quantitative methodologies. The qualitative methodology serves to perform an exploratory study and to formulate a series of propositions which are later tested on a population of 1,291 Spanish subsidiaries of foreign multinationals belonging to highly technology- and knowledge-intensive sectors during the quantitative stage. The results showed that the subsidiary's initiative, autonomy and internal environment exert a significant positive influence on its knowledge creation capability, whereas there is no empirical confirmation of the influence of leadership and external networks.

The sixth chapter analyses sustainability strategies in 251 small and medium-sized businesses in a Portuguese region located in the north of Portugal Vale do Sousa. The strategies analysed are at the economic, social and environmental level. In order to classify businesses as familiar or non-familiar types, the authors adopted two main criteria: (1) Management Control, (2) Family Employability. The authors conclude that in general SMEs in the region are concerned

with sustainability strategies and surprisingly the environmental sector is ahead of the social and economic sectors. The same tendency is verified in both familiar and non-familiar businesses. Concerning the differences between these groups of firms, authors did not find statistically significant differences. The results show that these businesses are trying to follow sustainability strategies; this is not a family or a professional concern, but a cultural concern in this region.

The next chapter applies organizational politics research to explore boundary conditions for traditional assumption of the management and entrepreneurship literature. Based on the assumption that organizational politics is a multidimensional construct, the authors attempt to analyse organizational politics and some environmental influences. In addition, they also indicate factors that drive organizational politics to lever organizational effectiveness. To answer these questions, the authors bring together theory at intersection of strategic management, organizational behaviour and organization and management theory.

The eighth chapter deals with failures during the development phase due to incomplete or incorrect data analysis of the market. The authors examine problems in more detail using the tools of logistics. The systematic study of the problematic aspects of industrial enterprises' innovative activity reveals the main causes and consequences of ineffective innovation. It is established that the key task of managers is to create conditions which guarantee an enterprise's innovation activities in managing a portfolio, reducing the risk of production of low-quality or unclaimed products and reducing the development time of a new product. The role of logistics in creating a new product is determined, which in this process is very important since the introduction of the logistic approach to innovation activities of enterprises using the corresponding logistics tools can significantly improve the performance of the material and information flow and coordination at a cross-functional level.

The last chapter continues with issues related to logistics, focusing on logistic risks management. Logistic goods maintenance involves interaction with a large quantity of industrial and technological factors that lead to a manifold increase in the number of transactions in logistics, and with them, increasing the number and size of the various risks that may be classified as logistic. Analysis of the risk situation identifies three interrelated conditions: the presence of uncertainty, analysis of possible alternatives and selection of an optimal opportunity to assess the likelihood of realization of the selected options.

1. CLUSTERS, REGIONAL PERFORMANCE AND CORRESPONDING POLICIES. SOME CONSIDERATIONS IN THE CASE OF ROMANIA

Daniela-Luminita Constantin[*]

Luiza Nicoleta Radu[**]

ABSTRACT

This chapter proposes an inquiry into the regional growth and cluster development in Romania, aiming to reveal to what extent the existing clusters have had a significant contribution to each region's economic performance and, more precisely, whether the overall development level is closely related to the presence of clusters and their characteristics. Appropriate policies for cluster development depending on regional profile are also suggested.

KEYWORDS:

clusters; regions; economic performance; cluster policies

JEL CLASSIFICATION:

O18, R12, R58

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1.1. INTRODUCTION

The debates that are taking place in the international arena with regard to regional competitiveness and regional growth bring frequently into discussion the role of clusters as an important generator of knowledge diffusion, labour pooling, intra- and inter-industry exchanges, etc. (CSC, 2011). It is highlighted that clusters act as a catalyst for the transformation of new ideas into prosperous businesses via cooperation networks established between interested actors.

Nevertheless, the simple presence of clusters in a region is not a 'blank cheque' for more competitiveness and prosperity (Constantin et al., 2010). The cluster formation should be accompanied by a comprehensive and coherent package of policy measures – in economic, institutional, infrastructure, cultural, etc. terms – able to improve the business framework and the quality of regional development processes (Funck & Kowalski, 1997). This orientation is perfectly mirrored by the multidimensional cluster policy promoted by the European Union in accordance with the smart, sustainable and inclusive growth objectives.

Based on these overall considerations, this chapter aims to examine the relationship between regional distribution of clusters and the economic development level of the Romanian regions so as to reveal to what extent the most developed regions are the 'champions' in terms of cluster development too. As it will be demonstrated, this has a lot in common with the economic performance of the existing clusters, leading to relevant conclusions and suggestions about the need to adapt and apply those cluster policies which prove to be the most adequate for the cluster profile and maturity level.

The chapter is organised as follows. First, data and methodology are presented, followed by results presentation and interpretation. Subsequently, various policy responses are suggested, accompanied by concluding remarks.

1.2. DATA AND METHODOLOGY

The data were collected so as to respond the chapter's main research question, namely whether, in the case of Romania, clusters development and performance are reflected in the development level of the region they are located in. The investigation has been performed at development region level (NUTS 2), with insights into the existing situation at 'judete' level (NUTS 3). Both the regions' development level and clusters' main characteristics were analysed considering the EU context, which served as reference in quantitative and qualitative judgements. For development level GDP per capita was analysed in order to make comparisons between regions and rank them. Clusters' main characteristics and performance were examined based on the elements of the classification by number of stars (maximum 3) employed by the European Cluster Observatory (ECO). Thus, one star is assigned for each of these criteria: employment

size in a certain cluster of a region, degree of specialisation in the region and cluster focus on employment in the same region[1]. Data were collected from the websites of the ECO website and the Romanian Cluster Association.

For a better understanding of the Romanian territorial organisation established in accordance with the NUTS classification of the Eurostat some details may be necessary. Thus, the territorial-administrative structure incorporates one regional level – the counties ('judete'), which correspond to the NUTS3 level of the EUROSAT and one local level (cities, towns, communes). In Romania there are 41 counties plus the Bucharest municipality. In 1998, after the preparations for accession to the European Union had started, eight development regions (NUTS2) were set up in order to provide the necessary framework for the elaboration and implementation of regional policy. They are not administrative units, being established on a voluntary basis. The number of counties included in each region varies between 4 and 7. The only exception is the Bucharest-Ilfov region, which incorporates the municipality of Bucharest and the surrounding county, Ilfov.

1.3. RESULTS

1.3.1. Regional growth

According to Eurostat, in 2010 the GDP per capita (PPS) in Bucharest-Ilfov was 114% of the EU28 average (compared to 30% of the EU28 average in the North-East region), indicating that GDP per capita was 3.93 times higher in the most-developed region than in the least-developed region (compared to 2.42 times in 1998). However, in absolute terms the GDP per capita has increased significantly in all regions (see Table 1-1 and Figure 1-1).

The data show that Bucharest-Ilfov is ranked first during the entire 2000-2010 period (and beyond). The following three places are constantly occupied by West, Centre and North-West regions. The North-East region remains the poorest region of the Romania and, even if in its case the regional GDP per capita evolution was positive in the analyzed period, the development gap has increased. However, at the European level the North-East region is no longer considered the poorest region in the EU in terms of GDP per capita, two other regions in Bulgaria having a smaller value of this indicator.

[1] see www.clusterobservatory.eu/

Table 1-1. GDP per capita at PPS in the Romanian NUTS 2 regions compared to the EU27 average

Region	GDP per capita 2000		GDP per capita 2010		2010/2000
	PPS	As % of EU28 average	PPS	As % of EU28 average	%
North-West	4,400	23	10,200	43	231.8
Centre	5,100	27	10,900	46	213.7
North-East	3,400	18	6,900	30	202.9
South-East	4,500	23	9,400	40	208.9
South-Muntenia	4,000	21	9,500	40	237.5
Bucharest-Ilfov	10,900	57	27,100	114	248.6
South-West	4,000	21	8,800	37	220.0
West	5,100	27	12,900	54	252.9
Romania	4,900	26	11,400	48	232.6

Source: Worked out by the authors based on Eurostat data

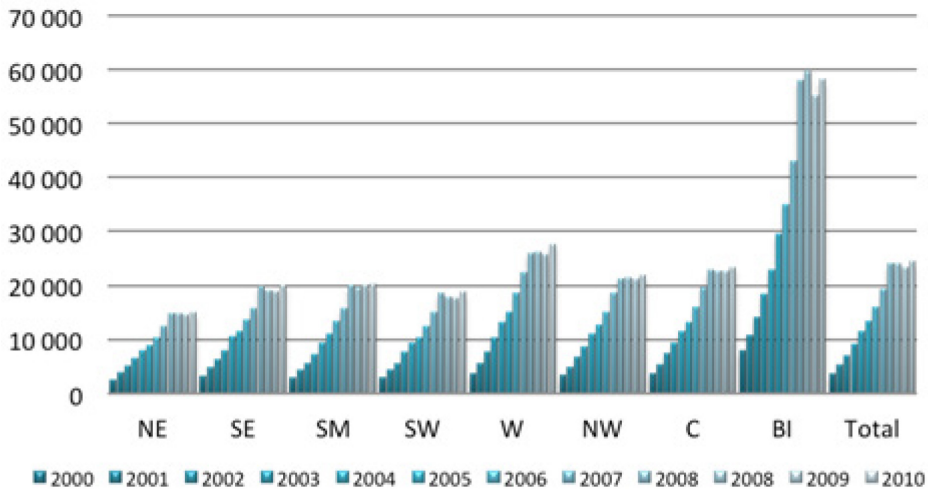

Figure 1-1. GDP per capita by region – thousand lei

Source: INS Tempo

As regards the West region positioning after the leading region Bucharest-Ilfov, this is mainly favoured by proximity to other European Union member states, which has created higher accessibility chances and cooperation opportunities. Within this region the Timis and Arad counties have the biggest contribution to regional growth. This is mainly the effect of the foreign private invest-

ments that created not only jobs, but also added value of the public investments (e.g., infrastructure). Hunedoara and Caras-Severin, the other two counties belonging to the West region, are characterized by historical industrial activities, especially mining. After the industrial activities restructuring, these counties are still confronted with a high unemployment rate and low contribution to the regional GDP. Differences between development regions in terms of GDP per capita reveal the disparities dynamics, mainly influenced by past socio-economic evolutions. In this sense, the North-East region displays a high percentage of employment in agriculture (41.5%) and a low percentage of the employment in industry (16.7%) in 2011. At county level the highest shares of employment in agriculture are in Botosani (51%), Vaslui (49%), Suceava (46%). As a consequence, Iasi and Bacau counties contribute approximately 50% to region's GDP, while Botosani and Vaslui only 18%. The analyses reveal that three counties of the North-East region, respectively Iasi, Neamt and Bacau, have the most important impact on the economic growth at regional level, due to the presence of the industries activities. Moreover, Iasi is an important university centre, with many research institutes and centres of excellence in higher education. Thus, only in the period 2001-2006 twelve new centres of excellence were created in higher education institutions in Iasi. Furthermore, in this region are five clusters monitored by the Romanian Ministry of Economy, namely ASTRICO Savinesti (clothing-textile), Iasi Creative Industries Pole, Iasi IT New Media, Suceava Regional Tourism Cluster and MOL IMAGO Iasi (medical imaging).

1.3.2. Clusters

Clusters (and competitiveness poles) in Romania are monitored by the Ministry of Economy and the Romanian Cluster Association (CLUSTERO). The Romanian legislation does not make a clear difference between the two concepts. As a consequence of the generally low level of cooperation between companies and between private and public sectors in Romania, clusters can be rather characterised as spatial agglomerations of companies. To a certain extent this is the result of various public policies that simply encouraged the agglomeration of firms. Nevertheless, at present the Ministry of Economy monitors 40 structures (cluster networks, nationally and internationally oriented clusters) and clusters (associative structures between industry, public authorities, research and other entities). There are also two clusters identified by the regional development agencies (RDAs). As far as the CLUSTERO is concerned, it has 34 cluster members, but provides data for only 17 clusters. Summarizing the available data, it can be concluded that the Centre region has the most clusters, respectively a proportion of 28.57% of those existing at national level, which incorporates 306 members, of which 172 companies (Table 1-2). This is followed at a big distance by Bucharest-Ilfov region with 16.6 % of the clusters

and North-West and North-East with 11.9%. There is only one cluster in South-Muntenia region.

Table 1-2. Clusters formally monitored in Romania by development region – basic characteristics

Region	Number of clusters	Number of members	Number of firms	Number of employees
North-West	5	114	67	9,322
Centre	12	306	170	10,693
North-East	5	192	98	8,271
South-East	4	71	42	52,189
South-Muntenia	1	28	25	22,388
Bucharest-Ilfov	7	161	31	4,933
South-West	4	152	87	13,029
West	4	125	77	13,445
Romania	42	1149	597	134,270

Source: www.clustero.eu and RDAs

Relevant research studies have shown that most of the well crystallized clusters in Romania are in activities such as software production, shipbuilding, wood, textile, ceramics. Most of them are located in Timis and Arad counties, in the Western part of Romania. Here, the preponderance of Italian investments has generated the clusters model based on 'industrial districts' (Becattini, 1990), inspired from the Italian experience in this field. Basically, the internationalisation of Italian firms was accompanied by relocation of clusters from Italy, which found in Romania good structures able to support the transfer of knowledge in the network (RDA West, 2013).

In another register, according to the analysis conducted by the European Cluster Observatory[2], which considers the cluster size, degree of specialization and employment in the region, industries that are capable of clustering in Romania are textile, furniture, footwear, farming and animal husbandry.

Also, according to the data provided by the European Cluster Observatory regarding cluster employment, specialisation degree and categorization based on the number of stars, most of the clusters holding the top positions in manufacturing act in clothing and footwear, as presented in Table 1-3. It also notes the existence of a cluster in oil processing in South-Muntenia, given the refineries operating within this region.

[2] The data provided by the European Cluster Observatory are based on information provided on voluntary basis by the member organizations.

Table 1-3. Top 15 clusters based on employment, specialisation degree of and number of stars

Cluster	Region	Employ-ment	Specialisation degree	Categorization
Clothing	North-East	53,835	6.64	3
Textiles	North-East	45,786	5.61	3
Clothing	Centre	42,396	5.65	3
Clothing	South-East	41,401	5.65	3
Clothing	North-West	40,798	5.51	3
Clothing	South-Muntenia	38,710	4.61	3
Textiles	Centre	38,378	5.08	3
Communications	West	36,431	14.10	3
Petroleum and gas	South-Muntenia	36,383	20.61	3
Metal processing	South-East	36,040	2.25	3
Automotive	South-Muntenia	32,935	2.71	3
Constructions mix-ture	North-West	30,919	3.21	3
Footwear	North-West	28,200	15.67	3
Textile	South-Muntenia	25,884	3.06	3
Constructions mix-ture	South-Muntenia	23,113	2.12	3

Source: European Cluster Observatory

The European statistics on Romanian regions ranking according to the classification of clusters by the number of stars and employment in categorised clusters reveals that Centre region has the largest number of stared clusters, followed by South-Muntenia and West regions, according to the data in Table 1-4. The last place is occupied by Bucharest-Ilfov region, even if this region has the highest reported growth in GDP per capita. Moreover, only Bucharest-Ilfov and South-West regions have no 3-star cluster on their territory.

Table 1-4. Top of Romanian regions according to the classification of clusters by the number of stars, the employment of clusters categorized

Region	Total number of 'stars'	Share of employment in categorised clusters
Centre	27	71.25%
South-Muntenia	26	71.43%
West	22	62.53%
North-West	19	63.06%
South-East	17	77.59%
North-East	17	60.47%
South-West Oltenia	15	50.75%
Bucharest-Ilfov	15	54.92%

Source: European Cluster Observatory

1.3.3. Interpretation

According to the rankings in Table 1-5, with two exceptions – Bucharest-Ilfov and South-Muntenia – the Romanian development regions hold close ranks in terms of GDP per capita and number of clusters' stars, which may suggest the clusters' contribution to boosting these regions' growth and bringing more value added to economic development.

Table 1-5. Romanian regions' ranking according to GDP per capita and total number of clusters' stars

Region	Ranking according to GDP per capita	Ranking according to total number of clusters' stars
North-West	4	4
Centre	3	1
North-East	8	6
South-East	6	5
South-Muntenia	5	2
Bucharest-Ilfov	1	7
South-West	7	8
West	2	3

Source: Worked out by the authors

In the case of the South-Muntenia region the rank corresponding to the number of clusters' stars (2) is much higher than the GDP per capita rank (5), indicating that there is still a lot of room for a higher contribution of the other factors of an important impact of regional growth. In particular, this region is characterised by big intraregional disparities between the three counties located

in its Northern part – Prahova, Arges and Dambovita – where most of the region's clusters are located and the four counties in the Southern part, along the Danube river – Ialomita, Giurgiu, Calarasi, Teleorman – which are among the least developed counties in the whole Romania.

As far as Bucharest-Ilfov region is concerned, it is in an opposite situation compared to South-Muntenia: it ranks first in terms of GDP per capita and seventh in terms of the number of clusters' stars. This might be explained by the special attraction of Bucharest to big companies, considering the countless opportunities offered to strategic investors, either from Romania or from abroad. In many cases they act as individual competitors without deep needs of cooperation, as happens when the small and medium enterprises prevail in a region's economy. For example, out of a total of 1,609 large companies at national level, 33.93% are located in Bucharest-Ilfov region. One of the main explanations is that this region ranks first in terms of foreign direct investment, accounting for 61.7% of total FDI in Romania in 2011.

A special case is depicted by the North-East region too: even if it is the least developed region of Romania, ranking 8th in terms of GDP per capita, it ranks 6th in terms of number of clusters' stars. It indicates the efforts paid by local authorities in order to support cluster development as a means to improve region's economic performance.

Currently, Romania aims to strengthen the competitiveness of regional clusters by supporting them throughout the value chain, finding new market niches, managerial skills and capacity of the cluster enterprises to adapt to environmental requirements and energy efficiency. It is also intended to stimulate the association of firms in supply chains / clusters, national and cross-border clustering and facilitate transfer of knowledge and sharing best practices with other European countries.

1.4. POLICY RESPONSES

As Romanian clusters in general are not in an advanced phase of development, further support policies are necessary. Nevertheless, these policies should not be applied in a uniform manner. Their differentiation appears as necessary in order to reflect the specific regional context and the specialisation of cluster activities. As the international literature is pointing out, the right decisions, able to ensure the success of cluster policies and a clear cluster identity, are based on the careful consideration of geography, development stage, available resources, social needs, etc. (Rosenfeld, 2002; Romanelli and Khessina, 2005).

The results of the current analysis, correlated with the findings and suggestions formulated by previous studies from both Romania (e.g. Constantin et al., 2011) and abroad (e.g., Leick, 2010) point to local production systems of industrial district type (in accordance with the description provided by Becattini (1990)) as a suitable solution for those clusters still in an incipient develop-

ment stage. The building of solid local production systems requires intense networking between business firms as well as between these firms and the other regional actors (such as universities, research institutes, innovation centres, consulting firms, training centres, banks, chambers of industry and commerce, local governments and so on (Belussi, 2001; Constantin, 2006; Constantin et al., 2011). Another idea, mentioned from the very introduction, is that the support measures for cluster development have to be conceived as a *coherent 'package',* based on a clearly defined *'regional profile', "stressing and taking advantage of specific feature of each local area"* (Funck & Kowalski, 1997, p. 428).

The foreign direct investment can also play an important role in developing the Romanian clusters. The presence of foreign and mixed-capital firms in a cluster can generate important effects in terms of knowledge and technological spillovers, contributing to the productivity increase and a better performance of the whole cluster and positively impacting the development of the area in which it is located. The automotive cluster in the South Muntenia region or the footwear cluster in Timisoara (West region) are relevant examples in this respect. Their successful results can serve as good practice lessons for other Romanian clusters, located in areas more and more active in attracting foreign investors.

1.5. CONCLUSION

Our research confirms the importance of cluster development for speeding up the regional growth, pointing out, in most of the cases, the close relationship between the two processes. However, cluster development in Romania is far beyond the European level performance, requiring further efforts for speeding it up. It should not be considered a purpose on its own but a means to boost the regional economic performance. Accordingly, there is no single recipe for developing dynamic and competitive clusters. The specific regional context matters and has to be considered in all its relevant aspects (Constantin et al., 2011). As many Romanian clusters are still in an 'infancy' stage, policies built around local production systems of industrial district type may represent a viable solution, envisaging, *inter alia*, the so-called 'soft' measures for enhancing the necessary territorial networks.

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2. THE ROLE OF CLUSTER APPROACH IN THE REGIONAL DEVELOPMENT AGENDA OF TURKEY

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Burcu Müderrisoğlu[**]

ABSTRACT

In Turkey, there has been a changing process in regional policies in the last decade. These are not only establishing the regional development agencies and trying to increase the capacity of the regions, but also accelerating development of the regions by using new instruments and approaches. Therefore, the cluster approach has appeared emphasizing both the competitiveness and productivity of clustering firms and performance of the regions. The aim of the paper is to evaluate what has been done related to clusters in Turkey over the last decade. The paper includes a review of cluster policy considering the actors, strategies and projects. Different cluster analyses are classified according to the main actors, while the increasing importance of clusters for regional development is examined. Potentials and the issues of the clusters are analysed with regard to the developed and less-developed regions of Turkey.

KEYWORDS:

clusters; networks; regional development; innovation system

JEL CLASSIFICATION:

O32, R11

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2.1. INTRODUCTION

The literature on clusters is usually interested in whether they contribute to higher economic growth in their regions, and productivity and innovation. However, there have been ongoing discussions that the relationship between the presence in a cluster and economic performance is relatively weak (Feser, 2008). Clusters have been considered one of the instruments for building economic capacity for regions to be in the global market not only in developed but developing countries during the last decades (Stimson et al., 2006). Furthermore, fragmentation of production increased the numbers of SMEs and the role of SMEs has become significant due to the new development model. Therefore, industrial policy designed to encourage innovation in SMEs regarding development and competitiveness (Trullen, 2009). The main expectations from the clusters are to increase the collaboration through the networks among the firms, to enhance the knowledge and technology spillovers, to increase the competitiveness and to link with the international value chain, while it supports regional specialization. From an evolutionary perspective, cluster policies emerge at the interface of industrial policy, science, technology, innovation and regional development policy (OECD, 2007; Boekholt and Thuriaux, 1999; Kiese, 2010). A national innovation and technology policy would generate and foster economic growth, however it could cause growing interregional disparities (Sternberg, 2003).

Ketels (2004) argues that clusters have turned out to be a fertile ground for innovations, since they are well aligned with modern innovation processes. It is known that innovation capabilities are embedded in human capital and advanced infrastructure. The innovation competence in a region could be strengthened by improving or establishing educational and scientific institutions (Rosenfeld et al., 2008; Feser, 2008). In many developing countries, the clustering of innovation is likely to be tied to mere traditional industries (Feser, 2008). On the other hand, synergies not only among the firms, but also with other supporting institutions are significant. However, traditional economic factors may explain the success of local agglomerations, even in the absence of any strong synergies (Gordon and McCann, 2005). Cooperation between business, universities and technology centers has taken the most attention in terms of strong networks and innovation.

There has been a consensus that the building of clusters is quite a difficult, risky and high cost attempt, while it makes no sense to expect a new cluster as a direct result of public policies. However, there have been examples of policy supporting influence in the genesis of clusters (Sternberg, 2010). In fact, nongovernment factors have played an important role in the process of cluster emergence. Therefore, the suggestions for cluster policy are mostly not aimed at creating clusters, but at activating them. Especially for developing countries, the lack of the synergies among the firms and different actors should be taken

as the primary purpose for the cluster policy. Stimson et al. (2006) highlighted that 'winning the confidence of business and public agencies to share information and collaborate as a cohesive industry cluster may take many years'. The government should avoid a top-down approach to organize the clusters, rather should act as a facilitator for designing cluster strategies for the regions by understanding regional economy (Keise, 2010; Sternberg, 2010; Landabaso and Rosenfeld, 2009). Landabaso and Rosenfeld (2009) put forward helpful hints for successful cluster policies such as: dare to be different, promote innovation, support entrepreneurs, target education and training, support relationships among clusters, look at global networks as much as local ones, be creative and attract talented workers.

The paper aims to examine the cluster policy process in Turkey considering the industry and regional policies. In the first part of the second section, the main strategies, projects, and the dominant role of central government on cluster policy are evaluated. In the second part of the section, the regional dimension of cluster policy is analyzed since it is increasingly considered a tool for regional development. The concluding remarks highlight the main points and the contribution of the case of Turkey to the cluster policy literature.

2.2. THE EXPECTATIONS FROM THE CLUSTER POLICY IN TURKEY

2.2.1. The main strategies, projects and actors

An industrial based growth model has been conducted in Turkey since 1960 beginning with the planning period. Between the years of 1960 and 2000, numerous numbers of organized industrial districts have been established. While these districts are designed for planning development considering the industry as the engine of national growth, they become agglomerations of sector specialization. Furthermore, some studies argue that these districts would be the opportunities for generations of clusters. Currently, the vision of the 10th Development Plan for the years of 2014-2019 emphasizes the innovation and technology based growth model following the trends in the world (Figure 2-1).

The 6th and 7th Development Plans targeted the sustainable growth, while international markets have become more significant due to the Customs Union and economic integration into the EU. Being more open to the global economy has required structural changes, such as producing technology and innovation that have become essential for competitiveness. Technology centers were established within the universities along with the Small and Medium Enterprises Development Organization (KOSGEB) in order to facilitate cooperation between the firms and universities for research and development in the 1990s. More recently, Technology Development Centers (TGB) have been constructed to accelerate the research and development investments in the 2000s (Figure 2-1).

The most important national strategy document in which cluster policy has been announced, is the 9th Development Plan (2007-2013). The vision related to the industry and regional development has appeared in the 10th Development Plan (2014-2019) with the concepts such as competitiveness, innovation and clusters. Development of the National Clustering Policy Project, conducted by the Ministry of Economy[3] in 2007, targeted development of a strategy document on clusters using EU funds. Three components of the project are: to develop a national strategy document for cluster policy; to develop the capacity for the implementation of the policy; to map and analyze the clusters. The White Book has been written for the implementation of national strategies and has led to the conducting of the institutional bodies and financial assistance projects.

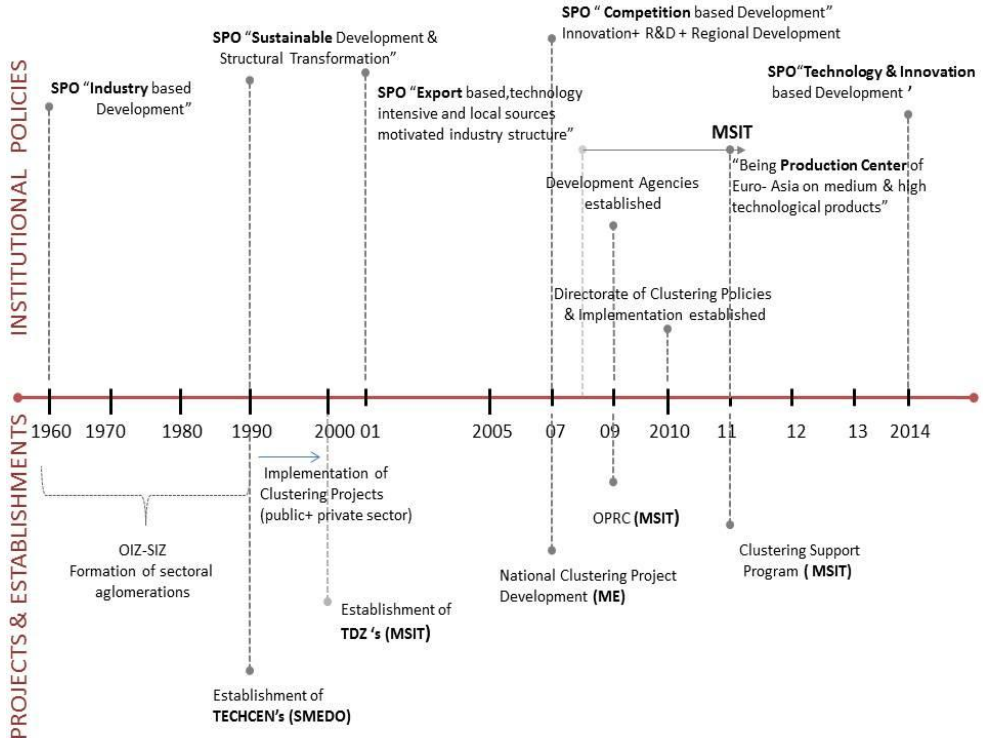

Figure 2-1. Process of Cluster Policy in Turkey

Note: **SPO**: State Planning Organization, **MSIT**: Ministry of Science, Industry and Technology, **ME:** Ministry of Economics, **OIZ:** Organized Industrial Zone **SIZ:** Small Industrial Zone, **TDZ:** Technology Development Zone, **TECHCEN:** Technology Center, **SMEDO:** Small& Medium Enterprises Development Org.

[3] The Undersecretariat for Foreign Trade and Undersecretariat of Treasury merged and the Ministry of Economy was established on 8th June 2011.

The main three axes of the National Clustering Policy are to create the capacity, to define the priorities for business and regional competitiveness, and to utilize clustering-innovation (Figure 2-2).

Mapping the clusters was prepared based on the three star system[4] and 32 cluster categories have been determined in Turkey. The main themes for the cluster evaluation are defined as innovation and entrepreneurship, construction of cluster networks, establishment of clusters and factor conditions. The report of cluster mapping and analysis is defined as the road map for the 10 clusters, however they were not chosen as the most competitive and strong ones. The aim was just to establish certain samples and share the experiences. The highlighting points of the road maps are the necessities to increase the competitiveness for the international markets, to attract the foreign capital to the existing clusters, to establish the cooperation between university and industry for innovation, to enhance the supply chain in the clusters.

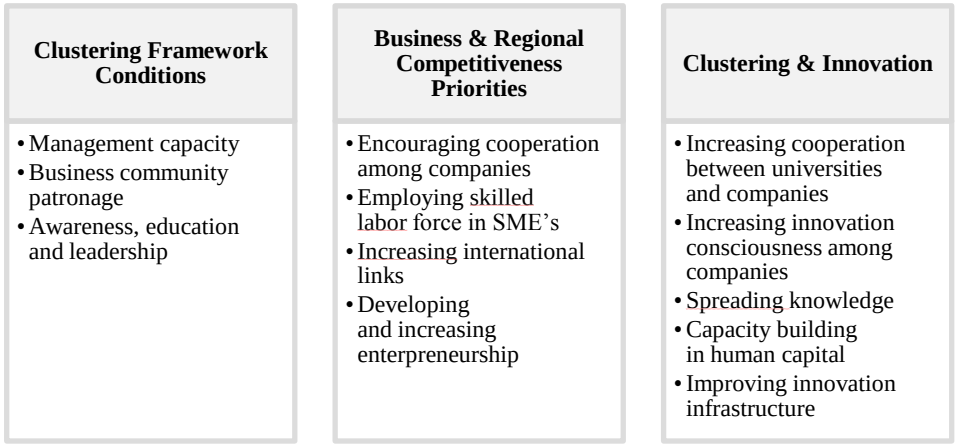

Figure 2-2. Main Axes of the National Clustering Policy

Source: (White Book, 2009)

The name of the Ministry of Industry and Trade was transformed to Ministry of Science, Industry and Technology, and prepared the financial assistance for competitive clusters in 2010 and 2011. The Ministry of Science, Industry and Technology is one of the responsible bodies from the clustering projects defined in the vision of the Industry Strategy Document as being the production centre of Euro-Asia with medium and high technology products (MSIT, 2011).

[4] Stars are identified according to three dimensions: the dominancy of sector within the province; size of these correlative to the national sectorial employment; and specialization of the sector if the dominancy is greater than the size.

Not only the Development Plans and Industry Strategy Document, but also National Science, Technology and Innovation Strategy Document (2011-2016) has been produced by the Scientific and Technological Research Council of Turkey (TUBITAK-STRC), and defined the strategies and sectors which will take incentives for innovation, technology and research and development activities.

Since there have been several actors and attempts, the governance model of the National Clustering Policy should have been designed based on three government institutions as Ministry of Economy, Ministry of Science, Industry and Technology and STRC-TUBITAK. Figure 2-3 shows the main clustering programs of each institution. It is obvious that several attempts to support clusters have been conducted, but the coordination among them is critical point.

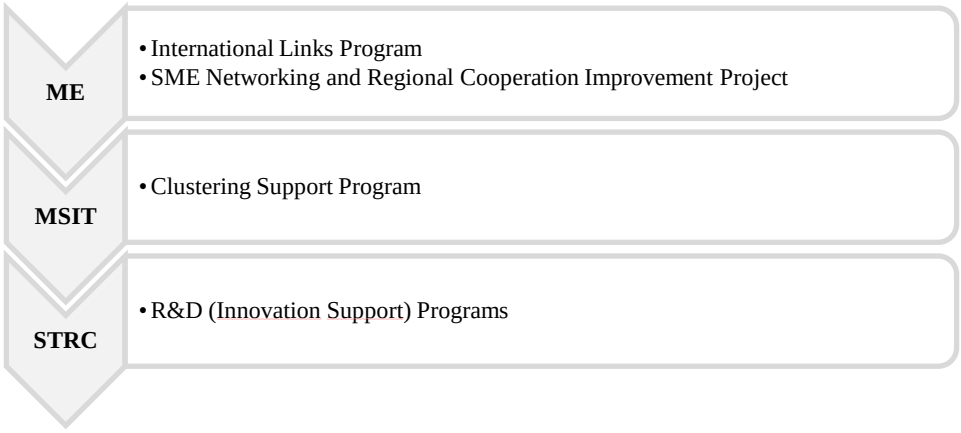

Figure 2-3. Main Clustering Programs. Note: ME: Ministry of Economy, MSIT: Ministry of Science, Industry and Technology, STRC: The Scientific and Technological Research Council of Turkey

Source: (Cansız, 2011)

The instruments for clustering should be convenient to the typology and life-cycle of the clusters. Currently Clustering Governance Model has been developed by Ministry of Development to identify the instruments and relationship among the stakeholders. The objectives of the model are to increase the level of competitiveness, to monitor the financial assistance and to get the benefits from the experiences of different institutions.

2.2.2. Regional dimension of cluster policy

Cluster policy is not only focused on industry to make it more productive and competitive, but it would accelerate the performance of the regions as well, by taking into account the role of space on economic development. Thus, the Ministry of Development[5] and 26 development agencies, which were established in 2006 to enhance the capacity of the NUTS 2 level regions and use the EU Pre-accession Financial Assistance for regional development, would be other important actors of the cluster projects. Table 2-1 indicates the exiting cluster analyses according to the region and sector in Turkey. Furthermore the table includes the classification of existing cluster analyses due to the actors such as: private sector, public sector or public-private partnerships. It is clear that defining and conducting a national cluster policy, along with the analyses essentially have been done by the public sector and the central government.

Due to the regional perspective, the incentive policy, which is conducted by the Undersecretariat of Treasury, has long been one of the traditional/financial instruments for attracting new investments to the specific regions. The new incentive policy tries to combine sectorial and regional priorities and to create an effective support system for clustering (Cansız, 2011).

Also, the Ministry of Industry and Trade prepared the "Operational Program on Regional Competitiveness" (OPRC). Developing industrial infrastructure and enhancing the cooperation among the sectors are the significant aspects of this program, including investments and incentives, for existing or newly emerging clusters and networks (Ministry of Industry and Trade, 2007). The target regions of this program are the ones which have a GDP per capita 75% below the national average. Thus 12 NUTS 2 regions (43 provinces) are eligible for the program. The essential priorities of OPRC are improving the business environment, increasing the capacity of firms and encouraging entrepreneurship.

For the provinces of OPRC coverage, establishing clusters is defined as a basic theme to all cluster analyses, while just two clusters are identified for each theme for the provinces out of OPRC coverage. During the preparation of the national cluster policy, clustering was considered as local specialization in the less developed regions to reduce the interregional disparities. Therefore, cluster policy has not only aimed to increase the sectors' competitiveness, but also to increase the capacity of less developed regions.

[5] Former State Planning Organization

Table 2-1. The classification of cluster projects/analyses according to the responsible institutions

	PUBLIC SECTOR			PRIVATE SECTOR
CHAMBER OF COMMERCE & INDUSTRY/GOVERNERSHIP/ GREATER ISTANBUL MUNICI-PALITY	MINISTRY OF ECONOMY/ MINISTRY OF SCIENCE, INDUSTRY & TECHNOLOGY		DEVELOPMENT AGENCIES	
Mersin – Food Industry	ME-ROAD MAP	ME-ANALYSIS **OPRC**	Izmir- Organic Agriculture	Ankara- Defense Industry
Samsun- Medical Sector-**OPRC**	Ankara-Construction Ind.	Kayseri- Furniture	Izmir- Health Sector	Merzifon- Fixed Furniture-**OPRC**
Istanbul- Machine Industry	Ankara-Software Sector	Gaziantep- Carpet Sec.	Izmir-Livestock Sector	Izmir-Machine & Metal Sec.
Istanbul- Plastic Ind.	Muğla-Yacht Industry	Kahramanmaraş-Textile	Izmir- Processed Food	Istanbul-Fashion Sector
Istanbul- Metal Industry	Denizli ve Uşak- Home Textile	Sivas- Natural Stone Ind.	Antalya-Burdur- Isparta- Health	
Istanbul- Textile	Eskişehir, Bilecik, Kütahya-Ceramic Industry	Yozgat-Furniture	Gerede- Leather Industry	
Istanbul- Marble Industry		Trabzon- Wood-working Industry	Erzurum-Erzincan-Bayburt-Organic Agriculture- **OPRC**	
Istanbul- Glass Industry	Izmir- Organic Agriculture	Samsun-External Trade	East Marmara- Logistic Ind.	
Istanbul- Furniture Industry	Konya-Automotive Industry	Malatya-Apricot Ind.		
Istanbul- Leather Industry	Manisa- Electric & Electronic Industry	Erzurum-Kars- Winter Tourism		
Istanbul- Food Industry		Mardin-Tourism Ind.		
Istanbul- Automotive Industry	Marmara-Automotive Ind.	Çorum-Machine Ind.		
Istanbul-Electric& Electronic Industry	Mersin-Agriculture&FoodInd.			
	Şanlıurfa-Organic Agriculture-**OPRC**			
	Diyarbakır- Marble Industry-**OPRC**			
	Adıyaman- Textile&Apparel Ind.-**OPRC**			

Note: Italics are the cluster projects, which are not implemented yet.

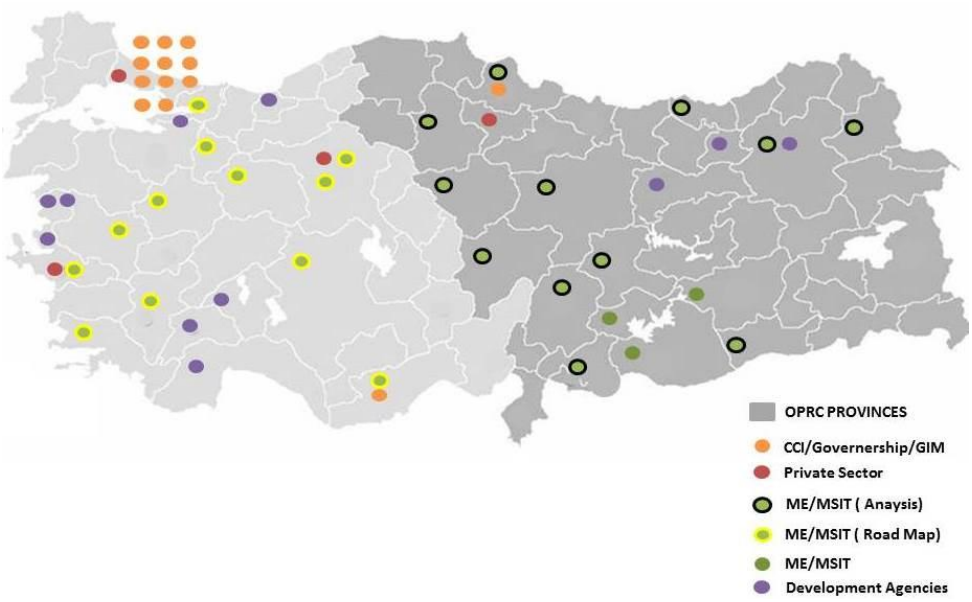

Figure 2-4. Geography of cluster analysis

Nine sector clusters were defined and analysed in the 12 selected provinces of OPRC (Table 2-2 and Figure 2-4). The analysis was done based on the Porter diamond model, considering factor conditions, firm strategy, demand conditions, related sectors, institutions and government. The requirements included: providing technology transfer by increasing the number of technology centres, generating knowledge networks by developing cooperation among the institutions, creating supportive units for SMEs, enhancing the capacities for entrepreneurship, knowledge and skills, and defining the financial mechanism.

Table 2-2. Cluster Analysis for OPRC provinces

Theme	Province	Clustering Analysis	Theme	Province	Clustering Analysis	Theme	Province	Clustering Analysis
Establishing Cluster	Çorum	Machine	Establishing Cluster	Kayseri	Furniture	Establishing Cluster	Samsun	Trade & Lojistics
	Erzurum	Tourism		Kars	Tourism		Sivas	Marble
	Gaziantep	Carpet Sec.		Malatya	Apricot		Trabzon	Wood & Timber
	Kahra-manmaraş	Textile		Mardin	Tourism		Yozgat	Furniture

Source: Ministry of Economy, 2009

All the clusters in the provinces of OPRC have the advantages of factor conditions. The clusters in Gaziantep and Kayseri are strong and make a positive impact on the development of the provinces, while the apricot cluster in Malatya is competitive and has less impact on the province. All the clusters are based on productivity, while Gaziantep and Kayseri are in transition for innovation. Therefore, for these two clusters the policy priority should be improvement of interactions among the actors in the innovation system. However, it is not surprising that the majority of innovation capacity is in the provinces outside of OPRC. Only 22 of the biggest 250 firms in Turkey are registered in the OPRC provinces. Due to this reality, the road map emphasizes the significance of inter-regional cooperation, which would be helpful for transferring knowledge and technology from developed to relatively less developed regions. The weaknesses of the clusters in OPRC, except for the two relatively developed provinces, are the mistakes on the knowledge share, lack of awareness of the cluster concept and identity, and the insufficient development of a domestic market for those regions.

The Ministry of Economy and Ministry of Science, Industry and Technology have prepared the report on Strategies for Common Competitiveness Areas as a document of the SMEs Cooperation and Cluster Project in 2011. The aim of the project is to increase the competitiveness of SMEs in the global market and to establish the cluster-based networks within and between the regions. The intention of the networking strategies is to be helpful for increasing cooperation between the developed and less developed (OPRC) regions. The identification of Strategies for Common Competitiveness Areas was conducted with cluster mapping by the surveys of the development agencies. At the end of the study, 356 clusters were defined in Turkey. However, 321 of them are potential clusters, while 35 are defined due to the groups of emerging, developing and mature clusters and only three of them are at the stage of maturity. Innovation, internationalization, export and entrepreneurship are the common priorities of 35 clusters. The majority sectors of the clusters are respectively: agricultural food, metal processing, textile and wooden products. OPRC provinces consist mostly of traditional and agricultural production industries. For the purpose of the project, the cluster information centers in the five provinces of OPRC were established in order to enhance the cooperation with developed regions.

The cluster of Organic Agriculture is one of the interesting examples that was analysed and defined as a significant cluster both in the developed and less developed part of Turkey. The clusters of Izmir and Erzurum are both conducted by development agencies (Table 2-1). Izmir is one of the most developed provinces in Turkey and has initial experience of development agencies. Therefore the Izmir Development Agency (IZKA) has started cluster analysis in 2009 and defined 14 clusters (IZKA, 2013). The aim of the organic food cluster project is to induce national and international competitiveness and to understand the innovation capacity of the sector. The project covers all the parts of the sec-

tor such as production, certification, marketing and export. The region would have the opportunity of being close to the market, which places the advanced consumption trends for branded organic foods. The analysis put forward that the cluster of organic agriculture in Izmir is at the level of international competitiveness with its existing conditions.

On the other hand, the aim of the project in Erzurum, called the Northeast Anatolia organic agriculture cluster, is to support rural development by enhancing the information-social and technical infrastructure of the training and e-marketing firms; and establishing the networks between the related sectors (KUDAKA, 2013). The issues of marketing are significant especially due to the lack of technical information. Although the analysis has not cover all the provinces in the NUTS 2 level region, the cluster development project for organic agriculture, seen as a potential cluster in Erzurum, has already started. These two cases are significant for comparing the developed and less developed regions, since they both are working to develop clusters in the agriculture sector. It is obvious that the developed region has market advantages and innovation has become a significant component of the clustering approach. However, the major attempt is to create a capacity and establish networks in the relatively less developed region.

2.3. CONCLUSION

Turkey has become one of the emerging economies in the world during the last decade. However, Turkey is still in the middle-income trap and on a transition process from productivity based to innovation based economic development, according to the WEF. The report of cluster analysis and its road map indicate that the clusters mostly have the advantages of factor conditions. However, competitiveness with cooperation is pretty new for the firms, so there should be a transformation for the innovation. Although there have been several potential clusters in the less developed regions, the indicators such as technology, patent and firm start-ups point out the gap between the developed and less-developed ones (Ministry of Development, 2013).

The aim of the paper is to examine the cluster policy process in Turkey considering the industry and regional policies. Obviously, the concept of clusters has increasingly received the attention not only from the academicians but from the politicians as well. In Turkey, the cluster policy has been mainly developed in order to increase the competitiveness of the industry in the global economy. Therefore, the policy has mainly been initiated by the central government, and the ministries are the main actors of national development and cluster policy. Since most of the firms are SMEs, the cluster policy would provide benefits to the firms when they improve the information and networks among themselves along with the supporting ones. Therefore several industry agglomerations have been required to explore all the components as to whether they have the evi-

dence for clustering and what the missing parts for being a cluster are. The private sector has taken up the role for the few cases especially in metropolitan cities. Recently, development agencies have appeared as new actors for regional development and have started to prepare cluster analysis for specific sectors in their region. Thus, a cluster policy has been considered as a tool for regional development. A top-down approach is obvious for this policy in Turkey to create a capacity and need. However, the role of the local and regional actors which are very significant for understanding regional dynamics should be more visible.

In general, erasing the lack of the synergies among the firms and different actors should be taken as the primary purpose of the cluster policy, although there have been different weaknesses due to the development level of the region. Overcoming the lack of cooperation between the industry and university should be taken into account for the innovation dimension of the clusters, understanding that increasing importance of innovation would be a challenge for less developed regions. The advantages of skilled labor and creativity in the metropolitan economy would probably increase interregional disparities regarding the cluster policy. The project, which intends to establish networks between developed and less developed regions, should be seriously followed.

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3. THE CLUSTERS AND NETWORKS IN CREATIVE INDUSTRIES. THE ROLE IN REGIONAL INNOVATION SYSTEM[6]

Sławomir Olko[*]

ABSTRACT

In the chapter the role of the clusters and networks in creative industries have been presented on the empirical base of the European regions. In the contemporary innovation systems creative and cultural industries (CCI) plays very important and differentiated roles. The most important in CCI are local networks of actors and clusters operating in these sectors. Management in these specific structures, that many times has no formal shape concerns the level of the cluster/network and the level of the cluster member – company within the cluster/network. The chapter presents the authors methodology of analysing management in creative clusters and networks consists three elements: social network analysis of the cluster, competence map of the network and identification of network of activities.

KEYWORDS:

clusters; networks; cultural and creative industries; innovation system

JEL CLASSIFICATION:

O32, R11

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[6] The chapter presents the outcomes of research conducted in the project 2012/07/B/HS4/03016 entitled Models of knowledge management in clusters and networks in creative industries in Poland and EU countries, financed by National Science Center.

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3.1. INTRODUCTION

The new challenges for the development of the society is strictly interconnected with the knowledge. Knowledge is currently the most important source of the values for the society. In 90. knowledge management (KM) was utilised to describe the creation of economic value of the companies. The pioneer of the knowledge management concept, Karl Eric Sveiby published in 1989 with the six others authors[7] in Sweden the Konrad Report presents key indicators for accounting control and valuation of know-how companies as well as stressing the role of intellectual capital. Skandia in 90. was the first company implementing the intellectual capital principles in practice and the Leif Edvisson was the first Chief Knowledge Officer (CKO). However implementation of knowledge management was at the beginning strictly commercial or even financial character (Edvinsson, Malone 2001).

Wallace uses the definition of KM from Encyclopaedia of Communities of Practice in Information and Knowledge Management: *"the process necessary to capture, codify, and transfer knowledge across the organization to achieve competitive advantage.[…] Combination of management awareness, attitudes, process, and practices for creating, acquiring, capturing, sharing, and using knowledge to enhance learning and performance in organizations"* (Wallace, 2007, p. 3). Among many definitions of KM we can see that it is a cyclical process, however the phases of these process (sometimes indicated in definitions) are subject of scientific discussions. Jashapara argues that KM process includes five basic phases:

- discovering knowledge – data, information and knowledge, history of knowledge management,
- generating knowledge – organizational learning, knowledge management tools and technology,
- evaluating knowledge – knowledge management systems, strategic management perspectives: knowledge management strategy,
- sharing knowledge – knowledge management and culture, change management,
- leveraging knowledge – knowledge management in the learning organization, intellectual capital (Jashapara, 2006, s. 20).

What is the most important in the Jashapara's integrated approach to KM the process should be considered as existing in the human minds and between the people as well as in the visible, explicit layer of technical systems, docu-

[7] Konrad Group (Swedish "Konradgruppen") The invisible Balance Sheet. Key indicators for accounting control and valuating of know-how companies.

ments, computers. This contribution of the author is very valuable in creative sector despite the fact that the author does not highlights the role of creativity[8].

The knowledge as the resource became more and more important for the value creation, however knowledge differs from any other considered resources. W. Czakon argues that knowledge is only resource fulfils the criteria abbreviated as VRIN: is V as valuable, R – rare, I – inimitable and N – non-substitutable. Valuable and rare resources are obvious in ancient and contemporary management and economy but inimitable and non-substitutable resources forces the entitles to exchange in different forms of exchange. The criteria of the VRIN framework clearly rules out best practices as a source of competitive advantage. If other businesses can easily understand and copy a resource, it is not a source of advantage. The business actors tends to appropriate the rent of knowledge, using the available ways of knowledge protection (Czakon 2012, p. 93).

Currently among the plenty of new publication presenting new knowledge management concepts and large number of practical approaches we can observe the three basic perspectives in KM:

- **techno-centric** – with a focus on technology and its transfer, oriented on knowledge sharing and creation (Gloor, 2006),
- **organisational** – with a focus on how an organisation can be designed to facilitate knowledge processes best (Nonaka, Takeuchi 1995; Back at al., 2006; Szulanski, 2003; Cook 2008), The key role in these perspective is establishing of Knowledge Management System for utilising knowledge within the organization.
- **ecological** – oriented on the interaction of people, identity, knowledge, and environmental factors as a complex system similar to a natural ecosystem (Bray, 2007),

The third, ecological perspective is typical for the creative sector that exist in dynamic ecosystem of transferred knowledge values and engaging different types of social actors. In this perspective we can observe and analyse the interactions between the actors of the systems, especially when the essence of knowledge transfer concerns the tacit knowledge.

The chapter presents the outcomes of research conducted in the project *Models of knowledge management in clusters and networks in creative industries in Poland and EU countries.* The main goal of the project is to work out the models of knowledge management in networks and clusters in creative industries in the process of development of the regional innovation ecosystem. Main theoretical canvas for the research is the assumption that the transfer of values

[8] The author understand the phase of knowledge creation as the area of creativity. Organizations can obtain new knowledge by: inheritance, action, borrowing, transfer, conquering (Jashapara, p. 95).

in the networks and ecosystem constituting creative industries could be described as the knowledge transfer and according to knowledge management principles. In the project up to now the methodology of direct research have been established and the wider literature research have been conducted. The collected material of conceptions regarding the nature of clusters and networks in creative industries is presented in the chapter.

3.2. CREATIVE INDUSTRIES

3.2.1. Creative and cultural industries

Creative and cultural industries (CCI) plays the two basic roles in the development of the regions:

- delivering the value of direct creativity – the product of creative firms are more and more important for the regional and national economies. The creative products are very different and includes the products of typical artistic creation like literature, drama, film, performing arts; computer software, consumer products: furniture, apparel and other product of consumer utility),
- delivering the supporting value – by activities raising the level of life quality (accessibility of culture ensured by units of culture: libraries, cinemas, theatres, exhibitions, art galleries and accessibility of communication media). The supportive added value also contains the additional elements for traditional industries (ex. graphical design for the traditional industries). Although this value is called 'supporting' the practice of investment shows the importance of 'cultural infrastructure' for external investors.

The specific of CCI activity could be realised most effectively in the cities. In practice this is very difficult to find the agglomerations of creative industries outside the cities. This obvious fact results from the following reasons:

- high population density enable access to large number of culture 'consumers',
- natural availability of cultural spaces like libraries, cinemas, theatres, exhibitions, art galleries as well as public 'life spaces' – the squares, parks, stadiums and other spaces available to deliver the 'cultural product',
- the highest level of available 'creative class' the citizens representing the creative jobs and knowledge-based occupation (Florida, 2002).

The European policy regarding CCI highlights the horizontal role of these sectors: their interconnections with other sectors and their role in job creation. According to the Green Paper on CCI there are the three main challenges for the future development of CCI in EU:

- putting the right enablers in place by increasing the capacity to experiment, innovate and succeed as entrepreneurs, and providing easier access to funding and the right mix of skills,
- helping CCIs develop in their local and regional environment as a launch pad for a stronger global presence, including through increased exchange and mobility,
- moving towards a creative economy by catalysing the spill-over effects of CCIs on a wide range of economic and social contexts. (Green Paper, 2010).

The Green Paper showing the important impact of CCI also presents the problems of interchanging the specialisations and skills within the CCI and with the external regional environment. This role could be fulfilled by networks and cluster in CCI, however even in Great Britain we can observe that this important function is not performed good enough (Chapain at al., 2010). In the NESTA report by Chapain at al. basic analysis of British CCI concerns the analysis of agglomeration. This analysis, very important for the regional innovation policy is based on factor Location Quotient (LQ).

$$LQ = \frac{E_{ib}}{E_b} \div \frac{E_{ir}}{E_r} \tag{1}$$

where: *LQ - Location Quotient concentration indicator*
E_{ib} *– variable in industry i, in analysed region b*
E_b *– variable in all industries in analysed area b*
E_{ir} *– variable in industry i in reference area (e.g. country)*
E_r *– variable in all industries in reference area (e.g. country)*

The LQ indicator equal to 1 means that the agglomeration in analysed industry is average at the same level that it exists in the reference area (e.g. country – domestic level). There is contractual assumption for agglomeration analysis that LQ > 1,25 providing a high intensity in analysed industry. Table 3-1 presents the levels of LQ in the chosen CCIs in Great Britain in chosen regions (the table presents the regions with at least two industries of LQ greater than 1). We can observe regions of very high agglomeration: e.g. Radio and TV in London region or Designer Fashion in East Midlands. This agglomeration has a very high potential for networking structures.

Table 3-1. Measure of firm concentration (LQ) by creative sectors, creative layers and regions – 2008 – Frontier Economics

Industry	North East	North West	East	London	South East	South West	Scotland
Advertising	0,69	1,18	0,91	1,77	1,06	0,8	0,55
Architecture	1,39	1,07	1,04	0,81	1,06	0,96	1,42
Arts and Antiques	1,09	1,05	0,97	0,82	0,95	1,15	1,08
Designer Fashion	0,64	1,15	0,55	1,73	0,36	0,55	0,76
Video, Film and Photography	0,55	0,57	0,71	2,68	0,94	0,77	0,69
Music and the Visual and Performing Arts	0,55	0,62	0,82	2,36	1	0,88	0,6
Publishing	0,51	0,62	1,06	1,82	1,13	1,07	0,75
Software, Computer Games and Electronic Publishing	0,71	0,97	1,09	1,31	1,41	0,87	0,75
Radio and TV	0,38	0,53	0,56	3,05	0,9	0,74	0,56
Total Creative Industries	0,91	0,94	0,97	1,37	1,09	0,95	0,94

Source: Chapain at al. 2010, p. 12

However the agglomeration analysis with the LQ indicators is the beginning of CCI performance analysis. Next step is networking and interchanging knowledge within the entitles representing the CCI that take place in creative networks and clusters.

3.2.2. Clusters and networks in creative industries

Industrial cluster is the well know phenomena in management, economics, regional sciences and innovation management. Historically A. Marshall (1890) believed that enterprises using advanced technologies are geographically focused around areas of greater potential of qualified workforce (the initiators of such areas were both enterprises and technological universities). Since that time the issue of concentration and cooperation of enterprises has had very diversified character (Andersson, Schwaag Serger, Sörvik, Wise Hansson, 2004, p.14-18).

The role of the industrial clusters became more crucial in the era of knowledge base development and knowledge based economy. The practical implementation of development policy based on clusters and real adoption of cluster concepts in innovative companies. Currently, the most often cited definition

of the cluster is formulated by M. Porter, who defines the cluster as "*geographically proximate group of interconnected companies and associated institutions in a particular field linked by commonalities and complementarities. Clusters encompass an array of linked industries and other entities important to competition including governmental and other institutions – such as universities, standard setting agencies, think tanks, vocational training providers and trade associations"* (Porter, 1998).

Bojar (2006) emphasised that the classification of cluster should correspond to the economic reality and wide understanding of sectors and forms of economic activity even thou the cluster is novelty (as the term and as the way of activity) for some environments. That is why the author postulates the standard classification of clusters by British Department of Trade and Industry.

The role of creative clusters in stimulating innovation processes is due to the fact of synergistic learning. Interactions, facilitating and stimulating the diffusion of knowledge, are necessary for the economic recovery and the creation of technological innovations. In the environments dominated by technological innovation, creative industries help to make sense of the technology showing its human usability. Moreover, clusters of creative industries are promoters of activities in a specific territories, which are usually associated with a particular cultural heritage, a shared system of values, supported by building an identity based on tolerance in general. A. Klasik defines creative cluster as follows: *"A creative cluster includes companies and non-profit institutions, public and business, cultural and research institutions and special places to meet and exchange ideas of individual artists and scientists, such as science parks, cultural centres and media centres. Creative clusters are places of life and work, places of production and consumption of products the material for which is intellectual property such as patents, new technology or process, trade mark and brand, copyright and design work of various nature."*

Clusters of creative industries allow diversification of the local economy and increase of opportunities for young people (especially in the generation of new jobs); they relate not only to the creative industries, but also serve as guidelines and knowledge base for the local mature industry. The dynamics of the creative industry cluster is based on the co-creation of the regional identity, the innovative use of resources and the search for (the creation of) talent, while maintaining the local and regional values. They constitute the base of resources and creative skills for other clusters and the development of innovation in the region (Gorynia, Jankowska, 2008). It thus becomes necessary to a collect and systematize knowledge about the functioning of the creative industries clusters within the local and regional network system, in order to generate knowledge and provide a kind of 'bank of ideas' for both the creative industries clusters and clusters of other types. Until now it was thought that the reciprocal complex relationships that occur in the process of capitalization of knowledge between the three types of entities: research centres, industry and regional au-

thorities fully depict the processes of creation and development of innovation – the triple helix model (Kogut, 2000).

Creative clusters have not been examined from an innovation perspective – that fact has been stressed in the report of creative clusters in British cities (Chapain, 2010). For this reason in will be very promising area for the scientist, taking into consideration the fact of growing share of creative industry in the GDP[9]. That is why the question of analysing the activity of clusters is still very important. L. Knop proposes the holistic model of cluster analysis, especially useful for cluster management. The model consist of analysis the two types of conditions of qualitative character:

- internal conditions – relation (within the cluster and with environment, cluster identity, cluster dynamics,
- external conditions – external support for cluster, key challenges, cluster role (Knop, 2011, p. 57).

3.3. REGIONAL INNOVATION SYSTEMS – TOWARDS ECOSYSTEM

Iansiti (2005) argues that ecosystem is a viable concept not only for the network or clusters of medium and small businesses but also for the large companies. The interconnected world forces big actors to create their own 'business ecosystems' – a networks of medium and small companies cooperating in producing the value. This author develop the ecological metaphor in institutional networks implementing in his recent book the term of Keystone Advantage. The term refers to 'keystone species', which proactively maintain the healthy functioning of their entire ecosystem for one, fundamental reason: their own survival depends on it. In the same way, say the authors, companies can protect and ensure their own success by deliberately fostering the combined health of the network they operate in (Iansiti, Levien, 2004). The network 'healthy' is corresponding to the network balance – relative stability of the system. Relative stability means that the balance is rather fragile, depends on the behaviours of the network members and is not operated manually. This important feature of the ecosystem really impact the management of the ecosystem, that cannot be executed authoritatively.

There are some connections and similarities between ecosystem in management and stakeholders approach in strategic management. Ecosystem of the organization mostly consists of organization's stakeholders – other cooperating entitles linked with organization with the different types of ties. It is also seen in analytical methods similar in case of stakeholder analysis and ecosystem

[9] Great Britain has the greatest share of CCI in GDP, which is more than 5%. Average European share is 2,6% (Green Paper, 2010).

analysis. Reed at al. presents the complex review of methods of stakeholder analysis, realising the three cognitive goals of identifying stakeholders, differentiating between and categorising stakeholders and investigating relationships between stakeholders. The method used for identifying have typical qualitative character: focus groups interviews, semi structured interview with the snowball sampling. For categorisation we can implement: interest influence matrices, radical trans-activeness methods and stakeholder-led stakeholder categorisation. The analysis of relation between stakeholders are the domain of social network analysis, knowledge mapping and actor-linkage matrices. (Reed et al., p. 1936). The nature of implemented methods ensures us that the linkage between stakeholders has also immaterial character. This type of linkage connected with the distribution of knowledge and power in the network are the essence of understanding the phenomena of organizational ecosystem and the institutional and social network.

In the literature we can indicate two general types of institutional 'ecosystems', having part of the common: business and innovation. Business ecosystem refers to the business network of companies operating to obtain business goals. Business ecosystem never have non-business entitles like universities or public administration units. Miles and Snow define the corporation networks as *"...concentrations of companies or other specialized units, whose actions are driven by the market mechanisms and not by the chain of orders and imperatives"* (Miles, Snow, 1992, p.53). Very interesting deliberations on networks are put forward by the S. Rosenfeld, who distinguishes hard and soft networks of cooperation. According to him the hard networks are small-sized, closed and often joined by the formal links companies that cooperate together and realize in common a determined goal. Soft networks are characterised by the casual membership that is shaped paying special attention to the goals based on: search of ways of reducing costs, facilitating the organizational learning or the access to the information. The soft networks may have origins in clusters and may create clusters in the future. They might also be localized beyond the cluster. S. Rosenfeld states that being in a cluster *"...is a function of geography and relationships, not membership, which provides access to economies of scale otherwise not possible if the firm operates individually"* (Rosenfeld, 2001, p.15). This definition is corresponding to the understanding of business ecosystem. In main publication understanding of business network and business ecosystem is very similar, the difference could concern the role of the actor integrating the network (or coordinating the business ecosystem). In business network the role of coordinator could be very strong, sometimes playing the role of adopting new members of the network or exclude others. We should remember that typical examples of business networks are the retail networks. Iansiti, Levien and Miles and Snow refers to Wal-Mart – the global largest and the most well-known retail network as the typical example of business ecosystem.

In correspondence to the business ecosystem, innovation ecosystem is the network involving business entitles, scientific units, public administration units – and, probably the most important – a large number individuals constitutes a civil society. M. Rothschild (1990) used the concept of ecosystem derived from the biological sciences to describe the socio-economic reality. The concept of ecosystem in biology was formulated in 1935 by A. Tansley (1935). An ecosystem is generally understood to be a community of organisms living together interdependently within a physical environment. An important characteristic of the ecosystem is its ability to maintain a dynamic balance through continuous transformation, in order to adapt to changing external conditions. Thus, innovation ecosystem is a dynamic social and institutional structure consisting of interconnected organizations, which include: SMEs, large corporations, universities, research centres, government organizations and other stakeholders; it is a network of many diversified reciprocal relationships.

3.4. ANALYSING THE KNOWLEDGE MANAGEMENT IN CREATIVE CLUSTERS

3.4.1. Analytical contribution presented in the literature

As we assume earlier the crucial factor of network and cluster performance depends on the management of the network. One of the three pillars of KST management model (Knop et al, 2013) in cluster is knowledge management. The model consists of three interdependent mechanisms exist especially in clusters: Knowledge, Structure and Trust. The importance of each element depends on the phase of cluster life cycle (Knop & Olko, 2011). Exchange of knowledge is one of the most important ties connecting the cluster members. Czakon explored the relations in research and development network Aeronet that exists in the most developed of Polish cluster Aviation Valley. The author used for analysing the following techniques:

- Social Network Analysis for identification prominent network members,
- qualitative comparative analysis for multicriteria comparison of potential network leader,
- qualitative analysis of events for identification processes started by network leaders in order to achieve established goals of the network (Czakon, 2012, p. 214).

As we can see, holistic approach to analysing KM must include the dynamic aspects of value creation. It is consistent with the dynamic approach to social networks and the phenomenon called network of activities. Luhmann, answering the question what is the structure of social systems, argues that they have two elements: communication and system of activities. Both elements are interdependent, and no one can develop separately from another (Luhmann, 2007,

p. 164). Czarniawska explains the advantages of the term ‘network of activity’ collating it with the other, typical object of research in management: properties, places, people (individuals and groups), problems and events (chains of events). Describing the activity, the author refers to definition of Harré (1979): activity is en event or processes that have the goal or intention. Moreover, analysing network of activities rather than chain of events results investigation of ties in different direction (Czarniawska, 2012, p. 29). The difference between network of activities and network of ties lays in time. Network of ties, coming from general network theory, assumes existence of actors establishing connections and creating the network. Network of activities reverses this assumption: the relations between activities – after their stabilization – constitutes the identity of actors. It means that the identity of the network member is determined with what the actor makes, not by the relation in the network (Czarniawska, 2012, p. 31). This question could be a subject of academic discussion, nevertheless neglecting the role of the dynamic aspects of network of activities would not create the whole image of the network, especially in creative networks and clusters.

In this place we have to mention the role of activity theory and actor-network theory as the very important field of research, influential for explanation of human creativity an creation of tacit knowledge. The basic difference between creative activity and ‘normal’, routine activity is standardization of the process. Creative activities are not predictable and cannot be computerized, they can be perform only by humans. This problems was the subject of research of Miettinen who adopted an activity theory and actor-network theory for exploring technological innovation (Miettinen, 1999). The outcomes of the research convinces us that this approach could be very useful for analysis of non-technological innovation, art and culture creativity.

3.4.2. Author’s methodological proposal

The proposal of the author of these chapter regarding methodology of analysis knowledge management in the network consists of three elements:

1. Analyse the knowledge exchange in the network using Social Network Analysis (SNA) tools.
2. Analyse the competencies using the competence map.
3. Define the network of activities – describe the process of value creation in the network.

Ad 1. Social Network Analysis SNA is a technique for analysing and diagnosing the social relation in and can be useful for the ties existing in the clusters and business network. After analysis we can visualise and describe the network by presenting it on the diagram (Figure 3-1) and define the typical network variables. In SNA we assume that nodes represents the institutions (by types, size etc.), knowledge exchange represents the ties between the actors of the network.

In earlier research of the author of the chapter this techniques have been implemented for analysing the relation in chosen cluster in Śląskie region (Olko, 2011).

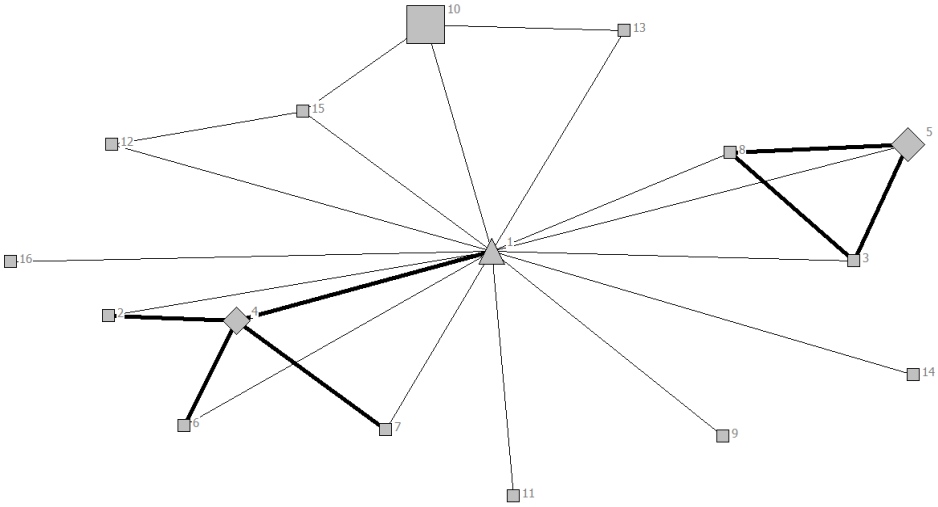

Figure 3-1. Exemplary diagram of the network / cluster with typical ties existing in the network

Source: authors conception

Although SNA is very useful for analysing the knowledge exchange it is very important to stress that the results of the research represents the snapshot situation. Normally the researcher is gathering the data in direct research collect the declaration of respondents about the knowledge exchange with cluster members. This situation could be based on historical evidences and could rapidly change in the future. That is why for the knowledge transfer analysis the other instruments should be implemented: the knowledge map and the network of activities.

SNA is useful for exploring relation of different types of actors: individuals, groups, institutions, associations etc. and different type of ties. Borgatti gives the examples of typical relations between firms using SNA: similarities, organizational relations (joint ventures, distribution agreements, ownership relations), interactions and flows (eg. technology transfer, financial infusion – Borgatti et al., 2013, p.5). For this type of relations we can add trust and credibility relations typical for social relation and impacting other activities in the network.

Table 3-2. Competence map of the network-members

No of network member	Key competences										
	International promotion	Domestic promotion	Leadership in the network	Brokerage on culture market	projects acquisition and management	Service design	3D printing	Consulting services	Training and personnel development	Event management	Performing skills
1		+	+		+			+	+		
2	+			+	–					–	
3						+		+		+	
4	–	–	+		–	–					
5		+	+								
6								+	+		
7		+				–				+	
9											+
10			+	–	+						
11											+
12				+							
13						+					
14											+
15										+	
16							+				

Source: author's conception

Ad 2. Competence map in the network or cluster represents the key competencies of the network members. Competence map is typical tool of KM within the corporations among the knowledge topographies, knowledge matrices and maps of knowledge sources (Probst et al. 2002). Mapping the knowledge is the process of assignment knowledge fields or competencies with the certain network member. In this approach we have to distinguish such knowledge map form the process of mapping the knowledge structure – the ontology (Karwowski, 2010, Jashapara, 2006) or taxonomy (Jashapara, 2006). The knowledge maps are not associated with the actors, that is why in proposed approach, for the sake of precision we will use the term 'competence map'. Proposed competence map presents in which area the network has the largest number of members and in which is the less or there are some 'empty spaces' – knowledge areas not relevant to any network member. Competence map also could show the 'competence gap' – the difference between possessed and expected knowledge in organisation – cluster member. Table 3-2 presents the knowledge map

where the actors can identify specialisation, knowledge possessed and expected knowledge.

Plus in these analysis indicates that the actor possessed the competence in these field, minus indicated the key competencies that are expected by the actor, to be realised by other actor of the network. Empty spaces indicate the competence not possessed and not expected by the actor of the network – the 'neutral zone' where no relation can be established. Most valuable fields of cooperation are available in the columns where pluses and minuses are occurred. It means in the network exist some potential market: demand and supply for exchanging competencies. The existence of the network is reasonable when every actor of the network has at least one key competence, In the columns we can observe competencies that are overrepresented in the network and underrepresented ones. In this second case the network members or the leader can decide to engage expected entitles or to develop such competencies within the network.

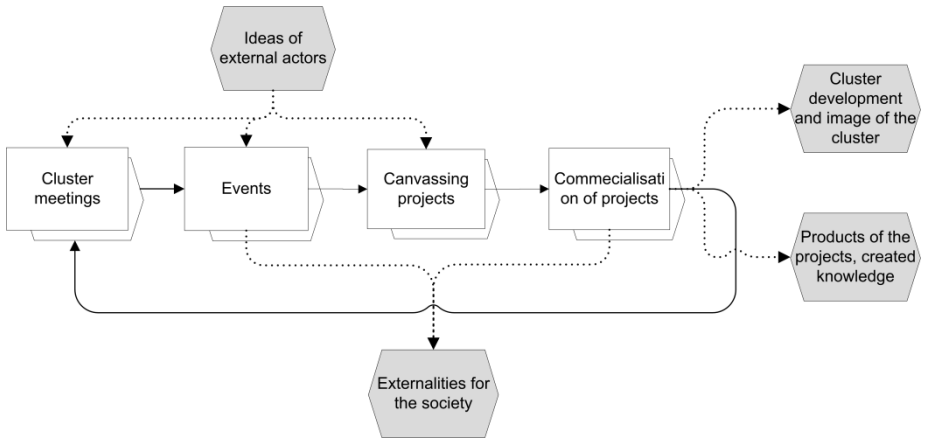

Figure 3-2. Exemplary network of activities for the network

Source: author's conception

Ad 3. Defining the network of activities is the last step of analysis oriented on identification of the process of value creation within the network. Answering the question: *"How the network help me to create the added value to the environment?"* enable to establish the map of the process. Every process should describe the stages of the process and involved actors. Proposed technique is open discussion with the network members in the form of individual interview or focus group interview. The preliminary version of the network of activity should be prepared before the interview in the form of the process with stages and oriented direction. In her works, Czarniawska suggest that network of activities presents the activities with multiple directions and with many nodes con-

necting activities and actors, giving examples of network (Czarniawska 2010, p.42). Author of this chapter assumes that the starting point for the analysis is elaboration of simple map of the process with identification of few fundamental stages. The role of the map is development of visual subject for discussion during the interview with the network member. The example of such process is presented on figure 3-2.

3.5. CONCLUSION

The chapter presented some consideration regarding the behaviour of the creative network and clusters as well as the methods of analysing knowledge management in this environments. In order to better understanding the nature of the KM in creative industries and the network existing in these sectors we have to realize the value for the whole society given by creative sector and informal character of knowledge transfer. For this reason the KM analysis reveals several problems considering the research process. Presented model of research will be developed in pilot research and then in wider research in selected network in Poland.

On the base on presented in the chapter consideration we have to express the following conclusions:

- Growing importance of creative sector for the value creation in regions and nations determines the development of new exploration method in these sector. Cognitive value in the exploring process could be obtained by using complex qualitative and quantitative techniques.
- The cognitive contribution of the analysis networks and clusters in CCI for the management sciences covers the extended understanding of knowledge management in CCI. The value of knowledge in CCI are not measured only by business indicators (value added, profit) but also the social factors connected with delivering aesthetic values to the society. They can be measured by life quality indicators.
- Limitation of the presented research methods concerns high effort of exploration. For these reasons presented methodology can be implemented in the limited number of networks with relatively low number of entitles.
- Another important limitation of the presented research methodology concerns the reach of the network of activities exploration. Simple network of activities can be identify and described with relatively low effort. However, according to Czarniawska approach, we are aware that network of activities is very complex psychological and sociological process oriented in different direction. Activity theory shows the complexity of analysing human activities but also the limits of our cognition regarding human creativity and other processes taking place in human minds. This area for management science should be regarded as a ‘black

box' – subject of interest of psychologists. For analysis of KM we can identify outputs (created knowledge) and transfer of knowledge taking place in the network.

– Presented methodology concerns the managerial aspects of cluster/network activity concerning leadership, coordination, knowledge creation and transfer as well as soft distribution of trust will be verified in empirical research in creative clusters in Poland.

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4. INTEGRATION OF RUSSIAN BANKS IN THE CONDITIONS OF FORMATION OF INTER-REGIONAL CLUSTERS

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ABSTRACT

Development of inter-regional clusters is a promising new form of development of the Russian economy. Financial infrastructure affects their development. Due to this, a high interest is raised by questions of influence of integrational clusterization processes on Russian regional banks. Besides that, in order to explore the macro-economical state of Russian economy and its' competitiveness it is important to track the development of main structural elements of the financing and banking system, because it plays the greatest role in providing economical activity in the country, especially in the period of formation of cluster development for modernization of economy. This is due primarily to the presence of institutional and systematic problems of the cluster infrastructure development, which requires a high concentration of financial assets and liabilities in the state-owned banks, to increase financial sustainability of private regional banks. This chapter identifies and substantiates the features of integration of regional banks for realization of inter-regional projects in new organizational cluster structures, as well as the types of bank structures defining the attractiveness of clusters for investors.

KEYWORDS:

bank; banking; structure of the banking sector; integrational clusterization processes

JEL CLASSIFICATION:

G21 – Banks; Depository Institutions; Micro Finance Institutions; Mortgages

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4.1. INTRODUCTION

Internationalization of the world economy is the main trend of development of modern economy, which in varying degrees affects all the processes occurring in the world. Due to this, questions about influence of integrational processes on the Russian bank sector as a mechanism of distribution and re-distribution of capital to spheres and branches of economy raise a high interest. Also, in order to get perspective information on the further growth of Russian economy and its' competitiveness it is important to track the status and development of the main structural elements of the banking system, because they play the greatest function of supporting economical activity in the country, especially during economical growth.

However, the presence of institutional and systemic problems in the industry has a significant impact on the development of the banking system, which lags behind many of the more developed countries. The main problems are:

- discrepancy between the scales of the modern banking system and the requirements of national economy,
- high concentration of assets and liabilities in the state-owned banks,
- low share of private capital in the banking sector,
- low territorial accessibility of banking services,
- lack of healthy competition in the banking sector.

These issues require special attention of researches, because the development vector of the Russian banking branch is directed at a soon integration into the worldwide financial system.

4.2. THE CURRENT STATE OF THE RUSSIAN BANKING SECTOR (REGIONAL ASPECT)

In modern conditions Russian banks are showing stable growth of the branch. At the same time, we can observe very important trends that will shape and define the ‘face’ of the Russian banking sector in the coming years. The main trend of development is that many members of the banking market in Russia began to change their business strategy in compliance with the universal model, where all banking services are developed almost the same, and specialize in targeted niches. Regional private banks can't thrive within the universal model on par with state-owned banks, and therefore began to find their market segments in which they have the opportunity to become local leaders.

In 2012 the most actively developing was the retail banking sector. High performance and better dynamics of the sector has been demonstrated in consumer credit, auto loans, mortgages. Such a significant market growth for banking ser-

vices has been made possible thanks to a change in the behaviour of individuals who have come to prefer to spend rather than save. This trend has continued in 2013, leading the banking system to a new configuration and requiring a restructuring of business models of the participants of this market, as well as new ways for the Bank of Russia to regulate the banking system.

Currently in Russia a fairly large number of national banks and banks with foreign capital are active (table 4-1). In Russia, as well as in most countries of the G10, except Sweden and Italy, the tendency of lowering bank numbers continues. At 1st October, 2013, the number of banks operating in Russia amounted to 942. More than a half of all credit organizations are concentrated in Moscow and Moscow region (525), with 44 in Saint Petersburg and Leningrad Region, and many other regions have 1-2 banks (BR, 2013).

Table 4-1. Number of Credit Institutions and their Branches in districts of Russia

01-10-2013	01-01-2013	01-01-2012	01-01-2011	01-01-2010	Region / Date
942	956	978	1012	1058	Total for Russia
559	564	572	585	598	Central District
70	70	69	71	75	North-western District
46	46	45	47	113	Southern District
45	50	56	57	–	North Caucasian District
106	106	111	118	125	Volga District
43	44	45	51	54	Ural District
51	53	54	56	62	Siberian District
22	23	26	27	31	Far Eastern District

Source: compiled by the authors according to official data of the Bank of Russia (BR, 2013)

Out of the total number of banks in Russia, 119 banks are owned by more than 50% by non-residents, and in total non-residents participate in the capital of 246 Russian banks. Nevertheless, there remains a post-crisis trend of foreign players leaving the Russian market. Over the whole year of 2012, many foreign banks (WestLB Vostok, Absolut, Svenska Handelsbanken, etc.) closed business

in Russia, as the high competition and risks have not allowed to conduct profitable business and prospects of development of the Russian financial market in the future are not clear. Weakening of the position of foreign banks is not due to problems in the Russian economy, but rather a consequence of the crisis in the European countries and, consequently, the appearance of difficulties in the parent banks. Therefore, this leave can be seen as a prerequisite for aid to parent financial institutions.

Tendency to reduce the credit institutions is typical for the majority of Russian regions, as the number of regional banks has decreased from 466 to 450. Reducing the number of credit institutions in Russia is primarily due to the tightening of the Bank of Russia to the management of credit risk and magnitude of bank capital. The regulational steps to transit to the principles of Basel III influence the activity of small credit institutions greatly. For instance, the requirement of Basel III to use the credit ratings during the calculation of the H1 normative cannot be applied to middle companies. However, small and middle businesses are fundamental to the activity of small regional banks. Therefore, in the first half of 2013Central Bank revoked the licenses of 14 regional banks; in 2012, 22 banks have lost their licenses, in 2011 – 34 banks, and in 2010 – 46 banks (CER 2012).

Another reason for the decline in the number of banks in the state is their consolidation. The combination of larger banks with the smaller regional ones is objective. General deterioration of the macroeconomic situation in the country caused by the negative processes in the real economy sector (reduction in production, decline in investment activity, low consumer demand) also affects the banking sector. Small credit institutions in the regions cannot compete with the banks with state participation, lose stability, have difficulties with funding, and therefore are forced to reduce the volume of business and population crediting and eventually withdraw from the market. This situation is typical for the Urals and Far Eastern regions, where the production fall over the past five years has been particularly significant. In addition, small banks cannot withstand pressure from the new regulatory requirements and are absorbed by larger competitors, which also causes a decrease in the number of credit organizations. Significant bank mergers in the financial market of the Russian Federation took place in 2011. A striking example of the merger of financial institutions is the join of JSC 'TransCreditBank' and the Bank of Moscow to VTB Group.

Finally, one should note the high proportion of state-controlled banks on the banking market, such as JSC 'Sberbank', JSC 'VTB', JSC 'Russian Agricultural Bank'. Government-owned banks are more able to finance big business due to the concentration of capital in several banks, with their help the government conducts economic and innovation policies, regulates the market of financial resources and loans for small and medium-sized businesses and the public. However, at the same time the principles of market competitiveness in the banking system are violated due to the existence of preferences

for these banks. Size of bank capital, which currently performs the functions of a guarantor of stability of a player does not allow small regional banks to compete with the largest banking organizations. As a result, the Russian financial market in the last few years has not come out with new members: in 2010 – 1, 2011 – 2, 2012 – 2, 2013 – 0.

Thus, the study shows that currently there is a trend of reducing the number of banking institutions, which is connected to the natural market conditions conducive to consolidation of banks and is the result of administrative measures taken by the Central Bank (excessive desire to increase the capital, tightening regulations, etc.). Russia's WTO accession has not affected the domestic banking sector since the number of newly registered banks in Russia is little.

Today, there are ample opportunities for extensive growth of the banking sector. In 2010-2012 there were positive dynamics of most of the key indicators that characterize the role of the banking sector in the Russian economy. Let us analyze the dynamics of the main indicators of credit organizations.

Macroeconomic indicators of capital are: capital gains, the ratio of capital gains to the value of assets, the ratio of capital to GDP, capital adequacy to protect against risks. At various stages of the business cycle dynamics of these indicators changes and demonstrates the stability of the banking sector to economic shocks. The ratio of banks' assets to GDP in 2012 increased from 74.6% to 79.1%, and in 2014 it is planned to reach 90%. Capital ratio of the banking sector to GDP in 2012 was 9.8%, increasing by 0.4 percentage points. Even without active government support, the banking sector in the next 2-3 years will keep the growth rate of assets at a level of 15-20% (EM 2013).

Aggregate capital of Russian banks is about $6 billion. It is less than the equity of any of the 100 largest banks in the world. In the capital structure of Russian banks the largest share (about half) is in the explicit capital, as shown in Table 4-2 (CBRF, 2013).

An increase is observed in the share of capital of the 200 largest banks in the banking sector in total capital, as well as the number of banks with a capital of 500 million rubles or more, except for the Far Eastern Siberian area.

Table 4-2. Indicators of credit institutions by authorized capital by region

Total	10 bln Rbl or above	1 – 10 bln Rbl	0.5 – 1 bln Rbl	300 – 500 mln Rbl	150 – 300 mln Rbl	Below 150 mln Rbl	Region
				2010			
1012	23	126	109	102	251	401	Russian Federation
585	20	94	72	60	157	182	Central District
75	0	7	10	2	11	45	North-western District
47	0	1	2	3	15	26	Southern District
57	0	0	0	4	7	46	North Caucasian District
118	2	15	11	18	35	37	Volga District
51	1	7	5	6	11	21	Ural District
56	0	2	5	7	8	34	Siberian District
27	0	0	4	2	7	14	Far Eastern District
				2011			
978	22	141	114	97	251	353	Russian Federation
572	19	103	76	55	153	166	Central District
60	0	7	10	2	13	28	North-western District
45	0	1	3	3	17	21	Southern District
56	0	0	2	4	13	37	North Caucasian District
111	2	19	9	22	29	30	Volga District
45	1	8	4	3	10	19	Ural District
54	0	3	6	6	10	29	Siberian District
26	0	0	4	2	6	14	Far Eastern District
				2012			
956	23	149	122	92	282	288	Russian Federation
564	20	108	86	47	160	143	Central District
70	0	7	9	3	18	33	North-western District
46	0	1	3	5	19	18	Southern District
50	0	0	2	6	26	16	North Caucasian District
106	2	19	10	18	31	26	Volga District
44	1	9	3	3	11	17	Ural District
53	0	3	3	8	10	29	Siberian District
23	0	0	4	2	7	10	Far Eastern District

Source: compiled by the authors according to official data of the Bank of Russia (BR, 2013)

Increase in the minimum capital since the beginning of the year (180 million) and expected by the Central Bank in 2015 (300 million), on the one hand, serves as evidence of tightening requirements for commercial banks, where the main criterion is the reliability and transparency – this undoubtedly leads to a reduction in the number of banks in the regions of Russia. And on the other hand, it is a stabilizing factor, restraining lending activity that provides moderate protection against risks.

The capital adequacy ratio of the banking sector of the Russian Federation on January 1, 2013 was 13.4% versus 14.7% in 2011 (CBRF, 2013, p. 119). Reduced adequacy forced banks to look for sources of capitalization. And the ways to increase it are different: from increasing profit to issuing securities.

One of the most important parameters characterizing the state of the bank's equity is its quality, i.e., the share of capital in its own. On January 1, 2013 it was equal to 62%, which is less than not only the recommendations of the Bank of Russia (75%), but even the more liberal Basel's 67%. An interesting trend should be noted: for the largest banks in the country, the figure is 55.8%, while for smaller regional banks – 75.7% (CER 2012).

In some regions of Russia (North Caucasus, Far Eastern District) a lack of quality capital is typical. This occurs primarily because of its actual output when capital remains only on paper. Practice shows that banks with revoked licenses capital was absent for many years prior to the revocation. In this regard, the tightening of regulatory requirements for commercial banks, including the share of capital is a justified and timely measure.

The assets of the banking system are one of the most important indicators of the degree of development of the banking sector. In Russia, the total assets of the banking system amount to more than 51 trillion rubles. At the same time, the share of the 200 largest (in terms of capital) credit institutions accounted to 92.8% of the total capital of the banking sector (1st January of 2012 – 92.5%), including the five largest banks – 48.4% (1st January of 2012 – 50.1%). In addition, there are regional differences in the level of concentration of banking assets. For most federal districts the typical average concentration of assets (the HHI) is from 0.10 to 0.18, due to the development of regional networks of structural units of credit institutions (the exceptions are the Central and North-Caucasian Federal District) (CBRF, 2013).

Russia's banking system faced a number of difficulties in 2012, however, the rate of growth of assets has been quite satisfactory. During 2012 assets of the banking sector increased by 19%, or by 7.88 trillion rubles, to 49.5 trillion. rub. (in 9 months assets of 2013 increased by 9.8%).This is less than in 2011, when the assets of banks in Russia increased by 23% (CBRF, 2013). However, given the current problems in the development of global and Russian economies, slowdown is justified because the speed of growth of the Russian economy by the end of 2012 amounted to 3.4%, instead of the expected GDP growth of 4.2%.

It should be noted that in 2012, there was a trend where banks different by total assets grew at the same rate (cf. Table 4-3). For example, the largest banks (banks with state participation and controlled by foreign capital) increased their assets by 19.1% (18.9% for all banks in Russia), large private banks (of the top 200) by 19.0%, medium and small regional banks by 19.9% (CER 2012).

Reduction of the size of bank assets, according to experts RIA rating, continues in 2013This is due to several reasons, most significant of which are:

- Continuing lack of liquidity in the market,
- Lack of capital, which is increased by gradually increasing requirements of the Central Bank of Russia.

In addition, the growth rate is greatly influenced by the development format that the bank chooses. So, universal credit organizations grew at a slower pace than those that specialize in the retail lending: consumer, mortgage, car loans, lending to SMEs. Banks that represent these segments grew faster than their competitors seeking to be represented simultaneously in many segments of the banking business.

Table 4-3. The main groups of banks in terms of assets as of January 1, 2013*

	Number of organizations	Share in total assets, %	Gain in assets, %
State-controlled banks	25	50.4	19.1
Banks controlled by foreign capital	112	17.8	19.1
Large private banks	128	26.6	19.0
Medium and small regional banks	341	2.4	19.9

* Excluding non-bank credit organizations

Source: compiled by the authors based on: Central Bank of the Russian Federation 2013, *Report on the development of the banking sector and banking supervision in 2012*

In 2013, the situation in the banking sector has not changed: the main catalyst for the growth of assets is the retail lending. According to preliminary data, the assets for the year increased by 18-19%, somewhat reduced growth compared to 2012.

Thus, the concentration of assets in the banking system of Russia has not changed much over the past few years.

The structure of the banking sector assets in 2012 is dominated by loans. The ratio of total credit granted to GDP increased by 2.8 percentage points

up to 54.3%, while their share in total assets of the banking sector decreased by 0.4 percentage points to 68.6%. (CER 2012).

Exploring the dynamics of these indicators over the last three years, it may be noted that a major proportion (63%) were loans to businesses and organizations. However, with the emergence of new credit products and improvement of payment systems as well as the availability of information resources, contributes to the emergence of a new trend: an increase in lending to individuals. Thus, in 2012 the volume of loans to individuals increased by 39.4% – to 7,737.1 billion rubles (CER 2012). As a result, the share of the retail portfolio in the banking sector assets and total loans has increased.

In 2012, the liabilities of the banking system of Russia increased by 7.88 trillion rubles in monetary equivalent. The main sources of funding of the banking system were Russian domestic funds, as access to external sources is available only to a few large banks. The volume of retail funds in 2012 increased by 20.0% to 14,251.0 billion rubles (in 2011 – 20.9%). The share of this source in the banking sector liabilities on 1st January 2013 was 60.8% (CBRF, 2013). The growth of bank deposits of individuals is due to the lack of available alternative sources of investment funds and a significant reduction in public funds to be placed in the stock market. In addition, regional medium and small banks have increased rates on household deposits in search of additional financial resources, by an average of 1.5-2.0 percentage points.

Nevertheless, it should be noted that the average amount of money per capita in a bank in Russia is about 60 thousand rubles, which is a very low figure even by Eastern European standards.

The amount of funds raised from legal entities (excluding banks) in 2012 grew by 11.8% to 15,648.2 billion rubles. (In 2011 – 25.8%). The share of this source in the banking sector liabilities decreased from 33.6% to 31.6% (CBRF, 2013). Weak dynamics in fundraising from organizations is due to the slowdown in 2012.

Table 4-4. Distribution of deposits of individuals and legal entities by groups of banks

	Deposit share of individuals in total deposit volume of the banking sector (by groups of banks), %		Deposit share of individuals in liabilities of the appropriate group of banks, %		Share of deposits and other borrowed funds of legal entities in their general volume in the banking sector (by groups of banks), %		Share of deposits and other borrowed funds of legal entities in liabilities of the appropriate group of banks, %	
Data revised as of	1st Jan 2012	1st Jan 2013	1st Jan 2012	1st Jan 2013	1st Jan 2012	1st Jan 2013	1st Jan 2012	1st Jan 2013
State-controlled banks	58.0	56.7	33.0	32.4	48.8	47.2	19.5	18.2
Banks controlled by foreign capital	11.4	13.5	19.3	21.8	19.0	19.3	22.6	21.0
Large private banks	24.6	23.9	25.6	25.9	29.7	31.0	21.7	22.7
Medium and small regional banks *	6.0	5.9	67.4	70.2	2.5	2.5	10.0	10.1

* Medium and small banks of Moscow and Moscow region, and medium and small banks in other regions.
Source: Compiled by the authors based on the official data published by the Bank of Russia (BR, 2013)

Thus, the growth rates of borrowed funds demonstrate a high level of public confidence in banks and business, which remains an important factor in the stability of the banking sector. However, the state-controlled banks remain on the most important positions in the deposit market. Deposits of individuals are an important source of funding, especially for regional banks.

4.3. THE ROLE OF INTER-CLUSTERS IN STRENGTHENING FINANCIAL STABILITY OF THE BANKING SECTOR

Russia lags behind developed countries in the world, both with the pace of development of modern financial infrastructure, and the results of banking activities in most areas of financial activities. Extremely low is the efficiency of financial instruments and the rate of development of inter-regional financial markets is being further reduced.

In our country, it was previously assumed that the problems of the intensification of the banking activities of Russia as a basis for modernization and transition to innovative development financing should be solved by the 'inter-bank financial clusters'.

Recognizing the cluster approach as an effective tool mesoeconomic systems analysis, we accept it as the basis of formation of the cluster model of integration of the banking system. Cluster integration model is a network of stable relations between the vertically and/or horizontally related financial institutions which partially combine features of long-term contracts and full ownership in the presence of control over the behaviour of formally independent financial institutions and the absence of control over their property. In recognition of the two-dimensional nature meso-organization of economy, the problem of determining the efficiency of the cluster is solved taking regional conditions into account. Territorial aspect is shown in the account-specific regional conditions (natural resources, industry, demographic potential, economical and geographical location, available infrastructure).The combination of the two aspects of meso-organisation allows to create more efficient organizational forms of realization of sources of relationships.

Since the term 'cluster' has two pronounced components – sectoral and territorial, it seems necessary to clearly define the terms. A regional cluster refers to a group of geographically concentrated (in a single region) group of financial institutions and banks in one chain of cost creation, as well as the infrastructure agents supporting them, characterized with the presence of synergetic relationships, providing income for economical results. Despite the variety of options to form a cluster, they all have some properties in common: the geographic concentration, cluster member diversity, combination of competition and cooperation, networking form of inter-firm cooperation (hierarchical network or a network of subjects of similar scale).Taken together, autonomous and interchangeable units – financial market agents, entering the network of cooperation and interaction (albeit based on mutual competition) form a regional cluster, and the interchange ability of links enables sourcing relationships outside the network as well, in order to involve new subjects in the network.

A cluster model for the integration of the banks belongs to one of the rapidly developing networking forms which present themselves as a system of relations between the owners of financial assets on their exchange, distribution and con-

sumption in order to meet common needs. Specific for the cluster is the so-called network effect, the emergence and influence of which is directly related to the size of the network defined by the number of its interacting agents, and the success of each of the partners depends on the success of the network as a whole. The network effect is characterized by a non-linear increase in network capacity, and the relationship potential with size increase. Comparative analysis of cooperative relations in corporate systems and systems with cluster models of integration makes it possible to explain the formation of synergistic relationships, on the basis of principles of the cluster concept.

Network principle explains empowerment through combining activities, sources and relationships, as well as types of resources. Using the principle of coordination allows to manage relationships through goal-setting and changing external conditions of existence.

The principle of competition explains the possibility of increasing the number of interconnections.

Being guided by the principles of complementarity, substitutability and specialization allows to create a basis for selecting options of combining relationships and types of resources, as well as add relationships by searching for them outside of the system.

The partnership principle explains empowerment of identifying relationships. These features of cooperative relations in clusters – network relationships, combining competition and cooperation, based on trust, mutual learning and coordinational principle of governance will improve the stability of the banking system by combining homogeneous and heterogeneous factors of synergies at all levels, from individual activity to the unit structure – a financial transaction or business process. Thus, the financial clusters are characterized as synergistic systems that can, based on a combination of factors integrable synergy of financial market, ensure sustainable nature of their activities.

4.4. DEVELOPMENT PROSPECTS OF THE RUSSIAN BANKING SECTOR IN THE CONDITIONS OF INTEGRATION INTO THE GLOBAL FINANCIAL SYSTEM

The analysis of the current state of the banking system indicates that a new model of the banking business, which should be based on a combination of extensive (upscale) and intensive (improving the quality of that growth) approaches is necessary. The model should be based on provisions such as poverty line modern banking system needs of the national economy; territorial accessibility of banking services; gradual diversification of assets and financial results, expressed in reducing the concentration of credit risks, ensuring a healthy competitive environment and the greater involvement of private banks in implementation of public investment projects (including in the field of modernization and innovation). Creating a sustainable model for the domestic banking system

will not only withstand internal and external threats, but on equal terms be active with international activity.

A reliable banking system plays an important role in sustainable development of the real economy. On the one hand it must maintain a reasonable growth rate of loans, promoting balanced lending in accordance with the law of economic development. On the other, it should provide financial support to key national industries and new strategic industries in the process of modernization of the economy, and increase the range of financial services for small and medium businesses. For active involvement of banks in the process of modernization of the Russian economy scale sector should increase significantly – at least up to 110% of GDP in 2015, which would require annual increases assets of not less than 25% (EM 2013).

Providing similar rates of development of the banking sector is possible, in our opinion, due to the involvement of banks in different scale development and introduction of new financial instruments (products), as well as conditions for the growth of the share of private capital in the sector. In such financial instruments one can distinguish types of investment banking services profile: consulting, structuring transactions, restructuring business, internet banking, etc., that is what customers demand today and brings the most revenue.

Particularly promising for the Russian banking market is the development of Internet banking, which allows to translate basic operations of customers into 'the online' and reduce operating costs of banks. Government-owned banks have the opportunity to invest more effort in the development of remote banking systems (RBS), as a result they get a loyal customer base, which is more robust in a lack of liquidity, and in stable periods it grows faster. Many banks, with a traditional set of services of RBS do not rest on their laurels and continue to expand the functionality of systems in response to customer needs. So, the big banks with their development teams far exceeded the average customer requirements, making online banking management into a system of family budget management. The same was managed by regional small and medium banks, connected to club systems. The latter are experiencing growth: for example, the number of customers of Handy Bank increased during the year by almost half – from 36 to 85 banks (EM 2013).

From the perspective of territorial access to banking services, it can be assumed that the further development of the Russian banking system will be scripted expansion of remote delivery channels of banking products. The latter assumption is confirmed by the dynamics of internet penetration and mobile communications by region.

Thus, a combination of the new financial instruments with financial and organizational tools causing traditional customer confidence is essential to create a new model of development of the banking system in conditions of the internationalization of monetary relations, and allow to compete with international financial institutions.

With the integration of Russian banks in the global financial system increase in the share of private capital in the banking sector is an essential factor. Growth capital in the Russian banking sector, as we have said previously, mainly occurs due to state-owned banks, which are able to increase capitalization by direct emission from CBR. For the domestic private banking sector growth is the main catalyst of investment attractiveness. One of the most important indicators of investment attractiveness is the business profitability, which is demonstrated by the retail banks, while private universal banks are in a zone of reduced profitability, often yielding on this indicator to banks with state and foreign participation. Accordingly, more attractive for investment are private retail banks or banks with a clear view of business model that is clear, transparent and allows you to generate stable cash income. The majority of our private banks do not have a coherent model of development, which is a negative factor for investors and creates additional challenges to enter the international arena (Zaslavsky, 2013).

Thus, attractive to investors are Russian state-owned banks and large private credit institutions with a coherent development model, clear market positioning and transparent business.

An important task of the banks in increasing competitiveness is quality growth through diversification of assets and financial results. Conducting diversification activities is made possible by expanding the range of existing banking products and services, as well as developing a strategy of penetration into other businesses beyond the banking sector. Large private banks should focus on the most profitable segments of the banking business: lending to large businesses, lending to small and medium-sized businesses, mortgages, credit cards, the development of the RB.

To date, major banks, in our view, do not cooperate actively enough in matters of lending to big business. And this is for several reasons: the low capitalization of Russian banks limits their opportunities of issuing large loans. Furthermore, large companies have access to foreign loans at lower interest rates and longer maturities, and use financial tools to attract debt and equity capital in the financial markets. All this has a negative impact on the development of this segment of the banking business.

To improve the situation, large private banks should develop long-term loans, to participate in the purchase of debt securities of corporations (essentially representing an alternative to direct lending).This enables banks to increase the liquidity of assets and generate additional leverage on the intended use of the loan (especially in a crisis).

Lending to small businesses can stimulate economic growth (such as in many countries, including the United States), but it must be formed under appropriate institutional conditions. In the meantime, the economic activity of banks, as well as the demand for bank loans to small businesses is quite low.

Moreover, the major Russian banks should use the instability in the financial markets for international business development. Today, the international business is accounted for less than 5% of the income of the Russian banks (EM 2013). Sale of the assets in the optimization of business of European banks is an opportunity for domestic players to enter the Western markets. They should focus on the markets of Eastern Europe, where the first step is to buy a small bank ('Optional') for maintenance of export-import operations of large companies in the priority countries for them. Acquisition of banking business abroad can act as an alternative to the modernization of business on their own.

Regional medium and small banks can develop syndicated loans to large clients, comprehensive services to small and medium-sized businesses and private-banking. In addition, there is an opportunity to generate additional income by the penetration of relatively closely related kinds of the financial business. This is achieved by sharing channels of banking, investment and insurance products, as well as through cross-selling, when the bank's clients, for example, are provided insurance and securities.

In this context it should be noted that, following the needs of the market, medium and small regional banks in the near future will introduce products with greater individualization, providing so-called 'tailor-made' services (Vedev & Grigoryan, 2011). Especially because the financial needs of the majority of people at different stages of the life cycle are essentially the same and banks should use this fact to provide quality service to its customers.

Creating a new model of development of the banking sector is not possible without an appropriate level of development of a competitive environment and adequate government support. For a long time, economic growth in Russia is supported only by the energy and raw exports and government does not pay the necessary attention to the development of the banking sector. So there still is no clear model for a system that could be able to compete on the foreign markets.

In our view, the main task of the state is to ensure equal conditions for all participants in the financial market and to eliminate 'blind spots' in the banking law. State-owned banks should focus on the development of new market niches with a high potential demand and weak interest from private banks (loans to start-ups, educational mortgage). Adoption of a number of laws (on consumer and syndicated lending, on irrevocable contributions, securitization) will not only support existing market segments, but also open up new possibilities in the field of credit and finance long-term projects.

Table 4-5. Public policies for the development of the banking sector

Ensuring competitive market environment	Scaling up of the banking business
Gradual privatization of state banks, strengthening the role of antitrust laws; Targeting state-owned banks into new niches (education mortgage lending start-ups); Providing conditions for release of large banks in foreign banking markets and their participation in the financing of international projects; Introduction of differentiated supervision and increase control over systemically important banks; Clustering of the banking system and the formation of several levels of banks: the first level – the global high-tech state-owned banks and large private banks, the following levels – specialized banks and banks operating in a small number of regions	Involvement in the implementation of innovative projects of large private banks, as well as small medium-sized banks based on syndicated lending arrangements; Adoption of the law on the registration of movable property will improve the quality collateral base for loans and availability of borrowed funds; Adoption of the law on securitization increase liquidity to Russian banks and breathe life into traditional segments (collateral consumer loans, SME loans)

Source: adapted from "Expert RA materials" (EM 2013)

4.5. CONCLUSION

The current situation in the Russian banking sector suggests that today functioning of the banking sector is due to the extensive development factors. Despite the fact that an increase in the basic indicators, the modern banking system largely lags behind many developed countries, which negatively affects the competitiveness of the Russian economy as a whole. In addition, the domestic banking system is not an investment attractive sphere, as its profitability is very low.

Successful integration of Russian banks in the global financial system and improvement of the competitiveness of Russian credit institutions must use intensive approaches in the implementation of banking strategy in the long term. The introduction of new business models of banking institutions, the use of various types of lending, new technologies will make banking transparent and open to customers, thereby increasing its investment attractiveness. An important component in this process should be the legislative support and financial development of interregional clusters.

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5. SPANISH TOURIST DISTRICTS, AGGLOMERATION AND HOTEL PERFORMANCE

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ABSTRACT

This chapter places a special emphasis on analyzing the tourist districts existing in this coastal Spanish area and the extent to which the degree of business agglomeration at each destination affects hotel profit. The results show that hotels situated at destinations with a higher degree of agglomeration are less profitable, probably due to the greater rivalry that exists between nearby competitors. However, in accordance with the theory of tourist districts, one could expect a positive effect.

KEYWORDS:

tourist districts; agglomeration; hotel performance; Spain

JEL CLASSIFICATION:

L10, M00, M20

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5.1. INTRODUCTION

Company performance depends on many factors. Numerous studies highlight a company's own resources (productive, human and technological resources, the brand, etc.) as the main profitability-generating factor (Penrose, 1958; Cyert & March, 1963; Wernerfelt, 1984; Barney, 1991; Rumelt, 1991; Short *et al*., 2007). It is also worth remembering the contributions made by industrial economy, according to which, business profitability is also affected by resources alien to the organizations themselves, such as the characteristic resources of an industrial sector (Porter, 1980), of a country or a region (Porter, 1990) or of an industrial district (Marshall, 1890; Becattini, 1990).

This chapter seeks to extend our knowledge of the latter. To this end, we test how company location affects profit levels. More precisely, our attention is on the study of Spanish vacation hotels located on the Mediterranean coast (peninsular and Balearic) and Canary coast and we analyze the extent to which the geographical area where these establishments are situated affects their profitability. Our work focuses on analyzing how the degree of specialization at a destination (or the concentration of companies linked to the tourism sector in the same place) may be a determining factor for hotel profitability. Hence our decision to base our analysis on the concept of 'industrial district', in our case 'tourist district', calculating the degree of agglomeration for each tourist district identified along the Spanish coastline.

According to this theory, companies located in a district are usually more profitable if they can benefit from a series of externalities generated by the agglomeration of same sector companies in the same district. Therefore, if we can demonstrate that agglomeration positively affects hotels, then the externalities generated in tourist districts will be relevant to the location decision. If not, there would be another reason why hotels concentrate geographically, more related to the search for natural resources like beaches that make tourist destinations more attractive. If we find this to be the case, it will raise doubts over the applicability of the industrial districts theory to the tourist sector.

In this sense, this chapter can be described as highly original for several reasons; most importantly because, although a number of studies have examined the effect of agglomeration on hotel profitability (Chung & Kalnins, 2001; Baum & Haveman, 1997) only very few of them have done it through the identification of tourist districts. In fact, we believe that this is the first study to fully apply the industrial districts theory to the tourist sector. Moreover, the above studies usually focus on analyzing the hotel industry of a very specific geographical area, either one city (Manhattan, Beijing) or one region within a country (Texas). Our study is more ambitious insofar as it covers the whole Mediterranean coastal strip and the Canary Islands, encompassing six autonomous regions and over

300 municipalities in a country that is one of the world's main international tourist destinations.

Now we will describe the structure of the chapter. The initial review of the literature on the impact of territory on business profitability and, more precisely, on the advantages that industrial (tourist) districts can bring to companies – which allows us to propose our main hypothesis – is followed by an explanation of the methodology used in the study, both in terms of tourist district identification and regarding the way of measuring variables and the information collection sources. The results are provided in subsequent sections, together with a summary of the main conclusions and implications derived from our research.

5.2. THEORETICAL BACKGROUND AND FORMULATION OF HYPOTHESIS

Alfred Marshall was the first to see the impact of external geographical economies on company decisions and profitability. Over the past two decades, researchers from the fields of economics and management have analyzed the origins and implications of the geographical agglomeration of companies.

The agglomeration is expected to have a positive impact on company profitability from a theoretical point of view – this is the opinion of authors such as Puga (2010) and Krugman (1991, p. 55). However, the relatively scarce empirical evidence is not consistent so far, as Stuart & Sorenson (2003) have already pointed out. Most studies obtain a positive correlation between agglomeration and business profitability, including some specifically focused on the hospitality industry (Chung & Kalnins, 2001; Canina, Enz & Harrison, 2005). In fact, hotels tend to be located where other hotels already exist because that allows them to improve both their efficiency and their chances of survival (Kalnins & Chung, 2004 and 2006; Barros, 2005; Yang, Wong & Wang, 2012). Other studies have obtained negative correlations, though (Staber, 2001; Shaver & Flyer, 2000; Folta, Cooper & Baik, 2006; Sorenson & Audia, 2000). There are even a number of studies which found both a negative and a positive correlation (Marco *et al*., 2013), as the authors show how a higher agglomeration of tourist companies can help hotels to become more profitable in terms of average occupancy but can also cause a reduction in their profitability levels as far as ADR (average daily rate) and average income per room are concerned.

Such highly contradictory results have several implications for researchers working along these lines. The most important one has to do with achieving a deeper knowledge of the factors that explain business agglomeration: whether it is the reasons for which companies concentrate in a particular area or the externalities which can be generated through agglomeration.

With regard to the reasons that lead companies to concentrate in a single geographical area, MacCann & Folta (2008) together with Rigby & Brown (2013)

point out that at least two of them exist. The first one is not related to the externalities which can be generated as a result of agglomeration, but rather has to do with the exploitation of other types of resources such as the natural resources associated with the territory. Instead, the second one does contemplate the possibility for geographically concentrated companies to take advantage of several positive externalities which precisely come as a result of having been located in a territory where other similar companies already exist.

As for the externalities which are generated through company agglomeration, Marshall (1890) describes two types of gains: production enhancements; and heightened demand. In terms of production enhancements, the agglomerated companies can benefit from three advantages: the opportunity to make good use of the common resources and infrastructures developed in the geographical area, as well as a greater accessibility to the suppliers and distributors based therein; the creation of a large labour market where employees have specialized and are highly efficient; and the knowledge spillovers arising from the proximity to others in the same industry.

However, some studies have shown that business agglomeration has a number of drawbacks as well. These costs essentially stem from the greater rivalry which arises between companies when their products are homogeneous and/or consumed locally, and when resource shortages or certain kinds of knowledge spillovers exist (insofar as stronger firms do not benefit when their knowledge spills to weaker firms). Business agglomeration consequently generates both positive and negative externalities, and it becomes necessary to calculate the net effect in order to know if location economies are actually obtained, which happens when *"the production costs of firms in a particular industry decrease as the total output of the industry increases"* (O'Sullivan, 2003).

According to the theoretical body of work produced to date, we have a situation in which hotels group together along beaches due to the geographical characteristics of the area but not due to any potential agglomeration externalities generated by the presence of other companies (McCann & Folta, 2008). Also, if there are any positive externalities generated, they tend to more related to demand enhancements, which are very present in the hotel industry, as production enhancements are more typical of technologically sophisticated manufacturing industries, such as the automobile sector or the computer manufacturing industry (Canina, Enz & Harrison, 2005). Conversely, we can expect there to be some agglomeration costs or negative externalities, as hotels at the same destination will have to compete with each other. Based on this reasoning, we expect the impact of agglomeration on hotel profitability to be negative. Accordingly, our main hypothesis is as follows:

H1: As the degree of hotel agglomeration increases in a tourist district, the profitability of the hotels in that area decreases.

5.3. RESEARCH METHODS

Our hypothesis is tested through a multiple linear regression in which hotel profitability acts as the dependent variable which can be explained by independent variables such as the greater or lesser agglomeration of tourist companies at the tourist spot or destination. However, other factors can also influence hotel profitability, and they will be used as control variables in our model: the autonomous region where the hotel is located, company size, establishment category and hotel chain membership. On the basis of all the above, our verification model can be expressed with the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

where:

Y	*is hotel profitability*
$X_1 \ldots X_5$	*are the explanatory or independent variables*
$\beta_0 \ldots \beta_5$	*are the independent term and the coefficients for such variables*
ε	*is the error term*

5.4. VARIABLE MEASUREMENT AND INFORMATION SOURCES

PROFITABILITY. There are many ways of measuring hotel profitability (Sainaghi, 2010), such as RevPar (revenue per available room), GopPar (gross operating profit per available room) and average occupancy, among others. In our case, a decision was made to use measurements closely resembling those mentioned above. More specifically, operating income per room was used as an approximate measure of RevPar and operating profit per room as an approximate measure of GopPar. Both operating income and operating profit can be obtained directly from the SABI (Iberian Balance Analysis System) database. The problem with SABI lies in the fact that it does not supply information about number of rooms. This forced us to use the Internet to find that information from hotel or some online travel agent web pages (booking.com, rumbo.es).

AUTONOMOUS REGION. The autonomous region where the hotel is located is measured with six dummy variables, one for each autonomous region on the Mediterranean and Canary coasts (Catalonia, Valencian Region, Murcia, Andalusia, Balearic Islands and Canary Islands).

DEGREE OF AGGLOMERATION. As mentioned above, our way of measuring the degree of agglomeration at a tourist spot or destination is based on the theory of tourist districts. As explained in the theoretical review, the chapter follows the ISTAT methodology, which basically consists in identifying the local labour systems (LLSs) existing along the Spanish coastline and verifying which of them can be defined as tourist districts due to having a concentration of employment in small and medium-sized tourist enterprises above the

Spanish average, for which the result of the equation below must be greater than 1:

$$Z \quad \frac{\text{Tourism employment in destination } i}{\text{Total employment in destination } i} \div \frac{\text{Tourism employment in Spain}}{\text{Total employment in Spain}} > 1$$

LLSs in Spain are already identified by Boix & Galletto (2005), whose work can serve as the basis for our study. Therefore, our task merely consists in checking all the tourist municipalities that exist along the Spanish Mediterranean and Canary coastline according to the Ministry of Agriculture and the Environment and identifying the LLS to which it belongs. This procedure led us to identify 301 tourist municipalities belonging to 135 LLSs, although a decision was finally made to eliminate two coastal municipalities, Barcelona and Valencia, because, strictly speaking, tourism in these two large cities could not be considered as sun, sea and sand tourism. The data used to estimate the equation corresponding to each LLS were obtained from the Spanish Chambers of Commerce enterprise database (Camerdata) – updated in January 2011.

SIZE. Hotel size is determined by number of employees, which can also be easily obtained from the aforementioned SABI database.

ESTABLISHMENT CATEGORY. This is a categorical variable, the value of which can range between 1 and 5, depending on how many stars the hotel has.

CHAIN. Finally, hotel chain membership was estimated using a dummy variable, the value of which is 0 when the hotel does not belong to any chains, and 1 in the opposite case.

5.5. CONCLUSION

With data from 2468 hotels, there is empirical evidence to confirm our main hypothesis, which suggests that the profitability of hotels situated in a tourist district decreases as the degree of agglomeration increases, as was foreseen. Although this is an apparently contradictory result, since the theory of tourist districts says that companies situated in these districts should be more profitable because of the externalities generated within the destination, the real situation in the hotel sector appears to be different. In this industry, companies are not attracted by the externalities generated in a district but rather the geographical proximity to a beach. Conversely, the costs and drawbacks of agglomeration are present.

The results obtained in our study are not completely atypical. Some papers applied to the hotel sector found evidence that business agglomeration increases the demand and profitability of establishments (Chung & Kalnins, 2001; Canina, Enz & Harrison, 2005), whereas others determined that companies which are located near one another obtain lower revenues because proximity is associ-

ated with higher competition and decreasing marginal usefulness (Baum & Mezias, 1992; Baum & Haveman, 1997; Baum & Ingram, 1998).

This makes us wonder if the theory of industrial districts can be applied to the tourism industry. In this sense, it is possible that the natural advantage model is more relevant when deciding where to locate a hotel. In this way, firms look for specialized inputs like beach or climate, as opposed to production externalities models, where firms' production possibilities depend on the actions of other firms at the same location (LaFountain, 2005). This is the typical situation explained by the central place theory and the spatial interaction theory (Prayag, Landré & Ryan, 2012; Daniels, 2007).

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6. A MIXED RESEARCH METHOD IN THE STUDY OF KNOWLEDGE CREATION IN MULTINATIONALS

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ABSTRACT

Considering the theory of knowledge and the theory of the multinational firm, the aim of this chapter is to answer the research question: which are the main variables impacting on multinationals knowledge creation capability? A mixed research method combining the qualitative and quantitative methodologies has been used to achieve that aim. The qualitative methodology serves to perform an exploratory study and to formulate a series of propositions which are later tested on a population of 1291 Spanish subsidiaries of foreign multinationals belonging to highly technology- and knowledge-intensive sectors during the quantitative stage.

KEY WORDS:

multinationals; knowledge creation; qualitative study; quantitative study

JEL CLASSIFICATION:

M190, M100

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6.1. INTRODUCTION

In order to compete effectively in *Knowledge Society*, organizations need to learn new skills which allow them to find, manage, share and use information and knowledge (Abell & Oxbrow, 1999). Competitive advantages are increasingly based on strategic assets, such as knowledge, and knowledge management has acquired a lot of importance within firms. Moreover, the increasing level of globalization is causing practically all economic sectors to shift from a local toward a global market. The multinational firm, which main characteristic is possessing scattered resources in various countries, appears as a diversified-knowledge corporation and provide the ideal environment to implement knowledge management processes, as it will be necessary to coordinate the creation and transfer of this resource between its various locations for the purpose of leveraging and achieving the maximum global performance.

Several theoretical and empirical works can be found in the literature about knowledge management and multinationals. However, hardly any studies link knowledge management and Spanish multinationals. In order to fill this gap, and considering the theory of knowledge as well as the theory of the multinational firm, this study has the objective of answering this research question: *which are the main variables impacting on multinationals knowledge creation capability?*

To answer this question we use a mixed research method. The reason lies in the fact that, although there are numerous theoretical works in the field of knowledge management, only few of them specify from an empirical point of view the set of mechanisms through which new knowledge can be created in multinationals. That is why we use a 'sequential exploratory strategy', QUAL/QUAN type, which is characterized by an initial phase of qualitative data collection and analysis, followed by a phase of quantitative data collection and analysis (Creswell, 2003; Tashakkori & Teddlie, 1998). This illustrates the complementariness of both methodologies

The structure of the chapter is as follows. Firstly, after introduction, a qualitative research is carried out, studying four Spanish multinational firms and formulating five propositions. Secondly, a quantitative research follows testing the propositions through a sample of 1291 Spanish subsidiaries. Finally, conclusions, contributions and limitations are formulated.

6.2. QUALITATIVE RESEARCH

We decided to use the case study during the qualitative research work because the characteristics of case studies make it possible to come closer to the study object. The selection of the cases was based on a non-random sample, choosing those which offered good opportunities for learning, and following

the recommendation that their number should be neither less than four nor greater than ten (Eisenhardt, 1989). The process led to the selection of four Spanish multinationals (see Table 6-1) from different sectors which were characterized by: (a) having a pro-active attitude in the field of knowledge; and (b) making efforts to inform their stakeholders about their experiences in this field.

Table 6-1. Analysed firms

	MULTINATIONALS			
	A	B	C	D
Sector of activity	Manufacture of electric motors, transformers and generators	Production and distribution of electrical energy, gas and services	Management and business assessment. Auditing.	Electronics. Manufacture of electric motors, transformers and generators.
Number of employees (parent firms+subsidiaries)	1,100	20,017	122,820	417,000
Role of the analyzed unit	Parent company	Parent company	Subsidiary	Subsidiary
Number of countries in which there are subsidiaries	4	11	139	50

Source: own elaboration

In order to avoid a potential bias introduced by researchers themselves and/or by informants, data were collected using the 'triangulation technique', which combines three methodologies: *In-depth interview* (with the Chief Knowledge Officer (CKO) or the person responsible for matters related to knowledge management), *observation* (visits to the premises and contact with the workforce) and *consulting documents* (extracted from the Internet and publications – both internal and external).

We used the multiple case study as opposed to the single-case one, always seeking to find behaviour patterns that make it possible to generalize the results ('replication logic', Yin, 1994, 1998). A single case would have a low degree of representativeness and would confine the scope of the conclusions to a specific type of organization and activity sector.

Knowledge creation in multinationals

Knowledge creation becomes especially relevant among the firms studied, as they all operate in global knowledge-intensive sectors and constantly need to generate new knowledge which enable them to remain competitive and face any new dynamics that may arise. The knowledge creation capability is strongly

influenced by the characteristics of the firm (parent firm or subsidiary), and by its internal and external environment.

Characteristics of the firm

The four firms analyzed are characterized by being proactive in the implementation of activities to leverage knowledge. Both the parent organizations 'A' and 'B' and the subsidiaries 'C' and 'D' have a strong initiative to constantly create knowledge and to be able to assume increasingly higher responsibilities. 'A' started to deal with knowledge issues in 1995 in order to develop a set of important values for the survival of the company; 'B' as well as 'C' had the initiative to develop a knowledge management scheme in order to help their respective mergers. 'D' has always paid a lot of attention to knowledge as a strategic resource which allows continuous innovation. In addition to initiative, it is necessary to highlight the leadership and autonomy of the enterprises analyzed. Leadership materializes in top management's support, which in turn leads to an encouragement of employee initiative (Birkinshaw, Hood & Jonsson, 1998; Birkinshaw, 1996). All four enterprises admit to have: highly internationally respected leaders; a top management with a high level of credibility; and senior managers who closely collaborate with the executives to accomplish the firm's objectives. This is reflected in the organizational culture and structure of each one of them. As for autonomy, with the exception of 'C', which still keeps a certain degree of hierarchy, all the firms have a considerable degree of freedom to adopt decisions about their products and/or processes. All this is possible thanks to their organizational design, which mainly revolves around teamwork, collaboration and empowerment.

According to the above, the following propositions can be formulated:

- P_1: *The firm's initiative positively influences its knowledge creation capability*
- P_2: *The firm's leadership positively influences its knowledge creation capability*
- P_3: *The firm's autonomy positively influences its knowledge creation capability*

Internal environment and external network

The multinational's internal environment, formed by the investments[10] made in the different functional areas and the interactions with other corporation units, is an essential aspect in the process of knowledge creation (Foss & Pedersen, 2002; Lane & Lubatkin, 1998; Cohen & Levinthal, 1990; Dyer & Singh, 1998).

[10] The investments undertaken refer to: R&D expenses; production and marketing; training; and incorporation of new Information and Communication Technologies (ICT).

That knowledge is not only useful to overcome the existing shortages, but also for its exploitation in other multinational units located elsewhere. Nevertheless, the difficulty to generate internally all the knowledge required makes firms to use knowledge from external sources.

'A' has learned how to combine the exploitation of its knowledge in geographical areas outside Spain with the creation of new knowledge. The latter is achieved by R&D, to which it dedicates permanent efforts; establishing a joint-venture; external relationships with R&D centres, electrical and business management organizations, quality institutions, universities and other institutions; interaction with customers, who specify in detail the products they require; and use of transnational teams. Regarding 'B', the parent company is the one where the distinctive competencies and accumulated knowledge in the generation, commercialization and distribution of electrical energy remain, and this is then used for the development of similar businesses in Latin America. The exploitation of knowledge is complemented by its generation, where new knowledge forms the basis for new businesses. Creation also takes place through R&D, connections with national institutions and universities, relationships with suppliers and customers, a suggestion box, expertise centres and international teams. 'C' is an organization best characterized for its knowledge exploitation rather than exploration, as its work practices are global and there is a tendency toward maximizing returns from those that already exist; nevertheless, with exploration, it is capable of taking over new market segments. That is why innovation, work teams, relationships with universities and business schools are used to create knowledge whenever possible. The need to constantly create, share and use knowledge becomes vital for 'D'. Creation is mainly carried out through R&D materializing in the form of patents, collaboration with customers and providers, work teams and relationships with external R&D centres.

It can be observed that several mechanisms (internal and external) contribute to knowledge creation in these firms. This reasoning leads to state the following two propositions:

- P_4: *The firm's internal environment (investment effort and interaction with the rest of units) positively influences its knowledge creation capability*
- P_5: *The external acquisition of knowledge by the firm positively influences its knowledge creation capability*

6.3. QUANTITATIVE RESEARCH

The deep involvement in knowledge-related issues showed by the firms analyzed highlights the non-existence of significant differences linked to whether they are parent or subsidiary companies. In this sense, and considering that, in a multinational, knowledge should be shared on a worldwide scale and innovations should result from a process involving all enterprise members, this second stage is going to focus on the study of Spanish subsidiaries of foreign multinationals belonging to highly technology- and knowledge-intensive sectors. The reason to focus on subsidiaries has to do with the change produced in the literature about multinationals, according to which subsidiaries very often own internal knowledge and capabilities which turn out to be the source of innovations and competitive advantage, not only for the subsidiary itself but also for the rest of the multinational (Bartlett & Ghoshal, 1989; Hedlund, 1986; Birkinshaw, 1996; Holm & Pedersen, 2000). The decision to focus on highly technology- and knowledge-intensive sectors stems from the fact that the subsidiaries belonging to those sectors are bound to show a higher level of commitment to new knowledge generation due to the dynamism and competitive turbulence that characterizes them.

Our population was constituted by 1291 Spanish subsidiaries of foreign multinationals. The study had a census and transversal nature. The quantitative data were obtained using a questionnaire (pre-tested by a group of experts including both academicians and professionals) which was sent to the CEO mainly by post, although also it was e-mailed and faxed. Finally, 80 duly filled-in questionnaires were collected, which represents a 6.2% response rate[11].

In order to achieve the main research question, the stated propositions were adapted to the context of the subsidiary. All measures were extracted and at times adapted from previous research. According to the literature, three control variables were included into the model (age of the subsidiary and the existence or non-existence of a CKO-Chief Knowledge Officer or person responsible for knowledge issues).

Reliability and validity were analyzed and the results showed that all measures were valid and reliable. According to previous empirical works within this field of analysis (Foss & Pedersen, 2002; Björkman, Barner-Rasmussen & Li, 2004), multiple linear regression was used:

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[11] In order to reduce the possible non-response bias, the group of companies which did not answer the questionnaire was compared to those which did. The comparison revealed that the values for the variables number of employees, business sector and turnover were situated within the same intervals (the T-test was used for means comparison).

Knowledge creation = β_0 + β_1 *initiative* + β_2 *leadership* + β_3 *autonomy* + β_4 *internal environment* + β_5 *external network* + β_6 *age* + β_7 *CKO* + β_8 *sector* + *error*

Once it was clear that no multicollinearity problems existed, the regression equation results were calculated (see Table 6-2). The results suggest that the model works very well with a value associated to the F statistic of 6.216, which is highly significant ($p<0.01$). The R2 determination coefficient is 41.5, which indicates that almost 50% of the variation observed in knowledge creation is explained by independent variables.

Table 6-2. Regression analysis

Variables	Regression coefficients (βi)	Standard error
Intercept	1.423*	0.734
Initiative	0.184**	0.089
Leadership	0.008	0.130
Autonomy	0.156**	0.074
Internal network	0.416***	0.137
External network	-0.086	0.145
Age	0.081	0.249
CKO	-0.285	0.265
F Statistic	6.216***	
R2 determination coefficient	0.415	

*** Significant at a 1% level; ** Significant at a 5% level; *Significant at a 10% level

6.4. DISCUSSION

The first proposition is confirmed at a 5% significance level, which permits to state that the active search for market opportunities to which the subsidiary may apply its specialized resources (initiative) does contribute to knowledge creation within the subsidiary, as had been assumed. This result coincides with the one obtained by Bishop and Crookell (1986), Birkinshaw (1996), and Birkinshaw, Hood and Jonsson (1998). The subsidiary's initiative leads it to continuous innovation with a twofold purpose: firstly, to deserve the allocation of responsibilities and, secondly, to face an increasingly specific and strict demand.

The second proposition is not confirmed but, because the result does not prove significant, it cannot be rejected either. This result can be due to the fact that this leadership is not recognized by the parent company, regarding both the allocation of resources to subsidiaries allowing them to develop capabilities

in the three functional areas examined and the allocation of new responsibilities internationally.

The third proposition is confirmed at a 5% significance level, which seems to indicate that autonomy (or decentralization in relevant decision-making) leads to the creation of knowledge in subsidiaries, as was stated by Birkinshaw, Hood and Young (2005), and Birkinshaw, Hood and Jonsson (1998). According to Nonaka, Toyama and Konno (2000), autonomy increases the likelihood of finding valuable information and motivating the members of the enterprise toward the creation of new knowledge. Self-organization not only increases individual commitment but can also become a source of unexpected knowledge.

The fourth proposition is strongly confirmed, at a 1% significance level, which suggests that, the greater the investment by the subsidiary in the development of R&D, production and marketing capabilities and the greater the interaction with its internal network (customers, suppliers and internal R&D centres), the greater the creation of knowledge within the subsidiary. This result is in keeping with the ideas of Foss and Pedersen (2002), Lane and Lubatkin (1998), Cohen and Levinthal (1990) and Dyer and Singh (1998).

The result obtained for proposition 5 does not fit our previous expectations, since although the effect is not a significant one, the regression coefficient is negative, which contrasts with the positive relationship formulated between the subsidiary's external network and its knowledge creation capability. Two possible explanations for our result could lie in the fact that the Spanish subsidiaries analyzed are characterized by suffering from the so-called 'Non-Invented Here' syndrome (Gupta & Govindarajan, 2000) and the 'Myopia of Learning' (Levinthal & March, 1993).

Regarding the three control variables, the results do not seem to show a significant influence upon knowledge creation.

6.5. CONCLUSION

The chapter was motivated by the growing interest in getting to know how knowledge is created inside multinationals. In this sense, and starting from the assumption that these organizations have their resources scattered over several countries, the objective was to answer a main research question. With that aim, taking as a reference the knowledge theory along with the multinational corporation theory, it was decided to use a mixed research method based on the qualitative and quantitative methodologies.

The qualitative research stage included the use of a multiple case study method and the in-depth analysis of four firms characterized by being knowledge-intensive and proactive in the field of knowledge management. The examination of their experiences made it possible to explore the business reality, developing theory and complementing the already existing one. After a comparative study of the cases, the results showed that knowledge creation was influ-

enced by certain characteristics of the firm, its internal environment, and its external network. All this was materialized in five propositions.

Regarding the quantitative research, the five propositions were tested on a population of Spanish subsidiaries and the results showed that the subsidiary's initiative, autonomy and internal environment exert a significant positive influence on its knowledge creation capability, whereas leadership and external network do not find empirical confirmation.

We think that this study can help to make a contribution to the literature in three ways: from the empirical point of view, increasing the empirical evidence within the knowledge-multinational firm link through a focus on the mechanisms which make possible the generation of this resource; from a methodological perspective, using a mixed method combining the qualitative and quantitative methodologies which permits to reinforce the results obtained in the study thanks to the synergies derived from integrating both methodologies; and, from a managerial point of view, findings of this study can help managers recognise the value that some intangibles (initiative, leadership, autonomy, internal environment and external networks) can acquire for knowledge creation, which should encourage them to take a leading role in the promotion of activities to foster knowledge creation in subsidiaries.

Nevertheless, there are two main limitations in this study. Firstly, it focuses exclusively on the knowledge creation stage and neglects the transfer and implementation stages, which are of paramount importance too. Secondly, only highly technology- and knowledge-intensive sectors have been considered. Future research lines should focus on overcoming these limitations, enriching the study with the analysis of the stages not examined and extending it to all activity sectors.

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7. SUSTAINABILITY STRATEGIES IN FAMILY AND NON-FAMILY BUSINESSES: THE CASE OF VALE DO SOUSA

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ABSTRACT

The goal of this chapter is to analyse sustainability strategies in small and medium-sized businesses. The strategies analysed along this chapter are those at economic, social and environmental level. The construction of these variables was made by using a latent variable for each strategy. The sub-variables were defined according to the literature review. However, as presented in the title, the study will go further by comparing the results of those strategies in familiar and non-familiar businesses. In order to classify businesses as familiar or non-familiar types, considering the large variety of definitions presented in the state of art, two main criterion were adopted: (1) Management Control, (2) Family Employability. These criterions are present in most definitions across countries and institutions. Considering the classification of firms on family issues, on the opposite to some studies that present a larger percentage of familiar businesses in national and European entrepreneurial fabric (60% to 80%), the criterion used leaded to a larger number of non-familiar businesses (53%). The study was carried in construction and industry (manufacturing and mining and quarrying) sectors, in a Portuguese region located in the north of Portugal Vale do Sousa. This region is composed of six concelhos[12] *in some of which it is possible to identify some industrial districts. In order to get a valid sample, a group of 251 firms were analysed.*

The results showed that in general SMEs in this region are somehow concerned with sustainability strategies and surprisingly the environmental sector is ahead of social and economic sectors. The same tendency is verified in both familiar and non-familiar businesses. Concerning the differences between these groups of firms, we did not find statistical significant differences. The results show that these businesses are trying to follow sustainability strategies; and this is not a family or a professional concern, it seems to be a culture implemented in this region.

KEYWORDS:

sustainability strategies; sustainable development; family businesses

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[12] *Concelho*: Portuguese administrative unit divided into smaller units called *freguesias*.

7.1. INTRODUCTION

In the chapter we analyse sustainability strategies and compare it between family and non-family businesses. It is common to find in the literature some arguments in favour of a better performance for family businesses (Martinez, Stöhr, & Quiroga, 2007; Miller et al., 2007). Some others present family firms as more innovative (Simon, 2009); or with higher propensity to entrepreneurship (Zahra, Hayton, & Salvato, 2004), or even more resilient than their counterparts (Chrisman, Chua, & Steier, 2011). There are studies (La Porta, et al. 1997; (Morris, 1998) that present family businesses as not so effective. However these businesses still present a research interest in the academic field.

According to Mandl (2008) across Europe, about 70% – 80% of enterprises are family businesses. On what concerns its economic contribution *"it has, for example, been found for Belgium that 40% of the gazelles of the Walloon region are family businesses. The sustainability of family businesses can exemplarily be pinpointed by data available for Poland, Spain and the United Kingdom. 30% or more of the family businesses have already under-gone a generational transfer and are presently in the hand of the 2nd, 3rd or even later generation.*

Family businesses account for an important part (40% – 50%) of European employment. In some of the available studies family businesses' contribution to employment is even estimated to reach 70% or more… However, it was found a higher share of enterprises than of employment, implicating that family businesses are on average smaller than the average national company" (Mandl, 2008).

Family businesses are also an important player, on local development. Their long-term orientation and regional roots present an important factor for regional development (Block & Spiegel, 2013). On the other hand, factors related to regional embeddedness are stimulating to increase the number of family start-ups (Bird & Wennberg, 2013). Some other authors argue that family managed businesses do not present a positive impact on internationalization diversification (Bueno & Usero, 2013; Segaro, Larimo & Jones, 2013). This might mean that family firms are really embedded and focused in the region/country. But do these firms present a different approach on what concerns local sustainability strategies?

Let's start by defining a family business. According to Mandl (2008), there is not a single definition of family businesses. What exists is exactly the opposite, a wide heterogeneity of definitions. The differences also exist among family businesses models (Gersick et al., 1997; Neubauer, 2003; Klein, 2010).

Taking into consideration the different definitions and models on family business there are a few constant concepts: Ownership, Management, and Em-

ployment (of family members). Those are also the main concepts that can be found in the Portuguese definition of family businesses:

- Ownership and Management Control (Mandl, 2008) – (referring to the Portuguese definition of family businesses),
- Management Control and Employment of Family Members (AEF, 2010).

Bearing in mind the characteristics that distinguishes a family from a non-family business, but at the same time that family businesses in and of themselves are not homogeneous (Kellermanns et al., 2012) we will compare sustainability strategies, next discussed, between those two types of businesses.

7.2. THE REGION

The region where this study was conducted is composed of six *concelhos* (Castelo de Paiva, Felgueiras, Lousada, Paços de Ferreira, Paredes, Penafiel) that together form the Vale do Sousa Urban Community. This region is located in the North of Portugal, and for statistical purposes it is a region within NUT III – Tâmega.

According to the last census the population in this region in 2011 is 337,432 inhabitants (INE I.P., 2012). Nowadays the main activities in this region are: shoe making, textiles, manufacture of furniture and construction. In four of these *concelhos* it is even possible to identify, some industrial districts (DHVMC, 2004), (Bessa, 2004): Felgueiras: Shoes production; Lousada: Textiles; Paços de Ferreira and Paredes: Manufacture of furniture. Even though being possible to find many activities in each *concelho*, in some of them there is a significant dependence of a major activity.

In order to describe the entrepreneurial fabric, it was necessary to collect information from different institutions, since the available information varies from source to source. According to data from the Statistics National Institute, by the time of this research the region had 34,049 firms registered. However, information from CofaceMOPE reveals the existence of 11,973 firms and, according to the Labour Ministry, the number of firms is 10,231. After contacts with local entities, it became clear there is no accurate information about the exact number of firms, which led us to believe that the number of firms was probably close to 12,000.

According to the data provided by the above mentioned institutions, this distribution (in relative values) is similar, pointing to retailing, manufacturing and construction being the main activities, representing 75% of the firms in the region.

7.3. THE QUESTIONNAIRE

In order to get the necessary results the questionnaire seemed to be the best solution. Since questioning the whole of the population (5,000 firms) was out of the question, the study was focused on a valid sample. Next we present a formula suggested by Saunders (Saunders, Lewis, & Thornhill, 2003) which takes into account the variability of the factors studied, the confidence interval required and the error margin was used to calculate the sample size:

$$n = p_{\%} \times q_{\%} \times [z/e_{\%}]2 \quad (1)$$

where:

n	*minimum sample size required*
$p_{\%}$	*proportion belonging to the specified category*
$q_{\%}$	*proportion not belonging to the specified category*
z	*z value corresponding to the level of confidence required*
e	*margin of error required*

According to Saunders, since the population is less than 10,000 a smaller sample can be used without affecting the accuracy.

The adjusted formula is:

$$n' = \{n/[1+(n/N)]\} \quad (2)$$

where:

n'	*adjusted minimum sample size*
n	*the minimum sample size (as calculated above)*
N	*total population*

Considering innovation (another strategy studied) as the main factor and considering a variability of 80% – 20% (which was later corroborated by the results), n' = 235.47 was obtained.

The questionnaire presented to firms included a large number of questions so as to allow the evaluation of different aspects of firms' management. The total sample comprised 251 firms.

Nevertheless, it is not easy to analyze the firms' management strategies and their entrepreneurial and innovative actions using a single approach to all of them, since they belong to different sectors. The degree and type of strategies differs from a clothing store to a technology software industry (Schwartz, Birch, & Teach, 2007). In order to find valid results, it was decided to study industrial (manufacturing and mining and quarrying firms) and construction businesses. These sectors engage, almost 50% of the total number of firms, and 75% of total employment. According to the data provided from

three institutions, 5,000 is the total number of firms in the industrial and construction sectors.

7.4. EMPIRICAL SURVEY AND RESULTS' DISCUSSION

In order to classify the firm as familiar or non-familiar we followed two main criterions:

- Management Control: firms with a largest number of managers not belonging to the family were classified as non-familiar firms. The results leaded to 11% of non-familiar firms, which means that the management is largely in the hands of family members.
- Family Employment: at least one of the employees must be a member of the family. The results showed that there are 43% of firms that do not employ any family member.

The final results allowed to classify 46,6% as familiar businesses, and 53,4% as non-familiar. These figures are not in accordance with some studies that present 60 to 80% (or even more) of family firms (Mandl, 2008; Kellermann et al., 2012; FFI, 2012). This difference might be due to the nature of the businesses present in this chapter: Construction, Manufacturing and Mining and Quarrying. It is acceptable, that those are not businesses where it is not easy to hire family members if they do not have qualifications or willingness to work in these specific sectors.

By doing a general analysis the economic dimension, mainly considering the factors of small businesses role in local development and profit application it was achieved an average result of 3.64 on a Likert scale (1 to 5). On what concerns the social dimension the analysis focused on recruitment policies, and society support. The result on this dimension was 3.76. According to the literature on sustainable development this is not an expected result, since most authors defend that usually firms, and even governments, are putting focusing on the economic dimension. Finally the environmental dimension considered for the analyses: firms' environmental impacts, and environmental rules compliance. The average result was 4.03, the highest value from the three dimensions. This demonstrates the importance that managers are giving to the green dimension.

Considering all dimensions the average result presents a value of 3.81 which means that on average firms in the region of *Vale do Sousa*, present a positive, let's say, proactive attitude towards to sustainability. Considering each firm result and forming classes where the lower means a weak approach to sustainable development and the highest a strong approach we can see that most of firms, 96%, present a proactive attitude to sustainable development.

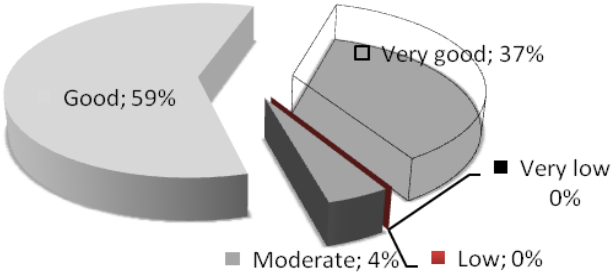

Figure 7-1. Sustainability levels

Source: own elaboration

After a brief literature review and the presentation of some general results, we move on in order to compare sustainability strategies between family and non-family firms. Table 7-1 presents the main indicators at a global level for the strategies in study.

Table 7-1. Descriptive statistics by type of firm

	Familiar or Non Familiar Firm	N	Mean	Std. Deviation	Std. Error Mean	Var. Coef.
economic	Familiar	116	3.5833	.61679	.05727	17.21%
	Non-Familiar	133	3.6917	.53752	.04661	14.51%
social	Familiar	117	3.7863	.53866	.04980	14.22%
	Non-Familiar	134	3.7512	.56297	.04863	15.00%
environmental	Familiar	117	3.9786	.77791	.07192	19.55%
	Non-Familiar	134	4.0858	.77926	.06732	19.07%
development	Familiar	116	3.7807	.45753	.04248	12.12%
	Non-Familiar	133	3.8417	.43635	.03784	11.35%

Source: own elaboration

Considering the results from Table 7-1, in particular the figures presented for means, they do not seem to vary significantly between types of business. In order to compare means we need to run some tests. To do so, the literature suggests, in first place to check the normality distributions. The normality hypotheses are as follows:

H_0: *The variables follow a Normal distribution in familiar and non-familiar firms*

H_1: *The variables do not follow a Normal distribution in familiar and non-familiar firms*

Table 7-2. Tests of Normality

Familiar or Non-Familiar Firms		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Familiar	economic	.149	116	.000	.958	116	.001
	social	.172	116	.000	.938	116	.000
	environmental	.134	116	.000	.917	116	.000
	development	.063	116	.200*	.989	116	.513
Non-Familiar	economic	.150	133	.000	.958	133	.000
	social	.147	133	.000	.952	133	.000
	environmental	.170	133	.000	.891	133	.000
	development	.107	133	.001	.980	133	.052

Source: own elaboration
a. Lilliefors Significance Correction
*. This is a lower bound of the true significance.

From the Normality tests it is possible to verify that all Sig, but *development* are lower than 0.05 what leads to the rejection of the null hypothesis. In this case, in order to get some valid results the theory (Pestana & Gageiro, 2005) suggests for samples with less than 30 cases the adoption of the non-parametric tests. However both groups present a number of cases above 100. According to the same authors, it is possible to realize the *t test* without the normality distribution and the results present statistical validity.

Next step is to test the following hypotheses:

H_0: $\mu_{group\ 1} = \mu_{group\ 2}$ – *The means on familiar and non-familiar firms do are not different*

H_1: $\mu_{group\ 1} \neq \mu_{group\ 2}$ – *The means on familiar and non-familiar firms do are different*

According to the results presented in table 7-3 do not exists evidence of differences on the variances. In order to verify the (in)equality of variances we have to compare them by following the hypothesis:

H_0: $\sigma^2_{group\ 1} = \sigma^2_{group\ 2}$ – *where* σ^2 *represents the variance of each variable.*

H_1: $\sigma^2_{group\ 1} \neq \sigma^2_{group\ 2}$

Table 7-3. Independent sample test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
economic	Equal variances assumed	1.510	.220	-1.482	247	.140	-.10840	.07315	-.22917	.01238
	Equal variances not assumed			-1.468	229.920	.143	-.10840	.07384	-.23034	.01355
social	Equal variances assumed	.968	.326	.502	249	.616	.03508	.06982	-.08019	.15035
	Equal variances not assumed			.504	246.902	.615	.03508	.06961	-.07984	.15001
environmental	Equal variances assumed	.003	.956	-1.088	249	.278	-.10719	.09852	-.26984	.05547
	Equal variances not assumed			-1.088	244.570	.278	-.10719	.09851	-.26984	.05546
development	Equal variances assumed	.016	.899	-1.076	247	.283	-.06104	.05670	-.15466	.03258
	Equal variances not assumed			-1.073	238.867	.284	-.06104	.05689	-.15497	.03290

Source: own elaboration

Considering Levine's test result, all Sig are higher than p=0.05. These results do not allow to reject the null hypothesis, so one cannot argue the existence of differences on variances.

Taking into consideration the results of *t test* for both p=0.10 or p=0.05 the null hypothesis are not rejected. These results allow us to conclude that there are no significance different attitudes towards sustainability strategies in familiar and non-familiar businesses.

As a final remark, it can be said that in this region managers (industry and construction) are concerned with social and environmental strategies, and this is not a typical concern of family owned firms. Even expecting a more responsible attitude from family firms, since those are normally local embedded, this sustainability behaviour is present in most of firms.

7.5. CONCLUSION

In this chapter we proposed to compare some strategies in familiar and non-familiar businesses. The strategies here analysed were sustainability. In a global perspective the results were interesting, because it was possible to conclude that there is proactive sustainability approach. On what concerns strategies, there are no differences between family and non-family businesses. Even being possible to find some authors defending a different behaviour between family and non-family businesses, due to the regional roots, and/or regional embeddedness.

It is also important to notice, as mentioned above familiar firms in and of themselves are not a homogeneous group. In order to have really comparative results it would be necessary to consider sectors characteristics, external environment factors, and even internal ones, such as generations of families in a firm and/or the degree of commitment of each employee to firms' objectives on sustainability strategies.

As main conclusion with this chapter, we can argue that unlike most studies refer there are no significant differences on sustainability strategies between family and non-family firms in the construction and industry sectors in the region of *Vale do Sousa*. That does not mean that there are no differences at all between family and non-family firms. We can only argue the inexistence of those differences in this particular case. If we consider a different activity sector or even a different classification of family businesses the results might be different.

This chapter suggests the necessity of a widely definition for family businesses (maybe a definition according activity sectors) but as the European Commission did by defining the figures to classify a firm as micro, small, medium-sized or large it would be interesting to find a single definition of what is a family business. After that it would be possible to compare some results

across countries, and activities sectors. Also important for this comparison is the external environment where the studies are carried on.

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8. WHY ORGANIZATIONAL POLITICS IS GOOD FOR CORPORATE ENTREPRENEURSHIP? SOME CONCEPTUAL FOUNDATIONS

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ABSTRACT

This chapter applies an organizational politics research to explore boundary conditions for traditional assumption of the management and entrepreneurship literature. Based on the assumption that organizational politics is multidimensional construct – we attempt to answer the following research questions: What is an organizational politics and does it matter in different environments? What drives organizational politics to lever organizational effectiveness? To answer these questions, we bring together theory at intersection of strategic management, organizational behaviour and organization and management theory.

Overall, our study sheds lights on why positive politics takes place in organizations and extends research on firm's performance? More broadly, this chapter provides a contribution to knowledge on the contingent value of organizational politics and how managers manage political resources? What is the relationships among organizational politics, corporate entrepreneurship, firm's performance and task environments? In adopting an organization level perspective our intent is to reframe existing discourse via greater appreciation of organizational and environmental contingencies in which positive organizational politics is embedded.

KEYWORDS:

organizational politics; corporate entrepreneurship; firm's performance; task environment

JEL CLASSIFICATION:

M0, M19

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8.1. INTRODUCTION

The main objective of this chapter is to explain the strategic role of organizational politics in entrepreneurial organizations operating in turbulent environment. Among the specific research aims there are: (1) analysing and describing organizational politics and corporate entrepreneurship as a strategic drivers of value creation, (2) defining the relations between organizational politics, corporate entrepreneurship and performance measured both with objective and subjective measures.

Scholars representing various disciplines and coming from various research traditions have been using different constructs for explaining organizational politics, and frequently they simply described different phenomenon. As a result, we are facing fragmented, incomprehensive and inexhaustive knowledge base concerning organizational politics, especially in the field of organizational science. Hence, we suggest to integrate the current literature dealing with organizational politics. Our general idea is to build a concept of organizational politics referring to whole organization, not forgetting about individuals as a resource of politics, which is the main focus of psychology, and where the traditional reference of politics comes from.

8.2. MODEL DEVELOPMENT

In this sense, our concept is more comprehensive than to-date approaches used in prior studies. This, as we are expecting, will allow to combine different theoretical approaches, constructs and models of organizational politics. We can posit further broad consequences for measurement and theory verification. Most methodological analyses concerning politics were carried out from the point of view of the psychological or social sciences perspectives, while the achievements in strategic management and organizational entrepreneurship were largely ignored. That is the reason why organizational politics demands operationalisation as a strategic resource and comparative advantage.

To-date studies dealing with the relations between organizational politics and organizational performance show two dominant paths. On one hand, there are analyses describing the nature of these relations, identifying and regulating the intermediary variables, aiming at building a broad theoretical base. On the other hand, there is a whole range of empirical research, which targets at verifying the all-present fragmented theoretical models. Starting with the analysis of both research approaches, the chapter will be carried out with accordance to the framework shown in Figure 8-1. It is based on configurational and procesual approach, assuming that the firm's performance derives from certain level of corporate entrepreneurship, which in turn depends on the level of organizational politics. In order to achieve the targets it is neces-

sary to analyze managerial practices in the domain of shaping the lasting high performance by means of increasing the intensity of organizational entrepreneurship.

In the course of comprehensive scientific research on organizational politics following aspects were distinguished to support the latest lines of research: key processes occurring in an individual, important contextual influences, premises for group politics and processes occurring in a group. The existing scientific findings in the field of organizational politics focused primarily on psychology and social psychology. What is more, the subject of analysis and measurement has been mainly an individual or a group of individuals whereas organization-wide analysis of organizational politics is virtually non-existent.

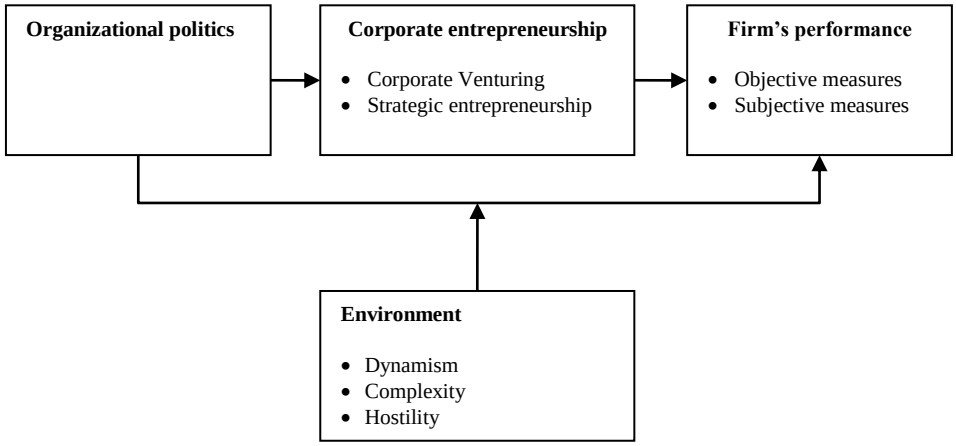

Figure 8-1. Organizational politics and corporate entrepreneurship in the environmental context. A conceptual research model

Source: worked out by the authors based on their own study.

8.3. ORGANIZATIONAL POLITICS

Politics is an important variable in organizational research which takes the attention of organizational psychologists and studied with different perspective in the organization (Jam, Khan & Muzaffar, 2011). According to Pfeffer (1981), the managers use politics as a functional tool in the organization to get the work done through political environment. But the others said, individuals involved in politics to achieving their self interest (Cropanzano et al., 1997). In earliest Mintzberg (1983, p. 172) defined organizational politics as *"individual or group behaviour that is informal, ostensibly parochial, typically divisive, and above all in a technical sense, illegitimate-sanctioned neither by formal authority, accepted ideology, nor certified expertise"* (Danaeefard, Balutbazeh & Kashi,

2010). Another definition of organizational politics is *"organizational politics involves actions by individuals, which are directed toward the goal of furthering their own self-interests without regard for the well-being of other or their organization"* (Kacmar et al., 1999). Gandz and Murray (1980) said *"a subjective state in which organizational members perceive themselves or other as intentionally seeking selfish ends in an organizational context when such ends are opposed to those of other"*.

The literature on organizational dialectics might provide a good starting point to advance our understanding of organizational politics dynamics. Over the last years, an increasingly number of researchers have adopted a dialectical perspective on organization, strategy and management (Bledow et al., 2009; Farjoun, 2002; Levis et al., 2002). These studies highlight the richness and scope of a dialectical perspective of organizational politics. Dialectical perspective underlines that organization is divided into mutually complementing and contradicting elements. From behaviour view of the firm an organization is a specific political arena of conflicting goals and interests (Cyert & March, 1963; Mintzberg, 1985). Such complexity requires reconciliation processes and organizational politics. In other words, we argue that organizational politics is a process which, together with organizational learning, organizational experimentation, organizational improvisation, and self-organization, is necessary for organization's flexibility, and in consequence long-term firm's performance. Saying so, we argue that organizational politics is very important driver of adaptation and innovations as levers of organization's growth.

Following earlier definitions (Cropanzano, Kacmar & Bozeman, 1995) we propose that organizational politics is the phenomenon expressed in attempts to exert a social influence on people who can be a source of benefit used to support and protect the interests of the entity exerting the influence. Despite the negative tone and feel to the discussion of organizational politics, there is small but growing belief that a more positive approach to political behaviour is possible and worthwhile (Block, 1991; Egan, 1994; Kurchner-Hawkins & Miller, 2006; Pettigrew, 1973). Organizational politics should be conceived as a continuum of behaviours that range from negative to positive (Sonake, 2013). Such approach may clarify the issue and overcome the stereotype organizational politics as negative. Following these ideas, we propose working definition of organizational politics: (1) an exercise and use of power and influence that primary occurs outside of formal organizational processes, systems, routines and practices, (2) based upon influence tactics designed to further self and/or organizational interests, (3) aimed at reconciling potentially competing interests, (4) strategic and focused on achievements, (5) optimistic approach that has at its core a belief in a positive vision of the organization's future. This definition increases the opportunity to view the organizational politics as a force for firm's performance, as a way to influence organization's positively and bring about productive change.

A good starting point to capture a multidimensional nature of organizational politics is a modified version of conflicting various framework which the leadership space. It distinguished four organizational domains that is (1) control for doing things right, (2) collaborate to doing things together, (3) compete for doing things fast, and (4) create for doing things first (Cameron et al., 2007). Overall, the implication coming from this body of work is that, in order to encourage corporate entrepreneurship and innovation managers need to recognize the organizational politics factors that foster or hinder different aspects of firm's performance. This, however, coincides with a lack of consensus concerning the definition and operationalisation of politics on organization level. So far, researches have mostly examine the individual and team political behaviour in the work context (Chang, Rosen & Levy, 2009; Miller, Rotherford & Kolodinsky, 2008). The empirical evidence at the level of organization is still very scarce. We argue that the field of organizational politics should specifically be concerned with the organization level, and thus also need to address the organization itself – beyond the individuals and teams in it (Bratnicki & Kulikowska, 2014).

Despite the negative tone and feel to the discussion of organizational politics, there is a small but growing belief that a more positive approach to political behaviour is possible and worthwhile. Malan and Bredemeyer (2002, p. 10) argue that the best of politics is about working to achieve consensus, to effectively align organizational members through integration of interests, and persuasion and influence. Egan (1994) refers to positive politics as a process where players lobby for the agendas that they believe will advance the firm's performance. Block (1991) describes positive politics as enlightened self-interest that begins with articulating a compelling, lofty, and strategic vision. Pettigrew (1973) lays out a position in which politics is about setting goals, and generating support for achieving them and managing the distribution of resources. Political behaviours that are associated with positive organizational politics are: serving a positive vision of the future, achievement oriented, collaboration and trust building, and working to ethical standards (Kurchner-Hawkins & Miller, 2006).

Following these ideas, we propose, that positive organizational politics is (1) an exercise of power and influence that primary occurs outside of formal organizational processes, systems, routines and practices, (2) based upon influence tactics designed to further self and/or organizational interests, (3) aimed at reconciling potentially competing interests, (4) strategic and focused on achievements, (5) optimistic approach that has at its core a belief in a positive vision of the future (Kulikowska-Pawlak & Bratnicki, 2014). This working definition increases the opportunity to view the politics as a force for firm's performance, as a way to influence organizations positively and bring about productive change.

Various conceptualization of organizational politics have been suggested, but most have treated organizational politics as a uni-dimensional construct,

arguing that positive organizational politics is a low-level reflective latent variable model. To avoid the omission of explicitly specifying the higher – order dimensionality of the focal construct – a key factor contributing to the misspecification of measurement models in strategic management research (Podsakoff, Shen & Podsakoff, 2006) – we hypothetically that organizational politics is type II (reflective – formative) hierarchical latent variable model (Becker, Klein & Wetzels, 2012).

It should be noted that a key requirement for defining and operationalising multidimensional construct is that they should be derived from theory and theory should indicate the number of dimensions and their relationship to the higher order construct (Johnson et al., 2012). We suggest a multi-dimensional conceptualization of positive organizational politics that is composed of four interrelated but conceptually distinct dimensions: planning, learning, improvisational and entrepreneurial. This view is expressed in the following proposition.

Proposition 1: Organizational politics is multidimensional construct

8.4. ORGANIZATIONAL POLITICS AND CORPORATE ENTREPRENEURSHIP

Entrepreneurial ideas are a key component of organizational entrepreneurship. On the other hand, lobbying is an extremely important aspect of organizational politics. Following this idea, you can hypothetically assume that there is the relationship between organizational politics and corporate entrepreneurship in terms of the emerging organizational outcomes, such as starting new, enterprising ventures or strategic renewal. Organizational politics is an important aspect of corporate entrepreneurship (Prasad, 1993). Participants of organizations involved in this process discover and take advantage of opportunities, trying to ensure public support for new ventures. They usually operate within bureaucratic structures, apply multiple techniques to influence other participants in the organization (e.g., persuasion or conflict resolution). Assuming that organizations are political coalitions, internal entrepreneurs are forced to negotiate, seek compromise and use personal relationships, especially in circumstances of uncertainty and different preference for strategic choices. As a result, corporate entrepreneurship is full of coalition building, lobbying and manoeuvring of different kind in social networks in the organization (Ocasio & Joseph, 2005). Thus, it can be reasonably assumed that organizational politics and corporate entrepreneurship are positively linked to each other.

Baron et al. (2012) highlight the potential role of organizational politics in initiating and developing new and enterprising ventures. They underline that politics is important for both activities taken within the framework of new enterprising ventures, as well as in the plane of links between these ventures and ex-

ternal stakeholders (e.g., venture capitalists, business angels, suppliers, and customers). The thing is that new ventures, in contrast to large organizations, do not have well-developed routines, procedures, and rules of action – this is the reason why businesses operate in the so-called 'weak situations' where there is great uncertainty about an effective actions and effective strategy. Therefore, they must rely on the interaction with other people, or a group of people, so on organizational politics.

In addition, in corporate entrepreneurship resources are usually limited, and in order to ensure survival of the venture, its founders need to cooperate. This need to avoid open confrontation forces them to seek compromise. Finally, new, enterprising ventures have no reputation or credibility, as they are unknown in the markets and often compete with well-established organizations with a recognizable brand. To sum up, corporate entrepreneurship participants are succumbed to important situational forces that urge them to use social influences, that is organizational politics. This is the reason why entrepreneurs having high political skills are more effective in performing tasks playing a key role in the success of the new venture. Influencing others is particularly important in obtaining the necessary resources, in negotiating with a wide variety of other people (e.g., such as venture capital fund, business angels, suppliers, customers), or in searching support for the introduction of new products or services. To sum up, organizational politics is a critical factor of the survival and success of new ventures. Thus, according to earlier suggestions (Prasad, 1993), and recent findings (Baron et al., 2012), the foregoing arguments suggest the following:

Proposition 2: Organizational politics and corporate entrepreneurship have a positive relationship.

8.5. CORPORATE ENTREPRENEURSHIP AND PERFORMANCE

The notion that corporate entrepreneurship increase the level of organization performance has been added to the growing body of research on entrepreneurial orientation vein (Rauch et al., 2009; Zahra, Jennings, & Kuratko, 1999). This is true, but only to a limited extent, because it may also be that entrepreneurial orientation is only predisposition to different corporate entrepreneurship activities (Dess & Lumpkin, 2005; Miller, 2011; Short et al., 2009). Entrepreneurial orientation is the key construct in the entrepreneurship literature (George, 2011). This construct has its roots in the work of Covin and Slevin (1989) who theorized that the three dimensions – innovation, proactiveness, and risk-taking – act together to comprise a basic strategic orientation. The point is that the high performance almost certainly arises as function of the corporate venturing (bringing new business to corporation through internal corporate venturing, cooperative corporate venturing, and external corporate venturing) and strategic entrepreneurship (innovating in the pursuit of competitive advantage manifested

in firm's strategy, product offerings, served markets, internal organization, and business model) as various forms that corporate entrepreneurship can take (Morris, Kuratko, & Covin, 2011). These arguments suggest that organization with higher level of corporate entrepreneurship are more likely to be effective, leading to the following proposition. In sum, we propose:

Proposition 3: Organizational politics has a positive indirect relationship with firm's performance through the corporate entrepreneurship: organizational politics is positively related to corporate entrepreneurship and corporate entrepreneurship is positively related to firm's performance.

8.6. THE ROLE OF ORGANIZATIONAL ENVIRONMENT

The environment in which firm operates in combination with organizational context, leads to a variety of potential organizational politics activities. What is not clear, is how environmental dynamism, hostility and complexity impact organizational relationships between positive organizational politics and firm's performance. Researchers are now delving with increased focus into the contextual factors that change the nature of the relationship between organizational creativity and various manifestations of organizational performance. The different measures that have been used in strategic management theory and corporate entrepreneurship theory to describe the task environment fall generally into three categories (Dess & Beard, 1984; Sharfman & Dean, 1991) for a detailed review: dynamism, hostility, and complexity.

By formally recognizing and giving explicit attention to environmental dynamism, hostility, complexity, three conditions under which the relationship between organizational politics and firm's performance may be more or less pervasive, we provide a more complex and nuanced understanding of the association between organizational politics and its outcomes. Taken together this view represents a welcome palliative to research that emphasizes firm-level effects by highlighting the higher-order influences on organizational politics action in these environments.

Viewed together, these research findings indicate that environment influences several aspects of organizational politics. From the previous analysis, it is also apparent that environment studies designed at the organizational level of organizational politics are absent. Due to lack of organizational politics and environment research at present, we extend the strategic management and organization and environment findings to organizational politics.

Viewed together, these research findings indicate that environment influences several aspects of entrepreneurial behaviours and, hence, important elements of corporate entrepreneurship. From the previous analysis, it is also apparent that environment study designed at the organizational level of politics is relatively rare. Due to relative lack of organizational politics and environment re-

search at present, we extend the corporate entrepreneurship and environment findings to organizational politics. The following three propositions capture these moderation effects:

Proposition 4a: Environment would moderate the relationship between organizational politics and firm's performance, that high levels of dynamic, hostile, and complex environment would be associated with a stronger relationship between organizational politics and firm's performance.

Proposition 4b: Environment would moderate the relationship between organizational politics and corporate entrepreneurship, so that high levels of dynamic, hostile, and complex environment would be associated with a stronger relationship between organizational politics and corporate entrepreneurship.

Proposition 4c: Environment would moderate the relationship between corporate entrepreneurship and performance, so that high levels of dynamic, hostile, and complex environment would be associated with a stronger relationship between corporate entrepreneurship and performance.

8.7. CONCLUSION

The proposed research meets the criteria of the basic research because they aim to gain new knowledge about fundamental phenomena and observable facts, without any direct practical application or use in mind. The presented chapter is a kind of continuation of research on organizational politics, especially in a psycho-social trend of the organization theory. The mushrooming literature on high performance organization argue that a viable organization is key to organizational health (Bratnicki, Kulikowska-Pawlak & Dyrbuś-Graca, 2013, p. 10; de Smet, Schaninger & Loch, 2007). In particular, we think that organizational members and the organization as a whole seek to reconcile different interests, view-points, and controversies by organizational politics and involves the application of human energy to the development of something new and that creates some kind of value. In other words, organizational politics is the proactive component of organization's survival and growth. It challenges the conventional wisdom that politics has a destructive power for firm's performance.

The second pillar is the current scientific achievements in the field of corporate entrepreneurship. Another important contribution is to combine these two research directions on the basis of management. As far as we are aware, this is the first project of research on organizational politics at the level of the whole organization in Poland. The originality of the research requires developing new tools for measuring both organizational politics and corporate entrepreneurship. The findings of the research done so far show that measurement and evaluation of politics is done primarily at the level of individuals

or groups of individuals. Meanwhile, politics is hardly ever considered at the level of the whole organization. The whole has enormous practical value as guidelines for managers of contemporary organizations will be formulated, suggesting how to revive entrepreneurship strategically in order to increase firm's performance operating in contemporary turbulent environment, and how to diagnose conditions of organizational politics.

A thorough review of theories and scientific research, paying special attention to the latest fields of study on organizational politics, allowed to decide whether to isolate the interesting connections of this process with corporate entrepreneurship, firm's performance and environment. Examination of these interdependencies at the level of an organization, rather than of an individual or group is definitely exploratory in its nature. The achievements in research on politics in organizations significantly contribute to understand this organizational process, more on the ground of psychology and social psychology, rather than of the theory of organization and management. Hence there is a need to go beyond the variables used so far, which may be beneficial to understand the content, factors and conditions of organizational politics taking place in organizations better.

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9. PROBLEM ASPECTS OF INNOVATIVE ACTIVITY OF INDUSTRIAL ENTERPRISES

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ABSTRACT

Innovative active enterprises are often faced with the output of a new product on the market. Often failures take place during the development phase due to incomplete or incorrect data analysis of the market. The article examined more detail given problem using the tools of logistics.

KEYWORDS:

innovative activity of industrial enterprises in Ukraine; competitiveness estimation of new product; logistics

JEL CLASSIFICATION:

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9.1. FORMULATION OF THE PROBLEM

New economic conditions aggravated businesses competition in both the domestic and foreign markets. The effects of the financial crisis, inconsistent government policies to protect domestic producers, a high level of moral and physical deterioration assets and other factors combined resulted urgency of the problem providing the competitiveness of enterprises.

Particularly acute problem of competitiveness becomes for industrial enterprises. Due to defective management, imperfection business processes, product quality requirements of this sector of the economy and other reasons, a large number of industrial enterprises were not prepared to adequately active behaviour in the market.

Nowadays industry is regarded as the most complex of which depends on the competitiveness of goods and services both in the domestic and international markets. According to the State Statistics Service of Ukraine (SSS 2014), the complex includes 48,103 active enterprises. The cost of property and equipment industry is 1101199 million, the number of workers it is more than 3 million people.

The third and fourth technological modes dominate in industry. Their share in the industrial production is 95%. The bases for these modes are metallurgy, chemical industry, light industry, fuel and energy complex, most branches of engineering. Share fifth and sixth technological structure does not exceed 5%. The bases for these modes are the electronic products, computer, fibre optic equipment, software, telecommunications, robotics, information services, and biotechnology.

Industrial enterprises are the worst hit by the financial crisis. Due to the decline in external demand was a fall in exports of industrial products, the decrease in production and an increase in finished goods in warehouses, reducing the financial results, the deteriorating financial condition. Although a large number of industrial enterprises reap significant profits, but the profitability of operations over the last 5 years did not exceed 5%. More than 40 % of industrial enterprises of the total in 2012 were flawed.

The export share of industrial output in GDP is about 40%, but its structure is unsatisfactory because of the prevalence of raw component which exceeds 60%. Production of high-tech and knowledge-intensive industries in total only 15%.

It should also be noted negative emerging trend, the decline in production. In 2012, over the previous year output in light industry fell by 5.3%, in manufacturing – by 3.7%, in the manufacture of wood processing and production – by 1.8%, in metallurgy and manufacture of fabricated metal products – by 5.2%, in engineering – 6%, in the manufacture of other non-metallic mineral products – by 5.8 %. For other sectors, though there was a slight increase in produc-

tion (SSS 2014), a general decline in industrial production in 2012 compared with the previous year was 1.8%.

The situation in 2013 is also disappointing: in January-July 2013 compared to the corresponding period of 2012, the index of industrial production was 94.7%, including chemical products – 81.1%, engineering products – 86.7%, product processing industry – 92.5%, etc. The increase in production for 7 months in 2013 was observed only in the manufacture of wood products, paper making, printing activities – 3.6% and in manufacture of basic pharmaceutical products and preparations – 19.7% (SSS 2014).

Under these conditions, it is necessary to ensure the development of innovative activity of domestic industry, which would enable them to improve, become more attractive investment, and as a consequence – to compete with foreign companies. But you must first have a clear understanding of the basic problems of development and modern tools to solve them.

9.2. ANALYSIS OF THE ACHIEVEMENTS AND PUBLICATIONS ON THE TOPIC OF RESEARCH

The study of various aspects of innovation activities have received considerable scientific heritage through the development of foreign and domestic scientists. A significant contribution to solving many problematic issues of innovation activities have such modern Ukrainian and Russian authors as Bazhal Y., Beltyukov E., Blank I., Vasilenko O., Volkov O., Voynarenko M., Goncharov Y., Denisenko M., Ilyenkova S., Yohna M., Lapko O., Mykytyuk P., Morozov Y., Ogoleva L., Pokropyvnyi S., Stadnyk V., Utkin E., Fedulova L., Filippova S., Fatkhutdinov R., Shehda A., etc.

The latest significant research on the problems of innovation activity can be distinguished works of O. Androsova (Androsova, 2007, p. 356), Y. Burennikov (Burennikov, 2009, p. 23), T. Dedilova (Dedilova, 2006, p. 20), L. Zakharkin (Zakharkin, 2011, p. 20), O. Kuzmin (Kuzmin, 2005, p. 250), L. Lysenko (Lysenko, 2010. p. 19), and E. Makazan (Makazan, 2008, p. 22).

However, an analysis of the current state of innovation in modern conditions require research into the causes and possible consequences of ineffective innovation activity of a large number of industrial enterprises is the main problematic aspects of its development. The mentioned has particular relevance for search terms the potential of providing innovative enterprise development using modern tools to create new products and economic direction of the vector to sustainable growth.

9.3. THE PURPOSE OF RESEARCH AND THE PRESENTATION OF THE BASIC RESEARCH MATERIAL

The purpose of research was to analyze the problematic aspects of innovative activity of industrial enterprises in Ukraine and the place of logistics in creating a new product. According to the legislation of Ukraine innovative activity – is an activity that directed to the use and commercialization of research and development and leads to the release of new competitive products (services). In the works of the most respected experts in the field of innovation paid much attention to this process, and the process of developing a new product collectively comprising the steps of studying the market situation and idea generation to output real product to market. During this time, the organization has the potential options, receives information from the consumer evaluates the product removes from consideration the least attractive, developing product prototypes, tests and implements them in the market.

It should be noted that savings in the early stages may cause higher costs and even losses on these. Therefore intelligent policy management requires careful corresponding relation to the management of each of the business processes of new product development. The main business process of creating a new product include:

- studying the market,
- generation of ideas,
- filtration of ideas,
- verification of the concept,
- economic analysis,
- product development,
- testing the product,
- test marketing,
- launch on the market,
- evaluating the effectiveness launch on the market.

Note that in the literature reviewed process is limited to stage launch on the market. We propose to extend the traditional understanding of this new stage of the process – assessing the effectiveness launch on the market, which will analyze achieving the targets of the use of the product, customer satisfaction and time to carry out the necessary adjustments.

For a period of one to two years after the launch on the market of novelty should be in the careful attention managers. Constant monitoring of the situation of the product, such as audit achieving the targets and analysis of customer satis-

faction, allow time to identify and correct the errors and inaccuracies. Targets can be projected sales, availability of the product and so on.

Tracking Key Performance Indicators of the product output can be carried out by means of qualitative and quantitative researches. These data will help managers responsible for monitoring, promptly make appropriate changes to the product, thereby responding to market needs as much as possible reduces the risk of new product failure.

An effective method is also a selection of a manager assigned to the new product. In the area of his attention and control should be the entire chain – from raw material purchasing to final sales. The main task of the manager is to promptly inform management of any cases of deviation from the plans. Thus, in practice, to increase accountability of manager's motivation system can be based on achieving the targets of the use of the product and the required level of satisfaction on the basis of a period of time.

Despite the existence of profound algorithms to develop a new product failures when starting new products is quite high. This especially applies to consumer products. Approximately 80% of new consumer products and 20% of new services fail.

Denote the major causes of failure of developing new products to the market:

- increase in costs to create and promote new products,
- tightening of laws on environmental protection and consumer protection,
- reducing the profitability of new products,
- increase of market segmentation,
- globalization of competition and growth in the supply of new products,
- reduction of product life cycles.

Analysis of the reasons for the failure of new products avoids many problems and greatly reduces the potential costs. It is worth to point out that the issues that new products are commercially unsuccessful can be divided into internal and external. Front cover causes, the occurrence of which depends largely on the perception of end-users of the product. These include, first, the lack of new product obvious distinctive edge as the inevitable failure of the product, if consumers believe that the novelty does not exceed the product they enjoyed before. One possible reason for this assessment is that the specifications of the new product do not meet the requirements of the market. It's also possible that the company has chosen the wrong strategy for positioning and consumers do not see the benefits of new products. Having first problem allows identifying testing, and the second – a survey of consumers.

However, most of the causes of inefficient launching new products is internal. These include:

- inadequacy of regulations managing the development of new products,
- indifference managers,
- slow the development of new products,
- non-systemic approach to the development of new products,
- poor coordination in the development of a new product in large industrial enterprises.

New product development – a process which requires coordination of efforts of many participants, the specific program implementation. Superficial market research, segmentation errors in the absence of clear objectives and monitor the execution of the budget, the use of risky positioning strategies end in failure largely of new products on the market.

A significant factor in the failure of a new product is indifference managers who believe that the development of new products diverts scarce resources away from the existing main production range.

An important issue is also a focus on short-term profit. If managers are focused solely on the performance of current income, the new product will most likely not be executed at the desired quality.

Many managers underestimate the negative effects of low rates of development of new products. Today, when the product life cycle has been steadily declining, and technological breakthroughs in various fields have become almost daily events, delays in the market – a strategic mistake. In companies that are in no hurry to introduce new products, develop new products cost prohibitive increases. Such companies rarely win significant market share or achieve savings in production and marketing. From a commercial point of view, the performance of the enterprise is more important than management cost of the product or to achieve a better quality product. In many modern studies indicated that the delay in the output of goods for 6 months results in the average for the industry to reduce the amount of return is 33%, with budget overruns group drafting a 10% reduction in the amount of profit corresponds to only 2%.

Modern industrial enterprise constantly need new market demand, as its managers the necessary skills assessment and implementation of new ideas. It is clear that employees of small industrial firms have close relationships with each client so that they understand that their success depends on the degree of customer satisfaction. But with the consolidation of its firm connections with consumers weakened, senior managers do not have regular contact with customers and employees low levels. The organizational structure of the company's growing more and more complicated and prioritizes issues of internal admini-

stration, which inevitably leads to a weakening of attention to customer problems.

Large industrial companies have a high level of functional specialization and usually geographically separated. Employees of the departments of sales, production, procurement, research and development are subject to different managers. Each service, each department has not only corporative, but also their own goals and develop their own culture relations. Thus, a significant problem the company is sharing information, communication between functional departments and prioritizing areas of their activities. Not surprisingly, a large number of innovative projects that are carried out on large industrial plants are closed, without having to hit the market.

As an example of the problem situation we present results of our investigation of a number of large industrial enterprises of automobile industry of Ukraine – equipment manufacturers throughout the period of 2008-2010, performing innovation projects. The study revealed that work on the implementation of the order took an average of 40% of the time, the rest of the time was spent on other stages (stopping in the fault divisions – 22%, agreement and approval of the project – 24%, authorizing transactions – 14%). This example is just a special case, and make serious generalization based on the existence of a number of other factors would be wrong. However, it cannot confirm the fact that the extremely important task of modern management of any industrial enterprise is the improvement measures for the development of a new product in terms of coordination between the participants in the process, especially within the organization.

Quality control process creation and launch of new products is not only important for new businesses that are trying to start a new product, but also for effectively working for many years organizations. Traditionally, work on a new project starts with the department of research that highlights promising idea. The study takes several months , and then developed a technology component of the product. When the design phase is completed, the project is sent to the production department. At each of these stages may delay associated with non-compliance and operations departments all sorts of delays. For example, the production department can send a draft for revision, citing the inability to manufacture the existing technology, resulting designers will spend some time on achievements of the project. Once finally on the market, the new product is likely to disappoint commercial staff, because the idea has lost its novelty, and the product will offer consumers no new benefits. As a result, the functional departments will accuse each other of incompetence. Preferably, the problem of coordination between divisions arises from the lack of a single centre of administration and decision-making processes are integrated into all new product development. That is why there is a huge poorly managed and poorly structured flow of incoming and outgoing information which, in turn, leads to poor performance of a particular process.

A key problem that arises due to the presence of all these difficulties is long, uncompetitive release dates of the new product in today's competitive environment which is unacceptable.

All these and many other problems in the development of a new product can lead to that business or uncompetitive product release, or not be able to release it. This, in turn, damages for loss of profits due to the deteriorating position of the company and the market.

In general we can formulate the following main consequences of failure for the company related to inefficient release of a new product:

- freezing of funds spent on raw materials to create products unclaimed market,
- losses from inefficient investment in the product,
- loss of market opportunities for the company as a result of delays in bringing to market a new product,
- failure to achieve the strategic goals of the company.

This way, the managers' key task is to create conditions that would ensure the innovativeness of its activities in managing assortment portfolio reduced the risk of faulty manufacture or unclaimed product market, reduced development time of a new product.

It should be noted that the task of developing a new product the company may decide to use the principles and tools of logistics. In view of outlined challenges and opportunities of logistics, you can define the basic provisions that highlight the role of logistics in the process of creating a new product:

- advancing requirements not directly to the quality of products, and to the system of product creation process, logistics ultimately designed to ensure predictable and stable quality, while reducing the development of new products,
- logistics puts spotlight selection mechanism for coordinating the development process. This approach, establishing a clear area of responsibility and motivation of managers remove their indifference and the risk of cross-functional relationships of incoordination and practice shifting the responsibility during non-compliance of a particular task,
- logistics configures the entire system to determine and achieve the final result of innovation, using the mechanisms of scientific justification for the demand of market outcomes, thereby reducing the risk of failure of new products to a minimum,
- using existing logistics tool provides the ability to optimize the performance of the material and information flows of the process of creating a new product,

- logistics provides reliability in obtaining the results of the activities of the enterprise by duplicating parts of the business,
- logistics provides continuity of experience and expertise in the development of a new product. Having transferred the management history allows more informed approach to operations to create new products.

9.4. CONCLUSION

The systematic study of the problematic aspects of innovative activity of industrial enterprises reviews the main causes and consequences of ineffective innovation. Established that the key task of managers of the enterprise is to create conditions which guarantee its innovation activities in managing assortment portfolio, reducing the risk of production of low-quality or unclaimed product market and reducing development time of a new product. Determined the role of logistics in creating a new product, which in this process is very important since the introduction of the logistic approach to innovation activities of enterprises using the corresponding logistics tools can significantly improve the performance of the material and information flows and coordination in cross-functional level.

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10. METHODOLOGICAL APPROACHES TO LOGISTIC RISKS ASSESSMENT

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ABSTRACT

Logistics goods maintenance involves interaction with a large quantity of industrial and technological factors that lead to a manifold increase in the number of transactions in logistics, and with them, increasing the number and size of the various risks that may be classified as logistic.

This chapter considers classification features of logistic risks and methodological approaches to risk evaluation.

KEYWORDS:

logistic risks; risk assessment; loss estimation

JEL CLASSIFICATION:

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10.1. INTRODUCTION

Logistic processes, like other business, are subject to random factors which are called stochastic processes. The effect of management of these processes is the result not only of administrative decisions, but also a factor of random events, which impact is quite difficult to predict. That is the dominant situation when making logistics solutions is uncertainty.

As in every functional area, in the logistics system there is a set of specific risks. Reducing their size depends on the solution of a number of pragmatic issues, such as, for example, a determination of the type of risks that may arise in the performance of logistics operations and in functioning of logistic system.

To build an effective risk management system you must mark the very subject of management – a risk. A risk should be understood as the probability of an unfavourable situation of failure or industrial, economic, financial, or other organization activity. It should be noted that among the main causes of risk it is not only the statistical possibility of an unfortunate situation, but also three other factors of external and internal logistics environment: uncertainty, randomness and countering. Risk is the probability of an event that involves occurrence of loss. Reliability is one of the principles of logistics.

There are following risks of logistic system:

- commercial risk. It is expressed as a disruption of supply, loss of production, violation of terms of delivery, failing financial obligations, loss of income by irrationality procurement, transportation, storage and more,
- the risk of property loss due to poor environmental conditions, including natural disasters,
- risks appearing due to theft of inventory items, including hijacking vehicles,
- the risk of civil liability which arises due to the damage caused to individuals or legal entities in the process of logistic activities,
- technical risks are associated with the operation of technical means in the logistics system.

Risks and associated property damage can largely be reduced by the work of the staff employed in the logistic process (Kondratenko & Lobashov, 2012).

The main reasons of risk are three environmental factors that define the different situations or set of circumstances: the uncertainty, randomness and countering, which must be considered, anticipated, planned, and, if possible – reduced, mitigated and prevented.

Uncertainty is considered as the sum of circumstances that can be predicted in advance, but it is impossible to determine how much they affect the resulting performance of logistics activities. Randomness includes circumstances that may arise regardless of the overall situation in the majority of cases that occur under the influence of environmental factors.

Countering is an intentional resistance to the circumstances and participants logistics process of its implementation (Kalchenko, 2000).

To reduce the significance of adverse events is usually a system of 'risk management', which includes a number of following activities.

10.2. RISK IDENTIFICATION

Risk identification involves the determination of the sources of risk, their species, size and probability of possible loss. The most common are logistic risks associated with the movement of goods following stages: production, storage, labelling and packing, consolidation and disaggregation, transportation, documentation, calculations and distribution:

- risks directly related to the transportation of cargo, including fires, car accidents, theft or loss of the vehicle, explosions, damage during loading, packing, unloading, receiving goods, loss or damage of packaging, the loss or misuse of documents, negligence of the personnel,
- risks affecting the cargo from without: accidents, climate, government prohibitions, insolvency or bankruptcy of subcontractors, errors in registration procedures of payments, delay in transit, loss or damage during storage, storage and other operations in the warehouse and in preparation for transport, high cargo concentration and low skilled workers,
- risks affecting the external objects through the incidents of cargo: victims of accidents, damage to the property of the contractor, damage another's property and customs risks,
- other risks, the costs of rescue and accident; liquidation of consequences, costs of attorney and surveyor and other expenses (Oklander, 2008, p. 346).

Experts can identify risks before they occur. It is important to distinguish the effect on the value of risk factors. These risks include: the type of product and its packaging, means of transport (type of transport, the number of vehicles and their features), timing and duration of transportation and transport routes.

Risk identification allows subsequently to obtain quantitative and qualitative risk assessment – evaluation the probability of hazards occurrence, forecasting the probable level of losses at cost or real terms. The obtained results allow developing the organizational and technical measures to prevent or minimize the risk of loss (Stock & Lambert, 2005, p. 797).

Many risks are associated with the properties of the product that is presented for logistics services. Such risks can be prevented or reduced at the planning stage of the contract. For this is sometimes useful to follow some rules:

- the contract presents specification (or attached) and set financial liability for breach of contract,
- terms of maintaining product quality are fixed in the contract (consistent system of standards and samples, the percentage of materials, certification of quality, safe supply of the goods),
- properly made packaging and labelling, for violations a fine is established (Zakharov et al., 2004, p. 260).

10.3. RISK ASSESSMENT AND DETERMINATION OF LOSSES

The ability to manage risk is to reduce, prevent and compensate losses that are determined after identifying the nature of the risk and obtaining its quantitative and qualitative evaluations. In assessing of risks there are used some basic approaches and a variety of methods.

According to the theoretical approach, the risk is calculated:

- on the basis of logical reasoning, empirically by extrapolation of past situations and predicting their future,
- on the basis of statistics by examining loss and establishing how often a certain level of losses appears,
- expert analysis is based on assessments and information received from the experts (Oklander, 2004, p. 312).

Choosing methods of risk assessment is most often associated with the circumstances and the required accuracy of estimation of losses from non-performance of contracts, agreements and other transactions.

Various methods of risk assessment from simple, allowing to focus on the situation to the modern mathematical methods can obtain accurate quantitative assessment of predictable dynamics.

Expert group is recommended to enrol with independent experts, among whom there is no feedback.

The procedure of calculation of risk assessment by the theoretical approach.

Here are the statistical tools of logistic risks evaluation.

In the first case risks are estimated on the basis of logical reasoning, empirically by extrapolation of past situations and predicting their future.

We assume that we are aware of the loss for the period, for example – for the year, with a few observations, for example – monthly losses.

Table 10-1. Time series of losses for the prehistory period

Observation period	t_1	t_2	t_3	…	t_n
Volumes of losses	y_1	y_2	y_3	…	y_n

Extrapolation of time series is made by using the construction of trend dynamics models. Trend of the model is used in case of presence of trend data for the period history. The equation of the trend is the dependence of *Y* losses from period *t.*

$$Y = f(t) \tag{1}$$

where:
Y – *amount of losses,*
t – *time period.*

As f (t) we choose one or a few reference features (trends). Trends are selected depending on the time series` losses schedule (Table 10-2).

Table 10-2. Trends and dynamics models

Model	Model name	Application of the model
$y = a_0 + a_1 t$	linear first-degree	A linear model is used to describe processes characterized by evenly growth (with $a_1 > 0$) or an even decline (with $a_1 < 0$)
$y = a_0 + a_1 t + a_2 t^2$	square (parabola)	Economic processes are described with some deceleration or acceleration, depending on the values of parameters
$y = a_0 b^t$	exponential	Depending on the parameter b Exponential function describing the various economic processes: rapid growth with $b > 1$, slow decline for $0 < b < 1$
$y = a_0 + a_1/t$	linear hyperbolic	Depending on the values of parameters a_0 and a_1 hyperbolic function (sometimes called reverse) describes the economic processes of saturation and decline
$y = a_0 + a_1 \ln(t)$	linear logarithmic	The model occurs as characteristic of processes with slow growth or slow decline
$y = a_0 + a_1 e^t$	exponential	The model is used to describe the process of intensive growth. Such processes are sometimes called cascade and are observed are periods of economic recovery

Generally, to receive a model several supporting functions are elected. Among those models we choose the most accurate, reliable and adequate, and thereon we carry out forecasts.

Evaluation of the accuracy of the model has two parameters – a standard error estimates S_{yx} and the coefficient of determination R^2. The model is believed to be accurate when $R^2 > 0,7$ and

$$\frac{S_{xy}}{|y_{\max} - y_{\min}|} < 0.3 \quad (2)$$

where:

S_{xy} *– standard error of the model,*

$y_{\max}$ *– maximum value of loss on the prehistory period,*

$y_{\min}$ *– minimum value of loss on the prehistory period.*

Assessment of the reliability of the model is carried out on two criteria:

Reliability overall model is tested by the Fisher's F-test. By this criterion, the hypothesis is tested:

$$H_0: \ \beta_1 = \beta_2 = ... = \beta_k = 0 \quad (3)$$

where:

β_k *– regression coefficient of the general population i = 1, ..., k.*

Reliability coefficients of the model is checked using the Student t-test. By this criterion, the hypothesis is tested:

$$H_0: \ \beta_i = 0, i = 1,..., k, \quad (4)$$

The adequacy of the model is verified on the balance. The residues` independence is characterized by their autocorrelation coefficient r(1).

For example, after the analysis of a time series losses we have received three projections (Figure 10-1). In statistics this situation called a 'fan' of forecasts. Choosing the most reliable forecast is done through a research data on the external and internal environment of the company. There are three options:

- Minimum logistic loss is along a logarithmic trend.
- Realistic prediction is a linear trend.
- Pessimistic outlook and the maximum loss is by the exponential trend.

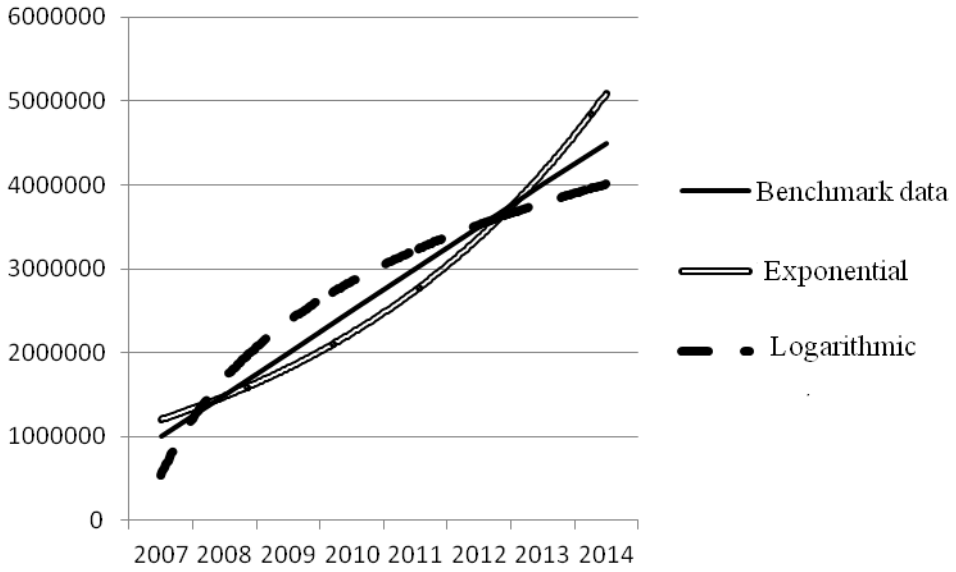

Figure 10-1. Benchmark data and 'fan' of forecasted losses

Source: The authors' own study

In the second case, the risks are assessed by examining the statistics of losses by establishing the frequency of certain level of losses occurrence.

Assume that the we know the logistic loss by the a period of observation and the frequency of losses.

Table 10-3. Losses of the enterprise and their frequency

Volumes of losses	y_1	y_2	y_3	…	y_n
Frequency of observation	n_1	n_2	n_3	…	n_k

Estimated volume of losses in future periods may be calculated by the weighted average formula.

For an accurate estimation of the projected sales volume confidence interval is built.

$$\bar{Y} - \Delta \leq Y \leq \bar{Y} + \Delta \tag{5}$$

where:

Δ *– limit of error calculated by the formula*

$$\Delta = \frac{t\sigma}{\sqrt{n}} \tag{6}$$

where:

$N = \sum_{i=1}^{k} n_i$,

t – a parameter of the distribution function determined by the reliability of the confidence interval.

In the third case logistic risks are assessed on the basis of estimates and information received from the experts.

Statistical methods allow to determine the consistency of expert opinions, the significance of obtained estimates and so on. The degree of consistency indicates the quality of the resulting estimates.

S is an expert assessment of loss of profit (increase of loss) due to the event of logistic risk.

Table 10-4. Expert assessment of logistic risks

Number of expert	1	2	…	n
Loss assessment	S_1	S_2	…	S_n

Average loss assessment that *n* experts provide is calculated as:

$$\overline{S} = \sum_{i=1}^{n} \frac{S_i}{n} \tag{7}$$

where:

S_i – *loss assessment given by i expert,*
n – *number of experts.*

The coefficient of variation in this case is:

$$\sigma = S^2 - (\overline{S})^2 \tag{8}$$

The degree of coherence of expert ratings is:

$$V = \frac{\sigma}{\overline{S}} * 100\% \tag{9}$$

where:

V – *degree of coherence between expert evaluations expressed as a percentage.*

The projected average loss assessment is given depending on the degree of coherence of expert opinions (Table 10-5). If the difference between the experts' estimates ranged within 10 percent, then the probability of risk P is 0.9 to 1. If the difference is more than 30%, then expert opinions are not consistent and the probability of risk can be estimated at the level 0.5 or lower.

Table 10-5. Expert assessments of probability of risk occurrence

V	P
[0;10]	[90-100]
(10;20]	[70-90)
(20;30]	[50-70)
(30;100]	[0-50)

Estimation results usually allow to decide on compensation arrangements, reducing or preventing the risk of logistics, which are based on current and constantly modified methods. Among them:

- diversification is the distribution of invested funds between different investment objects in the logistic system that are not directly linked thereby reducing risk and decreasing losses,
- the transfer of risk (risk reduction) is done by transmitting side (Transfer) transfers the risk of the receiving side (transfers) based on the contract,
- limitation of risk by establishing maximum amounts of costs, sales, credit, etc.
- insurance is performed by transferring or allocation of risks arising from one entity among a number of entities,
- eliminating of risk is the refusal of certain activities associated with risk.

10.4. THE MAIN WAYS OF MINIMIZATION OF RISKS IN LOGISTICS

Minimization of risks arising in a logistic system is based on a number of organizational and economic measures purposefully and preventively reduce the likelihood of risks:

- availability of accurate, timely and complete formation,
- control actions in the logistics system that reduce the likelihood of risks and their negative effects,
- the use of legal enactments for the right response to the occurrence of risk situations,
- having a developed logistic infrastructure and transport information,

- insurance processes of transportation, warehousing and cargo handling,
- prevention of further losses from risks.

10.5. CONCLUSION

Decisions on specific actions of reducing the risk should be detailed in the deep study and analysis of risk situations that are possible in the future and at the present time. Analysis of the risk situation identifies three interrelated conditions: the presence of uncertainty, analysis of possible alternatives and selection of an optimal opportunity to assess the likelihood of realization of the selected options.

Identification of the magnitude and nature of risk is a stochastic process which quantitative estimates can be obtained when using the theory of probability and statistics or through expert assessments. It should be mentioned that in a situation of risk in addition to identifying its causes and calculating the absolute values of losses or profits it is also necessary to take into account the probability of a deviation from the selected goal and the possibility of positive or negative effects of the measures taken.

10.6. REFERENCES

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