Abstract

The globalization is challenges in every organization. Undoubtedly, today’s organizations face the necessity of dealing with a growing number of various tension and risk factors-generators. Nowadays, as stressed many researchers, management studies referring to paradox theory offer new and vital insights into an array of organizational tensions. Paradoxes has been widely researched in the science literature, nowadays also in the management literature. The authors of this publication have taken into account a wide range of international research literature. The aim of this paper is to theoretically refer to the problems of paradoxes in selected areas of management. The authors indicated the contradictions emerging in the areas such as: risk management, innovation and demography. The literature on paradox theory suggests the existence of four different types of paradox: namely, the paradoxes of organizing, performing, belonging and learning.

Key words

paradoxes, risk management, innovation, demographic processes

JEL Classification: D81, G32, M21, J20

Introduction

The first studies exploring problems of organizational tensions and processes of paradoxes appear in the late 1980s (Quinn, Cameron 1988; Smith, Berg, 1987). The literature on paradox theory suggests the existence of four different types of paradox: namely, the paradoxes of organising, performing, belonging and learning (Jarzabkowski et al., 2013; Lewis, 2000; Humphrey et al. 2017) that may be found at different levels within an organisation. The paradoxes that appear contribute to the creation of innovation, both at the time of the release of tensions and of limiting them. Tensions may apply to the conflicting objectives, activities and processes, as well as to the significant restrictions. The settlement and the decision require a prior solution that would help maintain the balance between the contradictions and the intention of achieving an objective (Urbanowska-Sojkin, 2016).

In the field of strategic management, De Wit and Meyera (2007) point to the need of shaping the tension between the two opposites which are difficult to reconcile due to their mutually exclusive nature. These opposites include: logic and creativity, deliberateness and spontaneity, revolution and evolution, markets and resources, reflex and synergy, competition and cooperation, subordination and free choice, control and chaos, globalization and regionalization, as well as profitability and accountability. Those behaviors and features that maximize the likelihood of a company's major success also maximize the likelihood of a total disaster. Raynor (2007) points out that this peculiar paradox of strategy can be resolved by separating the management of permanent choices from the uncertainty management, in accordance with the principle of the required uncertainty and the strategic flexibility.

The phenomena are occurring in the enterprises environment are very important, especially in the context of aging and shrinking of potential labour force (Tupá, 2013). The demographic paradox refers to the proposition that there is an inverse relation between the number of children that people in the developed countries, but also the in the developing and emerging countries, actually have and could afford to have in view of their constantly rising real income. The term paradox results from the notion that greater means would necessitate the production of more offspring as pointed out by Thomas Malthus (Waii, 2009). The conclusion is that nations or subpopulations with higher GDP per capita are observed to have fewer children, even though a richer population can support more children.

Criticism of risk management as a result the global financial crisis and contradictions in this area (by academics and practitioners point of view) became the foundation of research in this area from the paradox theory perspective (Power 2011, Mikes 2009).
The aim of the paper was to theoretically refer to the problems of paradoxes in selected areas of management. The authors indicated the contradictions emerging in the areas such as: innovation, risk management and demography (fig. 1).

The remainder of this paper is organised as follows. Building on the existing literature, in first section we illustrate current trends in risk management research from the tension perspective. The next sections reviews the literature on paradox in innovations and demography. Discussion of our key findings and a conclusion complete the paper.

![Figure 1: Number of academic literature in paradoxes](image)

*Source: by Science Direct journals database*

1 Risk management from a paradox perspective

As stressed in the introduction, the issues of paradoxes in risk management is a study subject addressed by many researchers (Power 2011; Mikes 2009; Gorzeń-Mitka 2007, 2015, 2016, 2017; Tylec 2007 and others). Based on Lewis (2000) concept most of researchers define paradox as contradictory yet interrelated elements that exist simultaneously and persist over time. Describing the concept of paradoxes in risk management, researchers highlight its specificity and complexity, which are inherent characteristics of the process itself (Sytze Kingma 2015; Gorzeń-Mitka, 2016, 2017; Humphrey et al. 2017; Mesjasz-Lech 2012). Using division of paradoxes proposed by Lewis (2000) and extended by Smith, Lewis (2011) and Jarzabkowski et al. (2013) we can talk on paradoxes in risk management context as following:

- organising paradox - an entity seeks to create overall systems to manage conflicting goals and tensions between different parts of the same organisation (Lewis 2000, Jarzabkowski et al. 2013; Sytze F. Kingma 2015);
- performing paradox - reflects the contradictions of being required to be both productive and creative, efficient and effective, or to delegate but also to control; may arise, or be aggravated by performance management and incentive systems which encourage potentially contradictory behaviour (Humphrey et al. 2017);
- belonging paradox - arises when individuals face a conflict between their personal and social identities in the work place; may be useful in gaining a better understanding of risk management failures (for example risk manager may see a mismatch between their own, personal risk preferences and the team or group's risk culture (Humphrey et al. 2017; Gorzeń-Mitka 2017)
- learning paradox - comes from contradictions between building on existing knowledge and creating new knowledge (Smith, Lewis 2011); especially relevant to risk management as techniques and practices evolve in response to new regulations and as new financial products are created to meet changing market demands (Humphrey et al. 2017).

It is important to stress that all four forms of paradox may coexist, interact and cascade down through an organisation - from the organisational level, through to functional and individual levels (Smith, Lewis 2011; Jarzabkowski et al. 2013).

Although various aspects of paradoxes have been analysed in recent years, nowadays research on contradiction in management is one of intensively developed area. It is confirmed by, among other things, the number of scientific works that analyse problems in this area. In leading databases covering management literature (SCOPUS, Emerald, Elsevier, Google Scholar) there is an increase in the number of publications addressing issues concerning on management, risk, risk management in tension context. For instance, the number of papers on the subject discussed included in the Scopus database increased almost threefold between 2000 and 2016 (Figure 2).
Analysis (Figure 2) showed dissection of the number of publications depending on the adopted combination analyzed words. According to the search words "paradox" an almost sixfold the number of publications than in the case of search "paradox+risk" and fourfold - "paradox+management". The last combination provides the lowest number of publications. This indicates, on the one hand, considerable interest in the issues of paradox and risk in other areas than management, on the other hand, this matter on the basis of management science is in the initial phase of the interest of researchers. It should be stressed that in the period there has been a threefold increase in the number of publications in the analyzed area.

Paradox perspective in the risk management occurs most often in conjunction with the analysis of problems in economics, business and social sciences. Further in the order they are issues of decision-making and economics, econometrics and finance. Detail is presented in Figure 3.
The context of tension in risk management most often appears in connection with analysis of such problems as: organizational culture especially risk culture (Gorzeń-Mitka 2015, 2017), heterogeneity of management system or environment. The context of tension in risk management most often appears in connection with analysis of such problems as: organizational culture especially risk culture (Gorzeń-Mitka 2015, 2017) or heterogeneity of management system (Mikes 2009).

2 The paradoxes in innovations

Innovations are an inseparable element of the contemporary world. There are many authors who indicate that innovations are the determining factor for the international competitiveness of enterprises (J.Kay, G.Hamel, M.Porter, C.K.Prahalad, P.F.Drucker, et al). They define the competitive position of both countries and countries’ unions (EU) as well as the smallest regions which create them. Innovativeness is necessary, it manifests in many ways, and allows to achieve various goals. The proper course of innovative processes depends, to a large extent, on their active participants – the innovators. The rapidly growing complexity of global markets and value chains, contribute to the fact that innovativeness is not only the most important growth factor, but also a key factor impacting the management of the supply chain. (Deloitte, 2005) A paradox appears also in the field of managing innovations and innovativeness. The growing interest in these issues can also be seen for example in the growing number of publications concerning this subject. (since data base - Since Direct) (fig.2)

Innovativeness is related to long term planning, and creating innovations is expensive and includes the risk of failure. (Kay, 1996; Gorzeń-Mitka. 2007) What is most important, the effects of efforts undertaken in this field are not immediately visible. An innovation strategy constitutes the long term plan prepared in order to carry out an innovation. It is a part of a development strategy and is strictly related with it. Innovation strategies are usually complex functional strategies that should be determined on every level of the companies’ strategy, independent of its scale and the range of the companies’ activity. (Igartua et al., 2010; Pomykalski, 2001)

Figure 2: Number of academic literature in paradoxes

![Graph showing the number of academic literature in paradoxes](source: by Science Direct journals database)

According to Deloitte (2005) ‘the paradox of innovation is defined as the unwillingness or inability of a production businesses to handle actions, in terms of the accepted strategy, which create operational capabilities necessary for innovation‘. These actions aim at ensuring profitability and growth. It has been shown that in the production industry there is a significant profit barrier resulting from the failures of introducing most new products and services to the market. This paradox results from a few important reasons, including: insufficient information on the client’s needs; capabilities of suppliers; reluctance to allocate additional resources in R+D activity, and an incoherent approach to innovation in terms of actions related to products, clients, and the supply chain. To be stressed that just having a formulated innovation strategy is not a guarantee of success. Successful implementation is greatly dependent on the degree of business preparedness, and in particular, on the appropriate engagement of the management team (entrepreneurs, CEO’s) (Skibiński&Sipa, 2015). It is them, who by undertaking short and long term decisions, impact the development of the company. CEOs must determine the priorities and balance the requirements of today with the needs of the tomorrow. They must care for contemporary profits, at the same
time remembering to carry out innovative strategies for the future. Innovation is the last link in a long chain of dependencies – a problem with any preceding links results in the lack of the expected effect. Considering the problem of contemporary company structures and leadership styles, Buiksens (2013) brings up other key paradoxes of innovation. He lists: the paradox of flexibility; the paradox of failure; the paradox of business success; the paradox of knowledge; the paradox of strategic alignment.

According to Hall and Smith (2013) the paradox of innovation is the result of the complexity of reality. It is especially apparent when in order to introduce innovation, CEOs need to execute many actions, some of which seem to contradict each other, or contradict the assumed style of leadership. Here, a contradiction appears in terms of priorities, important for the development of a company and for the stakeholders, which most often expect immediate effects – looking ahead no further than 2 years (Dawidson, 2011). The paradox of innovation includes also the efforts of a CEO in terms of mobilizing the company and employees to be open for what is new and unfamiliar; motivating an efficient flow of knowledge and rewarding the best ideas, reconciling the execution of basic tasks, at the same time engaging proper human resources to projects; ensuring freedom of creativity for the employees, at the same time maintaining control in these terms. They must also promote innovations, not exposing the company to the risks of losing its profitability and market position (Hall & Smith, 2013).

It is also important to mention the paradox concerning imitation and innovation. In terms of globalization no one is safe from the pressure of competitive actions. However, introducing groundbreaking innovations, providing a long term advance over the competition, seems to be something much more difficult to achieve in the contemporary world. As Drucker (2001) stresses out, the biggest benefits deriving from the increase of productivity are related not as much to initial innovations but the improvements appearing later. Imitators may provide not only a perfected product but also one which is much cheaper.

Great technological leaps and taking advantage of more modern technologies, allow imitators to get ahead of innovators. Creative imitations focus on creating imitative products but including new functions. These imitating products include benchmarking, strategic alliances, and large investments in research and development (Brondoni, 2013).

As Krzakiewicz and Cyfert (2016) point out, imitation and innovation are not mutually preclusive, but create an integrated system of complementing features including a synergistic effect, which means that imitation should not be regarded as an obstacle but rather as a stimulator of a properly organized process of innovation.

In the contemporary world, the omnipresent pressure of innovation means that carrying out innovations should be treated as an ongoing and constant process. However, it can be seen that among some companies which achieved the so called “optimal state”, innovation in further stages of development has been given up. This state is related mainly to two issues. The first one results from the fact that on one hand innovations are a chance to survive and develop (are a necessity), but on the other hand stand for changes of the current state of being (meaning that the contemporary reality is still not perfect). The second aspect in favour of renouncing the implementation of changes in the current activity of a mature business, is the fear of reducing profits. A businessman searches mainly for process and organizational innovations, allowing to perfect the company’s manner of management and functioning, as well as improving its image. At the state of maturity, a business achieves a sort of stabilization in terms of its financial situation, employee efficiency, and the uncertainty of tomorrow. Searching for changes and implementing them should be regarded as an ongoing process (Targalski, 1999).

Scott Francisco (2010) also mentions the paradox of innovation, by noticing a conflict between today’s innovations and the innovative process. He points to the development of paradoxical relations (dependencies) between the innovations widespread in the contemporary form and the social-spatial context of innovativeness, necessary to stimulate the process of innovation. Innovations are a result of a “feedback between the technical capabilities and needs, as well as the interaction between technique, science, and the implementation actions within a company” . Innovations may be carried out at any stage, thanks to the possibility to take advantage of the camouflaged knowledge, at any time. This knowledge may be borrowed from the outside, as a transfer of technique in the form of: a licence agreement, a know-how agreement, purchasing technical machines and devices which may stimulate imitation, shared scientific and production actions, employee exchange which contributes to exchanging experiences and trainings (Bogdanienko, 2004).

Francisco (2010) suggests too, that the rapidly growing amount of information (systems for accessing and manipulating information) contributes to a lower interest in development of knowledge and creativity, which constitute the base for solving problems and creating innovations. A non-reflective striving for digitalization, improvements, increasing efficiency
and consumption, results in becoming distant from human experiences, behaviours, and values, which are the source of innovation. A negative loop of these phenomena is defined as the “paradox of innovation”.

3. Paradoxes in demographic processes.

Theories that explain the shaping of demographic processes, for example: the fertility decline theory by Caldwell, Easterlin's theory and hypothesis and the economic theory of human behavior by G.S. Becker or numerous theories of migration have become the inspiration for researches (Tupá 2013). Therefore the paradoxes in demographic processes can be found in numerous scientific researches in this scope (Skibiński 2017). The results of the study support the existence of the demographic and economic paradox, which is described that nations or subpopulations with higher GDP per capita are observed to have fewer children, even though a richer population can support more children (Balan, 2015).

There are many ways in which fertility inversely impacts economic outcomes. In the international literature Brander and Dowrick (1994) examined the effects of population growth and fertility on economic growth for 107 countries covering 1960-1985 periods. They concluded, that high birth rates cause the reduction of economic growth by means of investment effects and capital dilution.

In turn Li and Zhang (2007) examined the impact of birth rate on economic growth using a panel data set of 28 provinces in China for the period 1978-1998. Using the generalized method of moments estimator, the empirical findings of Li and Zhang (2007)'s study showed that the birth rate has a negative impact on economic growth. This finding is interpreted by the authors in the way that it supports the view of Malthus and China’s birth control policy is indeed growth enhancing.

According to Luci and Thevenon (2010) investigated whether there is a convex relationship between economic development and fertility for 30 OECD countries over the period 1960-2007. They found an inverse J-shaped pattern of fertility along the process of economic development. They concluded that there is a clear shift in the relationship between the two variables from negative to positive.

Whereas Somayeh et al. (2013) examined the effects of total fertility rate, life expectancy at birth, mortality rate and capital stock on the economic growth in 16 developed countries and 14 developing countries using panel data analysis over the period 1990-2010. Their researches showed that capital stock and life expectancy have a statistically significant positive effect on economic growth, while mortality rate has a statistically significant negative effect on economic growth in both groups of countries. The influence of fertility rate on economic growth differs for developing and developed countries. For example to developed countries, fertility rate has a statistically positive effect on economic growth, while it has a statistically negative effect for developing countries.

Social and economical transformations have recently stimulated political debates and policies on the integration of migrants in most Western and East European countries. While transnational migration studies have documented migrants’ cross-border activities there have been few empirically grounded efforts to theorise these developments in the framework of integration and status theory. Nieswand (2011) indicates based on a case study of Ghanaian migrants, integration processes and develops a theorem of the status paradox of migration, which explores the interaction between migrants' integration into the receiving country and the maintained inclusion into the sending society. It describes a characteristic problem for a large class of labour migrants from the global south who gain status in the sending countries by simultaneously losing it in the receiving countries of migration. This transnational dynamic of status attainment, which goes along with specifically national forms of status inconsistency, is what is called the status paradox of migration. By bringing together two modes of national status incorporation within one framework, the status paradox provides an innovative perspective on migration processes and demonstrates the usefulness of a transnationalist integration theory (Nieswand 2011).

Silva et al. (2006) discuss the so-called paradox of ageing process, with respect to the members of the age group 55-64 years of age. This generation is currently too young to retire, despite the length of their working lives for some in excess of forty years and high earnings, yet is too old to continue working, since employers prefer to hire younger, more flexible and less expensive workers. Furthermore, official statistics show that the longevity of this generation is higher than its predecessors, an evolution that would apparently call for a gradual increase in the retirement age.

It is worth point out on the research of "Conditions of reproductive behaviour" by Kotowska (2014). The more parting and informal relationships, the easier it is to replace generations. In countries where marriage is not a priority and where a high number of divorces are quoted are generally higher in fertility. States where the traditional approach to the family predominate have a demographic problem. Most children are born in liberal France and in Sweden. It can be concluded that the knowledge about
paradoxes in demographic processes are becoming more important for each organization especially in the face of population ageing.

Conclusion

Paradoxes may be found in various fields, both of human behaviours as well as actions of business units. Paradoxes have become the subject of descriptions and discussions in terms of many scientific research, also in reference to the behaviours of specific entities.

Undoubtedly, paradox in risk management context is a notion that resists clear classification. With respect to the conducted analyses, one should emphasize the fact that this problem has not been sufficiently explored in the area of management sciences; nevertheless, the analysis of the number and impact of leading publications indicates a growth of interest in this concept. In the author’s opinion, the results of research presented in this study may provide a basis for further work in this area.

To sum up, by learning and researching various types of paradoxes, we may better understand the behaviours of various business entities, and especially companies.

As Rokita (2007) emphasizes, contemporary organizations may be efficiently managed when managers understand the dynamics of social-cultural processes in terms of business, and solve problems in accordance with the following algorithm: identification of paradoxes – analysis of conflict, searching for a synthesis – a new paradigm – new goals and strategies – new ways of solving problems.

Therefore, identifying and getting to know these paradoxes helps to manage them, increasing the efficiency of the undertaken actions.


Literature


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