

# **IDENTIFICATION OF ORGANIZATIONAL CULTURE FACTORS INFLUENCING INNOVATION. RESULTS OF EMPIRICAL RESEARCH IN MANUFACTURING ENTERPRISES**

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## **1. Introduction**

In today's fiercely competitive environment resisting change is dangerous and innovation is the engine of change. European Commission's strategy on regional development identifies innovation as the primary source of competitive advantage for European SMEs in the face of mounting global competition [1].

Despite the numerous studies on the topic of innovation, there is still a lack of consensus as to a single definition. This is most likely due to the difficulty in settling upon an agreed upon method to measure innovation [2].

Innovation is studied at different levels of analysis [3]. At the organizational level, it represents the core renewal process and is usually defined as the development and use of new ideas or behaviors, where a new idea could pertain to a new product, service, production process, organizational structure or administrative system [4; 5]. Innovations have been often categorized into administrative (or organizational) and technological to reflect a distinction between social structure and technology in organizations [6].

Innovation process is a complex phenomenon characterized by several stages ranging from basic research to the penetration of the market with a new product [7]. There are now too many different definitions in the diverging studies on innovation and this makes the search for one even more complicated [2; 8; 9]. By taking the broadest view of innovation, rather than an exact and specific definition for innovation which every academic can agree upon innovation as a process that involves the generation, adoption, implementation and incorporation of new ideas, practices or artifacts within the organization [8; 10].

There are many factors which have impact on innovation process. One of them is culture. Its determinants influence creativity and innovation in organization. This article presents impact of culture on the development of innovations in enterprises and the results of empirical research. The aim of the empirical study was identification of factors of organizational culture which influence enterprise innovation and evaluation of this strength impact.

## **2. The impact of culture on the development of innovations in enterprises**

According to Paul Herbig [11] culture is the sum total of a way of life, including such things as expected behaviour, beliefs, values, language, and living practices shared by members of a society; it is the pattern of values, traits, or behaviours shared by the people within a region. Shared cultural norms give the people of any society a sense of their common identity and a means of relating to one another. Hofstede [12] treats culture as 'the collective programming of the mind that distinguishes the members of one group or category of people from another' and he explains that the 'mind' stands for thinking, feeling and acting.

Casson [13] insists that culture is an economic asset and an intangible durable public good. He

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states that “an ideal culture from an economic point of view is individualistic, pragmatic, high-trust and high-tension”.

Culture is likely to have a profound and continuing effect on innovation within organizations, contributing to the development of different norms, habits, and ways of working. An innovation-oriented culture appears to be extremely important in predicting future innovation and, subsequently, organizational performance [14]. The key to success in innovation lies in making sure these two critical aspects of innovation – strategy and culture – are in alignment and working together [15]. The literature on organizational innovation emphasizes the importance of culture as a major determinant in innovation performance [16; 17; 18; 11].

Existing cultural conditions determine whether, when, how, and in what form a new innovation will be adopted [11]. The social organization of a culture may either foster or inhibit technological development. It tends to operate as a source of authority, responsibility, and aspiration, thus influencing the course of technological advance and the creation of material culture. Culture unifies people’s behavior, but it may also create barriers between people, thus nowadays, innovation faces the consequences of culture for various reasons. People’s beliefs and behavior can contribute or block the process of developing and implementing new ideas [19].

Paul Herbig [11] found that those cultures which value creativity will have a greater number and quality of innovations, and those countries that reward technical ability and higher education will prosper in innovative pursuits. Often where religious and political systems are intertwined, definite cultural bias exists against technology that might affect tradition. This usually occurs in un developed, not technically progressive societies.

The results of the research concerning determinants of firm innovation in Singapore indicate positive and significant relationships between organizational innovation and decentralized structure; presence of organizational resources; belief that innovation is important; willingness to take risks and willingness to exchange ideas [8]. The cultural impact stems from the fact that coping with different situations is associated with two opposing processes – tradition and innovation – and that some cultures have an accumulated experience that prefers the former and others the latter. In other words, the openness towards new experiences varies in different cultures [19].

Companies should promote a culture that allows employees to believe in innovation, encourages risk-taking and shows a keen willingness to exchange ideas [8]. Several researchers have indicated that changing a firm’s existing organizational culture can prove a complex task [8; 20]. According to David Wan et al. [8] given the uncertain nature of innovations and their associated risks, managers should be more tolerant of failures and not be so keen on stressing a “get it right the first time” policy, which will only serve to hinder the innovation process. Employees must not be made to feel that a couple of failed efforts will damage their careers.

The culture profile of a learning organization is a “community of commitment” [21], providing a safe environment of trust, understanding, acceptance, and dialogue [22; 23]. Teamwork is a common and appreciated mode of working [24; 25; 26].

On a basis of their research, David Wan et al. [8] point out that crucial importance to organizations seeking greater innovation is the nurture and development of an innovation supportive culture. A willingness to take risks, a belief in the importance of innovation and a willingness to exchange ideas are what managers must strive to nurture in their organizations. Organizations must be prepared to accept failure as a natural consequence of encouraging greater innovation. In addition, substantial rewards and recognition should be awarded to innovative employees not only on the basis of successful innovations, but also when providing good ideas as well.

Since, 1989, Poland has been undergoing rapid, major change in all aspects of social, political and economic life. Equally rapid learning and unlearning has been a necessity spanning all levels of the society – from the state through the organization to the individual [27]. Poland is faced with the need to continue to learn at a rapid pace just to prevent the widening of the gap in economic development that still separates it from Western European countries. According to Zdunczyk and Blenkinsopp, there are still significant learning challenges ahead for Polish businesses, especially in the area of innovation.

The results of these authors' study suggest that neither Polish nor foreign-influenced companies are very supportive of higher-level learning functions, such as creativity and innovation [27]. Sztompka [28] claims that there is a more basic wall in culture of which the conduct and mentality of post-Communist people are just the symptoms or reflections. This cultural barrier has been raised by several decades of real socialism. Zdunczyk and Blenkinsopp suggest that in the context of Poland's accession to the EU, it has to be concluded that Polish companies are not equally well-equipped for competing on innovation and creativity as their western counterparts. Employees within foreign subsidiaries come to adopt the parent company's work values and thereby their working practices [29]. The challenge for Polish-owned companies is to develop their innovation and creativity potential in the absence of such an influence, through further effective assimilation of western management philosophy and methods [27].

### **3. Methodology of the research**

The aim of this study was identification of factors of organizational culture which influence enterprise innovation and evaluation of this strength impact. The survey included 86 manufacturing companies from north-eastern Poland. Questionnaire containing closed question was the tool applied in the research. Nonprobability purposive sampling was applied selecting the entities participating in subjective way so that they could be the most useful or representative. The survey was conducted in innovation enterprises that, according to the Oslo methodology, were enterprises that introduced at least one new or significantly improved product and/or one new or significantly improved technological process to the market within the last 3 years.

In most of the companies predominated domestic capital (74%), in 26% foreign capital. In the sample, 15% were micro-enterprises employing up to 9 employees, 27% – small enterprises employing 10–49 people, 31% – medium-sized companies, where employment stands at 50–250 employees and 27% – large companies employing more than 250 people.

Respondents were asked to comment on the statements concerning factors influencing organizational culture in the company by identifying appropriate assessment on a five-point Likert scale. Relationship between the declaration that thanks to innovation the firm is developing and organizational culture factors were examined using Pearson correlation coefficient  $R$ .

### **4. Results of the research**

Based on the analysis it can be concluded that the factors affecting organizational culture have an impact on innovation. The strongest and at the same time a statistically significant correlation was observed between innovation and the mission and vision of the company (Pearson correlation coefficient  $R = 0,685$ ). The high correlation coefficients allow to conclude that also creativity of employees, a strong commitment to work, open communication and clear communication encourage innovation. Strong correlations were observed also in the case of corporate identity ( $R = 0,558$ ). The obtained results allow to conclude that the regular development of innovation and the use of information technology in the flow of information and decision-making processes of innovation are also important. Another interesting aspect of the analysis is the relationship of innovation and competitiveness. Companies that treat competition as a priority, implement innovations and declare that with this the company is developing. The absence of ability to deal with conflict has a negative correlation ( $R = -0,627$ ).

**Tab. 1. Culture factors of strong and moderate impact on firm innovation  
(Pearson's correlation coefficient)**

Lp.	Factor	Thanks to innovations enterprise is developing
1	The company has a vision and a mission from which comes the need for innovation	0,685*
2	In the company work creative people	0,608*
3	In the company there is a strong commitment to work	0,603*
4	Open communication and clear communication	0,572*
5	The image of our company in the market is very good	0,558*
6	Regular work on innovation, not only when see an opportunity in the market	0,537*
7	The priority of the company is competitiveness	0,508*
8	Technologies used in the company support the flow of information and decision-making in processes of innovation	0,501*
9	No ability to deal with conflict within the company	-0,627*
10	Good knowledge about the needs and preferences of our products' users, we make research in this field systematically	0,494*
11	The innovation process in company can be divided into specific stages (phases)	0,418*
12	The company is flexible	0,413*
13	Planning innovation ahead before competitors bring them to market	0,400*
14	Entering new products into new markets, diversifying business	0,400*
15	Setting goals for innovative projects and assessing the degree of realization drawing up reports of innovative activities	0,398*
16	Management strongly supports innovation	0,378*

\* The correlation coefficient significant at the level  $\alpha=0,05$

Source: own research

On the basis of correlation coefficients was confirmed a statistically significant correlation of moderate strength between innovativeness of enterprises and a very good knowledge of the needs and preferences of the users of these products and systematic research of customers' needs, as well as entering new products into new markets and diversification strategy. Also important is the group of factors directly related to innovation, e.g. specific stages in the innovation process, innovation planning before the competitors bring it to market and setting goals for innovative projects and assessing the degree of realization drawing up reports of innovative activities. Pearson correlation coefficients are at the 0,398–0,418 level and are statistically significant. A moderate correlation was also observed between the innovation and flexibility of the company and strong support of managers.

Other examined factors determining the organizational culture of the enterprises were not positively correlated with the belief of the respondents that the company is developing thanks to innovations. These factors include the participation of suppliers in the innovation process, the lack of time to implement their ideas, teamwork, support for change, qualifications of staff involved in innovation and a large bureaucracy.

## 5. Conclusions

The results of empirical study suggest that, in order to successfully enable innovation at a given level of analysis, managers should address factors embodied in each of the core factors influencing organizational culture of innovation (among others: vision and a mission from which comes the

need for innovation, ability to deal with conflict within the company, open and clear communication, regular work on innovation). Managers should ask whether they are creating an environment that stimulates innovation in a company and are focused on building a culture that cannot be copied. It is very important to understand the key role of the soft side of the organization in innovation. The results of correlation coefficients suggest further research in order to create appropriate cultures and innovative climate.

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### Summary

This article presents impact of culture on the development of innovations in enterprises. The aim of the empirical study was identification of factors of organizational culture which influence enterprise innovation and evaluation of this strength impact. The results of empirical study suggest that, in order to successfully enable innovation at a given level of analysis, managers should address factors embodied in each of the core factors influencing organizational culture of innovation (among others: vision and a mission from which comes the need for innovation, ability to deal with conflict within the company, open and clear communication, regular work on innovation).

**Key words:** innovation, organizational culture, manufacturing enterprises.

**UD classification:** 332.145: 303.732.4

Date of acceptance 25.07.2013