

# THE SMES LIMITED CAPABILITIES IN CREATING AND ADOPTING ORGANISATIONAL INNOVATIONS. A PRELIMINARY STUDY

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**ABSTRACT.** The research objective of the paper is to analyse Small and Medium Enterprises' (SMEs) potential to create and adopt organisational innovations. Reasons for choosing such topic stems from observation that in spite of strong emphasis on proving SMEs importance in innovation processes, some significant restrictions appear. One of the areas influencing operational effectiveness is the readiness for and the ease of absorption innovations that shape and organise the internal processes. In this elaboration organisational innovations are understood as a new way of realising tasks facilitating and improving daily and strategic activities. The first research hypothesis has to some extent a controversial character. It states that the SMEs are not capable of creating organisational innovations. According to the secondary hypothesis, which extends the previous one, the SMEs are the laggards in the diffusion model.

**Keywords:** organisational innovations, adoption, SMEs

**JEL Classification:** O31, O33, L25

## 1. Introduction

The role of Small and Medium Enterprises (SMEs) in the economy is significant in terms of their number. According to the latest available Annual report on SMEs "some 20.7 million firms accounting for more than 98 per cent of all enterprises, of which the lion's share

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(92.2 per cent) are firms with fewer than ten employees” (Wymenga et al., 2012, p. 9). Nevertheless such big numbers do not convert into development and shaping the future of the national economies, especially if innovations as a driver for growth will be taken as the crucial.

Based on this shortly described background, the issue of joint analysis the SMEs and innovations emerges as interesting for researchers and practitioners. The research objective of the paper is to analyse the SMEs’ potential to adopt organisational innovations. Reasons for choosing such topic stems from observation that in spite of strong emphasis on proving SMEs importance in innovation processes some significant limits appear. It is worth mentioning that there is no one way of measuring innovation potential at SME level (Kasa, 2012).

One of the areas influencing operational effectiveness is the readiness for and the ease of absorption innovations that shape and organise the internal processes. In this elaboration organisational innovations are understood as a new way of realising tasks facilitating and improving daily and strategic activities. The first research hypothesis has fairly controversial character. It states that the SMEs are not capable of creating organisational innovations. The secondary hypothesis, which extends the previous one, states that the SMEs are the laggards in the diffusion model.

## **2. Literature review**

### ***2.1. SMEs and Innovations***

The data from Eurostat, R&D statistics, and OECD-MSTI 2004 computed by R. Veugelers (2008) show among others that:

- about 75% of R&D expenditures in the EU are accounted for by large firms,
- EU SMEs are less R&D intensive than large EU firms,
- lower percentage of EU SMEs successfully innovate as compared to large firms, both in services and in manufacturing.

It leads to the question: are SMEs naturally disadvantaged in innovation? Results indicate negatively correlation, however not only the size matters, but also the type of market and technology. In spite of this the biggest obstacle to innovate is weak access to finance. The second identified barrier is lack of necessary skills to create innovations. One

should keep in mind that presented conclusions are relevant to R&D that refer mostly to technological aspects of innovations.

The theory lying behind the statements (assumptions) indicated in Introduction emerges from the diffusion model of innovations elaborated by M.E. Rogers. Choosing Rogers's concept as a methodological basis is justified by its adequate explanation for non-material innovations to which organisational innovation belongs. Moreover the author formulated one of the generalisation connected to the research questions: larger organisations are more innovative (Rogers, 2003, p. 409).

Choosing organisational innovations as a research object is warranted by the notion that they co-evolve with technological change. This view is described by K. Sapprasert (2010).

## ***2.2. Organisational innovations as the research object***

In the literature there are several definitions of the term "organisational innovation". As K. Sapprasert (2010, p. 3) notes "organisational innovation is often more broadly defined in management/organisation studies as an adoption of »any« novelty in an organisation". According to the OECD it is "the implementation of a new organisational method in the firm's business practices, workplace organisation or external relations" (OECD, 2005).

In the similar manner G. Hamel (2006, p. 75) defines management innovation as "a marked departure from traditional management principles, processes, and practices or a departure from customary organisational forms that significantly alters the way the work of management is performed". However Hamel's proposition is dedicated mainly to managers and, as the author develops his explanations, one may state that it is suitable for big companies.

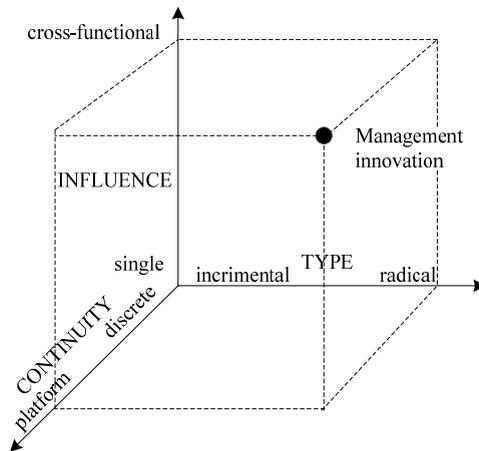
Another description of management innovation is provided by M.J. Mol and J. Birkinshaw (2006, p. 25) for whom it is "the implementation of new management practices, processes and structures that represent a significant departure from current state-of-the-art practices and are intended to further organisational goals". Their presentation of management innovation is more similar to the organisational one.

Other most common cited definitions of innovation taken from the organisational perspective according to K. Unsworth et al. (2012, ss. 1250004–2) are as follows:

- “An innovation is an idea, practice, or material artefact perceived to be new by the relevant adoption unit” (Zaltman, Duncan, & Holbek, 1973, p. 10);
- “Innovation (...) is generally understood as the introduction of a new thing or method (...) Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services” (Luecke & Katz, 2003, p. 2).

Organisational innovations can take different forms. New productions methods (e.g. lean manufacturing), new organisational approach (e.g. 5S programme), new strategic methodologies (e.g. Balanced Scorecard), new organisational structure (e.g. matrix structure) are among them. Such ‘soft’ solutions play important role in gaining competitive advantage and improving organizational performance that was described by C. Gavrea, R. Stegorean and L. Ilieş (2012) in reference to organizational structure and competitive strategy.

The proposition of management innovation types is given by M.J. Mol and J. Birkinshaw (2006, p. 27) who offer three key dimensions: radical, systematic and platform-based. This scheme (Figure 1) results from the research stating that only such kind of innovation has got the greatest influence on the firm’s competitiveness. Some examples given by the authors are: Activity Based Costing, Toyota Production System, Six Sigma, Management by Objectives.



**Figure 1. Management Innovation Dimensions**

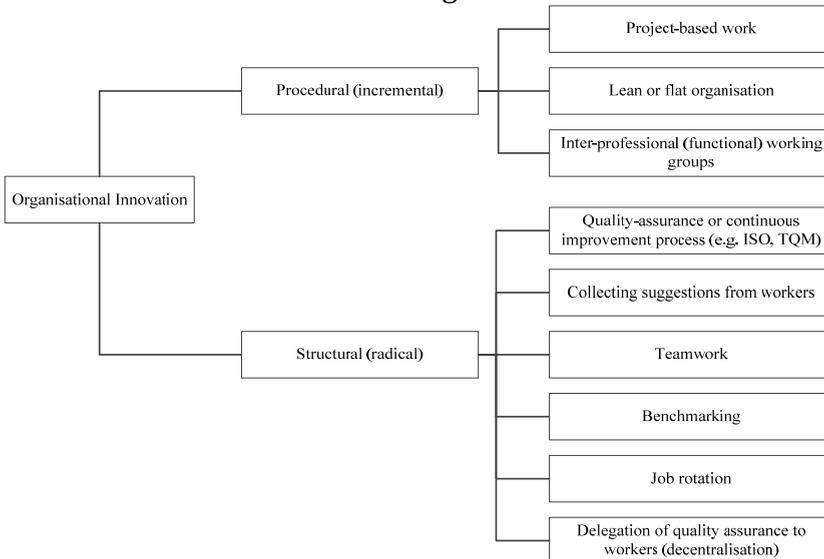
Source: elaborated on (Mol & Birkinshaw, 2006)

Another interesting classification was compiled by (Makó, Csizmadia, Illéssy, Iwasaki, & Szanyi, 2013). The authors used the proposal elaborated by (Armbruster, Bikfalvi, Kinkel, & Lay, 2008) and prepared own typology (Figure 2).

In the author’s view the possible classification’s criteria could contain: time needed for introduction, cost of replication, number and types of changes forced by innovation.

Creation of organisational innovations requires different resources. Taking into consideration the scope and scale of the organisational innovations it is possible to formulate the following types:

- small – typically perceived as a continuous improvements (kaizen), cheap in introducing, simple, easy one-time implementation, e.g. simplification of office forms;
- medium – usually refers to restructuring the routine, e.g. introduction of new procedure facilitating the electronic data workflow;
- big – requires: changes in supporting technology, time consuming, trainings, sometimes influencing organisational structure (task division), such as accounting software enabling elaboration of new reports and data correlations. This type corresponds to the Mol and Birkinshaw’s definition of management innovation.



**Figure 2. Types of Organisational Innovations**

Source: elaborated on (Makó et al., 2013).

### ***2.3. Reasons for SMEs being laggards***

M.E. Rogers (2003, p. 413) identified three independent variables influencing the organisational innovativeness such as:

- Individual (leader) characteristics represented by positive attitude toward change;
- Internal characteristics of organisational structure in forms of lower levels of centralisation and formalisation, and higher levels of complexity, interconnectedness, organisational slack, and size);
- External characteristics of the organisation (system openness).

Based upon "several hundred studies of organisational innovativeness" M.E. Rogers formulated another significant for this paper generalisation: "each of the organisational structure variables may be related to innovation in one direction during the initiation phases of the innovation process, and in the opposite direction during the implementation phases" (Rogers, 2003, p. 413).

Organisational innovations such as new methods, tools, etc. require specific resources in order to make them exist within the given organisational environment. The SMEs – as their name also indicates – have lower levels of resources which can be dedicated for elaborating or implementing managerial novelties. For this reason the managers are more careful in spending time and money for additional activities that could be perceived as an extra task to fulfil. Evidently efforts to compete, attempts to become better and better, hard work for fulfilling customers' expectations make pressure to modernise.

Explanations of the situation presented above can be defined as follows. Big organisational innovations requires scarce resources available in the SMEs. One of the most significant is lack of time for undertaking improvements resulting from a limited number of personnel. Furthermore if we bear in mind the adaptation's essentials of the organisational innovations such as a new work routine, the other obstacle occurs: difficulty of replacing old organisational habit by the novel.

The clarifications presented up to this point describe SMEs' path towards organisational innovations as long lasting. However when the decision about implementation of the innovation is undertaken, time of it incorporation is shorter than in large company.

Taking into account the characteristics of innovation receiver and the results of the study undertaken by J.K. Liker et al. (1999) on the adoption of the Japanese management system in the United States of America, other explanations appear. Depending on the receiver's: size, free resources, innovation-dependency, innovations are faster reproduced within small companies thanks to their flexibility and shorter decision making time (Liker, Fruin, & Adler, 1999, ss. 15–18).

### 3. Material and Methods

The matrix diagram is used in order to investigate relations between the typical SMEs characteristics and described above organisational innovations. This type of diagram was originally created for analysing the dependences among two, three or more variables (Cwiklicki & Obora, 2009; Mizuno, 1988). It belongs to the set of the 7 new quality tools. In the paper two dimensions are juxtaposed (L-type matrix).

The results of the analysis are given on Figure 3. The scale consists of three degrees: weak, medium, and strong relationship. Collating the SMEs capabilities and identified types of organisational innovations some significant correlations appear.

		Organisational Innovations			
		Incremental		Radical	
		Creation	Adoption	Creation	Adoption
SMEs	leader	◎	◎	◎	◎
	centralisation	○	▽	◎	▽
	formalisation	○	○	◎	◎
	complexity	▽	○	▽	◎
	interconnectedness	▽	▽	▽	▽
	organisational slack	▽	○	▽	◎
	size	○	○	◎	◎
	system openness	○	○	◎	◎

**Figure 3. SMEs and Organisational Innovations**

Source: own elaboration.

#### 4. Results and Discussions

The detailed analysis of particular element of the SMEs shows that each of them has got different effect on the creation and adoption of incremental and radical organisational innovations type. Mainly it is visible in the two kinds of innovations with slight difference (strength of relationship) in creation and adoption.

The preliminary analysis of interdependencies between characteristics of the SMEs in terms of Rogers's model of innovation creating and adoption show that incremental organisational innovations are more likely to appear in the SMEs. This is due to weaker relationships with their traits comparing with the radical innovations.

Situation changes whilst radical organisational innovations are supposed to occur. In such case the restricted capabilities constrict the creation and adoption this type of innovation.

Obtained results allow the conclusions that elaborated model, based on the secondary data, should become an input for empirical verification. The use of the qualitative tool – to which the matrix diagram belongs – admits flexibility to some extent and also certain imperfection (variation). These limitations of the study gives some indications for undertaking research with regard to different parts of the model. A specific future research plan should be aimed at examination of each of the particular item, For example the problem of leadership in creating and adopting of innovation, its interactions with other component, etc. should be investigated. Data sources should come from primary research which should identify:

- a type of organisational innovation (incremental or radical),
- the strength of relationship between SMEs' characteristics and innovations' type,
- an importance of particular SMEs dimension (leadership, centralisation, etc.) for organisational innovations creation and adoption.

The suggested methodology for such research is a triangulation of the methods. Quantitative methods should be used in order to gather data statistically valid and representative. Qualitative methods should be employ in order to describe a specific organisational innovation which occurs in the given enterprise.

## 5. Conclusions

In the paper the two main research hypothesis were formulated. The first one states that the SMEs are not capable for creating the organisational innovations was theoretically verified. According to the second one the SMEs are the laggards in the diffusion model, and as a consequence they are more appropriate for adopting innovation, was partially confirmed. The evidence from the literature do not fully allow to conclude that such reasoning is methodologically verified and applied to all the SMEs. Because organisation are different in terms of identified characteristics such as size, level of centralisation, etc., the preliminary analysis is, as its name states, just a proposition which should be further verified. Another proposition is to reconsider the set of identified variables.

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