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## The role of opportunity- sensing and learning processes in shaping dynamic capabilities in Polish enterprises<sup>1</sup>

### 1. Introduction

Dynamic capabilities are an essential theoretical construct that is useful for understanding the phenomenon of competition. Dynamic capabilities differ from operational capabilities in that they stress the processes of change management. The existing literature usually points out that dynamic capabilities lie at the core of the company's potential to integrate, create and reconfigure its internal and external competencies to ensure compatibility with the ever-changing conditions of the environment (Teece 2008). K. Eisenhardt i J. Martin (2000) see dynamic capabilities as intra-organizational processes to integrate, reconfigure and obtain or release resources to ensure alignment with the changes on the market or to generate such changes.

The purpose of this article is to discuss the role of opportunity-sensing and learning processes in shaping dynamic capabilities in Polish enterprises. Research findings which

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are a part of a wider project which sets out to offer a paradigm for the concept of dynamic capabilities as it applies to strategic management and identification and analysis of dynamic capabilities in Polish enterprises.

## 2. The concept of dynamic capabilities

Three issues are critical to the concept of dynamic capabilities: the level of capability “dynamics”; the role of anticipatory actions by managers; and the impact of the environment on shaping dynamic capabilities. The existing literature identifies three approaches to defining those issues and viewing dynamic capabilities.

The first of these approaches is based on the tenets of evolutionary theory and the concept of strategy founded in the classical microeconomic logic. It assumes that capability dynamics has a rather limited impact on the firm’s success and that the role of managers in that process is limited, too. The theory of population ecology and the theory of evolution both assume that, as they develop, organizations form certain habits and routines which are not only the root cause of organizational inertia but also disrupt the process of forming new behavioural patterns. The capability renewal is also impeded by the historical trajectory of the firm’s development, complementary assets (their value may be diminished with development of new technologies or new markets), and the “windows of opportunity” (if the organization fails to adjust its potential in line with emerging technologies and markets, doing so at a later time may prove to be difficult or, in extreme cases, impossible). It should be noted that the historical trajectory of development and complementary assets form an important part of the concept of dynamic capabilities which puts them on a different methodological basis than was traditionally the case.

The second approach sees managers as playing the key role in creating dynamic capabilities. It also assumes that there is a relationship between the pace and nature of changes and the environmental turbulence and dynamics. A “moderately turbulent” environment is one in which changes are a relatively frequent occurrence. These changes are predictable and linear, as a result of which dynamic capabilities may be viewed in terms of routine behavior. In a “turbulent” environment, capabilities have the form of simple, experimental and dynamic processes. In other words, what lies at the core of evolving dynamic capabilities is the mechanism of learning as influenced by the dynamics and changeability of the environment. The existing literature has therefore posited that dynamic capabilities help to explain phenomena occurring in sectors

affected by rapid technological changes. This assumption formed the basis for H. Mintzberg's critique of the school of strategic planning. Mintzberg argued that "analysis" (i.e. strategic planning methodology) should be reserved for organizational management in a relatively stable environment, whereas "synthesis" (i.e. strategic management) should be used in a dynamic and turbulent environment (Mintzberg 1999).

In their analysis of competition phenomena in a dynamic environment, K. Eisenhardt and J. Martin observe that problems in supporting dynamic capabilities result from improvised management processes. Dynamic capabilities are not "memorised" which means that external threats to sustainable competitive advantage are compounded by threats of internal nature (Eisenhardt, Martin, 2010). Following on from this observation and assuming that different dynamic capabilities may converge ("best management practices"), K. Eisenhardt and J. Martin present a mechanism for building competitive advantage that differs from mainstream descriptions of dynamic capabilities (Teece 2008). Assuming that sustainable business advantage cannot be achieved in fast-paced sectors, K. Eisenhardt and J. Martin argue that the value of dynamic capabilities for gaining competitive advantage lies in the ability they provide to configure resources and not in those capabilities per se. Dynamic capabilities are therefore a necessary but insufficient condition for gaining competitive advantage. K. Eisenhardt and J. Martin also point out that the concept of dynamic capabilities should not be presented as a separate paradigm in the theory of strategic management.

The third approach refers to the original tenets of the dynamic capabilities concept (Teece 2008). It assumes that the effective use of dynamic capabilities depends on a level of development of the organization's meta-capabilities which involve two interrelated factors: the ability to sense new business opportunities and use them effectively. In contrast to the first two approaches, D. Teece's proposal combines the idea of the "asymmetrical" advantage and the organizational adaptation to change, and is also a synthesis of the concepts of organizational learning, leadership, entrepreneurship and economic theories of the enterprise. Crucial to D. Teece's concept is the assumption that ensuring effective learning processes within the organization is critical to gain and maintain competitive advantage (Zollo, Winter 2002). This means that environmental turbulence and dynamics do not determine the degree to which dynamic capabilities are used. The assumption does not mean that organizations should be in a permanent state of change as this would lead to internal chaos in the long run. Moreover, not all of the organizational responses to innovation and change should be seen as dynamic capabilities (Winter 2003).

It is stressed in this context that competitive advantages may only derive from difficult-to-replicate (external and internal) competence-forming processes relating to creation of new combinations of assets in the organization (Teece, 2008). These dynamic capabilities are not obtainable on the market - they can only be shaped as new capabilities or configured out of existing ones. It is believed that the key role in shaping dynamic capabilities is played by managers and their entrepreneurial behaviors. D. J. Teece sees four organizational capabilities as dynamic capabilities:

- shaping effective innovation and change management processes,
- necessary intuition and vision to create business models,
- shaping mechanisms for effective investment decisions,
- effective management of transactions.

To build and maintain dynamic capabilities, it is necessary to incorporate mechanisms of real-time response to changes in the environment into the organizational management system.

### 3. The process for shaping dynamic capabilities

Environmental dynamics means that organizations have to adjust to whatever rules of the game are forced upon them. Exposed to internal and external forces, organizations are therefore in a stage of constant change and transformation. Striving to ensure that their organizations operate at the required efficiency, managers should approach changes in a systemic way by designing, implementing and honing the process for shaping dynamic capabilities within a larger organizational management framework. The fact that it is a desirable way to act finds support in the existing literature: it offers a view that the ability to renew the sources of competitive advantage is one of the fundamental requirements to make sure that the organization can exist and achieve sustainable success in the long-term perspective (Barney 1991, Rice & Co 2015).

The process of shaping dynamic capabilities may not be viewed as a one-off activity that forms a passive *ex-post* response of the organization to changes in its environment; rather, it should be a continuous process that makes it possible to anticipate changes. Should a strategic gap occur, the lack of continuity would force the organization to implement erratic changes with a potential "unbalancing" effect on the management system and the resultant reduction of the organizational effectiveness. Given organizational inertia, the *ex-post* adjustment focus would cause the organization to lag behind changes in its environment, potentially leading to negative operational consequences in the long run.

The existing literature distinguishes between four and eight stages in shaping dynamic capabilities (Teece 2007, Eisenhardt, Martin 2000, Kuuluvainen 2012). Based on a critical analysis of the approaches to how dynamic capabilities are defined, a five-stage model is proposed below representing the capabilities-shaping process (see figure 1):

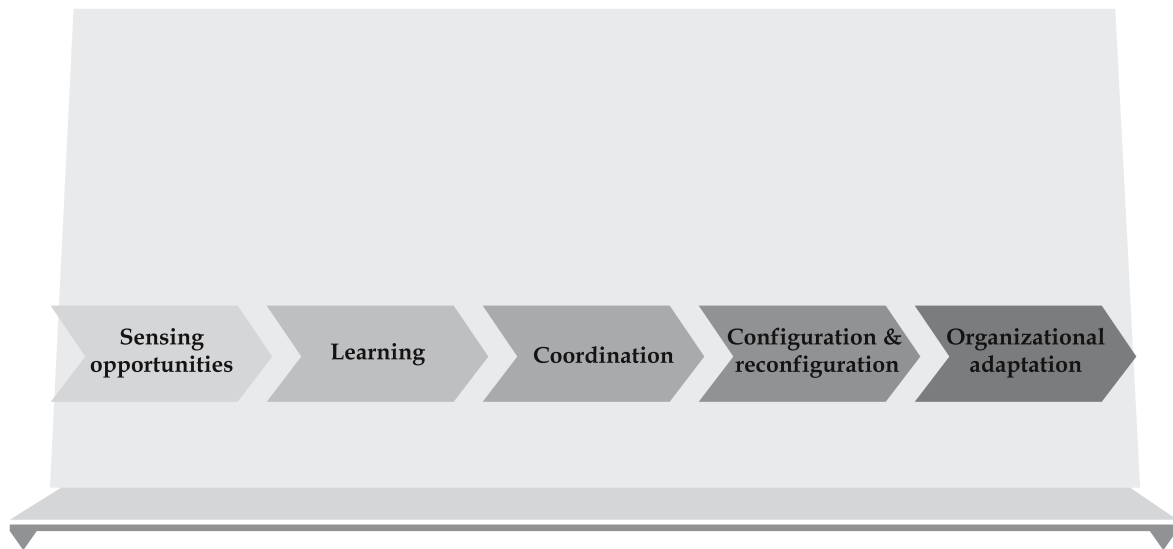


Figure 1. Shaping dynamic capabilities of the organization

Source: authors' own study

- Stage 1. Sensing opportunities:** This involves analysis of various trends and phenomena in the environment, creation of new ideas and identification of the need for change.
- Stage 2. Learning:** This involves accumulation of knowledge, intra-organizational knowledge transfers, intra-organizational knowledge allocation and retention, intellectual property management, and encouraging employees to experiment.
- Stage 3. Coordination:** This involves creating a vision to integrate stakeholders, building stakeholder loyalty, integrating supply chain activities, managing strategic alliances, building employee commitment, creating cohesive decision-making rules, integrating and coordinating business processes.
- Stage 4. Configuration and reconfiguration:** This involves creating, securing and integrating resources and skills, creating innovations, getting rid

of (releasing) superfluous and redundant resources and skills, and deploying new technologies.

**Stage 5. Organizational adaptation:** This involves transforming business models, managing organizational boundaries, ensuring a dynamic strategic management process, organizational improvements, adapting and implementing best management practices, ensuring flexible organizational structure, and managing organizational identity.

#### 4. Research methodology. Research sample

Our research into processes which shape dynamic capabilities in Polish enterprises is part of a larger research project which sets out to develop a paradigm for the concept of dynamic capabilities as it applies to strategic management and identification and analysis of dynamic capabilities in Polish enterprises. This article discusses preliminary findings of a pilot study during which a survey questionnaire was administered to 215 post-graduate students at the Poznań University of Economics. Completed questionnaires were returned by 142 respondents. Because of inconsistent data found during verification, 127 questionnaires were retained. 42% of the respondents were working for small enterprises, 27% in mid-sized enterprises, and 31% were hired by large enterprises.

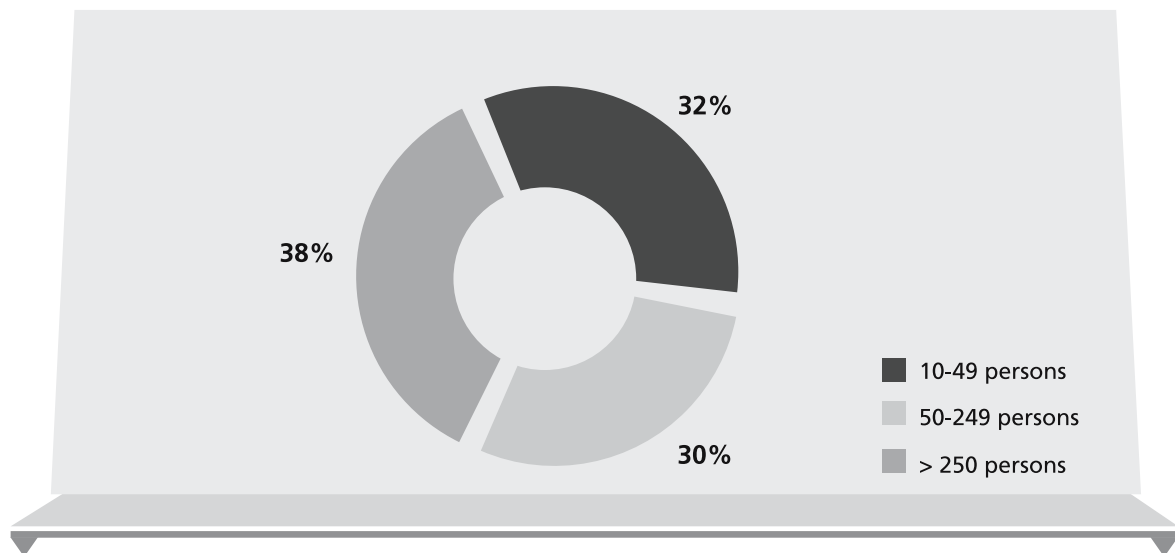


Figure 2. Surveyed enterprises by size, n=127

Source: own study

In the population surveyed, enterprises between 10 and 19 years old made up the largest group, at 33%. The percentage of firms between 20 and 29 years old was slightly lower, at 29%. Enterprises in operation for more than 30 years or between 5 and 9 years formed the least populous group (both at 19%).

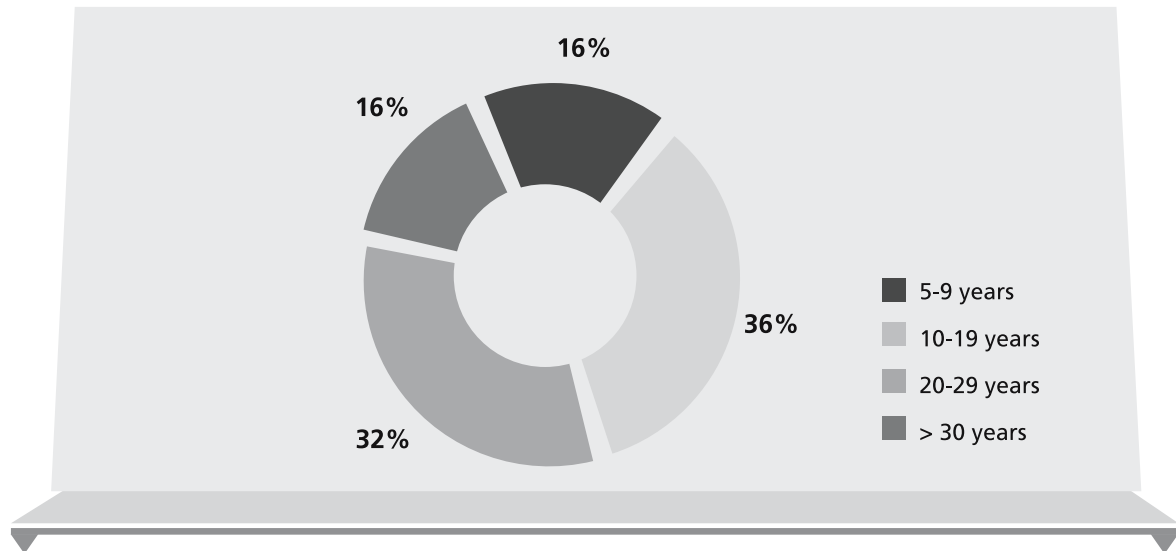


Figure 3. Surveyed enterprises by age of business, n=127

Source: own study

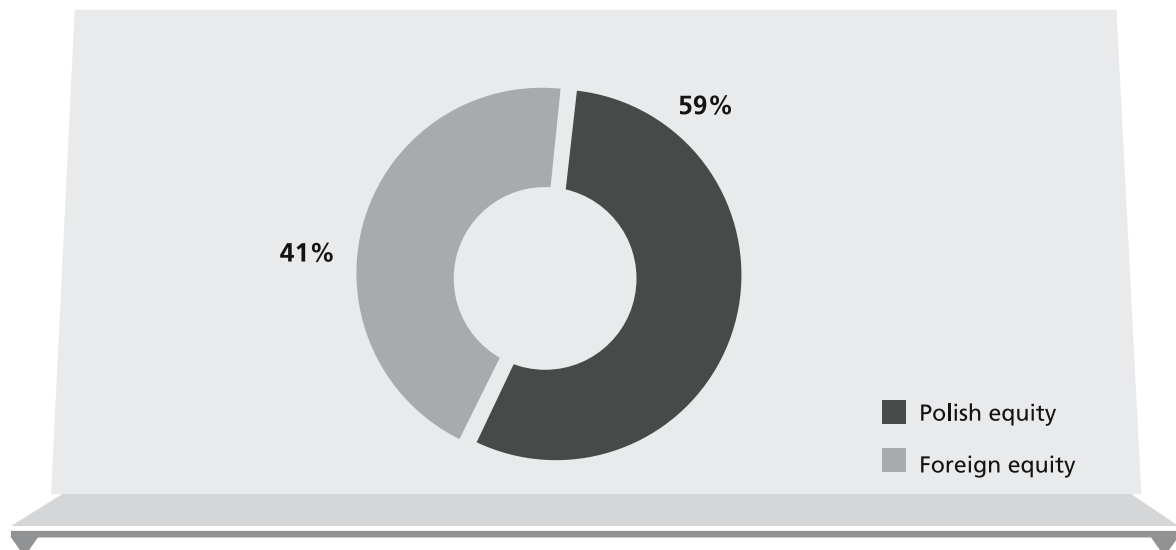


Figure 4. Surveyed enterprises by equity ownership, n=127

Source: own study



In terms of equity ownership, Polish-owned enterprises formed a majority of enterprises surveyed, at 72% of the entire population. At 28%, the share of foreign-owned enterprises was lower.

## 5. Opportunity-sensing and learning processes: the findings

The average declared value of economic effectiveness for all dimensions examined is at 0.66 (on a scale of -2 to 2, where -2 is much lower effectiveness than for competition, and 2 is much higher effectiveness). Effectiveness among the companies surveyed can therefore be said to be “above average”. When analysing economic effectiveness of the companies surveyed (Dyduch 2013), one notes that results are distributed in a manner that shows correct distribution of collected data: the percentage of extreme ends is negligible and average ratings prevail. The highest effectiveness of actions is observed in relation to the customer loyalty variable (0.86); the lowest effectiveness, on the other hand, is seen in the average annual employment growth (0.44). Nevertheless, the differences between the two variables do not deviate materially from the average declared value of economic effectiveness, which shows that the companies surveyed enjoy a sustainable growth. Based on the collected data, a conclusion is in order that, in the respondents’ opinion, sources of effectiveness should be sought in external variables (customer loyalty, market share, sales growth) rather than in internal ones (higher employment).

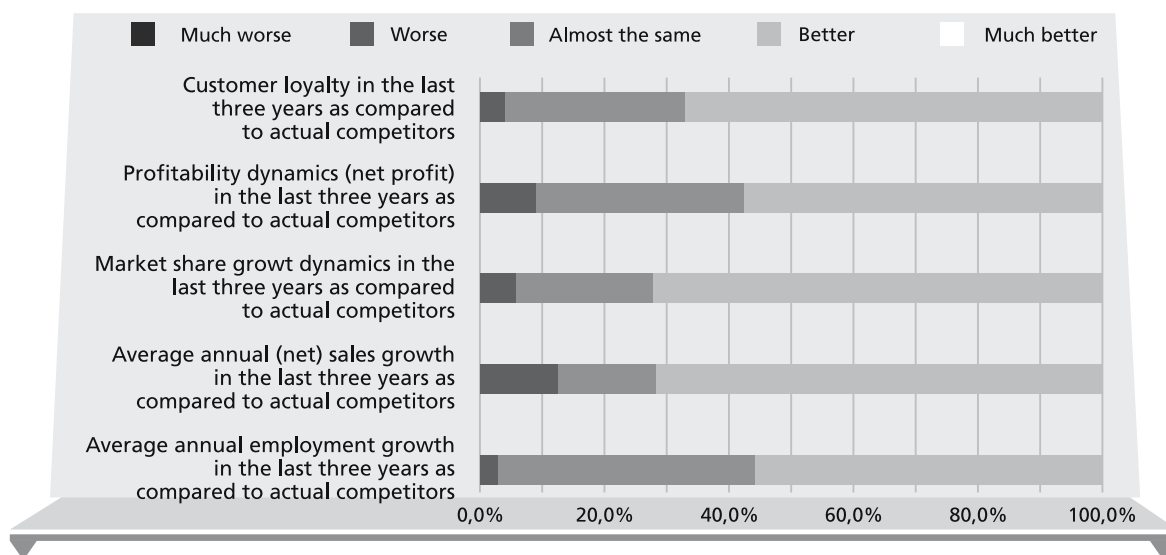
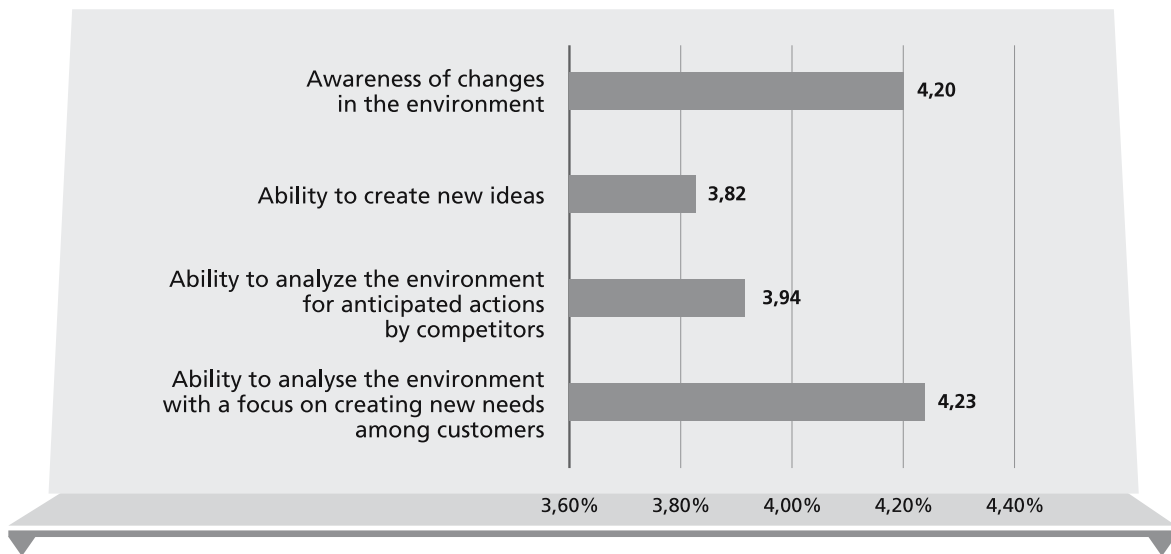


Figure 5. Declared economic effectiveness of the companies surveyed, n=127

Source: own study



One observation from our research is a relatively high significance of dynamic skills which are key to the opportunity-sensing process (the average value for all variables is at 4.05 on a scale from 1 to 5). The respondents believe that the following skills are of the highest importance for the opportunity-sensing process: the ability to analyse the environment with a focus on creating new needs among customers (4.23) and the awareness of changes in the environment (4.20). The impact of the ability to create new ideas (3.82) and the ability to analyze the environment for anticipated actions by competitors (3.94) were believed to be less significant.



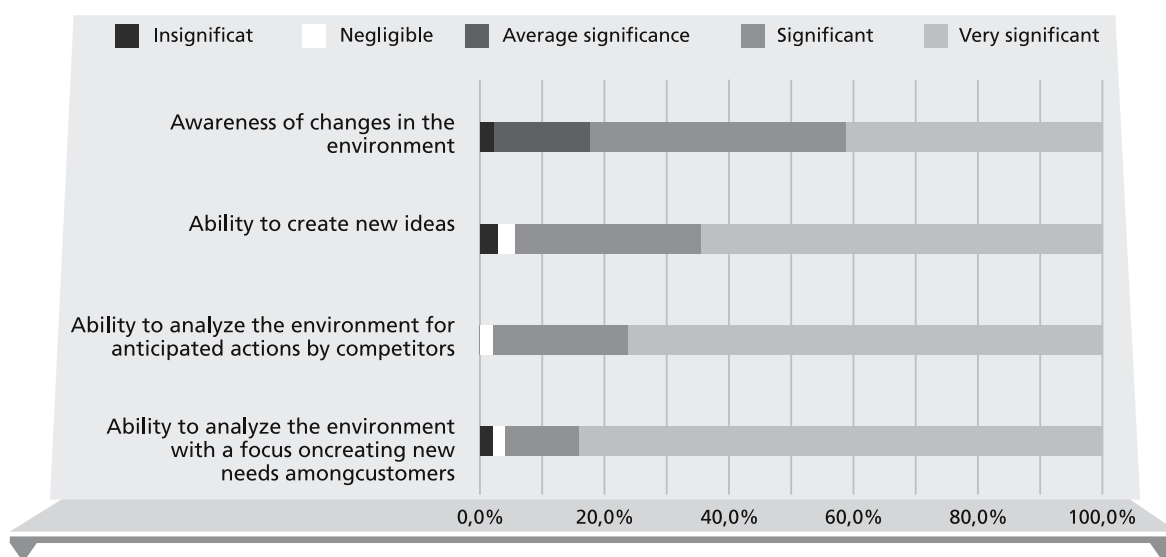
**Figure 6. Significance of crucial dynamic skills in the opportunities sensing process. Average ratings, n=127**

Source: own study

While the importance of the ability to analyze the environment and of the awareness of changes in the environment seems rather obvious, the relatively lower significance of the ability to create new ideas and analyze the environment for anticipated actions by competitors is surprising. The respondents' ratings point to the emergence of a paradox of sorts: the high level of awareness of changes in the environment does not translate into creation of new ideas. What is more, the respondents see no need for benchmarking the activities of their competitors. In an attempt to explain this, one should look for clues in the highly turbulent environment which – combined with inertia and a growing importance of intangible assets which are not easily identifiable and imitable – gives rise to

difficulties or even, in extremes cases, inability to implement solutions derived from observation of competitors and their behavior. The upshot of this situation is not that analysis of environmental phenomena is denied legitimacy as such but that more prominence is given to measures which anticipate needs and expectations of customers. Poor predictability of changes in the environment is also what makes managers inclined to exploit whatever competitive advantages they can use, leading to replication and renewal of existing competences, and to reduced significance of the ability to create new ideas. Whilst this type of behavior will provide the organization with an opportunity to optimize its financial performance in the short term, it will form a barrier to organizational growth in the long run.

Two issues should be addressed when analyzing the importance of dynamic skills which are of crucial importance to the opportunities sensing process. Firstly, clear prevalence of the “significant” response among all variables under examination allows one to conclude that the reported results are correct. Secondly, a relatively high percentage of responses which point to a low significance of actions involving the ability to create new ideas could lead to a conclusion that the organizations surveyed are passive in terms of their adjustment to environmental changes and of their limited potential for innovation.



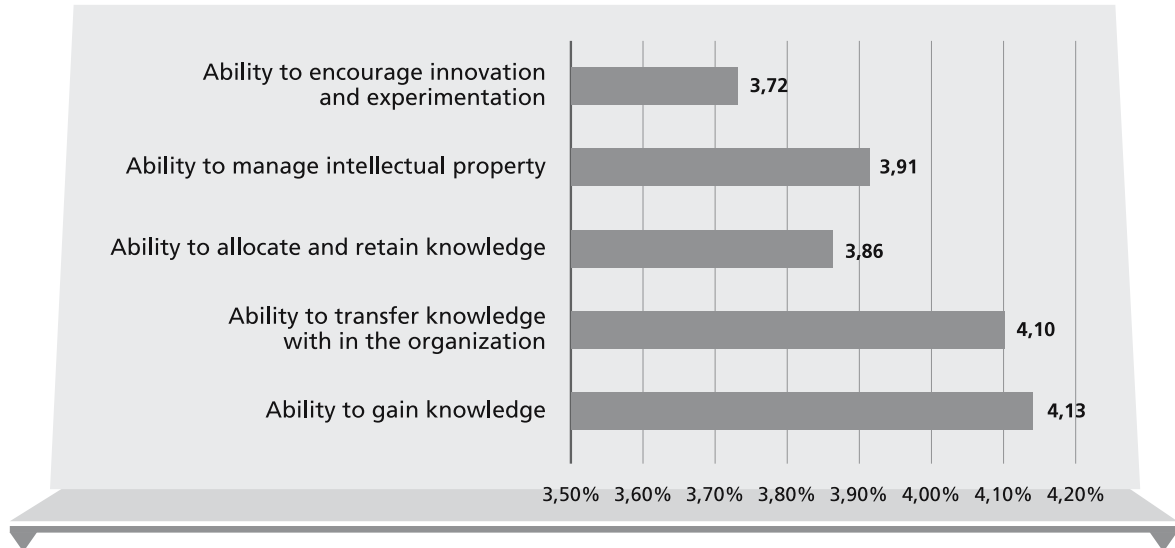
**Figure 7. Significance of crucial dynamic skills in to the opportunities sensing process, n=127**

Source: own study

A conclusion to be drawn from analysis of the research results is that (with an average value of 3.94 on a scale from 1 to 5) the dynamic skills in the learning process are less significant than the skills underlying the opportunity-sensing process. One should note that the reported value is not caused by some significant deviation of a single variable but is a result of lower ratings for all dynamic skills that were examined. This could lead one to conclude that the process for shaping dynamic skills in the organizations surveyed is dysfunctional - a strong focus on identifying environmental phenomena is not correlated with a high level of the organization's learning skills. As mentioned, sensing opportunities in the environment while under-appreciating learning processes, may be a consequence of the respondents' view of the environment as highly changeable and turbulent. In a turbulent environment, learning processes (which utilise the body of absorbed knowledge and organizational routines) lose their significance. This is because, given the new parameters of the environment, they could push members of the organization towards objectives which, rather than being neutral, could be even harmful to the organization.

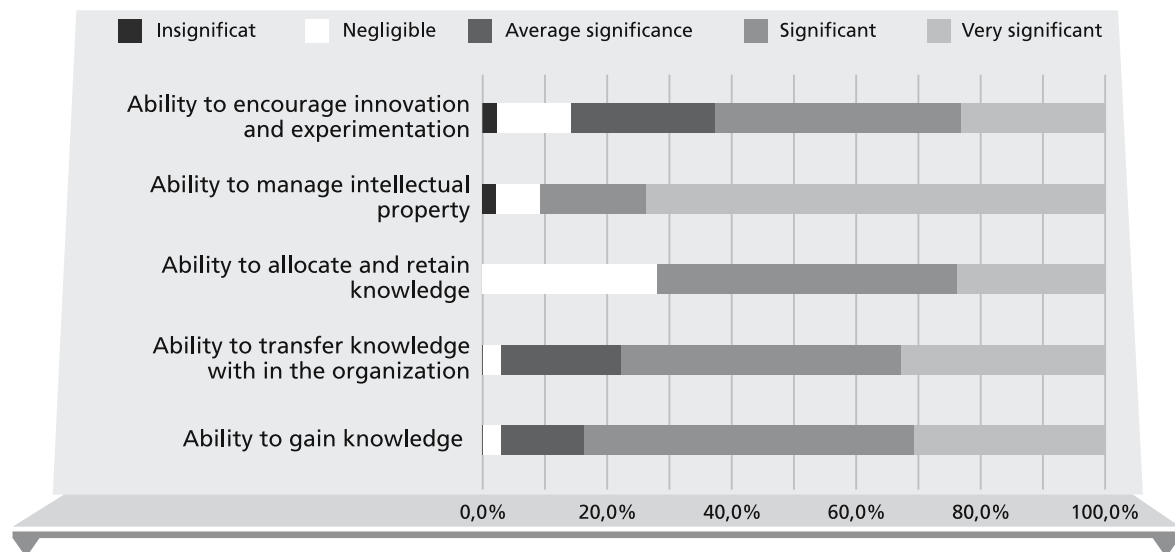
In the respondents' opinion, dynamic skills which are of the highest significance in the learning process are the ability to gain (4.13) and transfer knowledge within the organization (4.10). The skills with the lowest impact on the learning process are the ability to encourage innovation and experimentation (3.72); the ability to allocate and retain knowledge (3.86); and the ability to manage intellectual property (3.91). Comparing these results with those relating to critical dynamic skills in the opportunities sensing process, one should note that the low value of the ability to create new ideas in the opportunities sensing process is related to the low value of the ability to create new ideas in the learning process. A conclusion one could derive from this is that the internal creativity of the organization is reduced on purpose. On analysis, even though this kind of behavior enables the organization to exploit benefits in the short run due to the effect of standardization, the effectiveness of actions which limit internal innovation may be a factor preventing the organization from building the basis for sustained competitive advantage in the long run. As for the other two variables with low ratings, one should note that, while the low value of the ability to manage intellectual property does not seem to be much of a concern (and is rather a result of the "novelty" of this field), the declared low value of the ability to allocate and store knowledge should be considered a weakness in the learning process. The problems which the allocation and storage of knowledge involve derive from failure to develop appropriate skills and will have an adverse impact on the effectiveness of

the learning process, even if proper processes are in place for gaining and transferring knowledge within the organization.



**Figure 8. Average significance ratings for key dynamic skills in the learning process, n=127**

Source: own study



**Figure 9. Significance assessments for key dynamic skills in the learning process, n-127**

Source: own study

On analysis of the significance of crucial dynamic skills in the opportunities sensing process, a conclusion can be offered that the low average value of the significance ratings for dynamic skills that form part of the learning process is not so much a result of a shift in the distribution of average rating parameters (“average” and “significant”) but of a shift between the “very significant” and “negligible” groups (towards the latter one). This indicates more radical assessment of the process by the respondents.

## 6. Final conclusions

Four observations can be made based on our research into the processes which shape dynamic capabilities in Polish enterprises.

Firstly, what primarily determines the high level of key dynamic skills in the opportunities sensing process is the ability to analyse the environment with a focus on creating new needs among customers and the awareness of changes in the environment.

Secondly, the high awareness of changes in the environment does not translate into creation of new ideas. Most likely, this is a consequence of poor predictability of changes in the environment, which is also what makes managers inclined to exploit whatever competitive advantages they can use. On the other hand, a relatively high percentage of responses which point to a low significance of actions involving the ability to create new ideas could lead one to a conclusion that the organizations surveyed are passive in terms of their adjustment to environmental changes and of their limited potential for innovation.

Thirdly, a lower significance of dynamic skills that form part of the learning process compared to those in the opportunity-sensing process leads one to conclude that the process for shaping dynamic skills in the organizations surveyed is dysfunctional – a strong focus on identifying environmental phenomena is not correlated with a high level of the organization’s learning skills. Sensing opportunities in the environment while under-appreciating learning processes may be a consequence of the respondents’ view of the environment as highly turbulent. In a fast-paced environment, learning processes (which utilise the body of absorbed knowledge and organizational routines) lose their significance. This is because, given the new parameters of the environment, they could push members of the organization towards objectives which, rather than neutral, could be even harmful to the organization.

Fourthly, the skills which are of the highest importance in the learning processes are those relating to the ability to gain and transfer knowledge within

the organization. A relatively low rating of the ability to create new ideas leads one to conclude that the internal creativity of the organization is reduced on purpose.

## Summary

### **The role of opportunity-sensing and learning processes in shaping dynamic capabilities in Polish enterprises**

Dynamic capabilities are an essential theoretical construct that is useful for understanding the phenomenon of competition. However, even though dynamic capabilities and issues relating to them seem to enjoy large popularity, the existing management literature lacks studies into processes that shape dynamic capabilities.

This article attempts to outline the concept of dynamic capabilities and presents the authors' proposed configuration of the processes that shape dynamic capabilities. A discussion then follows of the results of research into the opportunities-sensing and learning processes and how they shape dynamic capabilities in Polish enterprises.

*Key words:* dynamic capabilities, dynamic-capabilities shaping process, sensing opportunities, learning.

## Streszczenie

### **Procesy poszukiwania okazji i uczenia się w kształtowaniu dynamicznych zdolności polskich przedsiębiorstw**

Dynamiczne zdolności stanowią istotny, teoretyczny konstrukt przydatny dla zrozumienia zjawiska konkurencji. Jednak mimo pozornie dużej popularności zagadnień związanych z problematyką dynamicznych zdolności, w literaturze przedmiotu z obszaru nauk o zarządzaniu brakuje opracowań poświęconych badaniom nad procesami kształtowania dynamicznych zdolności. W opracowaniu podjęto próbę zarysowania koncepcji dynamicznych zdolności, przedstawiono autorską propozycję konfiguracji procesu kształtowania dynamicznych zdolności, a następnie podjęto dyskusję nad wynikami przeprowadzonego postępowania badawczego dotyczącego procesów poszukiwania okazji i uczenia się w kształtowaniu dynamicznych zdolności w polskich przedsiębiorstwach.

## Słowa

**kluczowe:** *Dynamiczne zdolności, proces kształtowania dynamicznych zdolności, poszukiwanie okazji, uczenie się.*

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