




The empirical analysis of human capital competences on the example of company executives

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Abstract

Motivation: Diagnosing the competences of human capital is a complex process, involving many approaches and steps leading to the recognition of the entire problem situations of the organization and its employees. Due to the increasingly higher and ever-growing position of the human capital formation system in the overall process of managing an organization, the analysis and diagnosis of management competencies is a process of particular importance. In the era of the knowledge-based economy, employee competencies are the key to competitive advantage. An important issue, therefore, is the constant monitoring of managers attitudes to improve their competences and conducting a systematic analysis of their component structure.

Aim: This article aims objective of developing a factor structure of the rational dimension of management competencies based on knowledge, skills, and comprehension. Due to this objective, the factor structure of the knowledge and skills that managers have was determined. The practical level of self-assessment of the rational components of competence from the point of view of the influence of situational factors was also determined.

Results: A questionnaire, an interview and literature studies were used for the research carried out in 2019–2020. The questionnaire was addressed to 282 employees of enterprises in the Lubusz Voivodeship of Poland. This allowed determining the degree of managers determination expressed in the need to adjust the competence potential they have to changeable situational factors.



Keywords: human capital; knowledge economy; managers; competences; knowledge; skills
JEL: M12; M14; D8; M21; M54

1. Introduction

The changes occurring in Polish companies over the last years have contributed significantly to the role played by managers in the working environment. They create a basis for people who contribute to the success of the companies they are in charge of. Therefore increasing emphasis is put on the rational use of managers competencies in various areas of company management.

Confirming the assumption that employees are the company most important capital — they have both rational (knowledge, comprehension, skills) and emotional elements of competencies (values, beliefs, attitudes) (Czapla, 2011, pp. 111–166) — it must be concluded that the potential they use is necessary for efficiently fulfilling objectives. Without competent human capital, every company will either fail to achieve its determined objectives or come across a series of unwanted difficulties in fulfilling its goals.

The reasons are given above, which underlie the interest in manager competencies, make it necessary to carry out actions for the empirical verification of such manager competencies. It is reflected not only in the need to study company development conditions but also in a relatively new and often poorly understood issue concerning the competencies of company owners and managers. This image of company operation gives particular reasons to consider implications resulting from a pro-market orientation in management for manager competencies.

2. Literature review

Leading companies on the market that have entered the age of knowledge are trying to gain a competitive advantage by identifying and developing the critical competencies of the company in the field of individual competences of human capital. Competences of people capital can become a unique asset for an enterprise because the survival of an organization depends on its ability to create knowledge and skills and to use them, which can only be done thanks to people.

Along with the intensification of competition on the domestic and global market, each position acquired by the company is transitional and may at any time, turn into an unfavourable situation. The likelihood of such a situation increases significantly when the learning imperative, i.e. the further development of competences, associated with the skilful recognition of situational conditions, is neglected or neglected by managers. Therefore, more and more emphasis should be placed on the search for new forms of examining the work of managers related to their competences. From the assumptions of the article, managers competencies are an essential element of human capital. Because only people can predict the future and shape it. Therefore, empirical considerations about

competences have become the basis for research carried out in organizations operating (Nowacka, 2015; Sanghi, 2008; Schoonover et al., 2000; Tate, 1995; Taylor, 2006; Whiddett & Hollyforde, 2003; Wolfe & Keys, 2012).

Despite many studies on competences (e.g. Athey & Orth, 1999; Brundiers et al., 2021; Chung-Herrera et al., 2003; Drozdowski, 2017; Drozdowski et al., 2021; Ferreras-Garcia et al., 2021; González-López et al., 2021; Hoffmann, 1999; Kipper et al., 2021; Martin & Rubin, 1995; Rothwell & Lindholm, 1999; Shavelson, 2010; Taborsky & Oliveira, 2012; Woodruffe, 1993; Yin et al., 2019), there is still a need to deepen research on the identification of human capital competences.

The lack of employees' competences necessary to achieve competitive advantage generates the risk for any business. I am not alone in this belief. Research from the European perspective has revealed a serious problem. Around half of the European population is affected by the competency mismatch (Eurofund, 2020).

There is no need to convince anyone that the competences are a severe organisational problem in different types of businesses. Therefore, among other things, competences have become the subject of particular scholars' attention (e.g. Casper & Whitley, 2004; Denzin, 2009; Evetts, 2011; Foss et al., 2021; Hays, 2020; Le Deist & Wintertonand, 2005; Mills et al., 2003; Wittmann, 2009). Many firms want to increase their strategic position, which many scholars point out (e.g. Berber & Lekovic, 2018; Chen & Hu, 2021; Thite, 2004). However, without competent people, any company may have problem with achieving properly defined goals and planned tasks, or firms can pursue the wrong targets (Chuang et al., 2020; Drozdowski, 2021; Kaur & Kumar, 2013).

Without competent people, any company will pursue the wrong targets or encounter significant difficulties in achieving properly defined goals. Therefore human capital management is a continuous and dynamic process that creates paths for each company's development (Chuang et al., 2020; Kaur & Kumar, 2013; Scholes & Endacott, 2003; ten Cate & Scheele, 2007).

The competence assessment of human capital, which is the basis for flexible adaptation to changing operating conditions, has been based on the existing relationship between employees and situational factors. The relationship between employees' behaviour and the environment is dynamic and bilateral. Human capital adapts its activities to its environment (situational factors). At the same time, employees influence individual components of the environment through their competence potential.

Although the characteristics of individual components of the competence structure of human capital from the perspective of situational requirements can be found in many studies (e.g. Alniacik et al, 2013; Apriana et al, 2019; Kaur & Kumar, 2013; Mills et al. 2003) there is nevertheless a need to examine competences among workers, especially after the publication of the Eurofund (2020), which revealed a serious competency problem compared to business needs.

3. Methods

The article aims objective of developing a factor structure of the rational dimension of management competencies based on knowledge¹, skills², and comprehension. The sub-objectives supporting the main objective of this article are as follows:

- to identify the factor structure of the selected rational dimension of management competencies based on their knowledge and skills;
- to determine and analyse the degree of managers determination in terms of the comprehension of the need to continually update their competence potential by absorbing current practices.

The general hypothesis relates to the objective of this article. It says that there is a factor structure of competences managers rational competence level, which affects the management level of the studied companies. Also, it was stated that the increasing dynamic of changes in the company environment requires the managers to understand the need to modify their competence behaviours through a flexible (Drozdowski, 2020, p. 215; Juchnowicz, 2012, p. 21,) response to situational variables.

The central hypothesis was operationalised through three detailed hypotheses:

- h_1 — assumes that the managers from the studied companies have the technical knowledge to a prevailing degree;
- h_2 — it is true that there are skills which are most desired in management positions among the studied people;
- h_3 — it has been assumed that there is a competence gap presenting a mismatch between managers real competencies and requirements imposed on them by situational factors.

A questionnaire, an interview and literature studies were used for the research carried out in 2019–2020. The questionnaire which “turned out to be the most useful method for Polish businesses” (Tokarski, 2001, p. 86) was addressed to 282 managers at three management levels in the organisational structures of the studied companies. A purposive sample was used in the study, which means that it was not a statistical sample. The research was carried out in 2019–2020. Surveys were mailed to subjects during November and December 2019. Participants in the study included those with a college degree (74%) and a high school education (26%). The results were prepared for the whole set of the surveyed persons, without division into subsets (for example, women and men, younger, older, etc.). As the people participating in the research asked to remain anonymous, the author did not provide the names of companies or other data that could identify the respondents. In sum, we compared research

¹ Knowledge is defined as “a set of information in the form of a structure with rules for their interpretation” (Jemielniak & Koźmiński, 2008, p. 21).

² Skills are a practical ability to carry out physical and intellectual activities (Spencer & Spencer, 1993, p. 11).

results from different sources, which may reduce interpretive uncertainty (Martin & Staines, 1994, p. 24).

The implementation of the presented research concept involves an empirical verification of competence. This process in particular concerns, as Mroziwski (2008, p. 17) says, “the economy based on knowledge which determines the need for “the activity and creativity of organisations and individuals”.

4. Results

Actions taken by managers that aim at adjusting to situational requirements depend on the competencies they have (Tokarski, 1998, p. 127). In the introduction to this article, it was stated that management competencies include both rational and emotional elements³. That is why in this part of the article, a study describing the potential of rational competence elements will be presented in which mostly self-assessment was taken into account. Empirically, managers opinions or beliefs were analysed in terms of subjective feelings which created managers specific competence image in the view of a new situation in which the companies operate. The information obtained from the managers in this way is to a great extent, only a rough image of the reality since it is created by stimuli received in a subjective method (individually). However, it is essential for the research as determinants of specific behaviours. Additionally, the manager’s characteristic features include much social experience and the fact that they are familiar with qualification procedures which are efficiently used for creating the desired impression (Tokarski, 2001, p. 76). Therefore, an attempt to present managers’ opinions on the assessment of their competencies is a consequence of the response to the necessary enterprise management procedures resulting from the emerging mechanisms of the changing environment.

The empirical content of the central hypothesis allows analysing the distribution of a specific type of managers’ knowledge given their competencies. A list was prepared, which contains six key variables that are rational elements of competence. It includes background on the management of the studied company, technical (engineering) knowledge, marketing and promotion, law, finances and accounting, and knowledge on HR management.

An analysis of the detailed hypothesis (h_1) showed the following relationships. Among the six studied variables concerning knowledge, it was proven that in the studied period, the competencies of the analysed managers in general consist of engineering knowledge. The percentage distribution of rational competence elements was presented in Table 1. Statistical analysis confirmed the theoretical inquiries included in the first hypothesis (h_1).

The interpretation of results allows concluding that technical competencies mainly determine the rational dimension of the studied managers’ competencies in terms of their knowledge. Using technical expertise by such a big group of the studied people at the expense of knowledge on management and staff

³ The analysis of emotional elements of competence was skipped in this article.

management means that the level of management knowledge is low. It can be presumed that this significant percentage of people with abilities allowing to use engineering knowledge is the result of technical education. In this view, there an open question emerges: To what extent managers with general technical knowledge solve problems related to management are?

A statistical analysis testing the second hypothesis (h_2) showed that there are characteristic elements of the rational level of competencies in the form of acquired skills in the studied group of managers. It was proven that in the studied period the company managers had five main rational elements of competence: team management — average 4.45 pts⁴, negotiations — 4.24 pts, stress management — 4.03 pts, communication — 4.01 motivating — 3.98 pts. A list of the ten studied management skills was presented in Table 2.

The interpretation of research results shows that there are preferred skills as rational determinants of gained competencies. A set of skills with the highest average value was determined based on the study. Among the ten studied skills, it was found that in the studied period, the rational elements of competence included: managing a team, negotiations, coping with stress, communication, and motivating subordinates. The image above indicates that studied persons say that they have high soft skills in managing people. This is a positive outcome if we observe a high level of declared technical knowledge. Negotiation skills take second place, which means they must have high verbal and non-verbal predispositions in communicating with internal and external stakeholders in the studied companies. The studied managers also see the increased importance of their skills in coping with stress, communicating, and motivating the staff. On average, skills related to implementing changes, solving conflicts, improving work efficiency, resourcefulness, and influence were classified.

In further research, the third hypothesis was verified (h_3). It must be pointed out that knowledge, skills, and comprehension as rational elements of competence are linked to each other. The relation between knowledge and comprehension is learning, while the connection between skills and understanding is based on using intuition (Czapla, 2011, p. 128). The relationship between knowledge and managers' skills and comprehension described above allows obtaining more detailed insight into the identified competence potential of the studied managers. Based on this, the differences that emerge given requirements imposed on the managers by the changing situational factors can be determined.

An analysis of the results verifying the third hypothesis (h_3) showed that the managers from the studied companies assessed their competencies in gained knowledge and skills at a high or very high level (Table 3).

As the percentage distribution shows, 64% of the managers assessed their knowledge and skills as high, while 29% of the respondents identified their competencies in knowledge and skills at a very high level. Significantly fewer,

⁴ The number shows the average results concerning acquired skills according to a five-grade scale in points.

only 7% of the studied people consider their knowledge, resources and skills insufficient about the formal requirements of situational factors.

When interpreting the results of the study, it can be concluded that the studied managers considered their status of knowledge and skills to be at a high or very high level. This positive opinion expressed in the compliance of acquired skills and knowledge with situational requirements may change into a negative phenomenon resulting from the fact that there is no need to change the rational structure of competence elements. This means the internal motivation to learn new behaviours allowing to adapt to changing situational factors is low. Such action results in a competence gap between situational needs and individual competence potential. The lack of a critical view of the need to adjust their competencies to situational factors in a flexible way determines unfavourable phenomena in management. Competencies must be updated regularly, depending on the conditions imposed by the dynamically changing environment. The managers should indeed need to learn (develop) at a high level and intuition to gain new skills relevant to unique procedures.

5. Conclusion

The study, whose results were presented in this article, shows that changing situational factors force managers to treat their competencies as priorities and efficiently use them. Managers are mainly required to respond to situational needs flexibly. The need to continually develop management competencies to actively affect the individual elements of situations at work, including strengthening the awareness of that need, should be a basis for the process of manager adaptation. Thus, the way of management, depending on the quality of rational elements of competencies, is an essential element spurring the actions above.

Based on the comments above, it must be pointed out that the assessment of knowledge and skills level facilitates choosing an activity suitable for a specific situation. At the same time, the analysis of rational elements of competence helps in determining which activities managers can carry out.

The results of the empirical verification confirmed the research hypothesis assuming that there is an overall dimension of competencies whose structure includes individual elements of skills and gained knowledge. Selecting a general area that is an immanent feature of the system of rational competence elements proves there are characteristic management requirements addressed to this professional group by situational variables that are typical for functions at the management level.

As for a further discussion about the managers, it was also concluded that there is a divergence between the managers' real competence potential and competence paradigms formulated at the situational variable level. This competence gap means that the managers lack comprehension and have low internal motivation to increase competencies for further development. The lack of orientation to changes in the structure of rational competence elements does

not force the managers to look for new areas to complete them continually. Such actions are confirmed by the self-assessment of individual competencies which were considered to be high or even very high. Thus the assessment made by the managers in terms of their competencies follows conservative tendencies to a greater extent than development tendencies in noticing, looking for or valuing new situations.

The deliberations and results of the study presented in this article allow us to formulate the following conclusions:

1. The proposed attempt to formulate a concept structuring the rational dimension of management competencies creates an opportunity for an in-depth and multi-dimensional analysis of internal processes for manager positions.
2. The study confirmed that the thesis is saying that the rational elements of competence may be treated as a result of situational factors.
3. The analysis of the study results showed that there is a gradation of individual elements of knowledge and skills of the studied managers. The rational level of knowledge and skills turned out to be dominating. With it, the structure of the competence potential of the studied people was determined.
4. The results of the study confirm the theoretical inquiries saying that factors that change dynamically have an impact on increasing the competence gap which shows a mismatch between managers' real (rational) competencies and requirements resulting from situational factors. Therefore, an analysis of managers' work requires developing a consistent concept of HR policy whose elementary tool will be a category of "comprehending" changes occurring in the organisation close and distant environment.

The research is preliminary, and therefore, the author did not develop a detailed model of competencies. The obtained results are the basis for preparing the next stage of detailed research, which aims to formulate theses on models of changes in employees' competencies and estimate the statistical sensitivity of the obtained results. In the case of a comprehensive database, I believe that it will be necessary to use more advanced statistical tools, which allow for a deeper analysis of the dependency structure. I believe that there is a need for the continuous retry of attempts to establish the reasons for the failure to adapt employees' competence to the environment's needs. From a broader perspective and considering that around half of the European population is affected by the competency mismatch (Eurofund, 2020), one may argue that this study is a starting point for further analysis of rational components of competence.

I believe that future research should aim to determine in particular: 1) Do companies use a rational breakdown of competencies to identify the competency gap identified among employees? 2) Whether they respond promptly to employees training needs? 3) How do firms distinguish their actual training needs from the training needs of employees, as the needs do not have to coincide? 4) How the elimination of the competency gap affects risk management in companies?

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Appendix

Table 1.
Percentage distribution of managers knowledge level

Studied variable	Knowledge dimensions					
	CM	MaP	TK	L	FaA	HRM
assessment of knowledge elements	28	8	37	2	13	12

Note:

CM — company management; MaP — marketing and promotion, TK — technical knowledge, L — law, FaA — finances and accounting, HRM — HR management.

Source: Own preparation.

Table 2.
Importance of acquired skills in points according to a five-grade scale

ST-VA	Skill type									
	TM	IC	SC	M	EI	SM	C	RA	I	N
SK-AS	4.45	3.78	3.71	3.98	3.63	4.03	4.01	3.03	2.19	4.24

Note:

SK-AS — skill assessment, ST-VA — Studied variable, TM — team management, IC — implementation of changes, SC — solving conflicts, M — motivating, EI — efficiency improvement, SM — stress management, C — communication, RA — resourceful attitudes, I — influence; N — negotiations.

Source: Own preparation.

Table 3.
Percentage distribution of the knowledge and skills status of the studied managers

Studied variable	Knowledge and skills status		
	very high	high	insufficient
assessment of knowledge and skills level	29	64	7

Source: Own preparation.

