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## **HUMAN CAPITAL AND ORGANISATIONAL PERFORMANCE: THE MEDIATING ROLE OF LEADERSHIP**

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### **ABSTRACT**

Organisational performance depends largely on the level of human capital, which, when used properly, can contribute to the creation of enterprise value. However, literature studies indicate that there are gaps in the relationship between human resources practices and the success of the organisation. Therefore, there has recently been increased research interest in measuring human capital. The research in this field, conducted for many years in different countries, does not give a clear answer to the question of the impact human resource practices have on the success of the organisation. Most previous studies indicate the indirect impact of human capital on business performance. The aim of this paper is to construct a conceptual framework from the relevant literature to identify the relationship between human capital and organisational performance, using leadership as a mediating factor. The conceptual framework was practically verified through case studies in two companies.

**Key words:** human capital, leadership competency, organisational performance

### **INTRODUCTION**

The success of a business depends on its organisational performance, such as business model effectiveness, efficiency, and outcomes (Boyatzis and Ratti, 2009; Ryan et al., 2009). These variables depend on employees, who are a key part of the organisation and work towards achieving the organisation's goals. The success of organisation thus depends on its ability to manage its human capital effectively.

However, the literary studies indicate that there are gaps between the practices of human resources management and the organisation's outcome. The studies in this field, conducted over many years in various countries, do not offer a definite answer as to the impact human resource practices can have on the success of an organisation. The majority of these studies demonstrate the indirect influence of human capital on a company's results (Cabrita et al., 2007; Jardon and Martos, 2009; Guest, 2011; Paauwe, 2009). The authors Wall and Wood (2005) conducted a critical analysis of 25 of the most quoted articles from prestigious magazines and found that the connection between a human resources management system and an organisation's outcomes is based on ill-designed studies and methodological limitations, and that the conclusions drawn from them are too optimistic. There is a more distinct correlation between particular practices, for example payment systems and business outcomes, or the usage of more progressive methods of human resources management and staff fluctuation (Wall and Wood, 2005; Moynihan and Allen, 2005).

The variables discussed in this paper include human capital management and leadership competencies, as well as their impact on organisational performance. The aim of this paper is to construct a conceptual framework from the relevant literature to identify the relationship between human capital management and organisational performance, using leadership as a mediating factor.

This paper is organised as follows. In the first section, we review the literature on human capital and leadership, and analyse their link with organisational performance. The conceptual framework is formulated based on this review. The next section describes the research method

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and result. Finally, the conclusion summarises our contribution, and points to directions for future research.

## **LITERATURE REVIEW**

### **Human capital management**

The aim of human capital management (HCM) is to create the value of the enterprise and to use various kinds of measures to prove that better personal strategies and processes allow companies to obtain better results (Baron and Armstrong, 2008, p. 35). However, for the proper management of this capital it is necessary not only to govern it effectively, but also to measure it. A human capital management system is traditionally considered to be effective when it allows to increase the efficiency of the organisation measured in terms of economic indicators and to develop its adaptability vital for the survival and development of the organisation (Lewicka, 2010, p. 36). The use of suitable, precisely targeted instruments help to shape the approach towards the management of employees, who are treated as a strategic asset for building enterprise value. We can therefore observe an increased interest in research on measuring human capital (Curado, Henriques and Bontis, 2011; Demartini and Paoloni, 2011), the impact of which on the results of the organisation is not fully recognised either in theoretical or empirical terms (Lin et al., 2012). Assessment of the actions undertaken regarding HCM is not easy and poses many methodological and practical difficulties, because both quantitative and qualitative measures are used. It should be emphasised that certain complications arise in the measurement as a result of the definition of this term itself. Firstly, the concept is heterogeneous and includes many elements: skills, knowledge, competence, experience and motivation, which are also difficult to measure. People are variable, diverse and far from the accounting concepts of assets (Mayo, 2001, p. 41). In this context, the matter of how to define the management and measurement of the human capital acquires special importance. The choice and the type of practices that can be used to affect employees is strategic, because politics, practices and human resources management process influence behaviour, attitudes and employees' outcomes (Noe et al., 2000, p. 4). The work of every single employee might potentially create an added value for the enterprise. However, this kind of profit does not emerge by accident; it is the result of conscious actions that should maximise this value. The success of the company strongly relies on whether it can set the hidden value of the people free (O'Reilly and Pfeffer, 2006, p. 31).

There are various approaches to human capital measurement in the literature. One of the most commonly applied suggests using diverse methods of measuring human capital. It assumes that the development of those practices will help companies and investors understand the factors which increase the results of the organisation (Elias and Scarbrough, 2004, p. 22). This approach also undertakes the idea of opening the so-called "blackbox" (Sanders et al., 2014, p. 489), which indicates the relationship between the specific practices of human resource management and the obtained results of the company. The main idea behind this approach is that all actions in the field of HCM reinforce each other and increase the knowledge and skills of employees and their satisfaction, motivation and commitment (Becker and Huselid, 1998; Hutchinson, Purcell and Kinnie, 2000). This in turn contributes to the improvement of organisational performance. This approach leads to the perception of human capital measurement not only in terms of the effectiveness of certain practices, but also as a process of creating the value of the organisation.

### **Leadership competency**

Research in the field of leadership has a long history in literature, because leadership issues are vital for organisational success (Kumar and Kaptan, 2007) and constitute an important predictor of the performance of an organisation (Bass et al., 2003). Leaders have an impact on their organisation by setting clear goals and performance expectations (Bass et al., 2003), and

by motivating their employees to reach these goals. Effective leadership consist of two attributes: personal and professional leadership. Personal leadership includes expertise, trust, caring, sharing, and ethics (Mastrangelo, Eddy and Lorenzet, 2004). Professional leadership is a set of behaviours in which leaders engage to ensure organisational success (Mastrangelo, Eddy and Lorenzet, 2014). Effective leadership leads to sustaining profitability, productivity, and a competitive advantage (Lussier and Achua, 2007). Thus, the competency of a leader is best measured by the performance of the organisation (Pradhan and Pradhan, 2015). The most important competences of a leader (knowledge, skills, abilities and attitudes) are presented in Table 1.

**Table 1. Leader competency**

Leadership competency	Authors
Mentoring and coaching, leading and motivating, problem-solving and decision-making, communicating and listening, and influencing and negotiating	Tomal and Jones, 2015
Values, knowledge, intellectual drive, ethics, charisma, creativity, self-confidence, courage	Almatrooshi, Singh and Farouk, 2016
Effectiveness, flexibility	Soebbing, Wicker and Weimar, 2015
Open-minded, cultural interests, sensitive, resilient, resourceful, optimistic and energetic, honest, stable personal life, value-added technical or business skills	McCall and Hollenbeck, 2002
Strategic perspective, customer focus and understanding, ability to spot trends and connect the dots, engaged and committed teams, willingness to take risks, deep knowledge and expertise	Zenger, 2014

*Source: Author's compilation.*

The ability and competence of leaders as perceived by organisation members is a key element in viewing leaders positively (Kouzes and Posner, 1993), and an important characteristic of effective leaders (Yukl, 2001). Leaders can change and transform employees by increasing motivation, building commitment, and encouraging them to achieve organisational goals (Yulk, 2010). McNair et al. (2011) claim that leadership is the art of motivating groups of people to achieve a common goal. Leaders focus on the organisation and inspire employees to a higher level of performance (Yulk, 2010; Wang et al., 2011; Mastrangelo, Eddy and Lorenzet, 2014; Ssekakubo, Lwanga and Ndiwalana, 2014). Employee performance influences the effectiveness of the whole organisation. There is a relationship between team effectiveness (such as member behaviour, team attitudes, team productivity and organisational performance: Samul, 2016) and the performance of an organisation. Thus, a leader's skill constitutes a large part of the performance of any organisation (Almatrooshi, Singh and Farouk, 2016).

### **Conceptual framework**

An interesting approach to researching the relationship between human capital practices and organisational performance is measuring it with the usage of a mediating factor. The theoretical and practical model of the relation is then obtained (Figure 1). Its strength comes from simplifying those relationships and focusing on the most important elements of HCM. In this case, the mediating factor is leadership competency.

**Figure 1. Conceptual framework**

Source: own compilation.

## METHOD AND MEASURES

The research consisted of two steps. The first involved a survey conducted among 41 medium and large construction enterprises, which accounted for 87% of the total study population of Podlaskie Voivodeship. The surveyed companies were allocated into one of three groups based on their achieved financial position. Group A included companies characterised by high financial results; Group B included companies with average results; and Group C included companies with the lowest results. Two companies were selected to conduct a case study, one from Group A and one from Group C. Applying this criterion of division of companies into groups, made it possible to verify the assumptions of the conceptual framework, to notice the differences between the results and to interpret them. The surveyed enterprises agreed to the study on condition that their anonymity was preserved. Therefore, they are conventionally named Company A (from Group A) and Company C (from Group C).

These enterprises were later characterised and analysed for selected indicators, which were then used to assess and verify the established model. The selection of indicators in particular areas was limited to a dozen or so, and to a greater extent was a consequence of the real possibilities of access to the data rather than their potentially possible list. The following three subsections describes how the variables of the conceptual framework were assessed.

### Human capital

The assessment of human capital was made using indicators concerning the condition of the human capital and obtaining it, training, a sense of independence, satisfaction, and working conditions (such as the work atmosphere and salary). All managers of the organisation were considered to be leaders. Some of these indicators were possible to obtain by analysing the data available in the company during the period when the studies were conducted, whereas the rest required carrying out surveys among the leaders. For example, in the study of the level of job satisfaction, a 5-step scale measuring the level of change over several years was used, allowing the observation of possible trends in the examined indicators.

### Leadership competency

The assessment of the competence of the leaders was made by measuring the most important features on a 5-point scale, where 5 meant very good, and 1 meant very weak. On this basis, the competence of the leader of the studied enterprise was compared to the ideal profile. The ideal profile of competence of a construction company leader was determined by the average importance of this competence for all construction companies which were surveyed ( $n = 41$ ). Of the 41 companies, 16 were evaluated, and 9 (which scored at least 3) were selected for further analysis.

### Organisational performance

In assessing organisational performance, the market share and the company's financial situation was analysed. Participation in the relevant market was calculated as the company's ratio of sales compared with the sales of its three biggest competitors. This analysis shows the correlation of certain financial values that are important from the point of view of their mutual relations. The choice of indicators possible to calculate on the basis of the financial data of the

company is very wide. Therefore, a limited set of the most efficient indicators enabling the characterisation of the various aspects of the enterprise was used. The indicators of the profitability of human capital and its added value were also used. Each of these indicators shows the selected aspect of the company's financial condition, but the measures must be considered together. In the assessment of the individual meters, certain assumptions conditioning the correct conclusions were used:

- Indicators and meters were standardised in all enterprises, because the literature offers different formulas for calculating specific indicators; and
- Conclusions were drawn for a group of indicators over three years, because only then can some trends indicating an improvement, stability or deterioration of the situation in the company be noticed.

## RESULTS

Both the surveyed companies belong to the construction industry. The history of Company A goes back to 1951. The company underwent various transformations, changing its name, legal form and owners. In its current form, as a result of privatisation, Company A began its activity in 1993. The beginnings of the new company were quite difficult, as it was associated with the bankruptcy of the previous company, which resulted in customers' lack of trust and great caution on the part of contractors. Currently, Company A is one of the best construction companies in Podlaskie Voivodship. It employs about 190 workers. It is a developer and general contractor of construction of housing and public buildings. For this work, the company receives numerous diplomas and prizes, including Leader of Polish Business, the Certificate of Fair Play Business, the Golden Certificate of a Reliable Company, the Employer of Podlaskie, and Best Building of the Year. It has implemented and certified Integrated Quality and Environmental Management in accordance with the norms of ISO 9001: 9008 and ISO 14000: 2004. The mission of Company A is described in three words: quality, reliability and professionalism.

The beginnings of Company C date back to the early 1990s, which were the prelude to a completely new period in the history of Poland characterised by the emergence of private companies and competition. The registered capital of Company C contained more enthusiasm than actual financial resources, which transformed a small company into a rapidly growing medium-sized company. The company currently employs approximately 120 employees. It has an established market position and trust among customers, as evidenced by the certificate of "Trustworthy Company" and numerous references confirming the quality, robustness and reliability of the company. The company is a developer and a general contractor, specialising in industrial buildings, public buildings, sports and recreation facilities. Its prime mission is taking care of the quality of services and customer satisfaction.

The following is an analysis of the indicators used in the area of human capital management (Table 2).

**Table 2. Measures and indicators of human capital management in Companies A and C, 2010–2012**

<i>Human capital measures</i>	<i>Company A</i>			<i>Company C</i>		
	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>
Number of managers [number of person]	20	22	22	15	15	18
Managers of higher education [% share in the total number of managers]	70	72	68	66	73	72
Average seniority of managers [years]	13.2	12.5	12.5	7.5	8.5	7.8
Acceptance rate [%]	5	5	9	6.7	13.3	5.6
Stability rate [%]	65	68	63	40	53	44
Managers' fluctuation rate [%]	0	0	14	13.3	0.0	5.6
Share of trained managers [%]	60	77	77	0	0	0

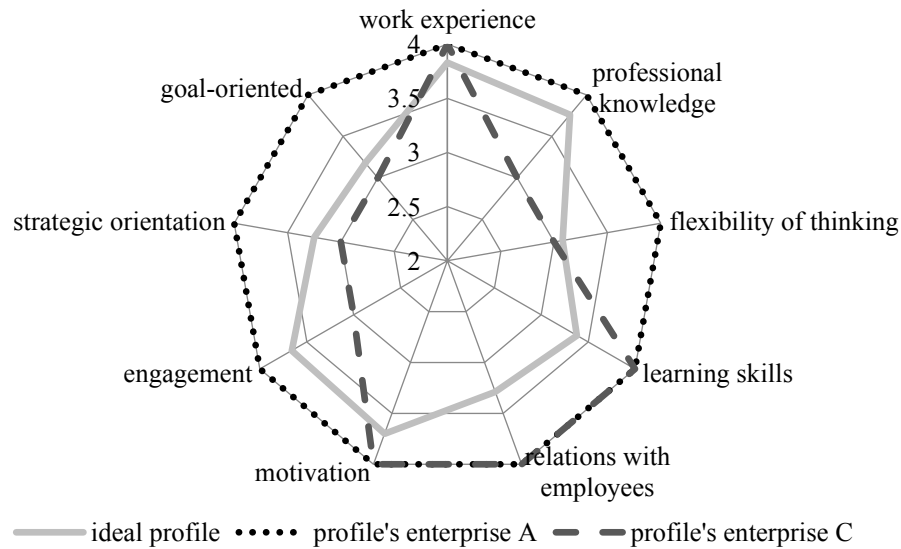
Average number of training days per manager [number of days]	1.8	2.6	2.1	0	0	0
Training costs in total labor costs [%]	0.6	0.4	0.3	0	0	0
The number of managers with planned career paths [number of person]	4	0	0	0	0	0
Promotion rate [%]	0	5	4.5	7	7	0
Indicator of making independent decisions [%]	60	55	55	66	66	55
The managers' participation rate in defining objectives [%]	100	100	100	40	40	38
Job satisfaction index [1-5 point scale]	5	x	5	5	x	5
Loyalty index [1-5 point scale]	5	-	5	4	-	4
Index of the sense of belonging to a team [1-5 point scale]	4.5*	-	4.5*	4	-	4
Indicator of the atmosphere in the company [1-5 point scale]	4	-	4	5	-	4
Indicator of personal life and career balance [1-5 point scale]	4	-	4.5*	5	-	4
The level of remuneration [Euro]	1058	1148	1171	1092	1205	1218
Level of salaries depending on effects [% share managers in total number of managers]	100	100	100	26.6	33.3	36.3
Indicator of the assessment system [%]	100	100	100	0	0	0

\*No value occurring most frequently; the same number of people issued an assessment of 4 and 5

*Source: Author's research.*

The analysis of the measures of human capital started with the assessment of the condition of this capital. In both companies, the factors are forming up favourably, especially the structure of the management in terms of education, where most of the employees have a higher level of education. However, the average length of service of employees in Company A is higher than in Company C. This is reflected in the rate of admissions and in the index of fluctuations, which forms more favourably in Company A. The stability of employment calculated as a percentage of employees with experience longer than average is also higher in Company A. Another area of interest concerns the indicators of human capital training. All measures in this field, including the number of trained employees, the average number of days of training and the share of training costs in total labour costs, are much better in Company A than in Company C. The analysis of measures connected with the development of independence in the workplace also shows good human capital management in this area in both Companies A and C. Admittedly, the rate of promotion and the number of managers who have a planned career path is low. Taking into account the results of previous studies on internship and employment stability, this cannot raise reservations. Another meter concerning the independence in decision-making is shaped at the average level: approximately 60% in both companies. However, in the case of the participation of the leaders in defining objectives, the results in both companies vary. Company A has a 100% share of the leaders in setting goals, while in Company C this ratio is at most 40%. Subsequent measures concerning job contentment (satisfaction, loyalty, atmosphere at work, a sense of belonging to a team, ensuring a balance between work and private life) were rated quite high and obtained evaluations of 4 or 5. However, in the case of Company C, a decline in the assessment (from 5 to 4) for the atmosphere at work and ensuring balance can be noticed. The indicators which concern wages shape in an interesting way. In Company A, wages are slightly lower than in Company C. Although the differences are very small, in this company, the earnings of all the leaders depend on the results. All managers are also subject to assessment.

The next stage of the conducted case study was the evaluation of leader competence. The selection of the set of core competencies was made on the basis of previously conducted surveys, which were then evaluated in the surveyed enterprises and compared to the ideal profile (Figure 2).

**Figure 2. Leadership competencies in Companies A and C**

Source: Author's research.

The assessment of leader competence in Company A comes off considerably more favourably than in Company C. Moreover, the specific skills, knowledge and abilities were rated higher than the ideal profile, which is the average for the surveyed companies. All measures of human capital management are positive or very positive, which is reflected in the quality of this capital. This confirms that the human resources practices in Company A fulfil their role in favourably shaping leaders' competencies.

The analysis of organisational performance through the assessment of the financial situations of Companies A and C was then performed (Table 3).

**Table 3. Measures of the assessment of the competitive advantage of Companies A and C, 2010–2012**

Measures	Company A			Company C		
	2010	2011	2012	2010	2011	2012
Relative market share	42.2	48.9	49.8	39.0	31.5	28.3
Current fluctuation ratio	2.43	2.16	2.93	1.73	2.38	2.84
Quick fluctuation ratio	0.11	0.11	0.06	0.82	1.12	1.43
Ratio of debt in assets	45.5	52.5	39.4	40	37	31
Ratio of debt in ownership capital	83.5	110.5	64.9	61	58	44
Rate of the inventory turnover cycle [in days]	496	454	439	117	102	81
Days sales outstanding [in days]	5	4	2	40	29	25
Inventory turnover ratio [in days]	32	60	60	28	28	29
Return on Assets (ROA) [in %]	10.09	9.63	9.49	12.42	11.52	8.64
Net profitability [in %]	18.54	16.58	12.48	6.99	6.75	5.64
Return on Equity (ROE)	18.51	20.28	15.65	17.93	18.22	17.26
Profitability of human capital [Euros]	1.47	1.57	1.50	1.31	1.32	1.33
Added value of human capital [Euros]	19735	27070	26430	17482	22540	14813

Source: Author's research.

The performance increased significantly from 42.2% in 2010 to almost 50% in 2012 in the analysed period in Company A, and fell from 39% to 28% in Company C. The whole financial situation of Company A should also be evaluated as profitable. Although differences

between the two companies are not big, they point to the financial advantage of Company A. The financial ratios in both companies, which enable the analysis of the company's ability to settle short-term liabilities, deviate from the standard. However, they have their justification in the specifics of the construction industry – possessing great amounts of land. In addition, the very low day's sales outstanding cycle and long terms of regulating current liabilities are specific to companies with a strong market position. Due to the nature of construction companies, a lower overall debt ratio in comparison with a higher rate of the share of equity is a regularity, which is also present in the example shown. Profitability indicators, used primarily to assess the effectiveness and the ability of the company's management to involve financial resources in the activities of the enterprise, or the effective placement of the capital, are at an average level in both companies. Return on Assets (ROA) tells you how effectively the managing team manages the owned assets, and is thus considered to be the best indicator of the leadership competence in management, while the net profitability indicator demonstrates the possibility of generating profits by the company. Return on Equity (ROE) is one of the most important indicators from the point of view of the owner. In Companies A and B, a slight decline of these values can be observed. It is, however, a general trend in construction business, in which profitability ratios declined in 2012 when compared with 2011 and net profitability reached a negative level (Statistical Bulletin, 2013). The return on human capital is in a very good state, which shows how much the company gains from each Euro invested in an employee. In the analysed example, Company A gets about 1.50 Euro from every 1 Euro over the studied period, and Company B gets 1.30 Euro. The added value of human capital, which evaluates the profitability of the average worker, is also formed favourably in Company A.

## CONCLUSION

The qualitative research presented in this paper positively verifies the conceptual framework that has been presented. Analysis of the two companies indicates that there are links between certain practices of human capital management, leadership competency and financial performance. Such a relationship was based on the measurement of specific indicators obtained in companies. An attempt to measure these relationships and the presented measures and indicators for this purpose may contribute to the development of a methodology in this area, as well as to the shaping of relations between human capital and organisational performance. The presented model not only has methodological value, providing a framework for further research, but it also has practical advantages, offering companies a model for shaping the relations analysed in this study.

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