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DETERMINANTS OF MANAGERIAL COMPETENCIES IN THE LEADERSHIP ECOSYSTEM 5.0

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Purpose: The purpose of this publication is to present the determinants of managerial competencies in the Leadership ecosystem 5.0. The identification of the elements of the Leadership ecosystem 5.0. and its characteristics were also performed.
Design/methodology/approach: In the theoretical part, a critical literature analysis was conducted. This included international literature from major databases and Polish literature. Additionally, in order to identify research problems, a diagnostic survey method with Likert scale analysis was used.
Findings: The research conducted was based on the authors' categorization of leadership competency areas. The most important competency areas were identified. Furthermore, the research results enabled the identification of criteria distinguishing a leader from a manager. Factors essential for the effective performance of the leader's role were presented. Additionally, indicators of competence within the context of the Leadership ecosystem 5.0 were highlighted.
Research limitations/implications: The research is intended to be expanded in the future to include a more extensive and more diverse research sample.
Practical implications: The research results and conclusions constitute implications for the development of competencies adequately matching the challenges of the Leadership ecosystem 5.0. The 5.0 Leadership ecosystem brings many benefits, such as increased efficiency, cost reduction, and sustainability. For managers responsible for team creation, member selection, and work organisation, the results and conclusions of the research are deemed a valuable information source aimed at enhancing the organisation's effectiveness.
Originality/value: The article proposes an original model of the Leadership ecosystem 5.0. It presents the conceptualization process and characterizes the elements of this ecosystem.
Keywords: competencies, leadership 5.0, ecosystem, manager, commander.
Category of the paper: Research paper.

1. Introduction

Contemporary reality can be described as incredibly volatile and unstable against the background of the past. Over millennia, the constant striving for development seems to be a special trait of human beings. Development in various aspects of life, and especially economic development, the basis of which is the development of technology. Following Fromm (2017), it can be noted that technology makes humankind omnipotent, and science makes it omniscient. Industrial civilization, being the brainchild of liberal thought, has brought people the freedom to choose and decide for themselves, but it has also brought a number of threats.

Apparently, the human being is the decision-maker for changes. Still, unfortunately, often, their knowledge and capabilities are poorer than the environment and the surroundings which are the author of their own plans. Increasingly often, especially in the business world, the acronym VUCA is used to describe the modern environment. The acronym VUCA stands for volatility, uncertainty, complexity, and ambiguity. Used for the first time by US Army leaders to describe the post-Cold War environment. It is still used to characterize the environment that leaders must face (Strategic Leadership Primer, 1998). Currently, VUCA has actually become an idea taken over by the leadership of all sectors of society to describe the nature of the world in which they operate: the accelerating rate of change (volatility), lack of predictability (uncertainty), interconnectivity, causes, and forces of impact (complexity) and massive potential for erroneous readings (ambiguity) (Forsythe et al., 2018).

VUCA has become not only an official threat to the development, stabilization, and functioning of any organization, but also a fashionable way to motivate leaders. While reviewing the literature, a research gap was identified regarding the inclusion of the VUCA environment as an element of the 5.0 Leadership ecosystem (Baran, Woznyj, 2021; Bennett, Lemoine, 2014; Du, Chen, 2018; Kautish et al., 2022; Luthans, Broad, 2022; Troise et al., 2022; Zhang-Zhang et al., 2022). On the ScienceDirect platform, 8 records were identified with the term VUCA in the title of an article or chapter in the area of Business, Management and Accounting and Social Sciences (November 29, 2023). BazTech showed 5 records with the term VUCA in the article title (November 29, 2023). However, no connection was found between the issues of leadership and the VUCA environment. For the authors of this publication, the VUCA environment has become an implication for taking up the issue of determinants which affect the manager's competencies as one of the elements of the 5.0 Leadership ecosystem. The aim of the research was to learn the determinants of a manager's competencies in Leadership ecosystem 5.0.

2. The essence of competency

There is no doubt that the concept of competency, at the same time, is one of the most commonly used and one of the most controversial concepts in the modern management language (Nicolini et al., 2006, Ruzzarin et al., 2002).

The analysis of the essence of the manager's competencies is proposed to begin with the etymology of the term competencies. In the source literature, there are two concepts of competence: "competency" and "competence". These terms are often used interchangeably, while the difference in their meanings may lead to numerous misunderstandings. The term "competency" denotes soft skills. Woodruffe (1991) defined them as employees' skills related to their behaviour, emphasizing that behaviour is the foundation of competent actions. In this sense, competencies are also referred to as behavioural traits. "Competence", in turn, denotes hard skills. Woodruffe linked them to work areas in which the skills of a given employee are adequate for the position. Therefore, it is assumed that a competent person meets the expectations related to the results of their work. Competences determine the skills of employees that guarantee the fact of being effective. In addition, they signify the ability to make use of the resources of their knowledge at various levels of the tasks performed to achieve the intended goals work.

In the *Dictionary of the Polish Language*, competencies are described as the scope of someone's knowledge, skills, and experience (sjp, 2023). A similar understanding is given by Spencer (1993), according to whom the term "competences" is a combination of three attributes: skills, attitude, and knowledge. They define a person who carries out the tasks efficiently and effectively, according to the quality-oriented expectations of the organization.

Some researchers omit the characteristics of a competent person as a significant part affecting competencies. Competencies are defined as a body of knowledge, skills, and attitudes which affect work to the greatest degree and remain related to its performance. Competencies can be measured using the approved tools and improved by training and development, but traits cannot. Such an attitude is also presented by Cooper (2000). However, Whiddetta and Hollyforde (2003) claim that competencies are exactly a set of personality traits characteristic of a specific employee (manager). Among them, we can point out skills, knowledge, motivation, and the ability to self-evaluate.

In the management science literature, we deal with many proposals of competency models and, more specifically, models of competency profiles. The proposal of Lucia and Lepsinger (1999) presented in Figure 1 presents a very general model which fits into one of the broader definitions of competency.

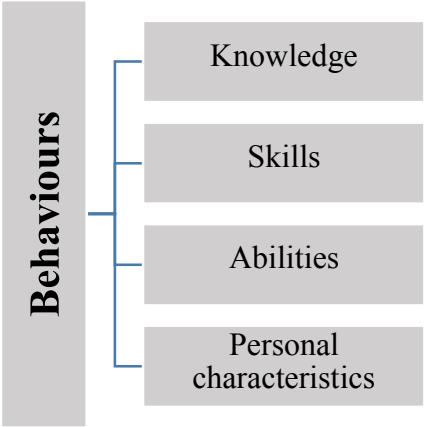

Figure 1. Competency model.

Adapted from: Lucia, Lepsinger, 1999.

The behaviour of a person is of key significance in the competencies according to the model above. They are presented as a base consisting of personal character traits, abilities, skills, and, of course, knowledge. Many researchers base their studies on the search for traits, skills, and behaviours that prove the effectiveness of a manager, leader, or commander (Balcerzyk, 2017, 2018). It should be noted that the spectrum of competencies and roles of managers and leaders cited in the literature largely depends on the perspective of the research conducted by an author of a given publication (Balcerzyk, 2021, 2023; Czaińska, 2021; Simerson, Venn, 2010; Sylwestrzak, Rzepecka, 2023). Largely, the variety of approaches results from the specificity of research areas and the breadth of management science which allow for describing this issue.

3. Clarification of the concepts of manager – leader – commander

Both in colloquial language as well as in the literature, the terms "manager", "superior", "leader", and "commander" are used interchangeably (Wojciechowska, 2019). Undoubtedly, these concepts have evolved, and researchers propose many definitions describing them as separate beings. Due to the variety of the fields of knowledge in which these concepts appear, there is no consensus on this issue.

A manager is a person who manages the work of other people within an organization's established structure (Penc, 1997, p. 188). A manager is the person responsible for the implementation of the management process. Within this process, they are responsible for implementing management functions: planning, organizing, leading, and controlling (Griffin, 2005, p. 7). A manager should also be considered as a person who holds an executive position regardless of the organizational tier (Kozuch, 2004).

In order to define the term "commander", *General Rules and Regulations of the Polish Army Soldier* (2023, p. 10) was used, according to which a superior in a military organization exercises command (executive), management, instructional, and educational functions over their subordinates. They are responsible for the organizational efficiency and service (work) of subordinates and is also obliged to create conditions ensuring adherence to the law and discipline by their subordinates.

According to Kopertyńska (2015, p. 257), a leader "...is someone who primarily inspires, motivates, convinces and influences other people and paves the way for change". Blanchard (2018) defines leadership in more detail as the ability to effectively influence people by unleashing energy and potential in them to enable them to strive for the greater good.

A comparison of the relations between the manager, the leader, and the commander indicates that the importance of the leader's role is growing. However, the roles of the commander and manager are very similar. The list of elements of individual roles is presented in Table No. 1.

Table 1.
Comparison of activities: manager, leader, and commander

Manager	**Leader**	**Commander**
Administers	Innovates	Commands
Accepts *the status quo*	Negates the status quo	Accepts *the status quo*
Controls	Inspires, motivates, inspires trust	Controls
Plans and budgets	Introduces changes	Plans and evaluate
Focuses on systems	Focuses on people	Focuses on tasks
Uses formal structures	Uses informal structures	Uses formal structures
Has a short-term thought horizon	Has a long-term thought horizon	Has a short-term thought horizon
Imitates	Creates	Recreates

Source: the authors' own development (based on: Balcerzyk, 2017, 2018; Tomaszuk, 2009; Sylwestrzak, 2023).

The current models match McClelland's (1967) concept, according to which a person influences the context in which they act only through their behaviour. In the discussions on the topic of leaders, in addition to the features possessed, the importance of the competencies possessed by a leader, which are the determinant of their position, is emphasized. By becoming aware of the nature of leadership, you can develop leadership qualities through appropriate training. A manager aspiring to the role of a leader must skilfully and coherently combine activities and functions from the sphere of leadership, management and command. These key activities include creating: models of personal role, values and culture, guarantees of trust, planning, organizing, motivating, knowledge and innovation management, etc. (Balcerzyk, 2021, 2023).

Mintzberg proposes blurring the lines between the roles of leader and manager. He believes that instead of separating, for example, management from leadership, we should treat managers as leaders, and leadership as well-executed management (Wrona, 2016). Undoubtedly, managerial skills are conducive to acting as both a commander and leader.

4. Research methodology

The search for a solution to the research problem required the use of the literature analysis method and the survey method (Cooper, 2000; Nicolini et al., 2006; Ruzzarin et al., 2002; Spencer, 1993; Whiddetta, Hollyforde, 2003; Woodruffe, 1991). In order to obtain the respondents' opinion, a questionnaire with detailed questions was used in the research. This study presents a fragment of broader research on the issue of leadership. The issues presented concern the most important areas of a leader's competencies and the criteria for distinguishing leaders.

Problem questions: Which area of a leader's competencies is the most important? What criteria distinguish a leader from people performing managerial duties?

The research was carried out in 2022-2023 in the Lower Silesia region. 340 questionnaires were analysed. The characteristics of the sample included: age, gender, size of the organization in which the respondents work, and the position held by them. The highest percentage of 48% of respondents are very young people from the age range of 19 to 25 years. Subsequently, 28% of the respondents were between the ages of 26 and 35. People from the age group of 36 to 45 years account for 15% of the respondents. People over 55 years of age account for 6% of the respondents. Respondents aged 46 to 55 constituted the lowest percentage share of 4%.

The distribution of gender in the sample was even. Women constituted 51% of the study group, and men 49%. Another variable taken into account in the research was the size of the organization in which the respondents work. Data obtained from surveys indicates that 49% of the respondents work in a company with more than 100 employees. The remaining respondents work in smaller companies employing: from 51 to 100 employees - 12% of the respondents, from 21 to 50 employees 11% of the respondents, from 11 to 20 employees 7% of the respondents, from 6 to 10 employees 10% and in a company employing up to 5 employees 11% of the respondents.

An important variable that was taken into account in the research was also the position held in the company. The results indicate that 22% of respondents hold the position of a middle-level executive (manager). The position of a junior manager was indicated by 12%. The least respondents - only 5% - occupy the position of senior manager. A large group of respondents - as high as 61% - are persons occupying a position other than the above-mentioned ones, i.e. a regular employee.

The characteristics of the research sample allow us to assess that these are mainly young people at the beginning of their professional career and few of them are senior managers. They probably play the role of supporters rather than leaders.

5. Research results

Referring to the literature review (Cooper, 2000; Nicolini et al., 2006; Ruzzarin, et al., 2002; Spencer, 1993; Whiddetta, Hollyforde, 2003; Woodruffe, 1991), it should be noted that there are many definitions and categories of competencies. The research undertaken was based on the authors' original set of competency categories. It was decided that five key areas can be distinguished in the set of competencies:

1. Interpersonal skills including: communication skill, inspiring and motivating a team, shaping trust, relationships and cooperation with people.
2. Personal predispositions, which may include: specialist and expert competencies. Problem-solving skills, taking initiative and personal development are also important here.
3. Focus on outcomes. The implementation of this area requires the ability to set ambitious goals, take initiative, but also take responsibility for the results obtained.
4. Mastery of change, which includes skills to develop a strategic perspective, connecting the group with the external world, also including its cultural aspect. In addition, they are characterized by the ability to update activities to take into account changing needs and expectations.
5. Character, which is understood here as being characterized by honesty and integrity.

The respondents were asked to assess the competency areas of a leader proposed in the multiple-choice answers. A five-point Likert scale was used for the assessment, in which 1 was the most important and 5 the least important. The data obtained from the respondents' answers is presented in Table 2.

Table 2.
The most important competency areas of a leader in the opinion of the respondents

No.	Categories		Scale					Weight
			1	2	3	4	5	
1.	Interpersonal skills: communication skills, inspiring and motivating, building trust, cooperation with people	n	150	86	60	30	14	1348
		%	44,12	25,29	17,65	8,82	4,12	
2.	Personal predispositions: specialist and expert competencies, problem-solving skills, taking initiatives, personal development	n	56	114	77	59	34	1119
		%	16,47	33,53	22,65	17,35	10,00	
3.	Focus on outcomes: setting high goals, taking initiative, but also taking responsibility for the team's results	n	26	58	76	106	74	876
		%	7,65	17,06	22,35	31,18	21,76	
4.	Master of change: developing a strategic perspective, connecting the group with the external and cultural world, updating measures taking into account the needs of the organization	n	31	29	68	96	116	783
		%	9,12	8,53	20,00	28,24	34,12	
5.	Character: being characterised by honesty and integrity	n	78	52	60	48	102	976
		%	22,94	15,29	17,65	14,12	30,00	

Source: Own research.

The analysis took into account both the percentage distribution of responses and the weight for individual categories was calculated. When calculating the weight, level 1, which was considered the most important, was assigned a weight of 5, for the other levels accordingly less, until level 5, which was assigned a weight of 1. The results of the research show that in the opinion of the respondents, the first of the above-mentioned areas is the most important one in the area of competencies, i.e. competencies including *interpersonal skills*. This area achieved the most of all categories, as 44.12% of the respondents awarded it level 1 on the scale. In this area, a group of 42.94% of the respondents indicated together significant levels 2 and 3 on the scale. This category gained the most weight (see Table 2).

Personal predispositions were ranked second in the weight ranking, as the most important area of competencies. The most important level 1 was indicated by 16.47% of the respondents, level 2 by 33.53%, and level 3 by 22.65%. In the third place in the ranking according to the weight of the most significant competency area, the respondents indicated the *character of a leader*. Nearly 23% of the respondents assessed this area at level 1. A total of 32.28% of the respondents assessed this area at level 2 and 3.

The focus on outcomes was in fourth place in the weight ranking. In this area, 7.65% of the respondents awarded the highest level 1, 17.06% awarded level 2, and level 3 was awarded by 22.35% of the respondents. In the last, fifth place in the weight ranking, the respondents rated the competency area related to the skills helping one to adapt to change, i.e. the *master of change* as the least important.

Many discussions in the management literature concern the differences between a manager and a leader. In the survey, respondents were asked to choose the most accurate statement in the question about the criteria distinguishing a leader from people performing managerial duties. The data obtained from the respondents' answers is presented in Table 3.

Table 3.
Criteria that distinguish a leader from a manager in the opinion of respondents

No.	Categoties	n	Percent
1.	They have special skills to deal with the conflicting needs of different components of the organization.	70	20.59
2.	They attach great importance to vision, values and motivation.	72	21.18
3.	They do not limit their interests to the scope of the organizational unit they direct.	40	11.76
4.	They think in a long-term perspective, going far beyond current problems and the horizon of the quarterly report.	146	42.94
5.	I do not accept the current state of affairs.	12	3.53
Total		340	100

Source: Own research.

The highest percentage share of the respondents, i.e. 42.94% concluded that the most important criterion distinguishing a leader from a manager is the fact that *a leader thinks in a long-term perspective, going far beyond current problems and the horizon of the quarterly report.* Almost half of the respondents, i.e. 21.18%, considered that such a criterion is contained in the statement - a leader *attaches great importance to vision, values and motivation.* Slightly fewer, namely 20.59%, believe that a leader has *special skills to deal with the conflicting needs of various components of the organization*. Only 11.76% of the respondents indicated that a leader *does not limit their interests to the scope of the organizational unit they manage.* A negligible figure of 3.53% indicated, on the other hand, that a leader *does not accept the current state of affairs.*

It is also worth quoting, at this point, the results of the study, which referred to the factors determining the effective role of a leader (Balcerzyk, 2021). According to 38% of respondents, the role of a leader largely *depends on their experience and other members of the organization*. Other factors determining effective performance of a leader's role are: the situation in which the relationship between a leader and the members of the organization occurs (18%), the type of tasks that need to be performed (18%), the organizational environment (14%), and the abilities and expectations of the subordinates (12%).

6. Discussion and conclusions

The main challenge of the Leadership 5.0 is to function in a turbulent reality environment, and therefore in a VUCA environment. The environment was recognized as one of the elements of the 5.0 Leadership ecosystem. The 5.0 Leadership ecosystem is also described by Industry 5.0 and, in particular, the challenges it poses for leaders. The organizations which have adopted Industry 4.0 (Adel, 2022; Wolniak, 2023) are flexible and ready to make data-driven decisions. Industry 5.0 means that people and machines work together. In order to adopt Industry 5.0, an adequate personnel interaction is required between machines (robots) and operators (Adel, 2022; Nahavandi, 2019). Competencies in areas such as robotics or artificial intelligence will be required. Artificial intelligence is already recognized as part of the 5.0 Leadership ecosystem.

Leadership, as a relation of influence, must achieve synergy of individual elements of the ecosystem. In Figure 2, a synergy model of the 5.0 Leadership ecosystem is proposed.

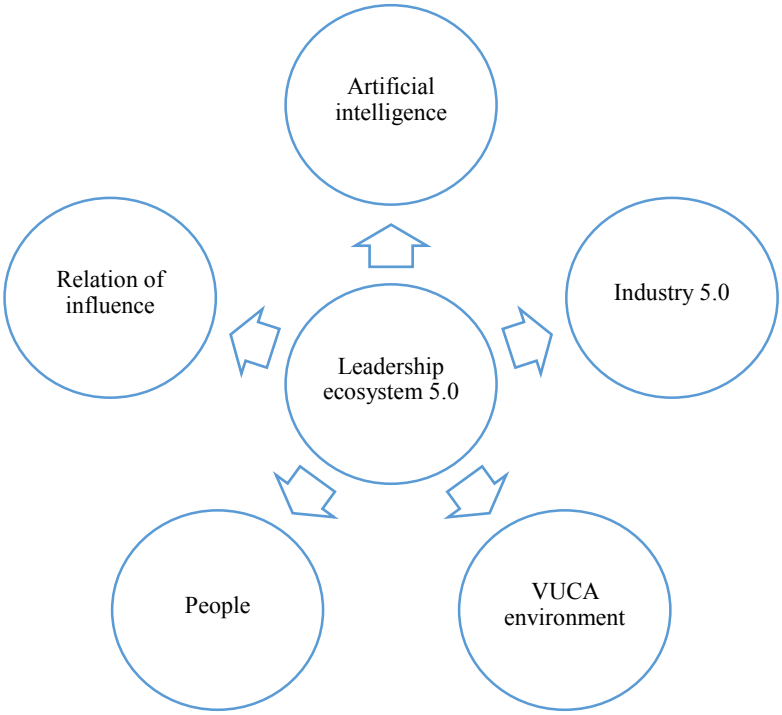

Figure 2. Leadership ecosystem 5.0 synergy.

Source: The author's own compilation.

It can be assumed that the elements which build the 5.0 Leadership ecosystem are the factors which hinder a stable development of the organization. A VUCA environment, i.e.:

- fast pace of change - variability,
- lack of predictability - uncertainty,
- interrelationships, their impact and the strength of impact – complexity,
- and a large spectrum of possible misinterpretations – ambiguity.

Features of a VUCA environment affecting changes in the business environment may also generate pitfalls for leaders. The problems seem obvious, but we do not just notice them. Namely, we see them as an opportunity to be seized.

The role of leaders will be to identify challenges. The environment creates unique situations; it does not create examples that leaders could duplicate or use. The terms variability, uncertainty, complexity, ambiguity generate completely different and difficult situations. Hence, it is from the competencies of a leader that the success of the organization is derived.

Another element of the Leadership 5.0 - artificial intelligence, entering reality without a question, poses new challenges and opportunities for leaders. Industry 5.0 are technologies based on cloud computing, blockchain technology, big data analysis, IoT, 6G networks. Industry 5.0 and artificial intelligence provide people with benefits such as technical precision, performing critical tasks, or application in human security situations, etc.

It was assumed that the elements indicated as components of the Leadership 5.0 are not separate entities but interweave each other. The relation of influence is, among others, a kind of bond between individual entities, a person – the leader, people – their supporters,

the environment – surroundings, people and technology - represented by Industry 5.0 technologies and artificial intelligence. The synergy of such different elements will make the total effect of their interaction greater than the effects of their separate impacts.

The research conducted in the social reality described above indicates that the respondents indicated interpersonal skills as the most important area of a leader's competencies. Therefore, communication skills, inspiration, motivation, building trust, and cooperation are more important in the opinion of the respondents than expertise. Personal predispositions: specialist and expert competencies, problem-solving skills, taking initiatives, and personal development came second. It may be disturbing that the skills facilitating adaptation to changing conditions, allowing for the development of a strategic perspective, the ability to update activities taking into account the changing needs and expectations of the organization were underestimated by the respondents. On the other hand, the most important criteria distinguishing the leader from the manager in the opinion of the respondents included the ability to think in a long-term perspective, which goes far beyond current problems and the horizon of the quarterly report. The conclusion from the results presented may be captured by a statement according to which people have stopped at strategic thinking and interpersonal relationships despite serious changes that the Leadership 5.0 brings about.

Competency determinants that can be adapted to the 5.0 Leadership ecosystem are proposed:

The ability to select the right people and to give them freedom afterwards. Providing one's own people with a place to work and space to develop.

Shaping a culture of responding - creating, shaping and transforming the culture of the organization so that it is more responsive. This feature means that it is tailored to the needs, responsive and reacting to the actions of fellow participants.

Formulating and sharing the values of the organization - using these values in decision management, in personnel management and development processes. Specific values ensure that all organizational systems are aligned and synchronized to embody the culture of the organization. Leaders should be the main relays of the organization's values, ones who strengthen them by personal example and ensure their cascade spread in the organization's structure.

Building an appropriate culture (Rzepecka, 2023) based on constant values (Balcerzyk, 2023), may be the key in the competencies of the 5.0 Leadership ecosystem. Building an appropriate atmosphere, responsive narrative both inside and outside the organization.

The 5.0 Leadership ecosystem brings about many benefits, such as increased efficiency, cost reduction, and sustainability. According to the author, the 5.0 Leadership ecosystem, as a complex but also a new category, implies the need for in-depth research on a larger scale, which she intends to undertake.

Despite the above conclusions, the research has some limitations. The author would like to mention that the research conducted was based on an interpretive paradigm, particularly valid in the study of the relationship between an individual and its ecosystem, focused on the future. The presented analysis and research results have significant implications for management theory.

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