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THE METACOMPETENCES IN ECONOMY 5.0: SELF-AWARENESS AND SELF-DEVELOPMENT

Izabela ŁUCJAN[1], Karolina BRODACZEWSKA-RUSZNIAK[2*], Halina ROROT[3]

[1] Politechnika Lubelska, Faculty of Management; i.lucjan@pollub.pl, ORCID: 0009-0003-1837-772X
[2] Politechnika Lubelska, Faculty of Management; k.brodaczewska@pollub.pl, ORCID 0009-0005-0982-4123
[3] Politechnika Lubelska, Faculty of Mathematics and Information Technology; h.rarot@pollub.pl, ORCID: 0000-0002-9095-0872
* Correspondence author

Purpose: The aim of this article is to identify key future competencies in the context of Economy 5.0, understood as a socio-economic model combining advanced technologies with a human-centered focus on individual needs and well-being. Particular attention is devoted to self-awareness and self-development as meta-competencies supporting adaptability, continuous learning, and effective functioning in conditions of rapid technological, social, and organizational change. The article emphasizes that these competencies foster the development of other skills and help individuals effectively respond to the challenges of dynamic and uncertain work environments.
Design/methodology/approach: The study is based on a literature review concerning Economy 5.0 and future competencies, complemented by empirical research conducted among 86 employees from various organizations. The diagnostic survey method was applied using an original questionnaire based on a five-point Likert scale.
Findings: The research findings indicate that respondents rate their level of professional competencies relatively highly, both in terms of theoretical and practical preparation, specialized knowledge, as well as socio-emotional competencies, particularly interpersonal skills, motivation, and adaptability. They demonstrate a strong orientation toward learning and development.
Research limitations/implications: The relatively small sample (N = 86) limits the generalizability of the findings. Moreover, self-assessment methods may involve subjective bias and social desirability effects. Further research should apply methodological triangulation and longitudinal approaches to better understand the development of meta-competencies and their impact on individual and organizational effectiveness over time.
Practical implications: The findings highlight the need for a systemic approach to competency development integrating learning, personalized development, and developmental tools. Organizations fostering self-awareness and lifelong learning can reduce competency gaps and enhance innovation and competitiveness.
Social implications: The study emphasizes the social importance of self-awareness and self-development in Economy 5.0, as these competencies foster proactive attitudes, adaptability, and lifelong learning. The findings underline the importance of organizational cultures and educational programs that support employee development.

Originality/value: The article combines theoretical analysis with empirical research on employees' self-assessment of competencies. Its main contribution lies in emphasizing self-awareness and self-development as overarching competencies crucial for adaptability and effective functioning in the Economy 5.0 environment.
Keywords: Economy 5.0, self-awareness, self-development, meta-competencies.
Category of the paper: Viewpoint.

1. Introduction

In the course of socio-economic development, several breakthrough moments have occurred that have shaped the directions of civilizational progress for decades. Multidimensional changes began with the First Industrial Revolution in the mid-18th century, which was based on the widespread application of scientific thought and inventions, enabling the mechanization of production and a radical reduction in human physical effort. The subsequent Second Industrial Revolution introduced the electrification of production processes and a more advanced division of labor, which in turn increased the scale and efficiency of manufacturing (Jabłoński, 2024). Another breakthrough occurred approximately one hundred years later, as the 1970s marked the beginning of a period of rapid development of microprocessors and information and communication technologies, accompanied by the progressive automation and robotization of production processes (Zamorska, 2020). With humanity's entry into the 21st century, the Fourth Industrial Revolution began (Schwab, 2014), characterized by further dynamic advancements in the field of information and communication technologies. Economy 4.0 focused on the synergy between humans and advanced technologies, such as artificial intelligence and collaborative robots, while simultaneously shifting the focus toward the individual and emphasizing that technology should serve overall well-being, and that ongoing development should be grounded in values such as openness and innovation. This perspective made it possible to identify another breakthrough, redefining the interdependencies between humans and machines (Islam et al., 2025; WEF, 2025).

The concept of Economy 5.0 has its roots in the assumptions of two ideas: Economy 4.0 and Society 5.0 (Hitachi-UTokyo Laboratory, 2020; Rojas et al., 2021), and is regarded as a key to sustainable development and innovation by combining digitalization with social solutions. This vision of a super-smart society assumes the integration of physical and digital spaces in order to create solutions that more accurately respond to citizens' needs, treating technologies primarily as tools for improving quality of life, increasing inclusiveness, and strengthening social resilience. Key aspects relate to the integration of cognitive computing with human intelligence, as well as the mass customization of production systems to meet individual human needs, with an emphasis on collaboration, personalization, and user well-

being. Within its framework, one can identify an attempt to balance economic development with the resolution of social and environmental challenges through the integration of physical and virtual spaces. In such a society, advanced information technologies, the Internet of Things, robotics, artificial intelligence, and augmented reality are actively utilized in every aspect of daily life, with particular emphasis on the benefits and convenience of each citizen. Economy 5.0 promotes the interdependence between humans and machines, assuming the integration of technology with human intelligence (Modrzewska, Kansy, 2025). Selected examples of its underlying assumptions include (Breque et al., 2021):

1. At the enterprise level: (a) the implementation and development of circular production, (b) the intensification of servitization, (c) the design of intelligent, autonomous, and self-learning factories capable of mass customization, (d) the development of solutions for distributed (multi-site) industrial production, and (e) the enhancement of flexibility and adaptability of production processes.
2. At the level of socio-economic development: (a) personalized human–machine interaction, (b) bio-inspired technologies and intelligent materials, (c) digital twins and simulations, (d) technologies for data transmission, storage, and analysis, (e) artificial intelligence, and (f) technologies supporting energy efficiency, renewable energy sources, energy storage, and autonomy.

Each successive stage of development involves the identification of megatrends characteristic of a given period, understood as enduring economic, social, environmental, and technological determinants. From this perspective, Society 5.0 provides a more comprehensive rationale for the growing importance of soft skills and meta-competencies. Designing and implementing technologies with a human-centered perspective increases the significance of socio-emotional competencies, ethical reflection, communication, as well as the capacity for learning and self-reflection.

2. Competencies as an Analytical Category

A review of the literature makes it difficult to identify a single definition that fully captures the interdisciplinary nature of competencies. R. White associated competencies with social skills enabling effective functioning within one's environment (White, 1959), while D.C. McClelland emphasized the importance of motivation and self-concept, challenging the dominant role of intelligence as the primary predictor of performance (McClelland, 1973). In other approaches, competencies are understood as the ability to achieve expected outcomes in a given context (Boyatzis, 1982) or as the integrated application of knowledge, skills, abilities, and personality traits in the execution of complex tasks (Levy-Leboyer, 1997).

The diversity of definitions is reflected in the typologies of competencies. For example, R. L. Katz's classification distinguishes technical, social, and conceptual competencies, referring respectively to specialized knowledge, functioning in interpersonal relationships, and analytical and synthetic abilities (Katz, 1974). F. Delamare le Deist and J. Winterton propose a model based on the criteria of the area of application (professional and personal) and the nature of activities (conceptual and operational), conceptualizing competencies as a combination of knowledge, skills, and habits (Delamare le Deist, Winterton, 2005).

Contemporary approaches emphasize the dynamic nature of competencies and the importance of their development as a continuous process of improving knowledge, skills, and attitudes, carried out through both formal and informal learning and aimed at reducing the competency gap (Jeruszka, 2016). Technological change, globalization, and digitalization mean that the labor market requires not only specialized qualifications but also high levels of self-awareness, adaptability, and a readiness for lifelong learning. In this context, self-development becomes a crucial element in building a career and maintaining professional competitiveness.

3. Future Competencies as Adaptive Meta-Competencies

The authors of the World Economic Forum's *Future of Jobs Report 2025*, a document analyzing current global labor market trends, emphasize that by 2030 a profound transformation of employment will occur, particularly in the area of new technologies, and that these changes will directly affect nearly 1.2 billion workers worldwide (WEF, 2025). The key challenges will include the skills gap, talent shortages, and the need to attract employees who are flexible and open to change. Demographic shifts also pose a significant concern, including population aging and the shrinking of the working-age population, particularly in highly developed countries. The labor market is evolving toward innovative, digital transformations that drive broadly understood progress, while remaining sensitive to megatrends shaping socio-economic development. A major challenge lies in defining a set of competencies necessary, first, to understand ongoing changes and, second, to adapt to them quickly and flexibly. The Top 10 Skills 2025 list includes, among others: (1) analytical thinking, (2) resilience, flexibility, and agility, (3) leadership and social influence, (4) creative thinking, (5) motivation and self-awareness, (6) technological literacy, (7) empathy and active listening, (8) curiosity and a commitment to lifelong learning, (9) talent management, and (10) customer orientation. In addition, competencies such as leadership and social influence, curiosity and lifelong learning, systems thinking, talent management, as well as motivation and self-awareness will become increasingly important due to the enduring human-centered orientation in the face of rapid technological advancement (WEF, 2025). While companies strive to enhance efficiency and profitability, in the era of information and globalization, achieving success also requires

responding positively to societal expectations and ethical norms (Antonopoulou, 2024; Salovey, Mayer, 1990; Saremi, 2022).

Given that, at the theoretical level, the concepts of Economy 4.0 and 5.0 are based on similar assumptions, competency requirements not only overlap but also complement one another. They arise directly from the application of advanced technologies in work processes, as well as from a holistic approach to shaping the work environment. However, in Economy 5.0, the design of work processes begins with human needs, capabilities, and limitations, with technological solutions subsequently adapted to them. Therefore, a clear emphasis is placed on soft skills necessary for functioning in digitalized, multicultural work environments, where self-organization is promoted as a guiding principle for technological solutions.

Research conducted by The World Future Manufacturing (2019), which can be related to competencies typical of Economy 4.0, indicates that competencies closely associated with technology dominate—particularly at the top of the ranking. These include digital skills, competencies related to artificial intelligence and data analytics, skills enabling work with new technologies, competencies ensuring cybersecurity, as well as data mindfulness (The World Future Manufacturing, 2019). In turn, research conducted by the World Economic Forum shows that employees are currently expected to possess skills that can be grouped into six categories: (1) cognitive skills, (2) engagement skills, (3) technology skills, (4) physical abilities, (5) management skills, and (6) self-efficacy, working with others, and ethics (WEF, 2025). When translated into specific competencies, these include: (1) analytical thinking, (2) creative thinking, (3) resilience, flexibility, and agility, (4) motivation and self-awareness, (5) curiosity and lifelong learning, (6) technological literacy, (7) reliability and attention to detail, (8) empathy and active listening, (9) leadership and social influence, and (10) quality control (WEF, 2019; 2023).

4. Self-Awareness and Self-Development as Key Future Competencies

In conditions of a turbulent environment, so-called soft competencies—encompassing cognitive, emotional, and social abilities—gain particular importance, as they complement domain-specific knowledge (Tarrago et al., 2025). They refer to traits applied in interactions with others and support the development of social networks (Itani, Sprour, 2015). Soft competencies include, among others, interpersonal skills, self-discipline, openness, and creativity (Hassan et al., 2024; Balcerzyk, Karczewski, 2022). They relate not only to strictly relational characteristics but also to other forms of behavior, such as social responsibility, ethics, and emotional intelligence (de Campos et al., 2020).

In the cited classifications, self-awareness is identified as one of the key future competencies, constituting a fundamental element in the process of personal development and the achievement of success. It refers to the ability to perceive oneself—one's thoughts, emotions, and behaviors—in a conscious and mindful manner. It enables the identification of strengths, the building of stronger relationships with individuals holding diverse views and experiences, and the avoidance of toxic relationships. Self-awareness is a continuous process that requires consistent effort and individual commitment for its development. In the context of future competencies, it facilitates more effective stress management, more deliberate decision-making, and the formation of authentic professional relationships. It is particularly significant in the era of VUCA (volatility, uncertainty, complexity, ambiguity), and increasingly in the context of BANI (brittle, anxious, nonlinear, incomprehensible), a concept describing the contemporary world as fragile, anxious, nonlinear, and difficult to comprehend (Syamsira et al., 2025; Sidor-Rządkowska, 2022).

Self-awareness—understood as the ability to recognize and understand one's emotions, values, and attitudes—directly translates into the capacity for self-development. Self-development is a conscious, planned, and long-term process aimed at expanding knowledge, skills, and competencies, leading to the fuller realization of one's potential. It requires self-reflection, goal setting, and systematic action, which distinguishes it from incidental learning (Becker-Pestka, Kołodziej, Pujer, 2017). Authors such as Deci and Ryan emphasize that its foundation lies in intrinsic motivation, arising from the need for autonomy, competence, and social relatedness (Ryan, Deci, 2000). A high level of motivation for self-development fosters cognitive flexibility, more effective stress management, and higher job satisfaction. Individuals who develop their interpersonal skills adapt more quickly to change, are more likely to take initiative, and demonstrate higher levels of innovativeness (Mäkelä, Stephany, 2024). In the face of automation and artificial intelligence, self-development enables the faster acquisition of new qualifications and more flexible adaptation of career paths (OECD, 2024).

5. Self-Awareness in the Context of Competency Development: Methodology and Interpretation of Research Findings

In order to identify how employees assess their own competencies, a survey study was conducted between May and June 2025. The study included 86 respondents with diverse characteristics in terms of age, work experience, and educational background. The diagnostic survey method was applied, using an original, anonymous questionnaire and a five-point rating scale, and the results were analyzed using basic statistical measures.

The obtained results indicate a high level of self-assessed professional competencies among the respondents, including in the areas of interpersonal skills, self-motivation, and a development-oriented mindset. Relatively low scores recorded in relation to passive attitudes and the avoidance of responsibility suggest a high level of personal agency, independence, and an internal locus of control.

Table 1.
Self-Perceived Competencies

	M	SD	Me	Min	Max	V
I am engaged in my work	3,38	0,77	3	2	5	22,74
I am able to work in a team	3,60	0,87	3	2	5	24,18
I pay attention to my colleagues' opinions	3,64	0,89	4	2	5	24,54
I fulfill my assigned tasks	4,93	0,26	5	4	5	5,20
I plan and organize my work effectively	3,58	0,85	3	2	5	23,64
I am motivated to work	3,41	0,86	3	2	5	25,22
I am willing to participate in various forms of professional development	3,31	0,90	3	1	5	27,09
I share my knowledge and experience with others	3,24	0,93	3	1	5	28,74
I am able to objectively evaluate my own work	4,03	0,42	4	3	5	10,37
I possess the theoretical knowledge required to perform my tasks	4,81	0,45	5	3	5	9,30
I have the practical skills required to perform my tasks	4,71	0,61	5	3	5	12,97
I continuously develop my qualifications	3,05	0,80	3	1	5	26,12
I work well in a team	3,44	1,05	3	1	5	30,42
I often relinquish control to others*	2,34	0,92	3	1	4	39,16
I find it difficult to take responsibility*	2,59	0,86	3	1	4	33,14
I am open to change	3,38	0,94	3	2	5	27,64
Intellectual development is very important to me	3,49	0,88	3	2	5	25,16
I enjoy acquiring new knowledge	3,94	0,52	4	3	5	13,11
I am able to motivate myself to work	4,00	0,63	4	3	5	15,81
I am not a lazy person*	1,29	0,65	1	1	4	50,23
I have strong technical skills	3,60	0,91	4	2	5	25,28
I possess strong interpersonal skills	4,27	1,00	5	2	5	23,41
I have good time management skills	3,56	1,00	5	2	5	23,41
My specialist knowledge is at a high level	4,47	0,79	5	2	5	17,75
I strive to increase my value in the labor market	3,81	0,96	4	2	5	25,28

M – mean, SD – standard deviation, Me – median, Min – minimum value, Max – maximum value, V – coefficient of variation (%).

Source: Authors' own elaboration based on the study.

Referring to the detailed analysis, it can be concluded that respondents assess their knowledge relatively highly, are aware of the need to enhance their competencies, and are motivated to do so. In this context, it is particularly interesting to consider the tools they use when planning to improve their competencies.

6. Conclusion

The aim of the article was to identify key future competencies in the context of Economy 5.0, understood as a model of socio-economic development that combines technological progress with a human-centered approach focused on well-being. Particular attention was paid to the importance of meta-competencies, such as self-awareness and the ability to autonomously shape one's own development, which determine the effectiveness of both individuals and organizations in conditions of intensive transformation. The article adopts a perspective emphasizing the growing role of transversal competencies as a foundation for the development of other capabilities. Self-awareness enables a deeper analysis of one's own potentials and limitations, while the capacity for self-development supports continuous improvement, flexible responses to changing demands, and effective functioning in a work environment characterized by a high level of uncertainty and complexity. The results of the empirical study indicate that respondents relatively highly assess their level of professional competencies, specialized knowledge, and socio-emotional competencies. The obtained findings confirm that self-awareness and self-development serve as key competencies conditioning the effective functioning of individuals in the context of dynamic economic and technological transformations. At the same time, they provide an important context and a foundation for further research in this area.

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