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Competencies of the Future: How Artificial Intelligence Has Been Shaping Skills and Labour Market Transformation

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Anna Dewalska-Opitek[1], Joanna Strzelczyk-Łucka[2], Aleksandra Szejniuk[3], Dominika Kalita[4]

Abstract:

Purpose: *The main purpose of this paper is to examine how AI reshapes current and prospective competencies and to evaluate its implications for employment.*
Design/Methodology/Approach: *The study employed secondary data analysis (SDA), drawing upon global report (Future of Jobs report, 2025, World Economic Forum). Desk research was applied to identify, synthesise, and triangulate data on technology adoption, employment trends, and competencies requirements. The methodological approach ensured broad coverage across industries and geographies, enabling the identification of both generalisable patters and sector-specific divergences.*
Findings: *The AI will shape job roles and competencies to a very high extent, acting both as a disruptor and a driver of new opportunities. The study confirms the necessity of sustained investment in upskilling and reskilling to ensure employability, organisational competitiveness, and societal resilience.*
Practical Implications: *the paper highlight the necessity of investing in continuous upskilling and reskilling programmes to maintain workforce relevance in technology-driven environments and to balance the development of advanced digital competencies with the cultivation of creativity, adaptability, as well as emotional and social competence.*
Originality/Value: *the paper contributes to the literature by integrating theoretical reflections on competencies with empirical insights from Future of Jobs report, 2025. It advances current understanding by conceptualising competencies as dynamic, multidimensional constructs that evolve under the influence of AI.*

Keywords: *Competencies of the future, artificial intelligence, labour market.*

JEL Classification: *M50, M54, J21.*
Paper type: *Research article.*

[1]*1Ph.D., Department of Organisational Relationship Management, University of Economics in Katowice, Poland, ORCID: 0000-0002-1269-4738, e-mail: a.dewalska-opitek@ue.katowice.pl;*
[2]*Ph.D., prof. Katowice Business University, Poland, ORCID 0000-0002-9023-8746, e-mail: joanna.strzelczyk-lucka@akademiagornoslaska.pl;*
[3] *PhD, Alcide De Gasperi University of Euroregional Economy, ORCID: 0000-0001-9964-118X, e-mail: a.szejniuk@googlemail.com;*
[4] *M Sc., Faculty of Social Sciences and Humanities, Academy of Silesia, Poland, ORCID: 0009-0002-8590-4473, e-mail: dominika.kalita@akademiaslaska.pl;*

1. Introduction

Competencies are increasingly recognised as foundational to organisational success, integrating not merely technical skills but also cognitive, interpersonal, and ethical dimensions. Recent studies posit that competencies are no longer static stock of skills, but evolving portfolios of capabilities that enable resilience, innovation, and alignment with shifting technological and market demand.

Therefore, organisations shall cultivate dynamic competence frameworks that adjust to rapid environmental changes, emphasising adaptability, creativity, and continuous learning (Gonzales-Lopez *et al.* (2021, pp.1388-1391).

One of the contemporary trends that may be observed, is the growing impact of artificial intelligence (AI). These technologies are transforming economic growth, productivity, job structures, and business operations at a pace rarely seen. According to Sestino, Kahlavi, and De Mauro (2025, pp. 298-300), AI acts as a general-purpose technology with potential to drive productivity growth across industries. Artificial intelligence increases the demand for particular competencies that would be align with the technology advancement and the market shift (Bharadiya *et al.,* 2023).

When having identified the required future competencies, both companies, and employees, may develop them by upskilling and reskilling them to meet the future requirements. Thus, analysing the influence of AI on competencies is f considerable academic and managerial significance, as it bridges conceptual reflection with pressing practical implications.

The main purpose of this paper is to examine how AI reshapes current and prospective competencies and to evaluate its implications for employment. Specifically,, the study seeks to identify the technological trends driving transformation, the occupations most likely to expand or contract, the competencies anticipated to be the most (and the least) in demand, as well as the extent to which AI reconfigures job roles and required skill sets.

To address these objectives, the research applied a secondary data analysis of global surveys report, i.e., The World Economic Forum's Future of Jobs Report 2025. This approach allowed the study to combine conceptual insights with large-scale empirical evidence, thereby offering a comprehensive perspective on competencies and occupations transformation.

This methodological design is well suited to the research purpose, as it situates empirical findings within broader theoretical discussions of competencies, while simultaneously capturing the dynamic interplay between technological innovation and workforce development.

2. Competence as a Dynamic Construct: Conceptual and Theoretical Insights

The notion of competence has been the subject of long-standing theoretical reflection in both psychology and management sciences. It etymological roots can be tracked back to the Latin word "*competentia*", denoting congruence, adequacy, or the ability to perform tasks effectively (Kowal *et al.,* 2022).

In modern times, the first scholarly use of the term is attributed to D.C. McClelland, who conducted studies on professional success and published a paper in 1973 in which he introduced the term "competence" as an alternative to intelligence tests, emphasizing that specific competences, rather than IQ are more reliable predictors of career achievements (McClelland, 1973).

Boyatzis further developed and popularised the concept of competencies, by formulating a model of managerial competencies and proposed their systematic classification (Boyatzis, 1982) of knowledge (cognition), skills (psychomotor domains), and attitudes (affection), which jointly define the scope of human action (Omar *et al.,* 2020). It then became the basis for Bloom's Taxonomy of competencies, referring to cognitive, affective, and psychomotor aspects (Ligale, 2025).

In the 1990s competencies were the subject of interest of L.M. Spencer and S.M. Spencer, who analysed 650 jobs in terms of required competences, using the McClelland/McBer job competence assessment (JCA) methodology (Spencer and Spencer, 1993; Armstrong, 2024).

The growing importance of this concept reflected a broader transformation in the economy, where intangible assets such as human capital and knowledge resources have become decisive factors in organisational competitiveness, explaining why some enterprises perform better than others with the same functional characteristics (Drejer, 2000; González-López *et al.,* 2021).

Literature studies prove that the concept of competence is not explicitly presented in the literature. In behavioural, praxeological, and attribute–process approaches, competencies are defined differently (Bonesso *et al.,* 2020; Sampaio *et al.,* 2021; Campos *et al.,* 2020; Kulbashna and Skrypnyk, 2020; Turner, 2021). The selected definitions of competencies, excerpted from the literature, are presented in Table 1.

Table 1. *Exemplary definitions of competencies*

Author(s) and date	**Definition**
Spencer, Spencer, 1993	The basic qualities of a person that show a causal relationship with (measured against certain criteria) work effectiveness and above-average performance, achieved in the course of a specific task or a given situation.

Author(s) and date	Definition
Boyatzis, 2008	The potential existing in an individual, leading to behaviour that contributes to meeting requirements of a given job within the parameters of the organisational environment, which in turn produces the desired result.
Pocztowski, 2008	The entirety of traits and qualities embodied in people (knowledge, skills, abilities, health, motivation) which possess specific value and constitute a source of future income both for the employee-owner of human capital and the organisation utilising the capital under given conditions.
Gruszczyńska-Malec and Strużyna, 2011	The ability and readiness of an employee to perform specific functions (tasks, activities) in various work situations.
El Asame and Wakrim, 2018	A set of knowledge, features, and skills that a person needs to accomplish an activity within a specific job.

Source: *Own elaboration.*

Moreover, it is worth emphasizing the divergences in how competencies are conceptualised within the Scandinavian, British and American models. The Scandinavian and British approaches argue that competence should not be equated with personality or character traits. Consequently, these perspectives clearly distinguish between competence and personality, asserting that personality does not determine professional effectiveness.

Furthermore, within this framework, personality traits are regarded as stable attributes and cannot and cannot be developed through training or practical experience. By contrast, the American perspective defines competencies as a relatively fixed structure of character traits, psychological needs, and value system (Kowal *et al.,* 2022; Penneta *et al.,* 2024). This concept has been reflected in the works of, among others, Sampson, and Fytros (2008).

The authors argue that competences may be conceptualised through three interrelated dimensions. The first dimension, personal characteristics, encompasses individual attributes, such as knowledge, skills, attitudes, behaviours, values, motives, and social roles. The second dimension, proficiency level, refers to the degree of mastery that enables effective performance of tasks. The third dimension, context, indicates the specific environment or situation in which competencies are applied, such as professional domain or a typical activity.

Collectively, these dimensions provide a comprehensive framework that aligns with prevailing definitions of competence in the scientific literature, which emphasise the integration of personal attributes with the capacity to perform tasks effectively in a given context (Strzelczyk-Łucka, Dewalska-Opitek, 2019).

Taking the conceptual deliberation into consideration, it may also be observed that there is a duality of terms, namely "*competence*" and "*competency*". Competence

may be understood as the capacity of an individual to act effectively and efficiently within a given situation. It is not directly measurable but may can be inferred from actual performance outcomes. Conversely, competency serves as a descriptive construct used to define attributes that enable satisfactory performance, like a skill, a piece of knowledge or an attitude (Miranda *et al.,* 2016; Teodorescu, 2006).

Nevertheless, some researchers (Arifin, 2021; Nikolajevaite and Sabaityte, 2016) present an opinion, that terms competence and competency may be used as synonyms and employ them interchangeably, whereas others (Miranda *et al.,* 2017; Ratnavat, 2018; Ellström, 1997) stress important conceptual differences.

Competencies can be classified according to various criteria. One of the most common classifications of competencies is their division into:

a. soft skills, necessary to engage in the work performed (behavioural competencies),
b. hard skills, such as the use of IT systems or computers (technical skills),
c. leadership characteristics (leadership competencies) (Kowal *et al.,* 2022).

On the other hand, a broader approach to the classification of competencies may indicate the following categorisation of competencies:

a. threshold competencies, they are common and do not affect work,
b. differential competencies, which are typical, specific to a given person, and rare or unique,
c. general competencies, required by everyone (e.g., ambition, professional aspirations, organisational skills, personal learning, self-development, creativity, or time management),
d. functional competencies, specific to a particular type of position,
e. technical competencies, i.e., knowledge and skills necessary to perform a specific task,
f. business competencies, i.e., knowledge and skills necessary to run a business and make decisions,
g. interpersonal competencies, including knowledge and skills in the field of effective communication,
h. intellectual competencies, necessary for organisation leaders,
i. workplace competencies, leadership competencies, and firm-wide competencies – are considered collectively, encompassing areas such as strategic planning and future orientation, relationships building, fostering partnerships and leadership,
j. generic competencies, which apply to most positions,
k. specific competencies, applying only to a specific job in a given industry (Kowal *et al.,* 2022).

Yasar *et al.* (2013), Gąsior *et al.* (2021) and Khan *et al.* (2022) identified most significant competencies, which may be divided and grouped in the following four categories:

a. Social competencies – competencies related to the interpersonal abilities of the employee, which include teamwork, communicativeness, identification with the company, customer focus, intra-company cooperation, solving the conflicts, social influence, sharing knowledge and building relationships.
b. Personal competencies – related to the personality traits and intellectual abilities that influence the quality of work and the performance of an employee, including scrupulousness, kindness, oneself and time management, professional/work development, problem solving, self-reliance, decision making, the pursuit of results, analytical thinking and innovativeness.
c. Professional competencies – which included specific knowledge and skills related to particular occupation and profession; those competencies included knowledge and application of hygiene and health and safety rules, professional knowledge, knowledge and application of procedures, technical skills, knowledge and application of the principles of ecology and sustainable development, business orientation, administration/record keeping, negotiating, foreign languages, process management and IT skills
d. Managerial competencies – related to managing and organising work of a group: motivating others, planning, strategic thinking, team building, company organizing, delegating, project management, leadership, and team management (Gąsior *et al.,* 2022).

Despite conceptual diversity, several common features of competencies are consistently emphasised. First, competencies are multidimensional constructs, integrating knowledge, skills, motives, and social roles. Second, they represent an organised set of behaviours mobilised by an underlying intent.

Third, they are context-dependent, varying in accordance with the specific organisational environment, role, or task requirements. Fourth, competencies are inherently dynamic, subject to development and modifications in response to the requirements of rapidly transforming business landscape shaped by artificial intelligence (AI). An in-depth understanding of the competencies that are likely to be shaped by artificial intelligence is of considerable significance, offering valuable insights for both academic inquiry and managerial practice (Daniels, 2023).

3. Artificial intelligence as a Growing Market Trend

Artificial intelligence (AI) has emerged as a transformative technological paradigm that profoundly influences economic and social structures, organisational practices, and individual competencies, apart from the most evident one, namely the technological environment. In order to understand its implications for the future of

work and skills development , it is necessary to establish a clear conceptual foundation by discussing definitions and core characteristics of AI, followed by exploration of how these attributes translate into the transformation of competencies (Bharadiya *et al.,* 2023).

The term "artificial intelligence" has been defined in a diverse way, reflecting the interdisciplinary nature of the field and the multiplicity of approaches to its study. Scholars often conceptualise AI either as the replication of human-like cognitive capacities or as systems designed to act rationally in in complex environments (Mikalef, Gupta, 2021; Demlehner, Laumer, 2020). Exemplary definitions extracted from the recent literature, illustrating the heterogeneity of AI are presented in Table 2.

Table 2. *Sample definitions of artificial intelligence*

Author(s) and date	**Definition**
Lee et al. (2019)	Artificial Intelligence: Intelligent systems created to use data, analysis, and observations to perform certain tasks without needing to be programmed to do so.
Schmidt et al. (2020)	Artificial Intelligence: The endeavour to mimic cognitive and human capabilities on computers.
Demlehner and Laumer (2020)	Artificial Intelligence: a computer system having the ability to percept, learn, judge, or plan without being explicitly programmed to follow predetermined rules or action sequences throughout the entire process.
Wamba-Taguimdje et al. (2020)	Artificial Intelligence: a set of theories and techniques used to create machines capable of simulating intelligence. AI is a general term that involves the use of computer to model intelligent behavior with minimal human intervention.
Enholm et al. (2022)	AI is the ability of a system to identify, interpret, make inferences, and learn from data to achieve predetermined organizational and societal goals.

Source: *Own elaboration based on Enholm et al. (2022).*

Despite some variations in focus, a consensus emerges that AI denotes systems capable of performing tasks that typically require human intelligence, such as reasoning, problem-solving, and learning (Sestino *et al.,* 2025; Enholm *et al.,* 2022; De Mauro *et al.,* 2021).

Artificial intelligence systems are generally classified into two principal categories, namely "Week (Narrow) AI" and "Strong AI". The first category denotes artificial intelligence systems designed to execute narrowly defined tasks within a specific domain. Strong AI, by contrast, designates artificial intelligence with cognitive abilities comparable to those of human beings, capable of engaging in reasoning and performing the full spectrum of intellectual tasks characteristic of human cognition (Rashid and Kausik, 2024).

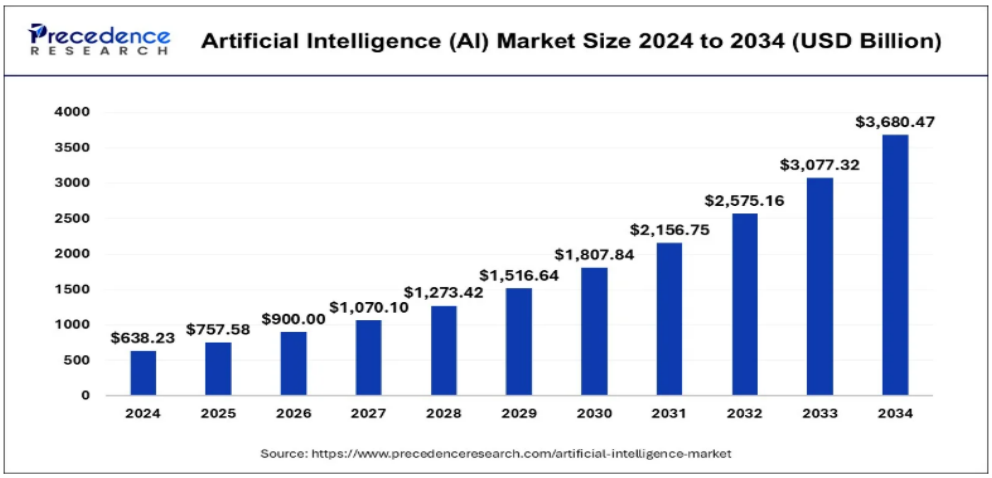
Literature studies allow noticing that AI has emerged as one of the most influential trends shaping the contemporary world. Its rapid development and diffusion across industries demonstrate a transformative potential comparable earlier to technological revolutions. AI is no longer confined to experimental laboratories but has become embedded in everyday applications, such as recommendation systems, digital assistants, autonomous vehicles, healthcare diagnostics, and financial forecasting.

The growing availability of big data, advances in machine learning algorithms, and the exponential increase in computing power have accelerated AI adoption, enabling organisations to enhance efficiency, reduce costs, and generate new value propositions (Kaushal and Mishra, 2024; Krishna, 2024). At a societal level, AI redefines patterns of communication, consumption, and work, creating opportunities for innovation while simultaneously raising concerns about ethical use, data privacy, and the future of employment.

Governments, businesses, and scholars increasingly recognise AI as a strategic priority, investing in research, regulation, and education to harness its benefits and mitigate risks. Consequently, AI is not only a technological advancement but also a structural driver of economic and social transformation, influencing how businesses, individuals and societies operate in the twenty-first century (Hauer, 2022).

It is predicted that the global artificial intelligence (AI) market size is going to expand at fast pace. It was worth USD 638.23 billion in 2024, calculated at USD 638.23 billion in 2025 and is expected to reach around USD 3,680.47 billion by 2034, expanding at a CAGR (i.e., Compound Annual Growth Rate) of 19.20% from 2025 to 2034 (AI Market report, 2025). The AI market dynamics is presented on Figure 1.

***Figure 1**. AI market dynamics (2024-2034)*



***Source:** AI Market report, 2025.*

It is cognitively stimulating to investigate and identify the impact that AI will have on competencies. This issue is significant from the perspective of organizations, which will seek to employ individuals equipped with the desired skill sets, as well as from the standpoint of employees, who must acquire, develop and offer these competencies on labour market.

4. Research Methodology

Grounded in theoretical reflections on competencies and the growing significance of artificial intelligence as a market trend, the study employed secondary data analysis (SDA) Its primary objective was to explore the impact of artificial intelligence on future competencies and employment. To achieve this aim, the desk research method was applied.

This research method uses existing, secondary data to answer research questions, applying a step-by-step process of defining the topic, identifying reliable sources, collecting, and cross-referencing data, and finally analysing findings to draw conclusions (Donnellan *et al.,* 2013).

Desk research presents several scientific advantages. First, it is cost-efficient and time-efficient: data already exist, often in detailed form, enabling rapid access to large-scale information without the time and expense associated with primary data collection (Guerin *et al.,* 2018).

Second, desk research permits broad coverage: by drawing on multiple sources spanning geographies, industries, and disciplines, one can observe large-scale patterns, compare projections, and detect divergences that may suggest boundary conditions or sectoral differences (Topolewski *et al.,* 2023).

Third, desk research supports scientific rigour through replicability and transparency (assuming sources are well documented). Other researchers can trace back the same reports, verify the data, replicate the synthesis, or apply the framework to new datasets (Bednarowska, 2015).

In using desk research, the study undertook systematic review of secondary data sources. The researchers identified, and analysed relevant published reports, journal articles, statistical databases, and industry white papers from 2023-2025. Inclusion criteria required sources to be credible (peer-reviewed, published by official institutions or established international organisations), to offer quantitative projections and trend analysis, and to cover technology, employment, and competencies (skills) issues. Exclusion criteria eliminated sources with unclear methodology, small sample size, or ambiguous projections (Guerin *et al.,* 2018).

A critical component of the desk research was triangulation: cross checking data points and projections among multiple sources to reduce bias and to assess

consistency of forecasts. Where reports differed, divergence was noted, and possible explanatory factors (region, sector, methodological assumptions) were considered. This approach enables identification of knowledge gaps and lends robustness to the findings, because secondary sources were not taken at face value but examined for internal coherence, timeliness, and relevance to the 2025 and beyond period.

The described desk research process allowed to base the research on Future of Jobs Report 2025 (World Economic Forum). The collected material was synthesised by thematic analysis and trend mapping to answer the following research questions:

RQ 1: Which technological trends are expected to drive future business transformation?
RQ 2: Which occupations are projected to grow and decline fastest in future due to AI?
RQ 3: What core competencies are anticipated to be the most in demand in future?
RQ 4: To what extent will AI reshape job roles and required competencies in future?

Central to the report is a unique dataset derived from an extensive survey of global employers. The 2025 edition captures the perspectives of over 1,000 employers – representing more than 14 million workers across 22 industry clusters and 55 economies, providing unparalleled insights into the emerging jobs and skills landscape for the 2025-2030 period.

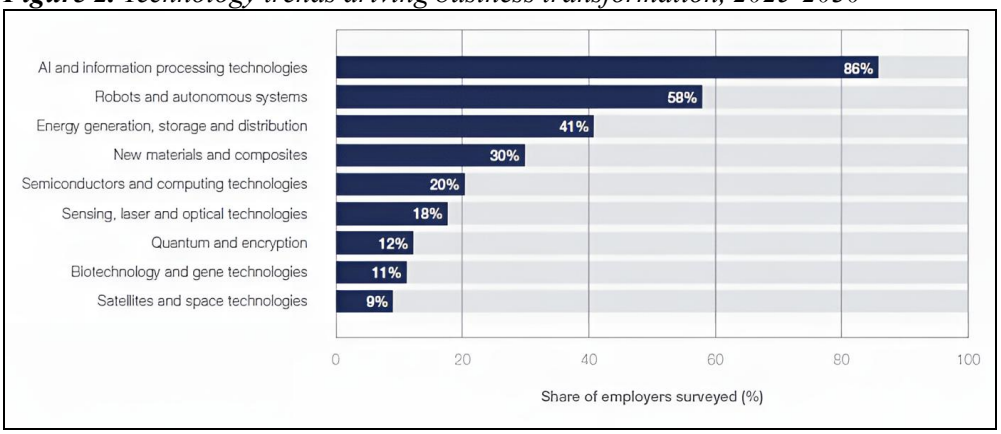
5. The Impact of Artificial Intelligence on Future Competencies – Research Findings

Technological change constitutes the principal driver of market transformation, with digital access, a critical enabler for recent technologies to transform labour markets. According to the Report (2025), employers were consulted on the transformative effects of nine key technological domains on business activities. Among these, three were identified as most influential.

Energy generation and storage technologies were expected to effect 41% of businesses, while robotics and autonomous systems were indicated as likely to reshape 58% of enterprises. The most significant impact, however, was attributed to artificial intelligence and information processing technologies, with 86% of respondents anticipating that these developments would transform their business operations by 2030 (Figure 2).

Generative AI has experienced a rapid surge in investment and adoption since 2022, with funding growing nearly eightfold and accompanied by large-scale infrastructure development. By lowering barriers to use through natural language processing, it has sharply increased demand for AI skills.

Figure 2. *Technology trends driving business transformation, 2025-2030*



Source: *Future of Jobs Report, 2025.*

Early evidence indicates that generative AI can augment human skills, expand task ranges for less specialised workers, and enhance professional problem-solving. Yet, without appropriate governance, there is a risk that technological progress will prioritise labour substitution, potentially intensifying inequality, and unemployment.

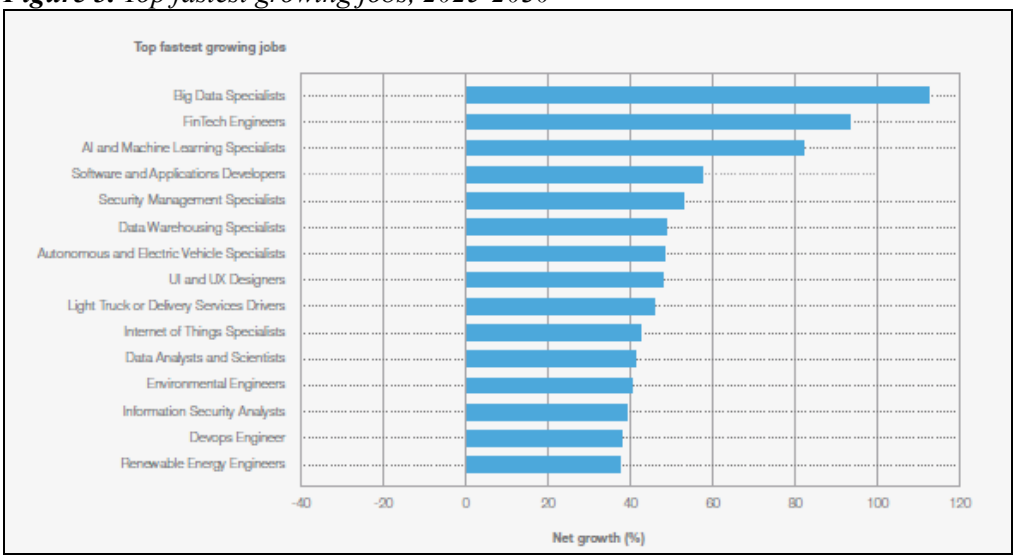
Drawing on employers' expectations regarding job growth and decline, it is projected that by 2030 labour market transformation will affect approximately 22% of current formal jobs. It is estimated that AI will generate around 170 million new jobs, equivalent to 14% of today's employment, while simultaneously displacing about 92 million positions, or 8% of the total. This dynamic is expected to yield a net increase of 78 million jobs corresponding to 7% of current global employment. Figure 3 present the expected fastest growing jobs.

The fastest growing jobs cluster around technologically intensive and innovation-driven domains. Professions such as big data specialists, AI, and machine learning experts, and FinTech engineers show the highest net growth, reflecting the growing demand for advanced digital competencies in data-driven economy.

The second tier of fastest growing jobs (with the net growth between 40%-60%) highlights the importance of applied digital and engineering expertise. Roles such as software and application developers, security management specialists, data warehousing experts, and environmental engineers represent fields where technological progress intersects with organisational and societal needs.

Their growth reflects the dual pressure of digital transformation and sustainability, signalling that demand will not be confined to innovative AI but will also extend to maintaining secure, efficient, and environmentally responsible organisational systems.

Figure 3. *Top fastest growing jobs, 2025-2030*



Source: *Future of Jobs Report, 2025.*

The data clearly illustrates a significant polarisation in labour market dynamics. Traditional clerical and routine-based occupations, such as postal clerks, bank customer service officers (tellers), and data entry clerks and among the fastest declining jobs, with net growth rates showing substantial contraction. This trend underscores how technological advancements, particular automation, AI, and digital communication tools, are displacing tasks that repetitive and easily systemised.

Moreover, the decline in roles such as cashiers, ticket clerks or administrative assistants highlight the shift toward self-service technologies and more efficient digital processes in both private and public sectors. These findings confirm that economic modernisation is leading to a structural reconfiguration of employment, where routine-intensive tasks are becoming increasingly redundant.

As the labour market evolves toward sectors characterised by advanced technologies and innovation-oriented activities, the need to identify emerging competency frameworks becomes crucial for the effective performance of individuals and organisations.

From an academic perspective, it is particularly valuable to examine both the present and future competencies that shape the ability to adjust to dynamic economic and social transformation. The Future of Jobs Report indicates that employers currently prioritise a blend of cognitive, interpersonal, and self-efficacy competencies.

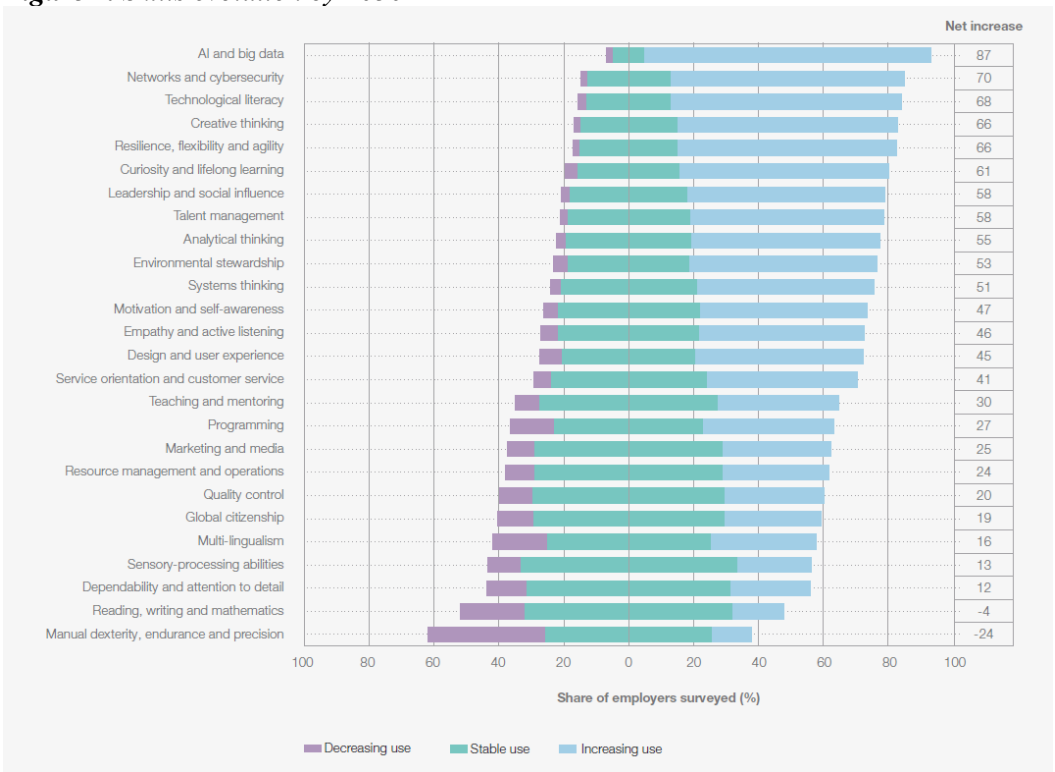
Analytical thinking is considered the most essential competency (69%), followed by resilience, flexibility and agility (67%), leadership, and social influence (61%). Creative thinking, motivation, and self-awareness also rank highly, highlighting the

importance of adaptability, problem solving, and innovation. The top ten skills further include technical literacy, empathy and active listening, curiosity and lifelong learning, talent management, and service orientation, illustrating the need for employees to balance technical proficiency with strong interpersonal abilities and continuous learning.

These findings underscore that success in the contemporary labour market relies not only on cognitive and technological capabilities but also in resilience, collaboration, and emotional intelligence.

The current competencies, which already reflect the dominance of modern technologies and artificial intelligence, will continue to evolve in line with the growing technological trend (Figure 4).

Figure 4. *Skills evolution by 2030*



Source: *Future of Jobs Report, 2025.*

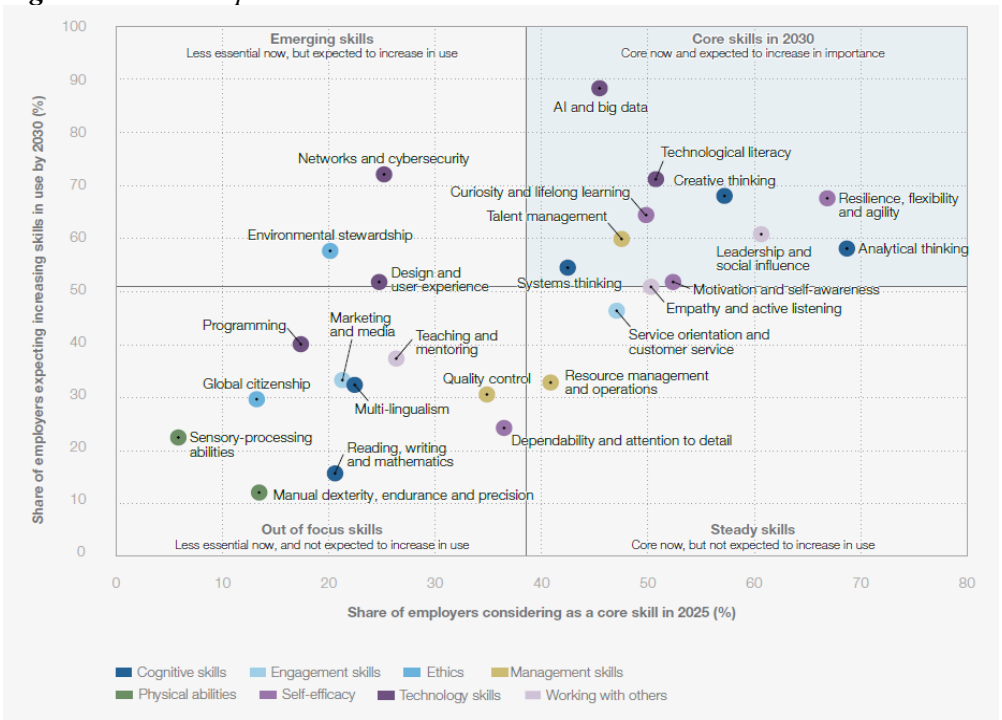
As presented in Figure 4, technological competencies are expected to expand most rapidly over the next five years, with AI and big data leading the trend, followed closely by networks and cybersecurity as well as technological literacy. At the same time, cognitive and socio-emotional skills such as creative thinking, resilience, flexibility. Agility and curiosity combined with lifelong learning are gaining

importance, stressing the demand for professionals who can innovate, adapt, and continuously develop. Leadership, social influence, talent management, analytical thinking, and environmental stewardship further complement the profile of a future-ready workforce, highlighting the need to integrate technological expertise with managerial, interpersonal, and sustainability-oriented capabilities.

In contrast, the relevance of traditional and physical skills is projected to stagnate or decline, which confirm a structural transformation of labour markets, where competitiveness will be increasingly driven by the interplay of advanced technological proficiency, creative problem-solving, and socio-emotional adaptability, while manual and routine-based abilities steadily lose their centrality.

Looking ahead to 2030, Figure 5 provides further insights into key priority areas for workforce development for organizations.

Figure 5. *Core competencies in 2030*



Source: *Future of Jobs Report, 2025.*

The top right quadrant highlights skills that are already core to organizations today and are expected to continue growing rapidly. Skills such as AI and big data; analytical thinking; creative thinking; resilience, flexibility, and agility; and technological literacy are not only considered critical now but are also projected to become even more important.

Moreover, leadership and social influence, curiosity and lifelong learning, systems thinking, talent management, and motivation and self-awareness solidify their importance, emphasizing the continued relevance of human-centric skills amid rapid technological advances.

Meanwhile, networks and cybersecurity and environmental stewardship – in the top left quadrant of the figure – rank among the top ten competencies expected to increase significantly in use by 2030, yet they are not currently considered core skills for most organizations. These emerging skills represent areas where businesses may need to anticipate growing demands and develop capabilities before they become critical.

On the other hand, skills that are core today, but expected to remain stable over the next five years without significant increase in use, displayed in the lower right quadrant, include empathy and active listening, service orientation and customer service and resource management and operations.

Finally, the bottom left quadrant of Figure 8 highlights skills that are neither critical now nor expected to increase significantly in use over the next five years. While most of these skills remain important, they may represent areas where less investment is required, allowing employers to prioritize resources toward more rapidly evolving skill sets.

The accelerating pace of technological advancement has intensified the existing mismatch between existing workforce capabilities and the competencies demanded by future labour markets. The discrepancy between supply and demand for anticipated skills highlights the necessity of systematic up-skilling and reskilling initiatives.

Upskilling enables employees to deepen and expand their current competencies to remain relevant in evolving roles, whereas reskilling equips them with entirely new skills to transition to emerging professions. Both strategies are essential for reducing structural unemployment, enhancing employability, and fostering organisational competitiveness.

It is predicted that by 2030, 48% of workers are expected to develop their competences, i.e., 29% will be upskilled in their present role, while 19% will be upskilled and redeployed, reflecting the ongoing reconfiguration of job roles in response to technological and organisational change. However, 11% of workers are unlikely to receive necessary upskilling, highlighting the risk of exclusion from evolving labour markets.

Overall, the evidence demonstrates that technological transformation is reshaping the demand for competencies, elevating digital proficiency, adaptability, and creativity while reducing the relevance of routine skills. Looking ahead, sustained

investment in upskilling and reskilling will be decisive in equipping the workforce with competencies required to thrive in and increasing technology-driven and innovation-oriented economy.

6. Conclusions

The study explored the evolving concept of competencies in the context of labour market transformation driven by artificial intelligence. From the theoretical perspective, competencies are understood as multidimensional and dynamic constructs, encompassing knowledge, skills and attitudes (behaviours) applied in a specific context.

Their conceptualisation has evolved from early behavioural approaches to more integrated frameworks that highlight not only technical and cognitive abilities but also interpersonal, motivational, and contextual dimensions. This theoretical diversity reflects the recognition that competencies cannot be reduced to fixed attributes but shall be interpreted as adaptive and developmental resources, constantly reshaped by changing social and technological environments.

The empirical evidence, grounded in secondary data analysis of global surveys, complements the theoretical insights by showing how rise of AI is defining job structures and consequently, competency requirements. Artificial intelligence and information processing technologies are identified as the most transformative, with nearly nine out of ten global employers expecting their significant impact by 2030.

Alongside AI, robotics, autonomous systems, and energy storage technologies are anticipated to shape industries profoundly, reflecting the growing interdependence of digitalisation, automation, and sustainability in organisational strategies. These findings provide the answer to the firs research question (RQ1).

The second research question (RQ2) focused on the fastest growing and declining occupations. The projections point to a robust expansion of professions, such as AI and machine learning specialists, big data analysts, and FinTech engineers, signalling that demand is increasingly concentrated in sectors where digital and analytical expertise is essential.

Equally important is the projected growth of environmental engineers, and security specialists, which demonstrates the intertwining of technological advancement with sustainability and risk management. Conversely, clerical and routine-based jobs, such as postal clerks, data-entry operators, bank service customer assistants, are among the steepest in decline, underlining how digital tolls and automation systematically displace repetitive tasks. This divergence reveals an emerging polarisation of the labour market, while high skill, innovation-driven profession flourish, while low skill, routine-intensive occupation contract.

To answer the third research question (RQ3) an examination which core competencies will be most in demand in the coming years. The report finding highlight analytical and creative thinking as fundamental, accompanied by adaptability, curiosity, and a commitment to lifelong learning.

Importantly, competencies as resilience, flexibility, leadership, and social influence are increasingly valued, as organisations recognise that technological expertise must be complemented by interpersonal and self-management skills. This balance between technical proficiency and socio-emotional intelligence demonstrates that workforce of the future must be both digitally competent and capable of navigating complex human and organisational dynamics.

AI will reshape job roles and required competencies to a high extent, which provides the answer the RQ 4. AI will act as a disruptor, eliminating many routine-based positions, as well as an enabler of workforce transformation, simultaneously creating demand for new roles in technologically intensive domains. Beyond task substitution, AI will require employees to attain advanced digital literacy, analytical and creative thinking, emotional and social competence, making continuous upskilling and reskilling indispensable for long term employability.

This paper advances the theoretical discourse on competencies by integrating classical frameworks of knowledge, skills and attitudes with contemporary demand shaped by artificial intelligence. It demonstrates that competencies should be conceptualised as dynamic, multidimensional constructs that evolve in response to technological, organisational on societal transformations.

For business practice, the findings highlight the necessity of investing in continuous upskilling and reskilling programmes to maintain workforce relevance in technology-driven environments.

Managers are encouraged to balance the development of advanced digital competencies with the cultivation of creativity, adaptability, as well as emotional and social competence, thereby ensuring both organisational competitiveness and employee resilience.

Despite the insights, the study is not without limitations. First, the application of secondary data (in the form of global survey reports) introduces a dependency on the methodologies and assumptions of external sources. Second, the analysis remains largely descriptive, focusing on aggregated patters, without providing deeper casual modelling of how AI adoption interacts with other organisational factors, like ethics.

Future research should therefore pursue several directions. Empirical studies employing mixed-method designs could validate and contextualize projections at the industry or national level. Furthermore, greater attention may be paid to ethical and social dimensions of AI driven competencies.

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