MANAGEMENT AND BUSINESS
Journal homepage: https://emsesd.com.ua/en
e-ISSN 3041-2420
Vol. 4, No. 1. 2026
Article's History: Received: 06.01.2026 Revised: 23.04.2026 Accepted: 26.05.2026 Published: 30.05.2026

UDC 331.108:005.591:004
DOI: 10.59214/mb/1.2026.70

Development and stimulation of innovative activity among company staff in the context of the digital era

Andrii Karpenko*
Doctor of Economic Sciences, Professor
National University "Zaporizhzhia Polytechnic"
69063, 64 Zhukovsky Str., Zaporizhzhia, Ukraine
https://orcid.org/0000-0002-5717-4349

Natalia Karpenko
PhD in Public Administration, Associate Professor
National University "Zaporizhzhia Polytechnic"
69063, 64 Zhukovsky Str., Zaporizhzhia, Ukraine
https://orcid.org/0000-0002-9301-3649

Nataliia Kholiavko
Doctor of Economic Sciences, Professor
Chernihiv Polytechnic National University
14030, 95 Shevchenko Str., Chernihiv, Ukraine
https://orcid.org/0000-0003-2951-7233

Abstract. The study aimed to analyse contemporary approaches to defining the essence of staff innovation activity, to reveal its significance in the context of digital transformations, and to substantiate the concept of developing staff innovation activity in the digital age. The article presented a comprehensive theoretical analysis of staff innovation activity as a key factor in ensuring the competitiveness of modern organisations. It examined the evolution of scientific approaches to interpreting the nature of innovation activity, its structural components and motivational determinants. The multidimensional nature of staff innovation activity was examined, emphasising that it was shaped by a complex set of factors encompassing motivational-psychological, organisational-managerial, technological and socio-cultural aspects. A substantial aspect of the article was the examination of the role of digitalisation in the transformation of HR processes and the management of innovative activity. The study noted that the success of digital transformation depends on a holistic approach that incorporates organisational characteristics, staff readiness for change, and effective risk management. The need for comprehensive management of innovation activity was emphasised, which should be based on the integration of various management practices and tools. To this end, companies should employ a diverse range of incentives (training, delegation of authority, recognition of achievements), as well as standardised methods for evaluating employees' innovative activities. The study proposed that innovative activity be viewed not as a separate process, but as a multifaceted system involving the interaction of psychological drivers, organisational practices, leadership and reward systems. Experience in managing innovative activity in the context of digital transformation was summarised. Proposals were formulated to improve the organisational and economic mechanisms for stimulating employees' innovative behaviour. The impact of digitalisation on stimulating the innovative activity of company staff has been analysed. Key technological and organisational tools of digitalisation were identified, which ensure effective motivation and support for staff innovation. The integration of digital tools into the human resources management system was proposed to develop and stimulate staff innovation, foster an innovation culture, and enhance the competitiveness of companies in the current environment

Keywords: human resource management; employee motivation; creativity; innovative organisational culture; human capital; digitalisation

Suggested Citation:
Karpenko, A., Karpenko, N., & Kholiavko, N. (2026). Development and stimulation of innovative activity among company staff in the context of the digital era. *Management and Business*, 4(1), 70-82. doi: 10.59214/mb/1.2026.70.

*Corresponding author (*andriikarpenko77@gmail.com*)

Introduction

Since the beginning of 2022, Ukraine has been facing challenging geopolitical, economic and social conditions caused by full-scale military aggression from the Russian Federation, resulting not only in significant losses of human resources and economic potential, but also in prolonged economic destabilisation and strategic uncertainty. Such conditions naturally reduce business motivation for development, meaning that the introduction of innovative technologies is often perceived as an overly risky or unattainable prospect. In such circumstances, the ability of companies to recover and adapt quickly becomes critical, and this depends directly on the innovative activity of staff and their potential. At the same time, the intensification of global digitalisation and competition demands new approaches to the development of human capital as a key resource for resilience, making the development of internal mechanisms to encourage innovative behaviour among employees a strategically relevant task for ensuring future economic progress.

The issue of encouraging innovative behaviour among staff in the context of technological change is being actively researched by academics. In particular, E. Autio *et al.* (2017) investigated spatial and digital opportunities for the development of entrepreneurial ecosystems. However, their work is largely focused on the macro level and the start-up environment, leaving aside the internal organisational mechanisms for motivating employees in traditional companies. The psychological aspects were addressed by H. Wang *et al.* (2022) in an analysis of innovative behaviour through the prism of leadership support and well-being in the workplace. However, this work does not take into account the specifics of digital transformation, which is radically changing the nature of communication and interaction within teams. For their part, P. Wang & Y. Hou (2023) studied the impact of employees' organisational commitment on their innovative activity over time. Despite the depth of the analysis, the influence of external extreme factors (economic or geopolitical instability) on staff's ability to generate innovation remains under-researched.

The role of management practices was examined by S. Guha *et al.* (2025), demonstrating the positive impact of human resource management (HRM) systems on innovative capabilities through knowledge sharing. At the same time, their study provided only a limited analysis of the inhibiting effect of mental barriers inherent among staff in enterprises within transition economies. S. Samuelson *et al.* (2024) examined contemporary practical experience by analysing employee-driven innovation. Despite their empirical value, their findings are based on relatively stable sectors of the economy and require significant adaptation to the conditions of Ukrainian companies in a state of crisis.

The significance of network interaction was highlighted by G. Vaccario *et al.* (2022), who predicted the outcomes of innovation based on research and development (R&D) networks. However, their analysis focuses primarily on patent statistics rather than on the day-to-day innovation routine and the motivation of ordinary company staff. The fundamental principles of creating a creative environment and accumulating the intellectual assets of human potential were explored by A. Karpenko (2018), who demonstrated that humans are the only productive factor capable of creativity. However, the current intensification of global digitalisation and the emergence of unprecedented crisis conditions require the further development of these theories directly at the micro-level.

Thus, the unresolved aspect of the problem, which has become the central focus of this study, remains the development of comprehensive models for stimulating staff innovation directly at the company level. Existing approaches require adaptation to the internal organisational realities of enterprises (particularly small and medium-sized businesses), considering the impact of external destabilisation, local socio-cultural barriers and the latest demands of the digital age. The study aimed to provide a theoretical justification and develop practical recommendations for the formation of internal organisational mechanisms to stimulate the innovative activity of company staff, which effectively integrate the development of employees' intellectual assets with the opportunities of the local business environment in the context of digital transformation and crisis-induced destabilisation.

Materials and Methods

The study employed a range of general and specialised research methods, ensuring a systematic approach to analysing the characteristics of the development and promotion of staff innovation activity within the context of digital transformation. Methods of analysis and synthesis were used to examine contemporary theoretical approaches and practices in managing innovation activity, as well as to systematise the findings of previous research. Within the scope of the work, the meaning of the basic concept of "staff innovation activity" was clarified using linguistic analysis tools, in particular morphological and semantic analysis. This made it possible to establish the deeper essence of this category, determine its polysemy and interdisciplinary connotations, and trace its evolution in contemporary scientific discourse. The method of abstraction was used to identify general principles for creating incentives for innovative activity, which can be flexibly adapted to different organisational contexts. At the same time, the formal-logical method was used to construct the general structure of the study, formulate reasoned conclusions and clearly outline the cause-and-effect relationships between external factors, digitalisation and the level of innovation among employees.

Based on these principles, the comparative analysis method formed the basis for systematising the determinants influencing employees. The comparison of approaches to classifying factors of innovative activity was conducted based on three key criteria (levels): 1) personal (individual) – analysis of internal (intrinsic) motives and socio-psychological traits; 2) organisational – assessment of the influence of internal company structures and the

corporate environment; 3) general (universal) – consideration of broad external socio-economic factors (Scott & Bruce, 1994; Amabile, 1996; Kesting & Ulhøi, 2010). This structuring distinguished between an individual's psychological motives and the influence of the business environment.

The structural-functional analysis method was used to identify specific tools for managing creative potential. The assessment of organisational motivation mechanisms was conducted across five key areas: 1) support for autonomy (delegation and allocation of time for experimentation); 2) competence development (investment in cross-functional skills); 3) psychological safety (tolerance for mistakes); 4) resource provision (access to budgets and technologies); 5) digital HR systems (integration of ideation platforms). The methodological basis for this stage was provided by self-determination theory and research into the psychological climate within teams.

To operationalise the categories under investigation, the content analysis method of classical psychometric techniques was applied. The selection and classification of motivational components of innovative behaviour were based on three dimensions: 1) person-oriented (intrinsic motivation, creative self-efficacy, initiative); 2) organisation-oriented (affective commitment, perceived managerial support); 3) situation-oriented (readiness for risk and uncertainty). Inductive and deductive tools were used to develop a matrix for the implementation of the latest digital technologies (IoT, cloud computing, artificial intelligence, knowledge management systems) and to assess their impact on internal HR mechanisms. The analysis was conducted in accordance with international standards for the collection of data on innovation.

In addition, to establish a solid empirical basis, a method was employed to systematise scientific literature and analytical reports covering the period 2018-2024. Sources were selected based on three criteria: 1) relevance – recent publications were prioritised; 2) authority – inclusion of works by recognised researchers; 3) practical significance – an emphasis on empirical studies and business cases. The synthesis of the theoretical and comparative data obtained can be used for the development of a comprehensive, scientifically grounded model for stimulating staff innovation.

Results and Discussion

It is necessary to examine the category of "staff innovation activity" systematically, exploring its various aspects and all its components. From a grammatical point of view, the category is a phrase comprising the adjective "innovative", the noun "activity" and the genitive form of the determiner "staff". Morphologically, the adjective "innovative" indicates a specific feature of activity, the noun "activity" denotes behavioural dynamics, whilst "staff" identifies the subject of the action. In other words, this category is morphologically composed of a qualitative characteristic of activity (innovative), the core of the action or state (activity), and the subject, the bearer of the activity (staff). This category is used to denote the aggregate actions, initiatives and behavioural patterns of employees aimed at creating, introducing or sustaining innovation within the organisation, and thus serves as a key indicator of the organisation's innovative potential in a changing environment.

From a semantic perspective, the concept of "staff innovation activity" is interpreted as the systematic internal and external readiness and ability of employees to generate, perceive and implement innovations within the organisation. The category is a multi-component semantic construct that combines categories from various levels of organisational, behavioural and managerial vocabulary. The emphasis is placed on the integration of individual potential, organisational climate, motivational factors and digital tools that stimulate innovative behaviour (Mumford & Licuanan, 2004). In other words, it reflects the integration of employees' innovative potential, motivational readiness and organisational behaviour in the process of developing, implementing or sustaining innovations.

In general, morphological analysis can be used to determine the structural organisation of a term and its internal logic, whilst semantic analysis reveals its system of meanings and usage paradigm. Taken together, these methods provide a comprehensive definition of the category, which can be adapted to the specific nature of empirical analysis of innovation activity. Thus, morphological analysis of the category "staff innovation activity" viewed it as a complex lexical construction combining three key elements: a feature (innovative), an action or state (activity) of a subject (staff). In turn, the semantic field of the concept encompasses content domains related to creativity, change and initiative, which are substantial for both organisational psychology and innovation management. Thus, the structural-semantic approach is substantial for refining the research parameters of the category.

The concept of "innovative activity" is interpreted in various ways by academics and practitioners. Traditionally, it is perceived by many in a broad sense and largely as a characteristic of companies' activities – innovative activity – and is also closely linked to the concepts of "innovative potential", "innovative climate" and "innovative process", forming a system of innovative development for an organisation or a specific local level. It is interpreted as a company's focus on achieving strategic development goals, aimed at ensuring stable operation and long-term success (Kharchenko, 2016). In academic discourse, a company's innovative activity is characterised by its participation in various types of activities that generate or implement innovations. According to the OECD (2018), this activity encompasses R&D, engineering and design, marketing, innovation management and staff training. At the same time, the OECD has also provided a clear analytical approach, distinguishing between innovation as a process and as an outcome – a product or business process involving significant changes in a firm's operations.

The innovative activity of companies contributes to their higher productivity. Empirical research by G. Verdier *et al.* (2010) has shown that companies which actively

introduce new products or technologies demonstrate higher productivity, particularly in financially developed economies. Furthermore, an analysis of network embeddedness conducted by G. Vaccario *et al.* (2022) revealed a close link between a company's position within an R&D network and its capacity for innovation. The intensity of research and development, reflected in the ratio of R&D expenditure to sales in Eurostat (n.d.), serves as an additional marker of companies' innovative activity. Thus, companies' innovation activity is typically assessed using indicators such as R&D intensity, the share of innovative products in total sales, the frequency of new technology adoption, and so on (Eurostat, n.d.; OECD, 2023).

Innovative activity is a key economic concept that characterises a company's level of management and encompasses aspects such as the strategic quality of innovations, the mobilisation of internal potential, the level of investment, organisational culture, and the methodological soundness of implementing innovative changes. It serves as a critical link between the analysis of the internal and external environments, goal-setting and strategic planning, encompassing innovation in products, processes and R&D activities (Karpenko, 2018). In other words, innovation activity can be viewed as the link between the stages of analysing the internal and external environments, formulating objectives and planning strategies. Its scope covers three key areas: innovation in production processes aimed at creating new types of products; innovation in the product and service portfolio, involving the modernisation or creation of new goods, the performance of work or the provision of services; innovation in R&D, which ensures the generation of new knowledge and technological solutions. At the same time, innovative activity extends to all participants in the innovation process – consumers of innovative products, innovative manufacturers and investors – and reflects the level of receptiveness to innovations, the intensity and timeliness of actions regarding their implementation, the ability to mobilise the necessary potential, the soundness of the methods applied, and the rationality of the innovation process technology in terms of the composition and sequence of operations. It also reflects a readiness to update key elements of the innovation system – knowledge, technological infrastructure, information and communication technologies, organisational structure and culture – and an openness to new ideas.

Since people are the primary agents and driving force behind any innovative activity, a company's innovative activity is inextricably linked to the innovative activity of its staff. Employees generate ideas, create new products and technologies, implement changes, and ensure their adaptation to market conditions. Therefore, according to A.V. Karpenko (2018), staff innovation activity can be regarded as a specific manifestation of overall innovation activity, reflecting the level of participation of researchers, inventors and entrepreneurs in the implementation of innovation processes within a defined period. Contemporary research has demonstrated that the primary catalyst for companies' innovative activity is their staff, specifically their innovative behaviour. H. Wang *et al.* (2022) have demonstrated that employee innovative behaviour, which involves the generation, promotion and implementation of innovative ideas in day-to-day work, forms the foundation of an organisation's innovative outcomes.

Furthermore, as part of the concept of employee-driven innovation, which emphasises the importance of staff involvement in the creation and implementation of new ideas, regardless of their formal role within the company's structure. The study also noted that employees, even those for whom innovation is not part of their official duties, are active in shaping new approaches and processes within the organisation. S. Høyrup *et al.* (2012) analyse the organisational conditions, leadership approaches and cultural factors that stimulate innovative behaviour, and propose methods for integrating "bottom-up" initiatives into the organisation's strategic development. This highlights that innovation often arises not only at the strategic level, but also through employee initiatives at the micro-practice level. S. Samuelson *et al.* (2024) addressed experiences of communication, team interaction and leadership in such initiatives, as well as factors that facilitate or hinder the successful implementation of changes in work processes. Thus, research shows that innovation often arises not only at the strategic level, but also through employee initiatives at the micro-practice level; in other words, employees can be key drivers of innovation if the organisational culture encourages their initiative and supports shared values.

The innovative activity of staff drives a company's innovative activity, forming the basis for the organisation's innovative potential. As noted by M. Kesting & J. Ulhøi (2010), innovations often arise not only as a result of centralised strategic decisions, but also as a consequence of the initiative of individual employees at all levels of the organisational hierarchy – so-called employee-driven innovations. Thus, the innovative activity of staff can be regarded as the primary level of manifestation of innovative dynamics, which accumulates, transforms and scales within the organisation. Consequently, the study of this phenomenon is critical for interpretation of the sources of companies' innovative capacity.

Staff innovation is an interdisciplinary phenomenon situated at the intersection of labour economics, innovation management, organisational sociology and digital technologies. In this context, the theoretical and methodological basis of the study draws on the following main approaches: institutional, resource-competence, systemic, motivational-behavioural, and ecosystemic. According to D.C. North (1990), institutions are formal rules, informal norms and mechanisms for their enforcement, which structure interaction within society. Therefore, from an institutionalist perspective, staff innovation activity is defined as the result of the influence of normative, cultural and organisational structures that shape an environment conducive to or restrictive of employees' innovative behaviour. In other words, both internal organisational institutions

(HR policies, management models, organisational climate, etc.) and external ones (government policy, the regulatory framework, local traditions, etc.) are substantial.

Within the resource-competence approach, J. Barney (1991) and R.M. Grant (1996) viewed innovative activity as a function of access to unique resources and the ability of staff to transform knowledge into innovative outcomes. Staff competencies, organisational learning, access to digital tools, and cross-functional interaction are all regarded as sources of sustainable competitive advantage. In the systems approach, innovative activity is viewed as the result of the interaction of subsystems: the individual, the organisation, the market, and the innovation value chain. This approach is characteristic of the study by B.Å. Lundvall (1992) and C. Edquist (1997) studied national and regional innovation systems. The motivational-behavioural approach suggests that staff motivation for innovation depends to a large extent on internal (interest, self-actualisation) and external incentives (remuneration, recognition, career progression). A key model is the self-determination theory (Deci & Ryan, 1985), according to which innovative behaviour is shaped by the presence of autonomy, competence and social relatedness.

A substantial contemporary approach to fostering innovation and innovative activity is the ecosystem approach, which emphasises the role of innovation ecosystems – complex networks of interaction between businesses, universities, the state and civil society organisations (Adner, 2006; Autio *et al.*, 2017). Key elements include the cultural environment, knowledge platforms, supporting infrastructure, and so on. Furthermore, over the last 5-10 years, "digital transformation" has increasingly been used as a framework or analytical perspective in management, HR, economics and public administration. In other words, a profound transformation of the nature of work, communication tools and decision-making processes is driven by digital changes. According to the approaches of G.C. Kane *et al.* (2015), digital transformation is not merely the implementation of technologies, but also a shift in mindset and corporate culture. It can therefore be stated that the theory of digital transformation has a significant influence on the formation and development of staff innovation.

At the same time, in the context of the digital economy, the effectiveness of human resources management is becoming increasingly relevant. Strategic HR practices, such as talent selection, training, performance appraisal and reward systems, directly contribute to the development of individual innovative activity (Jiménez-Jiménez & Sanz-Valle, 2005; Agarwal *et al.*, 2012; Guha *et al.*, 2025). Furthermore, a high level of affective commitment enhances an employee's potential and motivation to implement innovations, particularly in the context of the digitalisation of HR systems (Popa *et al.*, 2017; Wang & Hou, 2023). In particular, S. Popa *et al.* studied the impact of HR practices on the innovation climate and open innovation using a sample of Spanish Small and Medium-sized Enterprises and found that engagement-based management practices enhance the innovation climate, which, in turn, promotes both internal and external innovation. The dynamism of the external environment amplifies the positive impact of an active innovation climate on output innovation. P. Wang & Y. Hou (2023) found that affective commitment (employees' emotional attachment to the organisation) enhances their readiness for innovative behaviour. The time-lagged design they developed – in which data was collected in several waves at different times to test causal relationships – revealed a correlation: the stronger an employee's commitment, the more they initiate and implement innovations, particularly when HR systems are digital and adapted to modern ways of working.

Staff innovation can be interpreted as a socio-cognitive process that encompasses the perception of innovations, the intensity of actions involved in transformation, the ability to mobilise knowledge and resources, and adaptation in the form of implementing innovations. As emphasised in the multi-level approach to organisational climate, corporate values and norms that stimulate creativity and innovation are essential prerequisites for the development of innovative behaviour among employees. The concept of innovative activity originates in the works of J.A. Schumpeter (1934), who linked innovation to a new combination of factors of production. J.A. Schumpeter was the first to substantiate the role of innovation as a driver of economic development, emphasising the significance of the "new combination of factors" in the economy. In this context, employees' innovative activity is an element of "new entrepreneurship". Further development of the concept can be traced in studies of P.F. Drucker (1985), where innovation is viewed as a specific tool of entrepreneurship. P.F. Drucker regarded innovation as a "specific tool of entrepreneurship", and the employee as a source of ideas for changes in products, services or processes.

Based on the findings of the authors mentioned above, it can be noted that staff innovation activity refers to the motivated behaviour of employees aimed at initiating, developing and implementing innovations within an organisation. It is a component of the broader concept of "innovative activity", which also encompasses technological, managerial and social innovations.

The multifaceted nature of the category "staff innovation activity" is revealed through its three key components: idea generation – the creative search for new solutions; idea dissemination – the communication of innovative proposals within the organisation; and implementation – the putting of innovations into practice (Scott & Bruce, 1994; Amabile, 1996; Janssen, 2000). The "Frascati Manual" (OECD, 2015), which stipulates standardised approaches to classifying types of research, measuring investment in science and defining the role of human resources in research activities, emphasises the significant importance of researchers, engineers and other specialists involved in the creation and implementation of new knowledge and technologies. According to this methodology, the effectiveness of innovation largely depends on the competencies,

creativity and level of engagement of employees in research and development processes. Indicators reflecting staff involvement in generating new ideas, developing innovative solutions and integrating research results into production and organisational processes were addressed. In other words, it is possible to note that innovative activity is activity related to the transformation of ideas (the results of research and development) into a new or improved product, process or approach that is introduced to the market or into practical activities.

The "Oslo Manual" (OECD, 2018) is a key international methodological document that sets standards for the collection, processing and interpretation of data on innovation activity. It defines innovation as the introduction of a new or significantly improved product, process, marketing or organisational method, and provides tools for measuring innovation activity at both the enterprise level and across the economy as a whole. In the context of researching staff innovation activity, the "Oslo Manual" emphasises the importance of human capital as a source of new ideas and a driving force behind innovation processes, and offers a conceptual framework that can be used for the assessment not only of the results of innovation, but also of the processes that ensure their emergence and implementation, including organisational culture, resources and environment. The document notes that innovations often arise thanks to employees' initiatives, their capacity for creative thinking, interdisciplinary collaboration and commitment to improving internal processes; therefore, it is necessary to assess staff innovation efforts, including participation in solution development, knowledge sharing and teamwork, which contribute to the creation of new value.

In the context of a post-industrial economy, staff innovation is increasingly seen not merely as an outcome but as a driving force behind organisational change. It is a key factor in the competitiveness of modern organisations and determines a company's ability to adapt, develop technologically and make effective use of its employees' intellectual potential. The rapid pace of technological development, the instability of the market environment and the growing importance of human capital highlight the need to foster a propensity for innovative thinking and a readiness to implement innovations among employees. It is necessary to determine the mechanisms that encourage staff to participate in innovative processes and to create an effective incentive system.

Motivation is central in shaping an individual's innovative activity, as it is internal stimuli that drive a person to seek new ideas, unconventional solutions and improvements to existing processes. It is the driving force that determines the level of interest, perseverance and creativity. From a psychological perspective, motivation is divided into intrinsic motivation, which is based on personal satisfaction from the work process, and extrinsic motivation, which is linked to rewards, recognition or career progression.

Studies of innovative activity often identify two main groups of factors: internal (personal) and external (organisational, social). Since a person is a socio-psycho-physiological entity, reflecting the integrity of their existence as biological (the fundamental biological basis supporting vital functions and the capacity for adaptation), psychological (a person's inner world, which includes motivation, emotions, cognitive processes and self-awareness) and socio-cultural (the capacity for communication, cooperation, and the formation of social institutions and cultural traditions that define a person's social identity) systems, it integrates physiological needs and processes, mental states and mechanisms, as well as social roles, norms and values, which are formed in the process of interaction with the environment and is manifested in the individual's innovative activity. It is also worth noting the significance of cultural and spiritual aspects that influence the formation of values and meanings which a person embodies in their activities (Taylor, 2007; Karpenko, 2017, 2018).

In contemporary practice, other approaches to grouping factors of innovative activity and staff motivation are also considered. The choice of model depends on the level of analysis – individual or organisational. For the individual (personal) level of research, the logic is based on psychological and socio-behavioural models that view innovativeness as a trait and the result of individual development, whilst at the organisational level, managerial and structural conditions are identified as a separate block of influence, enabling the design of support systems for innovation teams and the implementation of comprehensive strategies. Thus, the two approaches do not contradict one another, but represent different perspectives on the analysis of a single phenomenon.

Research into the personal level of innovative activity and staff motivation (sustained motivation for creative work and innovative self-expression) focuses on an individual's personal potential (using a more psychologically oriented classification, which is best considered in terms of three groups of factors:

- intrinsic (internal) motivations should be viewed as a complex of psycho-emotional states, including a sense of autonomy (freedom to choose one's actions), a sense of competence (confidence in personal abilities), value alignment (alignment of the employee's values with those of the organisation) and a sense of meaning in the work performed (awareness of its significance) (Deci & Ryan, 1985; Amabile, 1996);
- external and contextual factors include management support, the provision of necessary resources, fair remuneration and recognition of achievements, as well as the implementation of HR practices focused on developing employees' competencies and motivation, that is, they create a favourable environment for the realisation of innovative ideas and shape an organisational culture that supports innovation (Amabile, 1996; Janssen, 2000);
- socio-psychological factors – these are characteristics of the social environment and the psychological climate within a group, which create the conditions for open communication, cooperation and creative activity. These

include psychological safety, social capital, and effective networks of interaction, which are critical for stimulating innovative behaviour, as they create a trusting atmosphere and provide social support for innovative initiatives (Edmondson, 1999). In other words, this approach makes it possible to describe the individual trajectory of innovative activity – from personal qualities and motivation to the influence of the environment and social expectations. Its logic is based on psychological and socio-behavioural models that view innovativeness as a trait and the result of individual development.

At the organisational level, it is advisable to adopt a broader approach to the analysis of employee motivation and behaviour, which should be more nuanced and comprehensive, thereby necessitating a broader classification of factors. The following four groups of factors should be identified:

- individual factors, which include not only personal characteristics but also psychophysiological traits that influence the capacity for innovation. This level examines specific personal traits (creativity, education, skills) that directly shape the potential for innovative activity (Scott & Bruce, 1994; Janssen, 2000).
- motivational factors are an independent mechanism (both internal and external) that determines an individual's activity in the context of innovation and mobilises personal resources for innovative behaviour (Deci & Ryan, 1985; Amabile, 1996);
- external factors that extend outside the organisation (economic, technological, cultural and legal) and shape the context in which the organisation and its staff operate;
- organisational factors, defined as a specific level of support within an organisation, which includes management practices, organisational culture, infrastructure for supporting innovation, etc. (Janssen, 2000).

This approach is appropriate at the organisational level, as it identifies managerial and structural conditions as a distinct sphere of influence, thereby enabling the design of support systems for innovation teams and the implementation of comprehensive strategies. A summary of the three approaches to classifying factors of innovation activity is provided in Table 1.

Table 1. Comparative analysis of approaches to classifying factors influencing staff innovation activity

Level of application	Main categories of factors	Key features / Purpose
Personal (individual)	Intrinsic motives; External and contextual factors; Socio-psychological factors.	Emphasises motivation, psychology and the individual's social environment. Suitable for developing individual potential and personal growth.
Organisational	Individual; motivational; organisational; external factors.	Systematic approach to managing innovation teams. Includes organisational structures and the external environment as separate categories.
General (universal)	Internal (personal motives, traits); External (organisational, social, economic).	Simple classification that is widely used in many studies. Useful for a general overview of the factors influencing innovative behaviour.

Source: compiled by the authors based on S.G. Scott & R.A. Bruce (1994), T.M. Amabile (1996), P. Kesting & J.P. Ulhøi (2010), S. Høyrup *et al*. (2012)

The approaches to discussed classification of factors motivating innovative activity reflect different levels of analysis and research objectives. The first approach, which comprises three groups of factors, focuses on the individual as the bearer of motivation and their immediate social environment. Such a classification is appropriate for psychological and sociological research, as well as for staff development, where the emphasis is on the internal and social aspects of an individual's behaviour. The second approach, which identifies four groups of factors, provides a more comprehensive and systematic picture of motivational influences. This differentiation is particularly useful for the strategic management of innovation in organisations and the development of effective management systems for innovation teams. The third approach, which is based on the division of factors into internal and external, serves as a classic and basic model, often used in the initial stages of analysing the motivation for innovative behaviour. It can be used for a quick outline of the overall influence of various factors and serves as a basis for further in-depth study. Thus, the choice of a specific approach to classifying motivational factors depends on the research objective, the level of analysis, and the practical tasks facing researchers or innovation managers.

The most common and effective tools for managing staff innovation are the implementation of creativity development programmes; motivational mechanisms (non-financial incentives, recognition, involvement in decision-making); flexible working arrangements; the creation of internal innovation incubators; the development of digital skills through continuous learning, etc. Generalised motivation mechanisms reflect a systematic approach to managing staff innovation activity, combining psychological, organisational and resource-related aspects. They are based on the concept of the interdependence of internal and external determinants of motivation, where autonomy, competence development and psychological safety form the basis for the formation of sustainable innovative behaviour, whilst fair reward systems, adequate resource provision and digitalised HR practices ensure the transformation of creative potential into measurable results (Table 2).

Table 2. Motivational mechanisms and organisational tools for their implementation

Mechanism of motivation	How can an organisation work with the component?	Scientific rationale and commentary
Support for autonomy and participation	Delegation of decision-making regarding how tasks are performed, the creation of internal incubators, and setting aside time for experimentation (similar to "20% time").	Self-determination theory and research show that autonomy boosts intrinsic motivation and stimulates creativity and initiative.
Development of competencies and cross-functional skills	Investment in training, mentoring and job rotation schemes to develop domain-relevant skills.	The development of skills enhances the ability to generate relevant innovations and solve complex problems.
Building psychological safety	Management openness to new ideas, tolerance of mistakes, non-judgmental reviews, and a focus on learning.	Psychological safety is a key prerequisite for employees to feel confident enough to put forward innovative ideas without fear of negative consequences.
Fair systems of remuneration and recognition	Balance between financial and non-financial incentives, rewarding the process and learning, rather than just the results.	Over-reliance on external incentives (overjustification) can reduce intrinsic motivation; it is necessary to maintain a balance.
Resource provision and organisational structure	Allocation of time, access to technology, a budget for pilot projects, and setting up facilitation teams.	Without the necessary resources, even high levels of motivation do not lead to results.
HR systems in the age of digitalisation	Use of digital HR platforms for training, communication and collaborative ideation.	Digital environment enhances access to knowledge and accelerates innovation.

Source: compiled by the authors based on T.M. Amabile (1996), A.C. Edmondson (1999), R.M. Ryan & E.L. Deci (2000), D. Liu *et al.* (2011), OECD (2018), S. Guha *et al.* (2025)

Thus, the comprehensive implementation of these tools can be used for an organisation not only to maintain motivation at the individual level but also to establish effective systems for the strategic management of innovation teams. To measure the motivational components of staff innovation activity, it is advisable to use established psychometric tools that influence employees' innovative behaviour. The systematisation of such tools can be used for the selection of the most relevant methods for assessing individual and organisational determinants of innovative activity, and lays the groundwork for further empirical research aimed at improving the effectiveness of human resource management and developing strategies for the development of staff's innovative potential (Table 3).

Table 3. Motivational factors in staff innovation

Author/source	Motivational component	Name of a score/method	Short description
Personality-based			
T.M. Amabile (1996)	Internal motivation for innovation	Work preference inventory	Measures intrinsic and extrinsic motivation in professional life
H. Schuler *et al.* (2004)	Need for achievement	Achievement motivation inventory	Values a commitment to achieving high standards in work
P. Tierney & S.M. Farmer (2002)	Creative self-efficacy	Creative self-efficacy scale	Used to assess an employee's confidence in thяeir ability to generate new ideas
S. Budner (1962)	Tolerance of uncertainty	Tolerance of Ambiguity Scale	Assesses the ability to function in conditions of uncertainty and change
T.S. Bateman & J.M. Crant (1993)	Initiative	Proactive personality scale	Indicates a person's propensity to take the initiative regarding change
Enterprise-based			
J.P. Meyer & N.J. Allen (1991)	Affective Commitment	Organisational commitment questionnaire	Three-component model of engagement: affective, normative and continuance
R. Eisenberger *et al.* (1986)	Perception of support from the organisation	Perceived organisational support scale	Measures the extent to which employees feel supported and encouraged to innovate
Context-based			
E.L. Deci & R.M. Ryan (1985)	External motivation (rewards, career progression)	Intrinsic-extrinsic motivation scale	Assessment of the role of material and non-material incentives in behaviour
R.M. Meertens & R. Lion (2008)	Risk readiness	Risk propensity scale	Measures an individual's propensity for risky behaviour
O. Janssen (2000)	Innovative behaviour	Innovative work behaviour scale	Comprehensively measures the generation, promotion and implementation of ideas

Source: compiled by the authors

An analysis of the tools presented in the table identified three generalised groups of motivational indicators: personality-oriented, organisation-oriented, and situation-oriented. The interaction of these groups of factors forms a comprehensive model of innovation readiness, where personal traits determine potential, organisational conditions determine the resource base, and situational stimuli determine the timing of the implementation of innovative initiatives. The psychometric tools presented demonstrate a wide range of approaches to assessing the

motivational factors of innovative behaviour – from measuring intrinsic and extrinsic motivation to assessing tolerance for uncertainty, proactivity and creative self-efficacy. The use of a comprehensive set of such methods can provide a multidimensional picture of employees' readiness for innovation, identify the strengths and weaknesses of the organisation's motivational environment, and develop targeted interventions to stimulate creative activity. Comparison of data from different scales further demonstrates the interrelationship between personal characteristics, organisational support and external incentives in shaping innovative behaviour. Thus, the systematic use of these tools is a key element of strategic human resource management in the context of digitalisation.

Staff innovation activity can be interpreted as a multi-level structure comprising three levels: the cognitive component (a system of knowledge, professional skills and competencies required for the development and implementation of innovations); the emotional-motivational component (values, a positive attitude towards innovation, a willingness to take on challenges and risks, and intrinsic motivation for creative activity); and the behavioural component (practical participation in research and innovation projects, the demonstration of initiative, the generation of new ideas and their implementation in production or organisational processes). The development of these components depends on the quality of the internal organisational climate, management style, openness to feedback, and the availability of resources for staff training and self-fulfilment. Furthermore, based on classical approaches to measuring innovation activity (OECD, 2015; 2018), which emphasise outcomes (products created, processes implemented, economic and social effects) rather than merely potential and processes, it is advisable to also include an outcome component. The performance level reflects the actual results of staff innovation activities, including quantitative and qualitative indicators (number of innovations implemented, economic impact, productivity growth, increased competitiveness, social benefits, etc.). Thus, staff innovation activity comprises a four-component structure (Fig. 1): cognitive, emotional and motivational, behavioural, and outcome-oriented, which aligns with the approach to assessing the effectiveness of human capital in innovation processes promoted by the OECD.

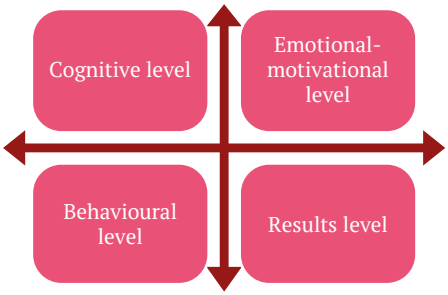

Figure 1. The structure of staff innovation activity
Source: compiled by the authors

The innovative activity of staff depends to a large extent on the local socio-economic environment. According to research by R. Florida (2002), regions with a high level of "creative capital" exhibit significantly higher innovation activity. Local educational institutions, clusters, business incubators and similar are substantial. Innovation activity is considered in several dimensions, notably as a process and a system. Innovative activity as a process is a sequential chain of actions – from the generation of an idea to its implementation in the form of a new or improved product, technological process or approach to services. It includes scientific, technological, production, organisational, financial and commercial activities, which ensure innovations. Innovative activity as a system is the organisation of the research and development process aimed at creating and implementing innovations to generate profit and competitive advantages, covering all stages of the "science-production" cycle and serving as a key factor in an enterprise's stable market position. In the modern interpretation, staff innovation activity encompasses not only the generation of ideas, but also their promotion, adaptation, implementation and evaluation of effectiveness. It is also necessary to address the role of the organisational environment, culture, leadership and HR policies.

The widespread adoption of digitalisation is becoming a key factor in the transformation of human resources management and in stimulating innovation within companies. Digital technologies are not only changing the way employees interact with work processes, but are also creating new conditions for the development of creative potential and the implementation of innovations. In the context of digital transformation, staff innovation is taking on new forms and implementation mechanisms, which are directly linked to the integration of digital tools. Key elements of digitalisation that influence the development of staff innovation include digital platforms for collaboration and communication; automation of routine processes; data analytics and decision support; personalised training and development systems; and incentive schemes based on digital tools.

Digital platforms for collaboration and communication (corporate social networks, knowledge management systems, shared workspaces, etc.) facilitate the rapid exchange of ideas, the formation of innovative teams and the stimulation of creativity, as they blur the traditional boundaries between departments and workplaces, creating conditions for flexible interaction and rapid adaptation to change. The automation of routine processes (robotic systems and artificial intelligence) frees staff from routine tasks, providing additional resources for creative and innovative aspects, which boosts motivation and facilitates the development of the skills needed to implement innovations. Data analytics and decision-making support using digital technologies help to identify new opportunities, assess the effectiveness of innovation initiatives and make informed management decisions, thereby encouraging staff to participate more actively in innovation

development processes. Personalised learning and development systems (digital e-learning platforms, microlearning, virtual and augmented reality) ensure continuous professional development tailored to employees' individual needs, which helps foster an innovative culture and develop the skills required to bring new ideas to life. Incentive schemes based on digital tools (gamification, digital rankings, bonus platforms, etc.) provide an effective way to encourage staff innovation, thereby increasing their engagement and sense of responsibility. In addition to the basic elements of digitalisation, there are several additional technological and organisational tools that significantly expand the opportunities for developing staff innovation (Table 4).

Table 4. Key digital technologies and organisational mechanisms influencing staff innovation

Digitalisation aspect	Feature description	Impact on staff innovation	Examples of use in companies
Internet of Things (IoT)	Real-time device interaction	Process optimisation, boosting creativity	'Smart' production lines, quality monitoring
Cloud technologies	Remote access to resources	Collaboration, knowledge sharing	Remote teams, collaboration platforms
Blockchain technologies	Ensuring security and transparency	Protection of ideas, formation of trust	Intellectual property registration
Artificial intelligence (AI)	Automation of data analysis	Personalisation of motivation, forecasting trends	Automated candidate selection, market analysis
Virtual and augmented reality (VR/AR)	Interactive training sessions, simulations	Skills development, fostering innovative thinking	Training simulators, product testing
Open innovation platforms	Collaboration with external partners	Stream of ideas, collaborations	Hackathons, innovation competitions
Knowledge management systems	Collection and dissemination of corporate knowledge	Fostering creativity through access to experience	Internal knowledge bases, corporate wikis
Staff sentiment analysis	Assessment of employees' emotional state	Creation of a comfortable environment, fostering motivation	Survey platforms, stress monitoring
Flexible digital working environments	Integrated management platforms	Increased autonomy and creativity	Asana, Trello, Microsoft Teams
Digital assessment systems	Automatic feedback	Adjusting the strategy, motivation to improve	Strategy adjustments, motivation to improve

Source: compiled by the authors based on G.C. Kane *et al.* (2015), E. Autio *et al.* (2017), OECD, (2018)

Each of the elements listed is characterised by specific functionalities that help to boost creativity, work efficiency and employee engagement in innovation processes. At the same time, the table provides examples of the practical application of these technologies, illustrating their potential in various areas of activity upon implementation. This comprehensive approach further demonstrates which digital tools are key drivers of innovation and which methods can be used to effectively manage these processes. Thus, staff innovation is a multidimensional phenomenon arising from the interaction of various factors. The first dimension is motivational and psychological, which involves creating favourable conditions for employees' internal and external motivation to engage in creative activity, supporting initiative, recognising achievements, and fostering a sense of commitment and responsibility. The second is the organisational and managerial dimension, which includes the formation of an effective corporate culture, flexible management structures, and the introduction of incentive systems capable of encouraging risk-taking and experimentation. The third dimension covers the technological aspect, which involves the integration of digital tools that simplify knowledge sharing, facilitate collaboration and optimise innovation processes. In addition, socio-cultural dimensions must be considered, in particular the organisation's values, the level of trust among employees, communication channels, as well as the external context, including market conditions, legislation and technological trends. All these dimensions interact with one another, creating a complex, multifaceted system that determines the effectiveness of stimulating innovative activity.

Consequently, digitalisation has a complex impact on staff innovation, transforming its structure, motivational mechanisms and organisational conditions. Successfully fostering innovation within companies requires a comprehensive approach that combines technological tools with management practices aimed at developing staff as a key resource for innovative potential. Overall, the development of staff innovation in the digital age involves not only the introduction of the latest technologies but also the creation of an appropriate culture, changes to the organisational structure, and the improvement of communication and motivation systems, which together create a favourable environment for innovative initiatives.

Conclusions

The study concluded that staff innovation is a key factor in enhancing companies' competitiveness in the digital age, as it is the employees who generate the ideas that are transformed into new products, services and processes. Morphological and semantic analysis of the term demonstrated that it is not a one-dimensional process, but rather a complex, multi-dimensional phenomenon. A substantial methodological outcome of the study is the developed and

theoretically substantiated 4-component structure of staff innovation activity, which organically combines cognitive, emotional-motivational, behavioural and performance components. The study established that organisations require a systematic management toolkit to transform employees' ideas into competitive, innovative products. To this end, the study systematises three approaches to classifying motivational factors: personal (focus on intrinsic motives and psychology), organisational (corporate practices, leadership, systemic HR initiatives) and universal (the influence of the broader socio-economic environment). To facilitate the practical implementation and objectification of these processes, a typology of psychometric assessment tools has been developed. It provides managers with standardised methods for measuring internal psychological drivers, risk appetite and the level of organisational support.

Fostering innovation requires a holistic approach that integrates motivational mechanisms and modern technologies. The implementation of digital tools in human resources management is a prerequisite for companies seeking to remain leaders. A wide range of digitalisation technologies (from the Internet of Things and artificial intelligence to blockchain and virtual reality) creates new opportunities for collaboration and knowledge generation. However, the success of their application depends on a comprehensive approach that considers organisational characteristics, staff readiness for digital change, and effective risk management. Thus, digitalisation not only modernises HR processes but also lays the foundation for the development of an innovative culture and the accumulation of the organisation's intellectual assets. A substantial area for further research should be the development of new metrics for assessing staff innovation activity, as well as models for managing its effectiveness in a turbulent business environment.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Adner, R. (2006). *Match your innovation strategy to your innovation ecosystem*. Retrieved from https://hbr.org.

[2] Agarwal, U.A., Datta, S., Blake-Beard, S., & Bhargava, S. (2012). Linking LMX, innovative work behaviour and turnover intentions: The mediating role of work engagement. *Career Development International*, 17(3), 208-230. doi: 10.1108/13620431211241063.

[3] Amabile, T.M. (1996). *Creativity in context: Update to the social psychology of creativity*. New York: Routledge. doi: 10.4324/9780429501234.

[4] Autio, E., Nambisan, S., Thomas, L.D.W., & Wright, M. (2017). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, 12(1), 72-95. doi: 10.1002/sej.1266.

[5] Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. doi: 10.1177/014920639101700108.

[6] Bateman, T.S., & Crant, J.M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14(2), 103-118. doi: 10.1002/job.4030140202.

[7] Budner, S. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality*, 30(1), 29-50. doi: 10.1111/j.1467-6494.1962.tb02303.x.

[8] Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Springer. doi: 10.1007/978-1-4899-2271-7.

[9] Drucker, P.F. (1985). *Innovation and entrepreneurship: Practice and principles*. New York: Harper & Row.

[10] Edmondson, A.C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350-383. doi: 10.2307/2666999.

[11] Edquist, C. (1997). *Systems of innovation: Technologies, institutions and organizations*. London: Routledge.

[12] Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500-507. doi: 10.1037/0021-9010.71.3.500.

[13] Eurostat. (n.d.). *R & D intensity*. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:R_%26_D_intensity.

[14] Florida, R. (2002). The rise of the creative class. Ney York: Basic Books.

[15] Grant, R.M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S-2), 109-122. doi: 10.1002/smj.4250171110.

[16] Guha, S., Rabby, A.H., Chowdhury, S.R., & Julee, S.A. (2025). Enhancing employee innovation capabilities through high-involvement HRM: Mediating role of knowledge sharing and transformational leadership. *Future Business Journal*, 11, article number 59. doi: 10.1186/s43093-025-00482-1.

[17] Høyrup, S., Bonnafous-Boucher, M., Hasse, C., Lotz, M., & Møller, K. (Eds.). (2012). *Employee-driven innovation*. London: Palgrave Macmillan. doi: 10.1057/9781137014764.

[18] Janssen, O. (2000). Job demands, perceptions of effort – reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73(3), 287-302. doi: 10.1348/096317900167038.

[19] Jiménez-Jiménez, D., & Sanz-Valle, R. (2005). Innovation and human resource management fit: An empirical study. *International Journal of Manpower*, 26(4), 364-381. doi: 10.1108/01437720510609555.
[20] Kane, G.C., Palmer, D., Phillips, A.N., Kiron, D., & Buckley, N. (2015). *Strategy, not technology, drives digital transformation*. Retrieved from https://sloanreview.mit.edu/projects/strategy-drives-digital-transformation/.
[21] Karpenko, A.V. (2017). Formation of the innovation culture of society as a prerequisite for ensuring the commercialisation of innovations. In M.V. Hud' & A.V. Karpenko (Eds.), *Socio-economic aspects of innovative development of human resources: Collective monograph* (pp. 20-37). Zaporizhzhia: Prosvita.
[22] Karpenko, A.V. (2018). *Development of intellectual assets of human potential: Theory and practice*. Zaporizhzhia: FOP V.V. Mokshanov.
[23] Kesting, P., & Ulhøi, J.P. (2010). Employee-driven innovation: Extending the license to foster innovation. *Management Decision*, 48(1), 65-84. doi: 10.1108/00251741011014463.
[24] Kharchenko, V. (2016). Innovative activity of an enterprise in the process of development. *Skhid*, 8(140). doi: 10.21847/1728-9343.2015.8(140).59656.
[25] Liu, D., Chen, X.-P., & Yao, X. (2011). From autonomy to creativity: A multilevel investigation of the mediating role of harmonious passion. *Journal of Applied Psychology*, 96(2), 294-309. doi: 10.1037/a0021294.
[26] Lundvall, B.Å. (1992). *National systems of innovation: Towards a theory of innovation and interactive learning*. London: Pinter Publishers.
[27] Meertens, R.M., & Lion, R. (2008). Measuring an individual's tendency to take risks: The risk propensity scale. *Journal of Applied Social Psychology*, 38(6), 1506-1520. doi: 10.1111/j.1559-1816.2008.00357.x.
[28] Meyer, J.P., & Allen, N.J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89. doi: 10.1016/1053-4822(91)90011-Z.
[29] Mumford, M.D., & Licuanan, B. (2004). Leading for innovation: Conclusions, issues, and directions. *The Leadership Quarterly*, 15(1), 163-171. doi: 10.1016/j.leaqua.2003.12.010.
[30] North, D.C. (1990). *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511808678.
[31] OECD. (2015). *Frascati manual 2015: Guidelines for collecting and reporting data on research and experimental development*. doi: 10.1787/9789264239012-en.
[32] OECD. (2018). *Oslo manual 2018: Guidelines for collecting, reporting and using data on innovation* (4th ed.). doi: 10.1787/9789264304604-en.
[33] OECD. (2023). *Main science and technology indicators*. Retrieved from https://www.oecd.org/sti/msti.htm.
[34] Popa, S., Soto-Acosta, P., & Martínez-Conesa, I. (2017). Antecedents, moderators, and outcomes of innovation climate and open innovation: An empirical study in SMEs. *Technological Forecasting and Social Change*, 118, 134-142. doi: 10.1016/j.techfore.2017.02.014.
[35] Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. doi: 10.1037/0003-066X.55.1.68.
[36] Samuelson, S., Pennbrant, S., Svensson, A., & Nilsson, K. (2024). Standing together at the helm – how employees experience employee-driven innovation in primary care. *BMC Health Services Research*, 24, article number 655. doi: 10.1186/s12913-024-11090-0.
[37] Schuler, H., Thornton, G.C., Frintrup, A., & Mueller-Hanson, R. (2004). *Achievement Motivation Inventory (AMI): Manual*. Göttingen, Germany: Hogrefe.
[38] Schumpeter, J.A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Cambridge: Harvard University Press.
[39] Scott, S.G., & Bruce, R.A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607. doi: 10.5465/256701.
[40] Taylor, C. (2007). *A secular age*. Cambridge: Harvard University Press.
[41] Tierney, P., & Farmer, S.M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal*, 45(6), 1137-1148. doi: 10.2307/3069429.
[42] Vaccario, G., Verginer, L., Garas, A., Tomasello, M.V., & Schweitzer F. (2022). Network embeddedness indicates the innovation potential of firms. *arXiv*. doi: 10.48550/arXiv.2205.07677.
[43] Verdier, G., Kersting, E., & Dabla-Norris, E. (2010). Firm productivity, innovation and financial development. *IMF Working Papers*, 49, article number A001. doi: 10.5089/9781451963250.001.A001.
[44] Wang, H., Chen, X., Wang, H., & Xie, M. (2022). Employee innovative behavior and workplace wellbeing: Leader support for innovation and coworker ostracism as mediators. *Frontiers in Psychology,* 13, article number 1014195. doi: 10.3389/fpsyg.2022.1014195.
[45] Wang, P., & Hou, Y. (2023). How does commitment affect employees' innovative behavior? A time-lagged study. *SAGE Open*, 13(4). doi: 10.1177/21582440231216568.

Розвиток і стимулювання інноваційної активності персоналу компаній в умовах цифрової ери

Андрій Карпенко
Доктор економічних наук, професор
Національний університет «Запорізька політехніка»
69063, вул. Жуковського, 64, м. Запоріжжя, Україна
https://orcid.org/0000-0002-5717-4349

Наталя Карпенко
Кандидат наук з державного управління, доцент
Національний університет «Запорізька політехніка»
69063, вул. Жуковського, 64, м. Запоріжжя, Україна
https://orcid.org/0000-0002-9301-3649

Наталія Холявко
Доктор економічних наук, професор
Національний університет «Чернігівська політехніка»
14030, вул. Шевченка, 95, м. Чернігів, Україна
https://orcid.org/0000-0003-2951-7233

Анотація. Метою статті був аналіз сучасних підходів до визначення сутності інноваційної активності персоналу, розкриття її значення в умовах цифрових трансформацій, а також обґрунтування концепції розвитку інноваційної активності персоналу в умовах цифрової ери. У статті здійснено комплексний теоретичний аналіз інноваційної активності персоналу як ключового чинника забезпечення конкурентоспроможності сучасних організацій. Розглянуто еволюцію наукових підходів до трактування сутності інноваційної активності, її структурних компонентів і мотиваційних детермінант. Досліджено мультидимензійний характер інноваційної активності персоналу, підкреслюючи, що вона формується під впливом комплексного набору чинників, які охоплюють мотиваційно-психологічні, організаційно-управлінські, технологічні та соціокультурні аспекти. Важливим аспектом статті був розгляд ролі цифровізації в трансформації HR-процесів і управління інноваційною активністю. Водночас зазначено, що успішність цифрової трансформації залежить від цілісного підходу, який враховує організаційні особливості, готовність персоналу до змін, а також ефективне управління ризиками. Наголошено на необхідності комплексного управління інноваційною активністю, яке має базуватися на інтеграції різноманітних управлінських практик та інструментів. Для цього компаніям слід застосовувати різнопланові стимули (навчання, делегування повноважень, визнання досягнень), а також стандартизовані методи оцінювання інноваційної діяльності працівників. Було запропоновано розглядати інноваційну активність не як окремий процес, а як багатогранну систему, що включає взаємодію психологічних драйверів, організаційних практик, лідерства та системи винагород. Узагальнено досвід щодо управління інноваційною активністю в умовах цифрової трансформації. Сформульовано пропозиції щодо удосконалення організаційно-економічного механізму стимулювання інноваційної поведінки працівників. Проаналізовано вплив цифровізації на стимулювання інноваційної активності персоналу компаній. Визначено ключові технологічні та організаційні інструменти цифровізації, які забезпечують ефективну мотивацію та підтримку інноваційної діяльності персоналу. Запропоновано інтеграцію цифрових інструментів у систему управління персоналом для розвитку та стимулювання інноваційної активності персоналу, формування інноваційної культури, підвищення конкурентоспроможності компаній у сучасних умовах

Ключові слова: управління персоналом; мотивація праці; креативність; інноваційна організаційна культура; людський капітал; цифровізація