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CIRCUMSTANCES OF DIGITAL EXCLUSION OF INNOVATIVE ENTERPRISES

UWARUNKOWANIA WYKLUCZENIA CYFROWEGO PRZEDSIĘBIORSTW INNOWACYJNYCH

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Abstract: The study aims to identify the principal circumstances of the digital exclusion of innovative enterprises. A deductive approach was used in the analyses. A leading method was the query of selected literature sources (domestic and foreign) – narrative literature review. Analysis and synthesis were complementary methods. Scientific studies have been chosen from the following full-text databases: EBSCO, Emerald, CEEOL, and BazEkon. The analyses indicated that the primary external circumstances of digital exclusion concerning innovative enterprises include technological, legal, economic, sectoral/cluster, educational, infrastructural, socio-cultural, territorial, and demographic dimensions. On the other hand, the leading internal circumstances for the digital exclusion of innovative enterprises are financial, relational, competence, management, infrastructural, and structural and procedural. In addition, individual circumstances (internal and external) can interact, which further emphasizes the legitimacy of planned and structured management of these circumstances so that they can be used constructively in innovative activities, i.e., aimed at eliminating the phenomenon of digital exclusion.
Keywords: digital exclusion, circumstances, innovative enterprise

Streszczenie: Celem opracowania jest identyfikacja głównych uwarunkowań wykluczenia cyfrowego przedsiębiorstw innowacyjnych. W analizach zastosowano podejście dedukcyjne. Wiodącą metodą była kwerenda wybranych źródeł literaturowych (krajowych i zagranicznych) – narracyjny przegląd literatury przedmiotu . Metodami dopełniającymi były analiza i synteza. Opracowania naukowe zostały wyselekcjonowane z następujących pełnotekstowych baz: EBSCO, Emerald, CEEOL oraz BazEkon. Przeprowadzone analizy wskazały, że do podstawowych zewnętrznych względem przedsiębiorstw innowacyjnych uwarunkowań wykluczenia cyfrowego zaliczyć należy uwarunkowania: technologiczne, prawne, ekonomiczno-gospodarcze, sektorowe/klastrowe, edukacyjne, infrastrukturalne, społeczno-kulturowe, terytorialne, a także demograficzne. Natomiast główne uwarunkowania wewnętrzne wykluczenia cyfrowego przedsiębiorstw innowacyjnych to uwarunkowania: finansowe, relacyjne, kompetencyjne, zarządcze, infrastrukturalne, jak również strukturalno-proceduralne. Ponadto poszczególne uwarunkowania (wewnętrzne i zewnętrzne) mogą na siebie oddziaływać, co dodatkowo podkreśla zasadność planowego i ustrukturyzowanego zarządzania tymi uwarunkowaniami, aby możliwe było ich konstruktywne wykorzystywanie w działalności innowacyjnej, tj. ukierunkowane na niwelowanie zjawiska wykluczenia cyfrowego.
Słowa kluczowe: wykluczenie cyfrowe, uwarunkowania, przedsiębiorstwo innowacyjne

Introduction

Conducting innovative activities is an attractive "way" for many enterprises to strengthen their position in the market. Innovation is seen as a "lever" to reach new market segments or consolidate "dominance" in currently explored markets. The value of innovation is attractive to the environment (stakeholders) if it is new and "fresh". This can be ensured by innovative enterprises, e.g., by using the potential of information and communication technologies (ICTs). However, the mere willingness to invest in technologies, implement them, and develop in the innovation processes and the management of a given entity is not enough. This is because the phenomenon of digital exclusion should also be considered – which does not only affect individuals or social groups (i.e., customers/market segments). It may also apply to enterprises, which may fundamentally determine the quality of their operations, making it difficult (or even impossible) to use the potential of ICTs in innovative activities.

Therefore, the study's main objective is to identify the principal circumstances of the digital exclusion of innovative enterprises. The article consists of four main parts, in which the following issues are discussed: (1) a literature query into the field of defining innovation, innovative enterprise, as well as digital exclusion, (2) a description of the methodological assumptions of the conducted analyses, (3) presentation of the results in the identification of the primary internal and external circumstances of digital exclusion of innovative enterprises and potential relations between them, as well as (4) conclusions extended to include the specification of research limitations and directions for future research. The considerations contained in the article are analytical and descriptive, and the dominant research approach is deduction.

Literature review

Nowadays, enterprises see innovation and innovative activities as a value that can be attractive to various stakeholder groups. The Oslo Manual (GUS, 2020, p. 67) indicates that an innovation is "a new or improved product or process (or a combination thereof) that differs significantly from the previous products or processes of a given entity and that has been made available to potential users (product) or put into use by an entity (process)." Applying this universal definition to the specifics of business activity, it can be assumed that "a business innovation is a new or improved product or business process (or a combination thereof) that differs significantly from the enterprise's previous products or business processes and that has been introduced to the market or put into use by the enterprise" (GUS, 2020, p. 77). Therefore, in a sense, it is a natural process for various economic entities to transform into the so-called innovative enterprises, i.e., those that create "one or more innovations during the observation period. This applies equally to enterprises responsible for a given innovation individually and jointly with other entities" (GUS, 2020, p. 37).

Innovative enterprises focus on meeting the currently developing local and global trends to fully achieve their primary goals and meet the needs of various stakeholder groups (internal and external). One of them is the digitization of management and business processes. When creating innovations, added value can be obtained precisely by using the potential of ICTs – ICT technologies become a new "layer" of products/services, making them attractive to users (based on: Borowski, Dyduch, Cyfert, 2021; Wang, Zhang, 2024). ICT can also be used in innovation processes as a "tool" for work, e.g., data analysis, communication, etc. (Andros, Chang, 2019).

To "fit in" to the digitization trend, innovative enterprises should acquire and improve the so-called digital competencies, understood as a specific "multidimensional construct that reflects the ability of the enterprise to benefit from digitization and solve the problems associated with it" (GUS, 2020, p. 143). M. Schmeichel-Zarzeczna (2022) notes that the leading digital competencies of innovative enterprises are limited to the following skills:

- use of information and data, as well as communication and cooperation,
- digital content creation and security,
- solving business and organizational problems.

The Oslo Manual (GUS, 2020, p. 143) also indicates that digital competencies include:

- digital integration within and across business functions within and across the enterprise,
- ability to use analytical data to design, develop, commercialize, and improve products (this should also include data on users and their interactions with products),
- access to the World Wide Web, as well as the use of appropriate hardware and software,
- adopting appropriate business models tailored to e-commerce or resource-sharing platforms, etc.

At this point, however, it should be noted that the willingness of innovative enterprises to use the potential of ICTs is only "one side of the coin". At the same time, these entities must be aware of the phenomenon of digital exclusion and its circumstances. This situation results in the readiness of enterprises to implement ICT being levelled by specific deficiencies, imperfections, and errors – both on the part of enterprises and external entities (Figure 1).

Referring to the OECD definition (2001, p. 5), it can be assumed that digital exclusion "refers to the gap between individuals, households, businesses, and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities". The FRSI portal (2024) notes that digital exclusion is "the division of society into people with access to the Internet and modern forms of communication and people without such opportunities". In the literature on the subject, two primary forms of digital exclusion are specified: (1) due to access to ICTs, as well as (2) due to use, i.e., the competencies and behaviors of people (Table 1).

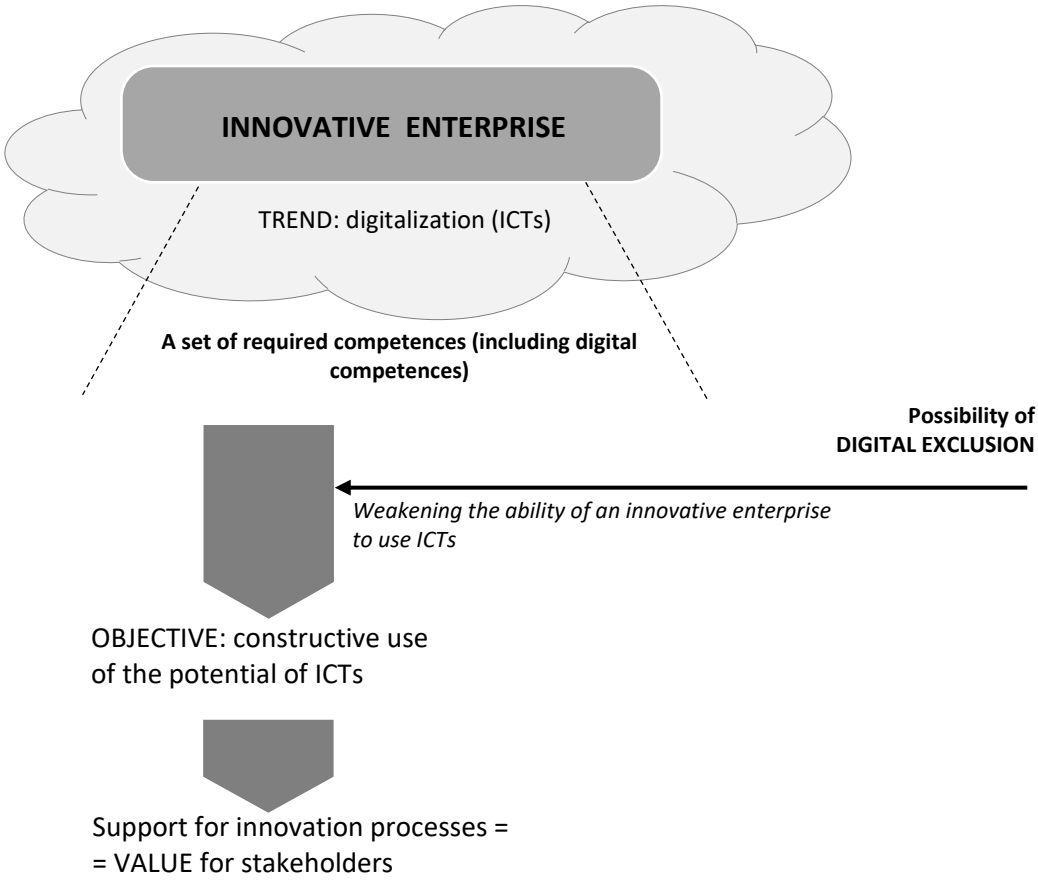

Figure 1. Digital competencies and digital exclusion, and support for innovation processes
Source: own elaboration.

Table 1. Types of digital exclusion

I: exclusion due to access (also known as "hard")	II: exclusion due to use (also known as "soft")
1. Lack of access to devices, software, network access services – physical unavailability, 2. lack of access to devices, software, and network access services at the required level of quality, ensuring freedom of use, 3. inability to purchase devices, software, and network access services due to costs.	1. Competence exclusion – referring to the lack or inability to acquire, maintain, or update skills that boil down to the use of ICTs, 2. exclusion through the use – refers to the different purposes of ICTs' use by the information society, 3. motivational exclusion – refers to the so-called mental barriers – e.g., lack of motivation and willingness to learn about modern technologies.

Source: own elaboration based on: Bartol, Herbst, Pierścińska, 2021, p. 7.

Referring to the content in Table 1, it is worth noting that the research published in the report titled "Socio-digital exclusion in Poland. The state of the phenomenon, trends, recommendations" (Bartol, Herbst, Pierścińska, 2021) points to the fact that nowadays, digital exclusion is more related to people's attitudes towards new ICT technologies, as well as their competencies and knowledge, than to physical access to the World Wide Web (Fundacja Stocznia, 2021). This is also confirmed by the words of the authors of the FFRSI portal (2024), indicating that "the term digital exclusion does not only come down to the possibility of access to the Internet, in addition, factors such as Internet literacy, connection quality, language dimension (lack of knowledge of the language in which the necessary information occurs)" are essential.

It cannot be denied that the above definitions are pretty universal and refer mainly to the digital exclusion of people/society. However, they can be transformed and transferred to the field of innovative enterprises. Therefore, digital exclusion can be perceived as the lack of access of innovative enterprises to the appropriate quality of the Internet, modern information technology (IT), software, and equipment, as well as contemporary forms of communication, or the inability to use them (lack of digital competences required of employees in a given entity), or deprivation of the enterprise of the ability to use certain technologies due to its unfavorable location.

Methodology

The subject of the analysis is the digital exclusion of innovative enterprises. This is an essential problem. Nowadays, it is generally assumed that an innovative enterprise cannot be digitally excluded by default because it has access to Internet technology and uses at least one IT device (smartphone, personal computer, tablet, etc.), and employees can communicate with stakeholders (customers, subcontractors, administration, etc.) using ICTs (GUS, 2020, p. 25, 41-42). It's hard to disagree with this as digitalization trends intensify (see: Zhao et al., 2021; Moinul Ahsan, 2022). More and more enterprises use ICT technologies on a large scale and operate in virtual structures (Borowski, Dyduch, Cyfert, 2021). However, this does not mean these entities are not exposed to various aspects of digital exclusion. Digital exclusion is not a "zero-one" phenomenon – it can have different levels and weaken the activities of innovative enterprises in specific areas.

Therefore, the study's main objective is to identify the principal circumstances of digital exclusion of innovative enterprises. The following research questions were adopted in the study:

1. What are the principal external circumstances of the digital exclusion of innovative enterprises?
2. What are the principal internal circumstances of the digital exclusion of innovative enterprises?
3. What are the potential relations between the internal and external circumstances of the digital exclusion of innovative enterprises?

A deductive approach was used in the analyses (see: Bogdanienko, 1983, pp. 30-31) – based on the general content concerning the essence of the exclusion of enterprises, a transition to the activity of innovative entities was made. The leading method was a query of selected literature sources (domestic and foreign) carried out in the period March – August 2024. Complementary methods were analysis and synthesis (see: Hajduk, 2012, p. 119). The criteria for selecting literature sources were their relative topicality and consistency with the issues raised in the article. When querying the literature, the following keywords were considered: digital exclusion, digital transformation, innovative activity, and innovative enterprise. Scientific studies have been selected from the following full-text databases: EBSCO, Emerald, CEEOL, and BazEkon. Due to the specific nature of the issues raised in the analyses, articles from reliable Internet portals were also included in the sources of helpful information.

Results and discussion

Digital exclusion is a complex phenomenon. On the surface, it may seem that it only applies to access to the Internet connection. This could have been assumed a dozen or so years ago when access to the World Wide Web was relatively rare, and not every person or enterprise could afford it. Nowadays, the possibility of using the Internet is considered to be a so-called necessary condition but not sufficient for it to be possible to talk about the existence of digital exclusion in an enterprise (Jedlińska, 2018, p. 227) – primarily focused on innovative activities and creating value in the form of innovations (process, product, marketing, etc.). This is due, e.g., to the fact that such entities are mainly based on the knowledge and competence of employees, sharing resources, and communication (Tajpour, Hosseini, Mohiuddin, 2023). It is not only access to the World Wide Web that determines that the enterprise (as an internally integrated system of operation) is not digitally excluded. This is not enough. Nowadays, the Internet is "only" a resource that an enterprise can use, but it is no longer an important "lever" of competitive advantage. In recent years, the following have become more critical: the behavior and attitudes of employees in innovation processes and their broadly understood creative and analytical potential, the level of real, i.e., verified (and not just declared) digital competencies, as well as factors related to the location of the business (innovative) activity (see: Matricano, 2024; Novikov, Sazonov, 2024).

Therefore, the environment of innovative enterprises can be taken as a starting point for specifying the primary circumstances of digital exclusion. The following layers of the environment should be distinguished here:

1. Internal environment – is related to the resources maintained in the enterprise and whose task is to create value for various stakeholders, with particular emphasis on different groups of employees. Importantly, this environment layer also includes the so-called organizational culture (Pawłowski, Kułakowska, Piątkowski, 2019, p. 126; Atuahene, Acquah, Boateng, 2023, p. 3).
2. External environment, which includes:
   - closer external environment (i.e., task, competitive, direct, or micro-environment) – specific entities that can be unambiguously identified and with which the enterprise interacts. It can be specified, e.g., competitors, customers, subcontractors, suppliers, etc. (Woźniak, 2021, p. 32; Atuahene, Acquah, Boateng, 2023, p. 3);
   - further external environment (i.e., general, intermediate, or macro-environment) comprises the so-called dimensions, including specific factors, circumstances, and subjects. For example, demographic, technical and technological, economic, legal, and cultural dimensions can be indicated here (Woźniak, 2021, p. 32; Atuahene, Acquah, Boateng, 2023, p. 3);
   - global and international environment – this layer is often separated from the general environment and refers to factors, circumstances, and entities that go beyond the territory of a given country (see: Ibraimi, 2023).

Considering the above stratification of the business environment, it is possible to identify the principal circumstances of digital exclusion. Therefore, the primary external circumstances for innovative enterprises include:

1. Technological circumstances – related to either too fast or too slow development of ICTs on a global scale (in different regions of the world). Both of these "extremes" are not beneficial, as they may imply the inability of enterprises or entire sectors in different national economies to implement appropriate ICT solutions, as well as IT integration of various regions of the world, which in turn may lead to a kind of "digital stratification" of the world (based on: Thapa, Sæbø, 2014).
2. Infrastructural circumstances – in this case, it is necessary to refer primarily to the level of development of ICT infrastructure in a given country, region of the world, etc., e.g., access to broadband Internet, fiber optics, or 5G technology (Park, Humphry, 2019; Bartol, Herbst, Pierścińska, 2021).
3. Economic circumstances – this refers to the general ability of a given country's economy to develop, also in the technological and infrastructural areas. In this case, one can also refer to, for example, investment capacity in developing the high-tech sector. It is also worth mentioning that an essential condition is the purchasing power of citizens and their standard of living – they can either purchase and use ICT technologies or not (both at work and in private life) (Holmes, Burgess, 2022).
4. Sectoral/cluster circumstances – in this case, it is worth mentioning the ability to develop a network of business connections between innovative enterprises and other cluster participants, e.g., entities supporting financial and investment processes, implementation of ICT technologies, etc. (Holcombe-James, 2021).
5. Educational circumstances – the lack of an appropriate, modern system of educating children, young people, and mature people in the field of, e.g., raising their digital competencies. This can lead to the creation of entire generations with low levels of these competencies, which can slow down the development of many sectors of the economy (Ueno, Dennis, Dafoulas, 2023; Wilson-Menzfeld et al., 2024).
6. Socio-cultural circumstances – related to lifestyle and cultural values that may limit the possibilities of using certain ICT technologies in everyday private and professional life, which may result in weakening communication processes (López-Aguado et al., 2022; Ueno, Dennis, Dafoulas, 2023).
7. Legal circumstances – refer to the possibility of regulations appearing in the legal systems of different countries that may limit the use of various ICT technologies or require their mass and quick implementation – which may lead to the fact that various innovative entities will not be able to use them quickly and effectively. There will be "mechanical" investments in ICT infrastructure without sustainable development of society's competencies (see: House of Lords, 2023).
8. Territorial circumstances – related to the lack of access to specific components of the ICT infrastructure in a given area, e.g., broadband Internet (Kinal, 2021; Schmeichel-Zarzeczna, 2022; Ueno, Dennis, Dafoulas, 2023).
9. Demographic circumstances – in this case, it is worth mentioning demographic changes on a global scale, which result in the systematic development of social groups (usually associating the so-called older adults), which may be digitally excluded, which may be reflected in the dynamics of development of individual regions (also in terms of innovation) (Seifert, Cotton, Xie, 2021; Olejniczak, 2021; Mubarak, Suomi, 2022; Seifert, 2023).

On the other hand, the internal circumstances of the digital exclusion of innovative enterprises are:

1. Financial circumstances – related, e.g., to the lack of sufficient financial resources that the enterprise can invest in the development of ICT infrastructure, e.g., in the field of software, the use of social media, or in general providing employees with safe and high-quality access to the Internet. Regarding financial circumstances, it is also worth noting that enterprises may have a sufficiently large budget

for developing the ICT area. Still, such activities are not carried out effectively and optimally (misguided or pointless investments), or such investments are not considered a priority for an innovative enterprise at all (based on: Wachnik, 2015; Trzepizur, 2020).

2. Relational circumstances – refer mainly to the lack or improperly implemented cooperation of an innovative enterprise with stakeholders – in this case, internal and main business partners. In this case, it is crucial to consider the neglect of technological and information integration and the lack of constant and planned communication with stakeholders within the framework of the adopted goals and tasks (Chierici et al., 2021).
3. Competence circumstances (including intellectual) – attention should be paid here primarily to the inability of employees (at various levels of management and in different areas of innovation processes) to use specific ICT technologies or the failure (intellectual or conceptual) to effectively integrate them into business and management processes – also in a situation where the enterprise has these technologies. Still, there is a barrier on the part of employees' competence, sometimes also resulting from fear/stress or resistance to change. In this case, it is necessary to refer to the lack of essential digital competencies in line employees and managerial staff (Jedlińska, 2018; Ueno, Dennis, Dafoulas, 2023).
4. Management circumstances (management functions) – in this case, the lack of adaptation of the management system in the enterprise (and in particular in the innovative subsystem) to the use of the potential of ICT or the systematic development of ICT infrastructure should be highlighted. One can point to the use of planning on a piece of paper, monitoring business processes, and identifying risk factors based on paper assessment cards or without the use of any form of recording (event monitoring is "recorded" in the manager's head), etc. decision-making processes with the processes of digital transformation of the enterprise. This is an excellent threat to innovative entities, as it may indicate that innovative processes (e.g., prototyping) are digitized, but the management system is not. Therefore, it should be remembered that an innovative enterprise is an internally coherent and integrated system of operation (based on Koźmiński, Latusek-Jurczak, 2011).
5. Infrastructural circumstances – this area is primarily related to the enterprise's lack of appropriate ICT infrastructure, resulting either from the owners/managers' ignorance of the legitimacy of investments in the ICT area, investment mistakes, or ignorance of decision-makers (Park, Humphry, 2019).
6. Structural and procedural circumstances – in this case, it is necessary to refer to the phenomenon of excessive asymmetry of information and limited access to specific technologies by individuals (employees) and organizations that participate (or should participate) in decision-making processes or are an integral "component" of innovation processes, e.g., in the open innovation model. The organizational structure of the enterprise/innovative projects does not work correctly and is not adapted to the use of the potential of modern ICT technologies, which suffers, e.g., communication in the team and achieving the set goals efficiently (see: Zaskórski, 2012).

Knowing the essential circumstances of digital exclusion of innovative enterprises, it is worth considering at this point which of them the enterprise can influence and shape and which are independent of the enterprise and the innovation processes taking place. It can be assumed that the enterprise may influence internal circumstances and those related to the external environment. On the other hand, external circumstances (originating from the external and global/international environment) strongly determine the condition of the enterprise, although a given business entity usually cannot influence these circumstances (based on: Woźniak, 2021, p. 32; Atuahene, Acquah, Boateng, 2023, p. 4) (Figure 2).

Examples include the ability of an innovative enterprise to shape the competencies of creative employees or market analysts in using software for data analysis (big data), communication in virtual teams or design processes, or including customers in innovative processes through ICT. Another example may be the potential ability of an enterprise to optimize the level of investment in new ICT technologies and their information integration with business partners. On the other hand, the enterprise does not influence the

development of regional or national IT infrastructure, which citizens and enterprises can use in conducting innovative activities, or on the level of income of the society (including entrepreneurs), thanks to which it will be possible to use ICT on a larger scale (or access to it at all) or to eliminate the competence gap in the field of digitization (e.g., in the 60+ age groups).

Summing up the above considerations, it can be stated that, in principle, internal circumstances and those resulting from the specificity of the external environment can be (which is quite perverse) the basis for strengthening the potential of an innovative enterprise – mainly because the enterprise can quite efficiently shape these circumstances according to its plans, transforming them from "threats" into "opportunities". On the other hand, circumstances related to the external and global/international environment – if they exist and are "strong" – can "weaken" the development potential of an innovative enterprise (Figure 2).

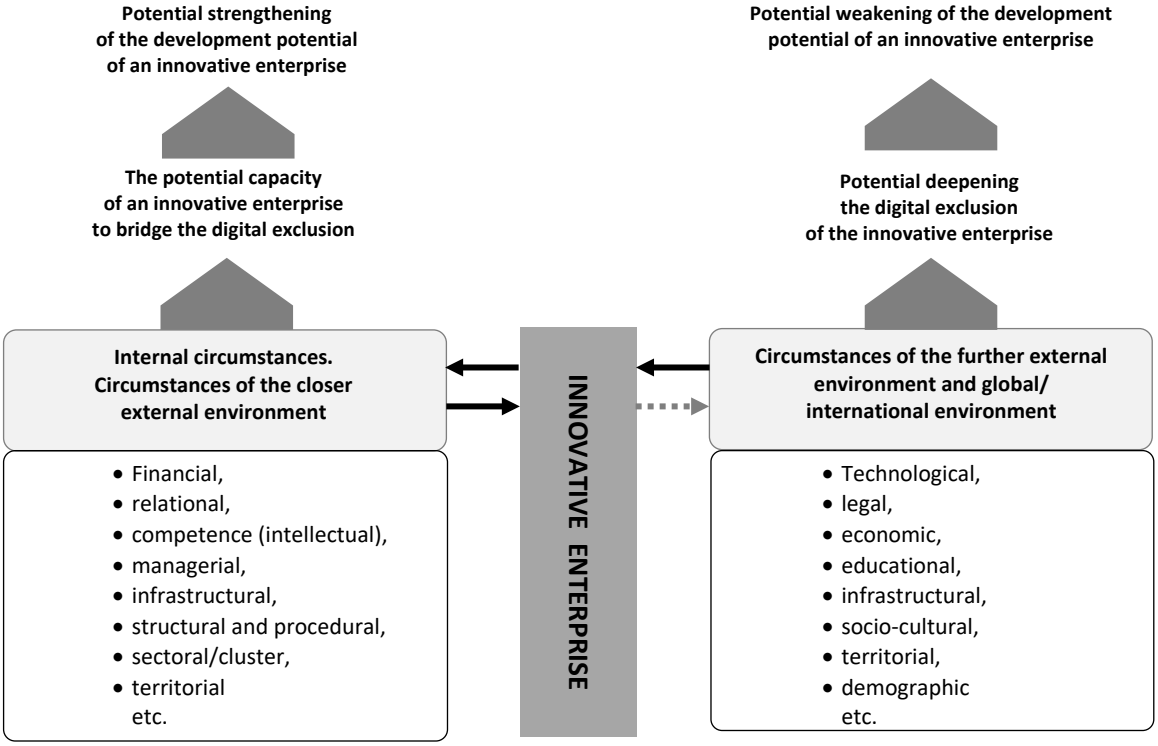

Figure 2. The impact of an innovative enterprise on the circumstances of digital exclusion
Source: own elaboration.

Expanding on the above considerations, we can refer to the mutual impact of internal and external circumstances of digital exclusion (Table 2). This impact is significant because it can determine the potential intensification of the phenomenon of digital exclusion of innovative enterprises, thus weakening the development potential and competitiveness of a given entity.

Summing up the above considerations, it should be noted that the circumstances for the digital exclusion of innovative enterprises should be perceived as a "complex", multifaceted system. These circumstances form a coherent system within which several mutual (strong or weak) interactions can be identified. Identifying these impacts is crucial because it makes it possible to counteract the intensification of the phenomenon of digital exclusion of enterprises, e.g., by supporting the digital transformation of innovative activities and management processes (see also: Ueno, Dennis, Dafoulas, 2023; Wilson-Menzfeld et al., 2024).

Table 2. Mutual impact of internal and external circumstances of digital exclusion

Group of circumstances	Examples of potential impact
Internal	Impact on external circumstances (related to the closer external environment): • The financial potential of the enterprise can determine the level of information integration with external stakeholders, as well as determine the level of digital transformation of industry/innovation clusters and the dynamics of their development, • the level of digital competence of creative employees (in innovation processes) may result in the digital quality of innovation and thus support or weaken the pace of acquiring new competencies (including digital ones) by customers and business partners and their "familiarization" with ICT technologies. Impact on external considerations (related to the further external environment): • The impact in this case is minimal. However, it can be noted that the technological, market, and financial potential of innovative enterprises (e.g., from the high-tech sector, IT, etc.) may undertake lobbying activities aimed at, for example, changing legal regulations on the pace and direction of digital transformation of enterprises.
External (related to the closer external environment)	Impact on internal circumstances (related to the internal environment): • The popularization activities of regional media organizations, associations, and foundations for computerization may affect the conviction of the management staff that it is justified to intensify activities in the area of digital transformation of innovative activities, • business partners using advanced ICT technologies can "force" the enterprise to implement such solutions, expand the ICT infrastructure, and introduce training for employees in various innovation processes. Impact on external circumstances (related to the further external environment): • Industry clusters can partly influence the dynamics and scope of investments on a national scale (economy) in ICT technologies and infrastructure development.
External (related to the further external environment and global/international environment)	Impact on internal circumstances (related to the internal environment): • Global trends in emerging new ICT technologies can either encourage enterprises to adopt these technologies or discourage them from doing so if these technologies are too advanced or expensive (then the digital exclusion of innovative enterprises may deepen, which may also result in a weakening of their position on the international stage). Impact on external circumstances (related to the closer external environment): • Virtual (using Internet technologies) global networks for financing innovative activities (e.g., through fundraising) can affect the development of industry clusters (e.g., technology startups).

Source: own elaboration.

Conclusions

Digital exclusion of innovative enterprises is a phenomenon that occurs in many entities today, negatively affecting their business activity and interactions with the environment. However, they can "fight" against this exclusion. However, it is necessary to understand the causes and circumstances of digital exclusion. Therefore, a systemic view of this issue can be the basis for effectively counteracting digital exclusion. This is a significant problem for innovative enterprises because customers (individual and business) primarily place value in ICT technologies and digitization. Therefore, this is what they expect from innovative enterprises. What is more, these entities are often forced (due to the specificity of the sector) to operate on a global scale – and thus, ICT technologies are a prerequisite for sharing resources, communicating with customers, or acquiring employees with appropriate competencies.

The analyses indicated that the primary external circumstances of digital exclusion concerning innovative enterprises include technological, legal, economic, sectoral/cluster, educational, infrastructural, socio-cultural, territorial, and demographic dimensions. On the other hand, the primary internal circumstances of digital exclusion of innovative enterprises are financial, relational, competence (including intellectual), management (management functions), infrastructural, structural, and procedural. The analyses also noted that individual circumstances (internal and external) may interact with each other, which further emphasizes the legitimacy of planned and structured management of these circumstances so that it is possible to use them constructively in innovative activities, i.e., aimed at eliminating the phenomenon of digital exclusion.

The fundamental research limitations include only the analytical-descriptive nature of the considerations based on the query of selected literature items and the use of the deductive approach. However, the article presents a general, primary "picture" of how the circumstances of digital exclusion of innovative enterprises may be shaped – which may be a contribution to further, in-depth empirical research concerning, e.g., the assessment of the importance of individual circumstances of digital exclusion for entrepreneurs and the identification of ways to counteract this exclusion in innovative entities.

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