THE USE OF DIGITALIZATION IN BUSINESS MANAGEMENT, IN EUROPE

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Abstract
Globalization has led to the spread of various trends across economic and social sectors, with digitalization becoming increasingly prevalent in recent years. This study aims to investigate the use of digitalization in business management across Europe, particularly focusing on its influence on the decision-making processes within organizations. The paper focuses on the analysis of specialized literature in order to identify the most relevant theories and formulate some conclusions concentrated on finding patterns that are similar. At the same time, in addition to the theories, the paper wants to come up with the analysis of the relevant statistical data in the field in order to consolidate the presented hypothesis. In this regard, the research employs an analytical approach, utilizing official statistical data to support the findings. The results will offer a comprehensive understanding of the role digitalization plays in organizational decision-making and provide key insights into its influence on business operations. These findings will contribute to a deeper understanding of how businesses can effectively integrate digital tools to enhance decision-making and management processes.

Keywords
Management, enterprise, digitalization, trends, Europe, usage.

JEL Classification
D20, D21, D22, F60, F63, L20, M10

Introduction

The subject of the present paper focuses on one of the most popular topics of the present day, more precisely digitization in business, a rising trend in the current economy. Thus, the importance of the chosen research theme results from the need to update the knowledge in the field as well as from the need to analyse the current situation on the matter.

The evolution and the topicality of the chosen study field allow the broadening of the scientific literature by correlating existing data and hypotheses with new theories and

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more recent results regarding the subject, which can then be used to support future research as well as practitioners from the field. Therefore, knowing the current state of digitization in European business management is all the more important in relation to the increasing popularity it holds among global businesses but also it comes as a necessity of the contemporary era in regards to the end user or beneficiary, respectively the customer, who is more and more familiar with digitization in his everyday life, a fact which implies the urgency of the adaptation of management and business to digitization, as it represents a customer need and also represents an important step in increasing performance in organizations.

In this sense, the main purpose of the research is to determine the level of use of digitization in European enterprises, more precisely to be able to create an overall image of the impact it holds in European business management. All the more so, because between the European Union states there is a significant difference highlighted from the point of view of economic evolution which would imply a supposed differentiation from the perspective of the use of digitization among European companies as well.

Therefore, the paper will review the scientific literature as a starting point in determining relevant opinions and data from the field and whose completion will come through the use of the research methodology focused on analytical research, with analyses of official statistical data in the field in order to obtain relevant results regarding the level of use and impact of digitization in European business, respectively in European management, determining finally if this level of use is uniform throughout the European territory or if it is one that centres around well-developed states, which can later be used as analysis points for the best digitized managerial practices.

1. Review of the scientific literature

Studies on digitization in business are a current topic for specialized literature on the subject, being a vast field that allows different approaches, a fact which also implies a rich literary base but that also allows and offers, at the same time, multiple possibilities to strengthen the already existing hypotheses or to help in the formation of new perspectives. In this context, the European space through its cultural and economic diversity helps form concepts based on comparative analyses that indicate reality and actuality, thus helping in identifying the most significant trends in the matter. It is therefore essential to note the fact that the digitization process and its implementation in business start from the decision-making level, from management, a fact that automatically implies the need for the existence of human resources that are familiar with it, therefore in one study entitled Business Digitization in the European Union, the significant difference between the accessibility that businesses have in hiring digital specialists is noted, stating that „more than 70 % of larger corporations with more than 250 employees afford to employ Information Communication Technology" (Șchiopu, 2020, p. 389) and in a comparative manner, in accordance to official data „medium and small businesses do not touch the 50% threshold in terms of accessibility to qualified personnel for this field (European Commission, 2019, p. 8). Consequently, as an important pillar, accessibility to digitalization in any type or form is one of the most important aspects that a business can achieve to increase the performance of its activity through the use of digitization.

Therefore, at the management level, when the questions of using digitalization in a business arise, one of the most widespread ones is: What is the role of digitalization in European economies?, practically why is it necessary so that the expected impact can be determined, in this sense a study focused on The Role of Digitalization in the European Economies concluded that „the factor of digitalization is added to the classical factors of competitiveness thus reflecting the role of digital performance in determining competitiveness" (Boikova et al., 2021), practically in order to be able to have an economic growth it is also necessary to have competitiveness and the role that digitization plays in this regard is a significant one, because the need to adapt to new technologies, more exactly to use digitization in line with or even better than the competition is an essential element to the economic development of enterprises, which automatically imply a need to use digitization and to have a digital-oriented thinking among managers. Considerations that lead to the possible impediments with which certain European states may come across regarding the use of digitization in the activities of the businesses in their respective countries, and a study carried out on the CEE countries (Central and Eastern Europe), it is noted that Romania and Bulgaria are „the countries with the lowest digital intensity of enterprises in the entire EU" (Trașcă et al., 2019), or in terms of a hierarchy of the level of digitization among European countries, many studies focus on the CEE area, hence one research concentrated on The Level of Digitization of Small, Medium and Large Enterprises in the CEE countries, which „highlights the fact that both small and medium-sized enterprises as well as for large ones, Slovenia is in the first place and again, Romania is either the penultimate or the last" (Brodny and Tutak, 2022a), a consideration that reinforces the previous analysis and which otherwise positions Romania in a lower position. In addition, in a study focused on the relationships between gross domestic product and the digitalization level of a state, the leader of digital maturity from the point of view of SMEs (Small and medium-sized enterprises) is determined, this being Denmark, with the study stating that „as much as 23% of Danish SMEs use AI technologies in their business" (Brodny and Tutak, 2022b).

Furthermore, the pandemic period has shed light on the need to digitize business and boosted the EU in reducing the gap it had in this field in comparison to the United States of America. In this matter in a report completed by EIBIS it was highlighted that over half of the companies in the European Union invested in digitalization as a response to the COVID-19 crisis, with „more firms report having acted or made investments to become more digital (53% vs. 46% in EIBIS 2021)" (European Investment Bank, 2023, p. 1), and in accordance with a report from the same year it was noted that „the most advanced digital firms tend to implement better management practices than non-digital firms" (European Investment Bank, 2023, p. 29).

Therefore, the level of use of digitization in an enterprise boils down to its management, respectively to the managerial decisions and the use of digitalization by managers in the decision-making process. In this meaning, in a study carried out on the support provided by the management in the implementation of digitization it was noted that out of „159 companies belonging to the 5 major stock indexes within the European Union, more than half of the top managers did not show strong support for the implementation of Industry 4.0 and Business Digitization" (Garcia-Ortega, López-Navarro and Galan-Cubillo, 2021, p. 139999), a fact that may imply a serious limitation in the use of digitization both by

them and by companies as a whole, but also a constraint or limitation of performance growth in the future when digitization will represent a normality and not an alternative way of doing business.
In principle, studies in the field highlight the differences found between the states of the European Union and in a research published in 2022 it was presented that there are significant differences between these States in terms of „digital readiness and usage of selected innovative digital tools, i.e., cloud computing, Big Data analysis, websites, and social media" (Hunday et. al, 2022). Practically, the scientific literature focuses a lot on the implication of digitization in European business, in this sense, the present research through the chosen research methodology wants to complement it and also to shed light on new perspectives.

2. Research methodology

To carry out a study that is as consistent as possible with the reality in the area of European enterprises and digitalization, the paper focuses on an analytical research approach that can present the analysed situation through the prism of critical thinking perspectives, objectivity and with a lot of attention, precision on the details and the data so that it is as accurate as possible. The importance of the chosen research methodology is directly proportional to the chosen research topic, as it will focus on statistical data and analytical research which is the best and optimal study method for this work.
In terms of conducting the research, the paper focuses on the use of secondary data sets; which come from official research sources on primary data, such as the data provided by Eurostat, as well as the economic or financial data sets provided by the companies that carry out analyses in the field.
In this sense, statistical data with high relevance for the researched field will be analysed; precisely so that the research results are as coherent, useful and up-to-date as possible. Furthermore, the existence of well-consolidated statistical bases as well as other research of high importance in the field represents an asset and also allows the use of relevant and well-consolidated official information for the purpose of presenting relevant results and conclusions that can play an important role for future research in the field as well as for practitioners. Therefore, through the lens of the chosen research methodology the work will achieve its main objective and present the situation at the European level regarding the use of digitalization in business management.

3. Results and discussion

The results of the research aim to shed light on the use of digitalization in the management of European businesses, in a more practical way; the aim is to highlight the level of its use by enterprises. In this sense, one of the most important elements for obtaining relevant data is analysing the situation both at a smaller level and at a level of much better consolidated enterprises; so that the first inquiry of the statistical data focuses on three categories of company sizes, respectively: from 10 to 49 persons employed, from 50 to 249 persons employed and 250 persons employed or more; and the states chosen for the collection of statistical data are in number of eight; these being specially chosen with the aim of highlighting the diversity among them; because the areas from which the states

were chosen are from different parts of the European Union and do not cluster around certain territories.

In this sense, figure number 1 is the perfect image of European diversity; it also proves that it is not mandatory for the most economically or politically developed states to be the most familiar with the integration of e-business, which is otherwise an essential component of digitization. Additionally from the analysis of these data, it can be seen that the integration of e-business is in correlation with the size of the enterprises (for the most part) with the exception of Italy, whose trend is balanced among all three categories of enterprises, more precisely this statistical basis indicates that the higher the number of employees in an enterprise, the higher the level of digitization or integration of certain digital components or elements; the size of an enterprise being directly proportional to the level of e-business integration; therefore of the use of digitization (figure no. 1).

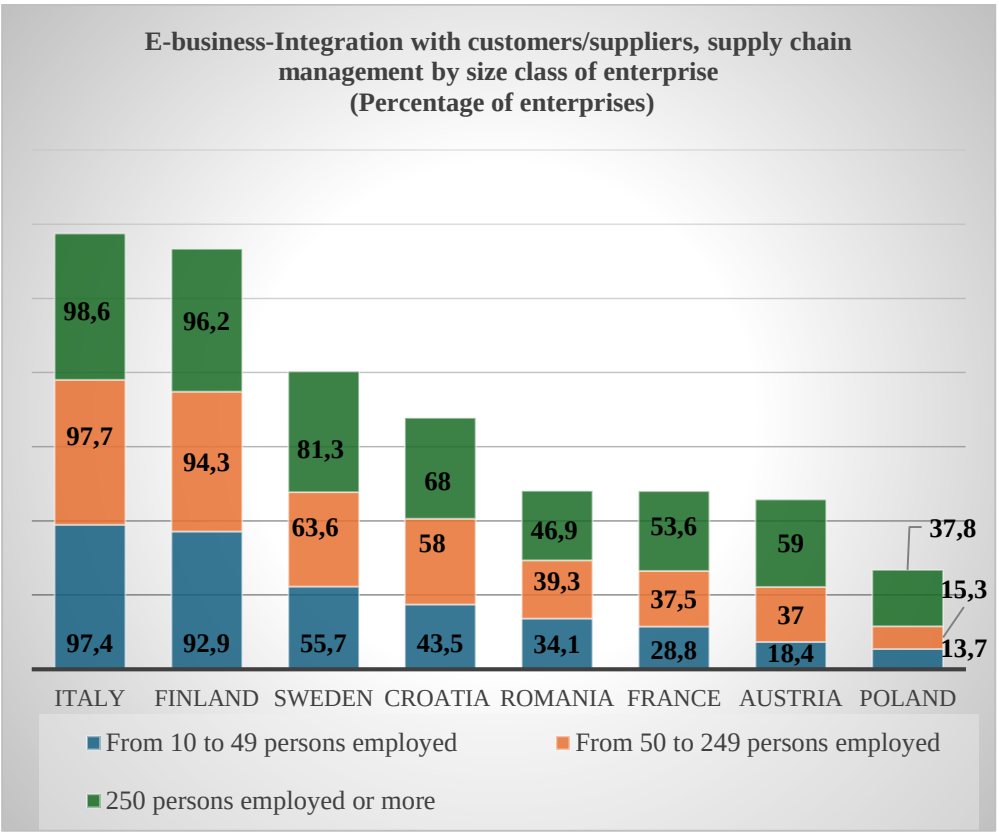

Figure no. 1: E-business integration

Source: Own processing with data obtained from Eurostat for the year 2023 (2024)

From a management perspective regarding the use of artificial intelligence in organizations, respectively the use of a main component of digitization; different CEOs

from different European areas were asked *If organizations should take action as quickly as possible on the integration or use of artificial intelligence in order not to lose a strategic advantage over the competition*, and their answers even if they indicate a higher percentage for a positive opinion regarding the use of artificial intelligence; also demonstrate the fact that those in the neutral zone and with those who do not agree add up to almost half of the total number, which suggests that the number of people in management positions who do not have open perspectives towards the implementation of AI is a significantly high one and it can represent a danger or rather a limitation in the use of digitization by management and according to the data in the figure (figure. no 2), the percentage of people who do not directly agree with the implementation of AI is around 38% for Benelux, 36% for France, 36% for Germany, 33% for Nordics, 26% for UK and 18% for Italy, their average being around 31%.

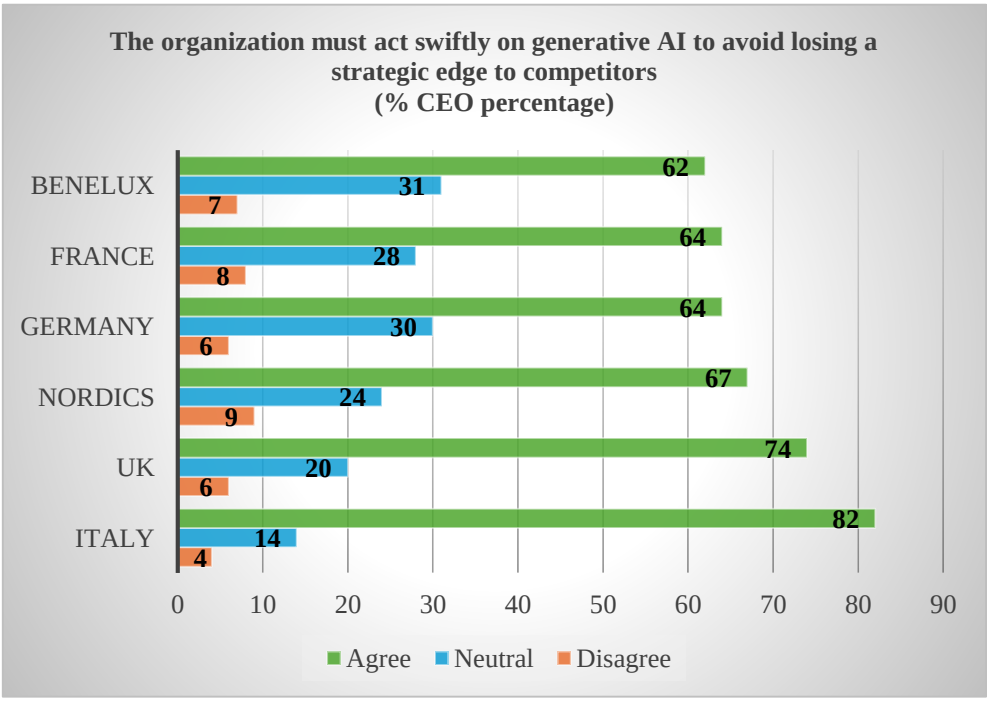

Figure no. 2: CEO Perspectives

Source: Own processing with data obtained from Ernst & Young Global Limited (2024)

In a report on management in the digital age, published by CEC European Managers (CEC European Managers represents approximately one million managers across Europe), it is noted to what extent the management of digital technologies is part of professional tasks. Thus, according to the survey among European managers, the report presents the percentage of usage of digital technologies in professional activities; statistics that allow the formation of a general picture of the managerial prospects in this

area. Therefore, the collected data indicates that among 1400 respondents, almost half frequently incorporate digital technologies in their professional activity, while more than half either do it sometimes or not at all. Implications that lead to the previously mentioned statistical data and which in turn indicate a danger or a limitation for the use of digitalization in the management of European enterprises. Practically, the situation is located somewhere in the middle, between those who use digital technologies frequently and those who are not so concerned about the use of these practices. This implicitly indicates the existence of a reticence among managers towards digitization in recent years. A factor that can otherwise negatively influence the activity of the respective companies and which is closely related to the digital intensity within them (figure no. 3).

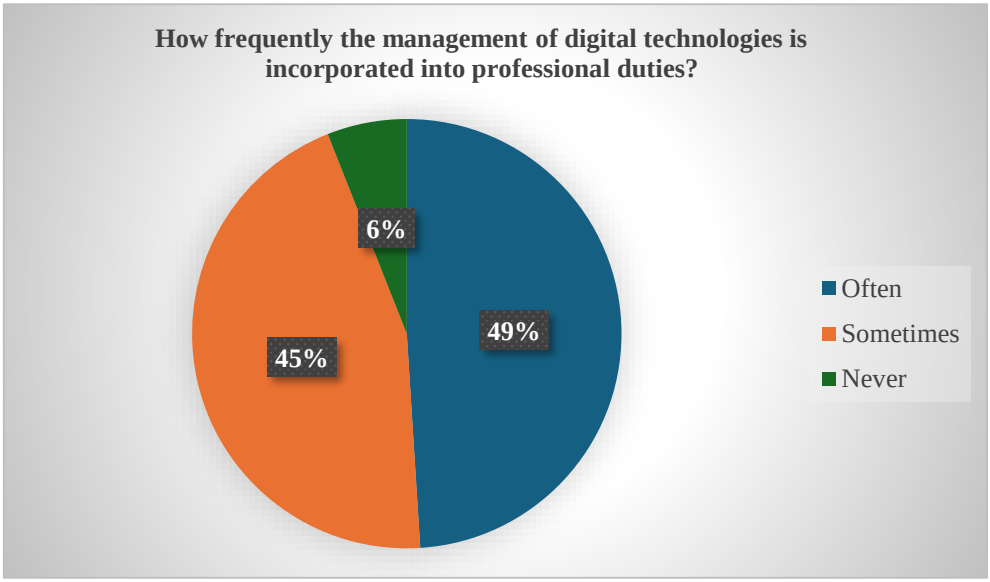

Figure no. 3: Digital technologies in professional duties
Source: Own processing with data obtained from CEC European Managers (2018)

The statistical data displayed in figure 4 were selected to present the state with the lowest level of digital intensity, then the state with an average level of digital intensity and finally the state with the highest level of digital intensity; and all the data selected were from the perspective of enterprises in the third category, respectively those with 250 employees or more; precisely because according to figure number 1, a positive relationship was highlighted between the high number of employees and the use or integration of digitization in enterprises, which indicated that the highest level of digital intensity will be identified only through the lens of companies that have 250, or over 250 employees. Thus, in terms of digital intensity, like the previously mentioned scientific literature and as a complement to it, Romania is positioned in the last place and the trend for all three states presented is of a slight increase. The difference for Romania is very small, of only 1.8 percent and as far as Germany and Finland are concerned, the increase is

approximately 9 percent and approximately 8 percent, a fact which implies that in these two states where the digital intensity is much higher, there was also a more accelerated growth trend. Consequently, the difference between the most developed state in terms of digital intensity and the least developed is significantly high, the difference being approximately 10 times greater for Finland (figure no. 4).
The statistical data presented and the analysis indicate the existence of significant differences among the European states regarding the use of digitization or its components. The diversity is not limited to the economic power of a state, but that extends to its social principles. Moreover, managerial decisions are often reduced to the perspectives and opinions of managers through the prism of their experiences and knowledge.

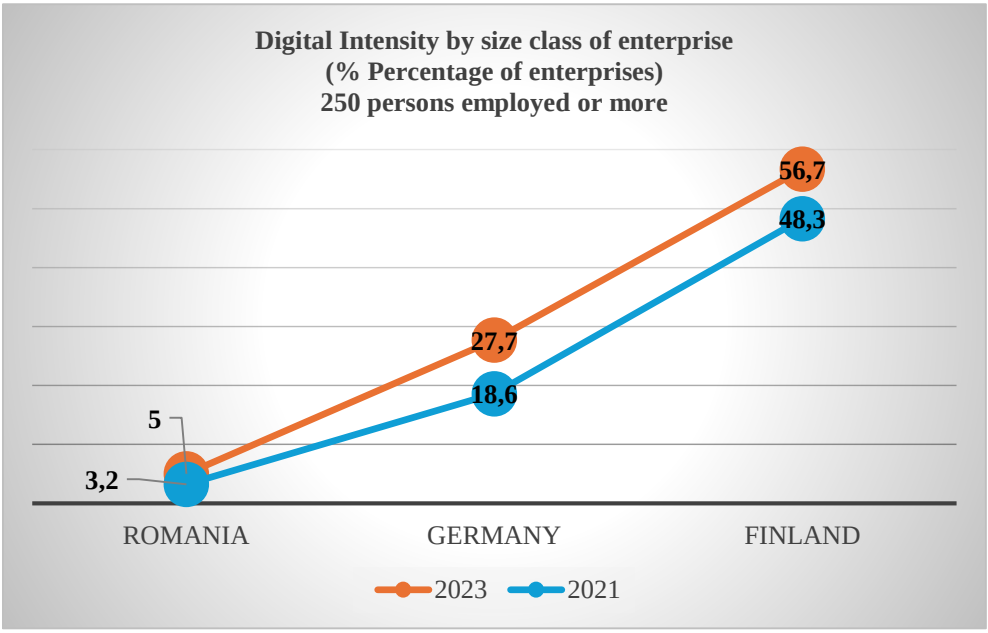

Figure no. 4: Digital intensity
Source: Own processing with data obtained from Eurostat for years 2021-2023 (2024)

The differences between companies that have a higher level of digitization and those that have a lower level are reduced to the states they belong to and to the public policies that those countries implement. Fundamentally, it is about the social and legal framework that a country offers for the digital development of companies operating on its territory. In a study carried out in 2023, a theory was highlighted, and according to which „digital inclusion is crucial for the social sustainability of digital transformation in a country as it guarantees equal access to the benefits and opportunities provided by technology" (Saeed Nosratabadi, Thabit Atobishi and Szilárd d Hegedűs, 2023, p. 11). Hence, in accordance with the study it can be noted that on a comparative basis, Finland vs. Romania comes first and last as well when it comes to Financial Education level.

The subject addressed is one that marks an area full of novelties; thus, the development of the digital space is an area not yet fully explored and which in turn forces the development of the economic area simultaneously with it and because adapting to the digital needs of customers is a constant of the current times.

Conclusions

The research results indicate a significant discrepancy between the European states in terms of the addressed research topic. Furthermore, some of them show the existence of huge differences; such as those between Romania and Finland in terms of digital intensity. At the same time, as a defining element of the study, it is also found that these gaps in the level of use of digitalization in the management of European enterprises are not directly proportional to the economic evolution of the respective States, which also indicates an involvement of the social and cultural component, possibly about the positive or negative effects of a higher or lower level of education. Thus, recalling a previous research in which it was highlighted that Finland has a higher financial literacy (Sidor and Manațe, 2023, p.104) could also indicate a better knowledge of the importance of using digitalization in business with the aim of increasing the performance of enterprises. Moreover, the decisions to implement or use digitization in organizations rest with those in the decision-making process and their degree of familiarity with the implications of digital transformations which can be directly responsible for its use.

In conclusion, it can be mentioned that the level of use of digitization in the management of European enterprises is a diversified one, with a high use towards maximum capacity in some states but also with a reduced, almost insignificant use in many countries, which implies a European imbalance and at the same time highlights possible limitations in increasing the performance of European companies, but it also sheds light on the existing differences between non-EU states and the difference from global practices.

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