DIGITAL CULTURE AS A COMPETITIVE ADVANTAGE IN THE SUSTAINABLE DEVELOPMENT OF ORGANIZATIONS

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Abstract: The article explores the concept of digital culture as a key component for organizations seeking sustainable development and competitive advantage in today's rapidly evolving business landscape. It delves into how embracing a digital culture within an organization can lead to enhanced efficiency, innovation, and overall performance. By fostering a culture that values digital skills, collaboration, and adaptability, companies are better equipped to navigate challenges and leverage opportunities in the digital age. There's no denying that there has been a noticeable increase in interest in recent years for solutions that support the sustainable development of organizations. In such a context, a key factor for increasing the efficiency of these processes is effective change management and its detailed knowledge. The management of human resources is affected by these management relationships, which guide it toward the strategic prioritizing of particular areas. However, given the evolving importance of technology and all of its associated aspects and activities, it is necessary to concentrate on identifying a new management paradigm, or digital culture. This is where we should also include the tendency, the primary driving force behind the changes, to be expressed in the understanding that increases in an organization's effectiveness have a direct connection to the human factor, and from there to innovative practices, talent management, motivational policies, and other aspects of personnel management. Therefore, in the search for sustainable development policies, human resources should be considered as organizational capital.

Keywords: sustainable development; digital culture; changes; human resources management.

INTRODUCTION

In today's rapidly evolving business landscape, the quest for operational efficiency and sustainable growth is a top priority for organizations across industries. One key factor that plays a critical role in enhancing efficiency is effective change management and the profound understanding of its intricacies. The management of human resources is intricately intertwined with these dynamic change processes, steering it towards strategically prioritizing specific areas to drive organizational success.

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However, amidst the ever-increasing significance of technology and its multifaceted aspects, there arises a pressing need to shift focus towards identifying a new management paradigm – one that encapsulates the essence of digital culture. This paradigm shift, which has unfolded over the past decade, resonates deeply within both the commercial and public service sectors, shaping their operational landscapes.

Consequently, in the pursuit of sustainable development frameworks, human resources emerge as invaluable organizational capital, propelling entities towards enduring growth and prosperity. The present study delves into these intricate relationships, offering unique perspectives on leveraging digital culture as a strategic advantage to bolster organizational effectiveness and pave the path towards sustainable growth.

The main research objective of the study is to explore the potential for Bulgarian organizations operating in the healthcare, education, hospitality and catering, finance, and insurance sectors to develop and foster a digital culture. This research aims to examine how building a digital culture within these organizations can lead to increased sustainability of their competitiveness and serve as a crucial competitive advantage in today's business environment.

I. DIGITAL CULTURE AS A COMPETITIVE ADVANTAGE

Investments are a key factor for the different phases of the economic cycle. It is really important they to be directed to innovative projects that provide high added value. For many companies from various sectors, digitalization is moving from a state of „nice to have“ to a „must have“ (Caldwel & Krishna, 2020). Companies are investing in digital transformation in order to be able to innovate faster, keep pace with technological and industry changes, and increase their resilience (Gurumurthy et al., 2021). Digital transformation should be a major pillar in the strategies of mature companies. “Digitalization is assessed as a factor contributing to the sustainable growth of business entities” (Akhundzada, N. & Rzayeva, 2023). Digitalization plays a crucial role in the sustainable growth of business entities by integrating digital technologies into various aspects of operations, enhancing efficiency, and promoting environmental responsibility. Digital tools streamline processes, reducing the time and resources needed to complete tasks. This can include automation of repetitive tasks, better resource management, and improved supply chain logistics. Digitalization enables better monitoring and management of energy usage and resource consumption.

Digital platforms facilitate better communication and collaboration among employees, partners, and customers. This can lead to more innovative solutions and faster problem-solving, driving sustainable growth. Access to real-time data and advanced analytics enables businesses to make informed decisions that enhance sustainability. Predictive analytics can forecast demand, optimize inventory, and reduce overproduction. Digital tools aid in designing and manufacturing products with sustainability in mind. Technologies like 3D printing allow for more efficient prototyping and production, minimizing material waste.

Digital channels provide businesses with new ways to engage with customers, gather feedback, and tailor offerings to meet customer needs. Satisfied customers are more likely to be loyal and contribute to long-term business success. Digital tools facilitate the tracking and reporting of sustainability metrics, enhancing transparency and accountability. This can improve a company's reputation and meet regulatory requirements. Embracing digital
technologies can drive innovation, allowing businesses to stay competitive in a rapidly changing market. Sustainable innovation can open new markets and attract environmentally conscious consumers. Digitalization is a powerful enabler of sustainable growth for business entities. By leveraging digital technologies, businesses can improve efficiency, reduce environmental impact, and create long-term value for stakeholders.

Digital technologies (from email, file sharing, mobile phones, online gaming, ecommerce, GPS systems) are becoming commonplace and part of our social and personal lives (Broeckman & Jaimes, 2015). Organizational culture refers to the collective beliefs, values, attitudes, and behaviors that shape the way individuals within an organization interact and work together. Organizational culture plays a significant role in shaping employee behavior, decision-making processes, communication styles, and the overall performance of the organization. Digital culture is an expression of norms, values and expected ways of going things due to ever-increasing computerization and digitalization of society (Deuze, 2006, p. 65). A positive organizational culture can foster collaboration, innovation, and employee satisfaction, while a negative culture can lead to conflicts, low morale, and decreased productivity. Cultivating a strong and healthy organizational culture is essential for creating a positive work environment and achieving organizational success. Digital culture encompasses the various ways in which individuals interact with digital media and technologies on a day-to-day basis (Sadiku et al., 2017).

I.1. Digital culture of organizations

Digital culture, which includes values, norms, and practices related to technology and digitization, usually stems from external trends and influences such as technological developments, industry trends, and consumer behavior (Junaedi et al., 2024, p. 455). Cultural characteristics include perceptions and attitudes about the organization's operations, risk-taking and innovation, awareness and public presence (Hadjitchoneva, 2022, p. 56). Digital culture for organizations refers to the collective mindset, behaviors, and practices that prioritize the integration of digital technologies and tools into every aspect of the business.

The digital culture that develops in the external environment can have a major impact on company performance (Junaedi et al., 2024, p. 455). Digital culture encourages innovation by fostering a mindset of continuous improvement and experimentation. It promotes the idea that new technologies and approaches can drive business growth and success.

Organizational culture refers to a set of shared values and beliefs that guide individuals in understanding how the organization operates and establish norms of behavior within the company (Arefin et al., 2015). Organizations with a strong digital culture are adaptable and flexible in the face of change. They embrace new technologies and ways of working to stay relevant and competitive in a rapidly evolving digital landscape. Companies that are able to adopt a digital culture that suits their external environment and integrate it with their operations and business strategy can gain a competitive advantage (Junaedi et al., 2024, p. 455).

Measurement of digital culture uses the dimensions of organizational culture (Arefin et al., 2015), digital transformation (Nguyen & Hoai, 2022), human capabilities, and innovation capabilities as a novelty. A digital culture places a strong focus on understanding
and meeting customer needs effectively. By using digital technologies to gather customer insights and personalize interactions, organizations can deliver better customer experiences and build long-lasting relationships.

Digital culture refers to mindsets, behaviors, and practices related to the use of digital technology in everyday life (Junaedi et al., 2024, p. 456). This culture promotes a data-driven approach to decision-making. Organizations leverage data analytics and insights to make informed decisions, optimize processes, and drive business outcomes.

The leading challenge faced by global management of human resources is the motivation of people to get involved with desire and curiosity in this new stage of human development. (Vasilev & Ognyanski, 2020, p.91). Overall, digital culture empowers organizations to harness the potential of technology to drive growth, improve efficiency, and create value for stakeholders. By embracing a digital culture, organizations can stay ahead of the curve and thrive in today's increasingly digital world.

Digital culture values employee empowerment, learning, and development. It encourages employees to embrace digital tools, upskill themselves, and contribute to the organization's digital transformation efforts. This culture reflects the social transformation brought about by advances in information and communication technology, especially the internet and mobile devices (Junaedi et al., 2024, p. 456). Overall, digital culture empowers organizations to harness the potential of technology to drive growth, improve efficiency, and create value for stakeholders. By embracing a digital culture, organizations can stay ahead of the curve and thrive in today's increasingly digital world.

Digitalization is a phenomenon that binds all things through technological innovations that cover the processes and phenomena (Hadjieva, 2021, p. 139). Digitalization and digital transformation have a variety of definitions and dimensions. Gartner (2018) defines digitalization as „the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business”.

Digital culture values employee empowerment, learning, and development. It encourages employees to embrace digital tools, upskill themselves, and contribute to the organization's digital transformation efforts. This culture reflects the social transformation brought about by advances in information and communication technology, especially the internet and mobile devices (Junaedi et al., 2024, p. 456). The areas in which enterprises benefit from participation in digital transformation are as follows: innovativeness, efficiency and process optimization, access to a wider market and et.

The effects of digitization are visible not only at the level of processes, but also management. As a company wants to benefit from digital transformation, it must first diagnose which areas have the potential for implementing new solutions. Digitization, which involves transforming analog data into digital datasets, represents the utilization of digital resources (Astuti & Augustine, 2022).

Entering modern technologies is a strategic decision that must result from far-reaching plans for production planning, but also the choice of markets, customer segments, sales policies, logistics partners and distribution networks. There is potential for change in all of these areas, but decisions must be well-thought-out, and in particular, comprehensive and integrated, embracing the company’s overall policy, in pursuit of the strategic vision.
Digital culture refers to the attitudes, behaviors, beliefs, and practices that shape how individuals, organizations, and societies interact with and adapt to digital technologies. Digital culture also includes the values and norms that guide how people engage with digital tools, platforms, and content. Overall, digital culture reflects the evolving relationship between people and technology in an increasingly connected and technology-driven world.

I.2. Competitive advantages for the sustainable development

There is an ongoing debate about the „entity” of competitiveness (Shafaei, 2009). Competitiveness as an economic category represents the ability and performance of a firm, sub-sector or country to sell and supply goods and services in a given market, in relation to the ability and performance of other firms, sub-sectors or countries in the same market.

Research methods can be descriptive research, exploratory research and or explanatory research (Sakyi et al., 2020). Competitiveness can be captured and measured by several aspects at micro, mezzo, and macro levels (Balogh & Jambor, 2017, p. 2076). L. Hardy, I. M. Lifits and others are proponents of traditional methods of assessing competitiveness based on the quality of production (Woodman & Hardy, 2003). However, these methods should be combined with others to achieve a more accurate assessment of the competitiveness of an enterprise.

To date, various methods have been employed to investigate the theory of comparative advantage, and they provide the basis for this analysis (Balogh & Jambor, 2017, p. 2078). Competitive advantages provide organizations with a unique edge over their competitors, enabling them to outperform rivals and achieve sustainable success in the marketplace.

Competitive advantages allow organizations to differentiate themselves from competitors by offering unique products, services, or value propositions. This differentiation can help attract customers who are looking for something distinctive and valuable. Both CSR and Sustainability address the responsible and sustainable use of resources while considering social, ecological, and economic dimensions of business practice. To increase sustainability and satisfy the demand for energy, countries should develop and utilize renewable resources as well as efficiently use energy sources (Gigauri & Vasilev, 2022, p. 267).

By leveraging competitive advantages, organizations can capture a larger share of the market. They can win over customers from competitors and expand their customer base, driving growth and profitability. Organizations with competitive advantages can build strong relationships with customers based on trust, quality, and reliability. This leads to increased customer loyalty and repeat business, reducing the risk of losing customers to competitors.

Competitive advantages enable organizations to charge premium prices for their products or services, leading to higher profit margins. They can also operate more efficiently and effectively, reducing costs and improving overall profitability. Having competitive advantages fosters a culture of innovation within organizations. They are encouraged to continuously improve products, processes, and services to maintain their edge over competitors and stay ahead of market trends. Strong competitive advantages create barriers to entry for new competitors trying to enter the market. This protects organizations from potential threats and gives them a more secure position in the industry. Overall, competitive
advantages benefit organizations by helping them stand out in the market, attract and retain customers, drive growth and profitability, foster innovation, and protect their market position from competitors. By leveraging their competitive advantages effectively, organizations can achieve long-term success and sustainability in today's competitive business environment.

**Figure 1**
*Digital culture as a competitive advantage*

![Digital culture as a competitive advantage diagram](image)

Source: author's systematization

Competitive advantage refers to the advantage gained by a company that surpasses its competitors within the same industry. This advantage is achieved through the implementation of innovative ideas that allow the company to provide high-quality goods or services, competitive pricing, and ultimately increase shareholder wealth. Sustainable competitive advantage can be applied to a company, country, or individual. Cost advantage, differentiation advantage, and comparative advantage are the three main types of competitive advantage. Competitive advantage enables an organization to create greater value for itself and its shareholders rapidly. By outperforming competitors, a company can secure a stronger market position, increase market share, and enhance profitability, leading to long-term success.

Achieving a sustainable competitive advantage, applicable to companies, countries, or individuals, involves leveraging cost advantage, differentiation advantage, and comparative advantage. This strategic edge enables organizations to create significant value for themselves and their shareholders, securing a stronger market position, increasing market share, and enhancing profitability, ultimately leading to long-term success.

**II. METHODOLOGY**

The methodology clarifies the main stages for assessing the digital culture as a competitive advantage and aims to reveal its reserves, as well as to formulate guidelines for its future development.
It can be seen from Figure 1 that after determining the values of the selected indicators and calculating the ranking scores, the overall competitiveness score is calculated, the competitive advantages are identified and it is proceeded to the selection of a strategy for the development of digital culture.

Weighting factors can be determined: by expert judgment; by studying the opinions of the managers surveyed; or as a result of empirical research. The summative assessment of the competitive potential is determined as the sum of the scores by individual indicators weighted by factors of significance. The key stages for assessing digital culture as a competitive advantage are generally the following: gathering the information needed to assess a competitive advantage; determining indicator and indicator values; scoring the indicators; determining weighting factors; and assessing indicator values.

In cases where the competitive potential to increase the competitiveness is assessed, the following formula is applied to determine its relative position to another (Velev, 2004, p. 105):

\[
BO_{ik} = 6x \frac{(ST_{ik} - ST_{imin})}{(ST_{imax} - ST_{imin})} + 1 \quad (1)
\]

where: \(BO_{ik}\) – score of the i-th indicator for the k-th producer;
\(ST_{ik}\) – the value of the i-th indicator for the k-th enterprise;
\(ST_{imax}\) and \(ST_{imin}\) – the maximum and respectively the minimum amount (value) of the i-th indicator for the entire aggregate of analysed producer.
The main research thesis is to study the possibilities of Bulgarian organizations in the field of healthcare, education, hospitality and catering, finance and insurance, to build a digital culture to increase the sustainability of their competitiveness and as an important competitive advantage.

118 Bulgarian companies from the fields of healthcare, education, hospitality and catering, finance and insurance were studied. Half of the companies are from the Southwest region. The survey was conducted in the period November 2023 - March 2024. The questionnaire consists of 25 questions, divided into 4 main subtopics: general characteristics; the relationship between digital culture and leadership in the company; investing in individual and company knowledge and innovation; and the sustainable competitiveness of the company.

The research object is the digital culture within Bulgarian organizations in the fields of healthcare, education, hospitality and catering, finance, and insurance. The research subject is the potential for building a digital culture in these Bulgarian organizations to enhance the sustainability of their competitiveness, examining how digital culture can serve as an important competitive advantage. This analysis focused on identifying the existing digital practices and the potential for cultivating a robust digital culture within these sectors. The selected companies were evaluated on various dimensions, including leadership's role in promoting digital initiatives, the extent of investment in digital tools and training, and the overall impact of these practices on organizational performance and market positioning. This detailed investigation provided valuable insights into the current state and future possibilities of digital transformation in the Bulgarian context.

The survey was conducted mainly among four types of organizations in different fields, such as healthcare (14%), education (27%), hospitality and restaurant business (33%) and finance and insurance (26%).

**Figure 3**

*Types of organizations studied*

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Healthcare</td>
<td>14%</td>
</tr>
<tr>
<td>Education</td>
<td>27%</td>
</tr>
<tr>
<td>Hospitality and restaurant business</td>
<td>33%</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>26%</td>
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</tbody>
</table>

To an extremely large extent, the researched organizations for micro- (23%), small (37%) and medium-sized enterprises (36%), and only 4% are the large organizations that took part in the research. In relation to the market in which activity have been carried out, 65% are national organizations, 26% operate in the regional market and only 9% operate in the international market. A vast part of the investigated organizations have a duration of work between 10 and 25 years (51%), with a duration of 25 years there are 26% and relatively fewer organizations with a duration of work under 2 years (only 3%) and between 2 and 9 years (20%).
III. RESULTS

In order to establish the relationship between digital culture and leadership in organizations, specific questions have been asked. It is noteworthy that a large part of the surveyed individuals (74%) answered that regularly share the leader’s vision for digital transformation with the entire team in the organization, i.e. managers often discuss with their employees the possibilities for development in the direction of digitalization in certain activities of the organizations.

**Figure 4**

*The relationship between digital culture and leadership in the company*

Source: author’s systematization

Approximately 71% of the surveyed individuals have the opportunity to participate actively in the development and implementation of digital initiatives, which means that the leaders in most of the investigated companies are aware of how important the staff is as being part of the implementation of innovations. Companies are beginning to try to react quickly and undertake strategies to anticipate or adapt to digital changes and to implement digital transformations (Genov & Hadjichoneva, 2021) to upgrade their operating models and improve outdated ways of working and cumbersome processes. New businesses are emerging that are “digital native“ (Prensky, 2001; Perkin & Abraham, 2017), distinguished by speed of reaction, focus and flexibility to changes in the business environment.

The results of the conducted research also show that innovative ideas for digital projects are encouraged extremely often, and when there is a mistake during the process, it is used as
an opportunity to learn and improve. In this regard, the business's ability to intelligently use internal and external information resources becomes its new competitive advantage, in order to ensure greater user satisfaction.

Referring to processes of implementing innovations, employee motivation is undoubtedly important, and very often companies encourage staff through recognition, awards or other forms of motivation for contributing to innovation. The company uses a system of rewards and penalties to ensure adherence to digital procedures and rules. Innovations are largely effective when strict procedures are followed for using digital tools and systems. The work with digital tools is subject to regular monitoring and evaluation by superiors.

To a significant extent, organizations in Bulgaria are aware that investing in individual and company knowledge and innovation is a key factor for success. In this regard, more than 75% of respondents have seen serious investments in the development of employees' digital skills, such as the use of collaborative platforms, smartphones, online communications with customers, use of company software and data analysis. Many companies invest in company knowledge to improve business processes, such as enhanced web presence, CRM for customer relationship management, ERP for business function management, e-commerce, digital marketing tools - social networks, email marketing, SEO, PPC, and others.

However, not all companies have the opportunity to balance investments between the development of company knowledge and the individual knowledge and skills of employees. To a considerable extent, Bulgarian organizations direct their investments to innovations in products and services, in marketing and business models. In terms of sustainable competitiveness, most companies seek to understand their customers' needs to a greater extent than their competitors. In this way, they could respond more precisely and quickly to the needs of users. (Stefanova et al., 2023).

Nowadays companies aspire to offer products and services that provide greater value for money or are difficult to imitate, resulting in a greater number of satisfied customers compared to competitors. Effective cost management is also a competitive advantage. Other competitive advantages that modern Bulgarian companies strive for is to adopt new digital technologies more quickly and to adapt themselves to market changes.

Embracing new digital technologies and staying agile in response to market changes are crucial for modern Bulgarian companies to remain competitive. By being quick to adopt innovative technologies, businesses can streamline operations, enhance efficiency, improve customer experiences, and gain a competitive edge. Additionally, the ability to adapt rapidly to changing market dynamics allows companies to seize new opportunities, address emerging challenges, and stay ahead of the competition. Overall, a proactive approach to digital transformation and market responsiveness can help Bulgarian companies thrive in today's fast-paced business environment.
Offering high quality products and services is also a key factor and an important competitive advantage. Competitive advantage in business is not something that can be vested. Rather it can only be earned through the hard work, dedication, and ethical performance of an organization. It does not come easy, and an organization might need to dedicate years and sometimes decades to earning this advantage over its arch rivals belonging to the same industry. The key to earning it is excellent and ethical performance, and one cannot earn the same through degrading or defaming rival companies operating in the same domain.

CONCLUSIONS

Sustainable competitive advantage can be applied to a company, country, or individual. It is mainly of three types- comparative advantage, cost advantage, and differentiation advantage. The strategies with which an organization can earn are: information advantage; cost leadership strategy; adaptability; differentiation strategy; operational effectiveness strategy; technology-based competitive advantage; and innovative strategy.

In conclusion, this study underscores the paramount importance of digital culture as a transformative force that holds the key to enhancing firm performance in today’s dynamic business environment. The findings highlight that digital culture not only significantly boosts firm performance but also acts as a vital moderator in amplifying the impact on organizational
success. Remarkably, it is evident that digital culture exerts the most potent influence on firm performance, reshaping the operational landscape of organizations.

From a practical standpoint embracing digital culture as a competitive advantage emerges as a strategic imperative for organizations seeking to elevate their performance levels. By harnessing the power of digital culture, firms can drive improvements in performance through direct influence as well as through fruitful interactions across various facets of their operations. This underscores the pivotal role that digital culture plays in propelling firms towards sustained success and growth in an increasingly digitized world. The insights generated by this study serve as a clarion call for organizations to prioritize the cultivation of a robust digital culture to unlock their full potential and thrive in the digital age.

The article presents an important perspective on the role of digital culture in shaping organizational success and sustainability. Researching provides insights into how organizations can leverage digital technologies and a digital mindset to drive innovation, efficiency, and growth. The focus on sustainable development underscores the long-term benefits of nurturing a digital culture that promotes resilience and adaptability.

Organizations can use the results of this article to assess their current digital culture and identify areas for improvement. Implementing strategies to enhance digital literacy, foster a collaborative work environment, and embrace digital transformation can lead to tangible business outcomes and sustainable growth. By aligning digital culture with organizational goals and values, companies can better position themselves for success in a competitive marketplace. The survey methodology used have limitations in terms of sample size and representativeness. The study not capture the full complexity of digital culture within different types of organizations and industries.

Overall, the article on digital culture as a competitive advantage in sustainable development provides a valuable starting point for further research and practical application in the field. Conducting longitudinal studies to track the impact of digital culture on organizational performance over time could yield valuable insights.

REFERENCES


