

TRENDS AND PROBLEMS OF DIGITAL TECHNOLOGIES DEVELOPMENT

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The study is aimed at assessing the trends of the global economy's digitization. The differences and peculiarities of the traditional and digital economy are researched and key areas for the introduction of digital technologies in the corporate sector are identified.

Key words: digital technologies; digitization; post-industrial development; competitive advantages; international competitiveness.

The continuing complication of social structures and relationships, which are increasingly based on modern digital technologies, causes the growing of data flow and highlights the digital economy emerging. The importance of these processes has led to the issue of a new type of economy formation with the dominant importance of relations regarding the production, processing, storage, transmission and use of growing data, which are the basis of economic analysis and examines the patterns of modern socio-economic systems functioning. Currently, the availability of data about resource and the ability to use it to plan and forecast its activities is of great importance for any economic entity.

Thus, the purpose of the research is to identify the factors and problems of business digitalization, which are in some cases common for many countries. We have relied on the results of recent (2016–2018 years) researches. International statistics annually survey more than three thousand executives of large corporations from more than 100 countries and dozens of industries. Methods of gathering information include in-depth interviews, in-person interviews, online and telephone surveys.

Companies start making the changes they need to adapt their business to a digital environment, that is fundamentally different from the traditional environment. As a result, they recognize the differences and understand how they need to work to adapt and succeed in a fast-changing market.

Research highlights key practices, that help to transform organizations into digital companies [1, p. 682]:

1) systematic changes in companies, that develop workforce, stimulate the use of innovation, introduce a culture and experience focused on the digitalization of operations;

2) expanding strategic planning horizons; digital strategies focus on both technology and key business opportunities. At the same time, tying the digital strategy to the ultimate business goals remains one of the leading challenges facing companies in increasing their digital completeness;

3) the ability to scale up digital experiments, turn them into great enterprise-wide innovations, that have a profound impact on business development;

4) turning companies into attractive force (magnets) for talented people;

5) creating the vision needed to implement a digital strategy and the willingness to use (engage) resources to achieve it.

During the last two years there has been a faster increase in the level of digital maturity of large companies which has not happened before [2]. These shifts indicate, that organizations are beginning to treat digital change differently and are making significant changes in working methods. In the process of digital transformation, companies face serious challenges, one of the leading is past success which is referred to in the management literature as «traps of competence». Competency traps are misconceptions, that the factors which have led to success in the past, will also be linked to future success.

Digital technologies are changing the competitive landscape – providing new ways to create value for customers and new service opportunities, and factors that relate to past success may not be related to future success.

Research shows, that older businesses tend to be less mature in the digital business. Avoiding the «traps of competence» is necessary to achieve such a digital transformation that leads to long-term success. The answer to the question of what differentiates digital business from the traditional, according to an international survey in 2018 [3]: business rate – 23 % (among respondents), culture and thinking – 19 %, flexible, distributed jobs – 18 %, productivity – 16 %, improved access, use of new tools – 12 %, connectivity – 10 %.

The greatest difference was seen by business leaders in the pace of doing business. The digital business requires companies to act and react faster than ever before. The problem is that communication and decision-making structures in organizations cannot change as quickly, as necessary. Not only production technologies work faster and more efficiently (everyone has access to the same technology), but also the emergence of new competitors.

The second most frequently mentioned by respondents is the difference between culture and thinking. These responses centered around the need for change in organizational culture, but the responses were not wholly positive. Many respondents noted, that cultural shifts also lead to tensions with employees who have a traditional mindset. In other words, competency traps can also exist on an individual level, especially in existing companies. Employees who have been successful in competition in the past may be reluctant to change these ways of working in the future.

The third most common difference is organizational structure. The boundaries of the company change significantly, the idea of «key periphery» is becoming popular. In this model, the company relies on a group of key employees in which it plans to invest and train using external talent networks as needed. Even large companies can consist of a «core team and peripheral employees» (and projects around them), instead of full-time employees working in the same company. Research suggests that employers will increase their reliance on contracted, part-time employees over the next few years.

Finally, the fourth most cited difference is performance. When asked what problems organizations are most likely to face when looking for a more effective way to compete in the digital environment, the following answers were obtained: experimentation, risk-taking, and the ability to work more flexibly – 20 % (among respondents), uncertainty and constant change – 13 %, purchase and use of the right technology – 12 % decision-making distribution – 10 %, transparency, democratization of information – 9 %, fluidity, variability of organizational structures – 8 % [3].

The leading challenge for organizations competing in the digital environment is the lack of experimentation. Rooted companies struggle with the need to experiment because of the fear of failure.

The second most important issue for digital business competition is how they cope with uncertainty and constant change. The degree of uncertainty in the markets will increase and the speed of response of companies needs to be accelerated. Companies need leaders who can assemble a coalition of people, who are driven by goals rather than tasks or functional areas at the right time.

The third most important competition problem is buying and implementing the right technology. Interestingly, this answer showed the biggest difference between non-digital and digital companies. Many early stage companies are overestimating the technological component of digital maturity, while more mature companies are looking at development issues more broadly, systemically.

The real effects of digital adoption in companies are to accelerate and simplify processes, improve accuracy and quality, reduce the complexity and complexity, increase the flexibility of processes, enhance their focus on customer needs (more than 60 % of respondents).

Rarely, the effect of increasing sales, the emergence of new consumers and fundamentally new products, services and opportunities were noted. The first positions in context of the greatest impact on business were the following digital technologies: Internet of things and production automation (60 %), digital design and modeling (58 %), virtualization technologies, remote access, remote office, etc. (57 %), mobile technology and cross-channel communications (55 %) [3]. The larger the company and the higher its level of digital maturity, the more new technologies affect its performance.

The development of the digital economy provides the opportunity for communication, exchange of ideas and experience. Playgrounds on the Internet allow to join forces to create a business, invest, search for employees, partners, resources and markets. Digital technologies can also play a key role in learning, sharing knowledge, implementing innovative ideas.

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