



TelSoc

Telecommunications & the Digital Economy

Published on *TelSoc* (<https://telsoc.org>)

Home > The Evolution of Digital Capital in Organizations: A Quantitative Assessment

The Evolution of Digital Capital in Organizations: A Quantitative Assessment

[Vladimir Bubnov](#) ^[1]

Moscow Aviation Institute

[Valeria Kopilevich](#) ^[2]

National Research Tomsk State University

[Anna Istomina](#) ^[3]

Plekhanov Russian University of Economics

JTDE - Vol 9, No 4 - December 2021 ^[4]

^[5]

☆ 28 ^[6]

Abstract

This study analyzed the evolution of resources in organizations towards digital capital using the example of Russia, by analyzing data on the development of technological infrastructure. It concluded that, over the past decade, there were moderately favourable conditions in terms of technological orientation in the Russian Federation. However, only a third of Russian organizations have mastered digital transformation in the context

of digital interaction in the online environment using relatively simple information technologies. At the same time, a downward trend was noted for the pace of digitization of business processes and management decisions through dedicated software, reducing the global competitiveness of such organizations. The quantitative assessment of the evolution of digital resources demonstrated that Russian organizations have only a basic level of mastery of digital technologies, with some additional capabilities. This level is characterized by the use of relatively simple digital technologies and standard software. Thus, Russian economic entities in almost all areas use information and communication technology as a component of digital capital for the production of added value, but within limited professional competencies. The study results can be used by organizations' management for meso-level research and by policymakers for evaluating the digital economy.

Introduction

The ubiquitous use of digital technologies in a chaotic business environment amid the COVID-19 crisis plays a key role in dealing with the aftermath of the pandemic. The measures introduced to contain the coronavirus infection (movement limitations, social distance, and wearing masks) required a new way of interaction from the business sector in the form of remote work and using digital platforms and technologies for video conferencing and going online. In this environment, information and communication technology (ICT) has helped alleviate the impacts of the pandemic, with uneven degrees of mitigation. This concerns, first of all, connectivity limitations (access, use, and speed), social inequalities, industrial heterogeneity, low organizational competitiveness, and limited access to data and information management, especially in developing countries ([Bárcena, 2021](#) ^[7]; [Romanyuk, Sukharnikova & Chekmareva, 2021](#) ^[8]).

However, as technology advances, new governance challenges constantly emerge: the importance of cybersecurity steadily increases (each innovation in technology carries the potential for new types of cyber threats); the business environment becomes more variable (technology introduction contributes to the update of economic relations and the structure of business models); environmental aspects of digitalization undergo changes (new digital devices, applications, and data transfers increase energy consumption, contribute to climate change, and generate large amounts of electronic waste) ([UN, 2021](#) ^[9]). The transformation of organizations in terms of digitalization in Russia is of particular relevance today because, over the past decade, digital technology has evolved from the tactical level, focused on attracting consumers through enhanced access to information services, to the strategic level – the full-fledged formation of the digital economy ([Romanyuk, Sukharnikova & Chekmareva, 2021](#); [Abdimomynova, 2021](#) ^[8]).

The present study is divided into five parts. The next section introduced the concept of Digital Capital and provides the rationale for the study. There follows a short section on research methodology. A Results section describes the outcomes of the study and is followed by a discussion, where the collected findings are compared with those presented in other similar studies. A Conclusion summarizes the research findings, practical implications, and a description of further work directions.

Please refer to PDF download for the full paper.

Article PDF:

[435-bubnov-article-v9n4pp1-22.pdf](#) ^[10]

Copyright notice:

Copyright is held by the Authors subject to the Journal Copyright notice. ^[11]

Cite this article as:

Vladimir Bubnov, Valeria Kopilevich, Anna Istomina. 2021. *The Evolution of Digital Capital in Organizations: A Quantitative Assessment*. JTDE, Vol 9, No 4, Article 435. <http://doi.org/10.18080/JTDE.v9n4.435> ^[12]. Published by Telecommunications Association Inc. ABN 34 732 327 053. <https://telsoc.org> ^[13]

Source URL:<https://telsoc.org/journal/jtde-v9-n4/a435>

Links

[1] <https://telsoc.org/journal/author/vladimir-bubnov> [2] <https://telsoc.org/journal/author/valeria-kopilevich> [3] <https://telsoc.org/journal/author/anna-istomina> [4] <https://telsoc.org/journal/jtde-v9-n4> [5] <https://www.addtoany.com/share?url=https%3A%2F%2Ftelsoc.org%2Fjournal%2Fjtde-v9-n4%2Fa435&title=The%20Evolution%20of%20Digital%20Capital%20in%20Organizations%3A%20A%C2%A0Quantitative%20Assessment> [6] <https://telsoc.org/printpdf/3411?rate=qisaHDqN2x9WM9Ly975dYccNWJ8jmdtID64ijYMBJ8w> [7] https://telsoc.org/journal/jtde-v9-n4/a435#Bárcena_2021 [8] https://telsoc.org/journal/jtde-v9-n4/a435#Romanyuk_Sukharnikova_Chekmareva_2021 [9] https://telsoc.org/journal/jtde-v9-n4/a435#Progress_UN_2021 [10] https://telsoc.org/sites/default/files/journal_article/435-bubnov-article-v9n4pp1-22.pdf [11] <https://telsoc.org/copyright> [12] <http://doi.org/10.18080/jtde.v9n4.435> [13] <https://telsoc.org>