introduction is one of the key factors in organizational performance in adapting to the rapidly changing market conditions of the modern world (WESTERMAN, BONNET, MCAFEE, 2014a, b; PIHIR, TOMIČIĆ-PUPEK, FURJAN, 2019). Researchers agree that DT aims at improving interaction with customers and automation business processes (PROBST et al., 2018; KOTARBA, 2018). At the same time, the essence of DT is not only to build up technological infrastructure. The introduction of ICT leads to new opportunities for business development, optimization of organizational structure, reforming the management concept, the emergence of fundamentally new types of services and innovative business models (MATT, HESS, BENLIAN, 2015; HESS et al., 2016). Insufficient integration of digital technologies into the activities of organizations is one of the reasons for the slow economic development (HANS- HAGÉN, GLANTZ, NILSSON, 2008; ANDREWS, CRISCUOLO, GAL, 2016).

The research results of the dynamics of ICT use in organizations (Marina M. Butakova, Olga N. Sokolova, and Nina I. Larionova, 2020) published in the papers of Elena N. Klochkova (2016), Gulnara I. Abdraakhmanova and Galina G. Kovaleva (2009), Tatyana A. Kuzovkova and M. V. Turenkov (2008), Svetlana Yu. Revinova (2010, 2015), Olga V. Artemova, Anastasiya N. Savchenko, and Tatyana M. Cheskidova (2019), Marina Yu. Arkhipova and E. V. Gribova (2012) prove that in the period since the early 2000s in Russia, the activity of ICT use in the economic sphere has been increasing. During this period, Russian organizations successfully entered the initial stage of digital maturity as a result of the widespread use of personal computers – since 2005 the proportion of organizations that used them (ABDRAKHMANOVA et al., 2010) reached 90% (ABDRAKHMANOVA, KOVALEVA, 2009). Nevertheless, in terms of key indicators of ICT use, the Russian Federation lagged significantly behind European countries (ABDRAKHMANOVA, KOVALEVA, 2009), including access to the Internet, website availability, the use of electronic document management system (EDMS), and radio-frequency identification (RFID) technology (ARTEMOVA, SAVCHENKO, CHESKIDOVA, 2019), as well as the active use of the Internet for commercial purposes (KUZOVKOVA, TURENKO, 2008).

Despite the gap with European countries, researchers give optimistic forecasts of further DT, noting the great potential of Russian organizations in the use of information technology (REVINOVA, 2015; LEVCHENKO, LEVCHENKO, 2020).

Previous studies have also revealed differences in the level of ICT use in organizations (BUTAKOVA, SOKOLOVA, LARIJOVNA, 2020) of the Russian Federation and European Union (EU) and Organization for Economic Cooperation and Development (OECD) countries. Based on the assumption that a wider spread of ICT in organizations indicates a higher level of digital
maturity of the economy, in this study, the trend analysis of ICT use was also made for EU and OECD countries. Comparative analysis of the level and intensity of ICT penetration in the Russian Federation and countries of EU and OECD on a comparable set of indicators is of practical interest in terms of identifying further prospects for digital maturity and DT trajectory in the Russian Federation relative to the position of countries with higher levels of digital technology penetration in economic activity.

This study aims to analyze DT trends and determine the stage of digital maturity of the economy of the Russian Federation. The research tests the following hypothesis: the level of digital maturity in EU and OECD countries is higher than in the Russian Federation, which indicates a lower growth rate of ICT use in organizations in foreign countries.

METHODS
Trend analysis of ICT use in organizations (BUTAKOVA, SOKOLOVA, LARIONOVA, 2020) was carried out according to the indicators that characterize:

- Availability of high-speed Internet access;
- Availability of tools for electronic interaction and information exchange (website, Electronic Data Interchange (EDI) system);
- Availability of automation systems and e-business technologies (EDMS, Enterprise Resource Planning (ERP), Client Relations Management (CRM), Supply Chain Management (SCM) systems, RFID-technologies, cloud services);
- Participation in e-commerce.

The information base of the study is the official statistical information, forming according to the results of the federal statistical observation "Information about ICT use and production of computer equipment, software and services in these areas" (Russian Federal State Statistics Service, 2016) (form No.3-inform.) of the Russian Federal State Statistics Service, as well as information from the ICT Access and Usage by Businesses - OECD Statistics (Organisation for Economic Cooperation and Development, n.d.). The indicators are presented on an annual basis for 2003-2019 for the Russian Federation and 2010-2019 for EU and OECD countries.

RESULTS AND DISCUSSION
The DT of the Russian economy in recent years is characterized by significant changes in several indicators.

Figure 1 shows the trends of the proportion of organizations (ARKHIPOVA, PROKHOrov, 2014) using ICT in the Russian Federation (LANGUEV et al., 2020) and countries of EU and OECD for 2010-2019. The highest backlog of the Russian Federation was observed on indicators of website availability and use of ERP and CRM systems. In 2010, the proportion of organizations having a website in EU and OECD countries was almost 2.5 times greater than in Russia, using ERP systems - more than 4, and CRM systems - more than 6 times greater. For the remaining indicators, the backlog in the levels recorded in the Russian Federation from those in EU and OECD countries was up to 30%. Comparable values for the Russian Federation, the EU, and the OECD were observed on indicators of participation in e-commerce.

By 2019, the difference between countries in the level of digital maturity of organizations has decreased and became 2.5 times in the use of ERP and CRM systems, 1.5 times in website availability, and less than 35% in other indicators, except for high-speed Internet. A negative trend is the increasing backlog of the Russian Federation in the level of penetration of high-speed Internet access from the average for EU and OECD countries.

Thus, the distinctive feature of the current stage of digital maturity of the economies of EU and OECD countries distinguishing it from the level of digital maturity of the economy of the Russian Federation is the greater penetration of high-speed Internet access and automation systems, as well as the higher level of availability of websites.
Differences in the levels of digital maturity of the economy indicate different patterns of DT, which is reflected in the trends of the specific indicators of ICT use in organizations (BUTAKOVA, SOKOLOVA, LARIONOVA, 2020). Figure 2 shows the average relative increase in the proportion of organizations using ICT in the Russian Federation (LANGUEV et al., 2020), the EU, and OECD countries for 2010-2019. The use of those technologies for which the difference between the Russian Federation, countries of EU and OECD decreased during the period under review was increasing at a higher rate. In addition to indicators of website availability and the use of ERP and CRM systems, Russian organizations were more active in implementing cloud technologies: on average, the use of cloud services increased by 11.3% annually in the Russian Federation in 2015-2019, by 9.5% in OECD countries, and by 5.8% in the European Union. The values of the average relative growth and usage levels of ICT (ARKHIPOVA, PROKHOROV, 2014) for the respective indicators show that in EU and OECD countries the growth potential of website availability, use of CRM systems, and participation in e-commerce is almost fully realized. Nevertheless, the average relative increase in the proportion of organizations having high-speed Internet access in the Russian Federation was half as high in EU and OECD countries.
Based on the assumption that the trends of transition to the next stage of digital maturity in the countries are similar, it is reasonable to assume that soon DT of the economy in the Russian Federation will develop in the direction of increasing the intensity of the spread of high-speed Internet access, stabilizing the growth rate on indicators of the use of cloud services and participation in e-commerce at the level of EU and OECD countries. In addition, the achieved values of indicators for the EU and OECD countries determine the potential capacity of the introduction of some technologies in Russian organizations, in particular websites and ERP and CRM systems, which in the long term will provoke a decrease in the spread of these technologies.

CONCLUSION
The analysis identified trends in DT of the economy and the current stage of digital maturity of organizations in the Russian Federation. From 2010 to 2019, the Russian Federation's lagging behind the EU and OECD countries on indicators of digital maturity has noticeably decreased. The values of the indicators of ICT use in organizations testify to the achievement of a higher level of digital maturity of the economy in the EU and OECD countries. At the same time, the growth rate of the proportion of organizations having high-speed Internet access in 2015-2019 was higher in foreign countries than in Russia.

In terms of practical application, the results of the trend analysis can be used in studies devoted to modeling and predicting DT trends on the considered indicators of ICT use in organizations to implement a more in-depth analysis of the nature of the trends and patterns of DT development. In future studies, DT trend analysis can be carried out in the context of individual countries to study the differences in the stages of digital maturity in detail, as well as in the context of Russian regions and industries to describe imbalances in the levels of digital maturity within the country.

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Digital transformation dynamics of the russian economy: an international comparative analysis

Dinâmicas de transformação digital da economia russa: uma análise comparativa internacional

Dinámicas de transformación digital de la economía rusa: un análisis comparativo internacional

Resumo
Neste estudo, a análise de tendências da disponibilidade e do uso de TIC nas organizações foi realizada utilizando uma gama mais ampla de indicadores a longo prazo, o que possibilitou identificar padrões de transformação digital (DT) e o estágio correspondente de maturidade digital da economia. A atividade econômica digital, o papel da informação e o valor dos dados aumentaram, o que afetou as tendências de uso da internet para a troca de produtos eletrônicos. Em termos de aplicação prática, os resultados da análise podem ser utilizados em estudos dedicados a modelagem e previsão de tendências de DT sobre os indicadores considerados de uso de TIC nas organizações para implementar um estudo mais profundo e abrangente da natureza das tendências e padrões do desenvolvimento de DT.

Palavras-chave: Transformação digital. Maturidade digital. Uso de TIC em organizações. Dinâmica. Tendências.

Resumen
En este estudio, el análisis de tendencias de la disponibilidad y el uso de las TIC en las organizaciones se llevó a cabo utilizando una gama más amplia de indicadores a largo plazo, lo que permite identificar patrones de transformación digital (DT) y la correspondiente etapa de madurez digital de la economía. La actividad económica digital, el papel de la información y el valor de los datos han aumentado, lo que ha afectado a las tendencias en el uso de Internet para el intercambio de productos electrónicos. En términos de aplicación práctica, los resultados del análisis pueden utilizarse en estudios dedicados a modelar y predecir las tendencias de DT sobre los indicadores considerados del uso de las TIC en las organizaciones para implementar un estudio más profundo y completo de la naturaleza de las tendencias y patrones de desarrollo de DT.

Keywords: Digital transformation. Digital maturity. ICT use in organizations. Dynamics. Trends.

Palabras-clave: Transformación digital. Madurez digital. Uso de las TIC en las organizaciones. Dinámica. Tendencias.