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**DIGITAL TRANSFORMATION OF GOVERNMENT SERVICES: A**  
**LONGITUDINAL CASE STUDY OF TAX SERVICE**

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**Abstract**

The digital transformation is expected to increase citizens' expectations of government services, the level of their value, the maximum utility generated and the minimum cost to the consumer. In response to changing expectations, the public administration sector is developing e-services. Real-time mode and online services achieve such efficiency criteria as transparency, satisfaction, functional interaction of authorities and citizens. However, in addition to internal executive reports, there is little systematic information on the status of the digital transformation of government services and whether online services meet consumers' expectations in day-to-day practice. The paper presents the results of the study of the digital transformation of state administration services provided by the Federal Tax Service of the Russian Federation, obtained by the longitudinal case study method. The longitudinal case study method is a qualitative case study methodology of long-term socio-economic processes. In the study of the digital transformation of public services, the method makes it possible to trace the process by showing the results achieved in the individual phases of digitization within a general algorithm, to form estimates and directions of the growth of the efficiency of digital transformation. The proposed three-level algorithm enables to form a project strategy and combines strategic, resource, organizational and indicative mechanisms within the boundaries of an individual service. The implementation of the project strategy will ensure the transition of digital transformation of public services of the Russian Federation to the final stage of digitization, corresponding to the stage "Networked e-government".

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## 1. Introduction

The content of state services is connected to the concept of a “service state” thoroughly developed by Osborn and Gaebler (1992). In the Russian Federation, the concept of a “public service” (a “public administration service) is the result of the recognition of the social role of the state, the specification of a certain product that is supplied by the state to the private sector directly or through investment, adopted as a priority of the administrative reform initiated in 2003, appointed as the main function of the executive authorities. The mechanism for carrying out the above-mentioned function includes: (1) the Register of Public Services; (2) organizations and infrastructure needed to provide public services; (3) service technologies and procedures for the interaction of citizens and public authorities; (4) quality management of public services (On the State Programme of the Russian Federation “Information Society (2011-2020)”). The quality of the provision of state services, in the opinion of scientists and in accordance with the legislation of the Russian Federation, is determined by the criterion of satisfaction of consumers achieved by the interaction between citizens and the State. The efficiency of the process is determined as the state expenditures on public services (Federal Act of 27.07.2010 No 210-FZ (Rev. 27.12.2019) "On the organization of the provision of State and municipal services").

The digital transformation has revolutionized the system of public administration of the Russian Federation, has firmly linked the quality and efficiency of public services to electronic forms and online services, and detailed the evaluation criteria as openness and transparency, savings of user time and platform characteristics of real-time mode, reduction of paper circulation, possibility of round-the-clock interaction of service providers in a self-service mode. The Federal Tax Service of the Russian Federation (FTS) is the leader in the digital transformation of state services in the country, an executive body whose function is monitoring and supervising the compliance with the laws on taxes and charges, their proper calculation and budgeting (Resolution of the Government of the Russian Federation dated 30.09.2004 No 506 "On approval of the Regulation on the Federal Tax Service"). The reasons for the rapid development of electronic forms and online services in the Russian Federation were:

- the content of state services of the FTS, which are legally established as activities for the fulfilment of the legal requirements and appeals of legal entities and individuals for the recognition, establishment, modification or termination of rights, the establishment of legal facts and information on matters; within the competence of the tax authority;
- a wide range of services on informing and processing taxpayers' applications, issuing licenses and permits, maintaining public registers and state registration;
- the regulated criteria for assessing the quality of services arising from the principles of lawfulness, declarative order, payment, openness, accessibility, availability in electronic form: (1) Minimization of temporary and other resources for the recipient of a public service; (2) Ability of the taxpayer to apply to the tax authority in person, by mail as well as by telecommunications; (3) Reduction of the number of documents required to obtain the service, the number of applications to the tax authority; (4) Formalization of the possibility of quality assessment, development of channels of «feedback» with taxpayers in the provision of a state service.

In such circumstances, the process of providing public services by the FTS is organized in the manner presented in Table 1.

**Table 1.** Organization of state services provision by the FTS regional authorities

Through the FTS regional authorities and multifunctional centres	Through the FTS online services and the Integrated portal for state services (IPSS)
<p>Informing</p> <p>recording and use of the electronic queue card; an explanation of the subject matter; obtaining information from a specialist on the procedure and time frame for the provision of the service; assessment of accessibility and quality of service</p> <p>Receipt of tax returns (on a limited list of declarations for each form of organization)</p> <p>recording and use of the electronic queue card; declaration / to be completed in cooperation with a specialist; registration of the declaration issued by the specialist of the FTS regional authority / submission of the declaration by a multifunctional centre specialist to the FTS regional authority</p>	<p>searching for the necessary service on the FTS site / recording for reception at a regional authorities of the FTS; study of information on the procedure for the provision of services and the establishment of referrals; monitoring status, results, accessibility and quality of service</p> <p>authorisation in the personal account on the FTS website / authorisation in the IPSS website; the choice of the necessary service; completion of the declaration; electronic transmission of the declaration to the FTS regional authority; monitoring the status of service delivery</p>

Source: authors.

The electronic forms and online services of the Russian Federal Tax Service cover four services: tax debt repayment, two types of tax return, registration by legal entities and individuals as individual entrepreneurs, confirmation of the individual taxpayer's number.

## 2. Problem Statement

The increase in the number of visitors to the FTS website (The Federal Tax Service of the Russian Federation, 2020) in 2019 by 17.7 million (27.4%) compared to 2017 indicates that the digital transformation of the FTS public services has passed the initial stage. However, the fact that the proportion of citizens receiving the services of the FTS through a specialized site is only 70 per cent indicates the limited use of electronic forms and online services (Your Control, 2020). The provision of 23 non-electronic service units requires the personal presence of the applicant at the FTS regional authority. The user of the IPSS online services – an individual - is provided with the only service of filing tax declaration (the individual income tax). The provision of tax reports to legal entities in electronic form through the FTS website is carried out in the form of a pilot project, which does not include reporting on value added tax (VAT). The continuing risks of technical failures in the operation of online services, low evaluated quality of electronic services (64 per cent of users rated the convenience of receiving information on the official site worse than «well») fixes non-electronic ways as part of the package of the FTS state services (The Federal Tax Service of the Russian Federation, 2020). The slowing down of the process of introducing new electronic services and unsatisfactory evaluations of the quality of online services are creating the problem of the loss of the digitization speed of the FTS state services.

### **3. Research Questions**

The research questions for this paper were: What are the problems hindering the digital transformation of the FTS public services? How can the problem be solved? What are the possibilities of a long-term method of research into the process of digitization offered on the basis of foreign experience? What are the information bases of the method? What is the algorithm of research of digital transformation of the FTS public services? How to evaluate the effectiveness of the organizational and economic mechanisms for the digitization of the FTS state services? What is the way to accelerate the development of the FTS e-services?

### **4. Purpose of the Study**

The paper is aimed to develop an algorithm for the study of digital transformation of public services based on the longitudinal case study method. The proposed method is based on the successful experience of a study on the digitization of public services in Denmark. The author's algorithm contains the characterization of prerequisites, standard blocks of information, organizational and economic mechanisms for the digitization of state services of the Russian Federation. The application of the method made it possible to identify the problem of slowing down the development of electronic services and online services of the FTS of the Russian Federation. The reasons for the problem, according to the authors, relate to the limitations of expert judgement on the progress of the process. The computed research algorithm removes these limitations. The proposed project strategy implements the combined potential of strategic, resource, organizational and indicative digital mechanisms within the boundaries of electronic services with socio-economic efficiency. The authors are convinced that the longitudinal case study method and the developed algorithm have the potential for use by Russian executive authorities at the federal, regional and municipal levels.

### **5. Research Methods**

The solution to the problem of the loss of the pace in the digitization of the FTS state services is to make the process more dynamic. At the current stage, the dynamism of digital transformation is achieved within the framework of the project strategy - the realization of digital projects by the FTS regional authorities with the construction of a system of civil quality control integrated into e-services or online services (Cinar et al., 2019; Natalini & Stolfi, 2012; Plesner et al., 2018). The project strategy has limitations in accelerating the digital transformation of public services by assessing the progress of digitization and the level of results achieved at selected stages, which have been developed with exclusively expert methods (Mergel et al., 2019). The longitudinal case study method is a qualitative methodology in the form of a case study, allowing to trace the progress of digital transformation of the FTS public services and to record the results achieved at each stage within the framework of a general algorithm. The result of applying the method developed by Scupola (2018) is the information systematized within the process approach as "secondary data". "Secondary data" are standardized blocks of information formed on the basis of strategies, policies and related public documents posted on official websites. In the case study of digital transformation of state services, the FTS "secondary data" forms an algorithm for estimating the progress

of digitization in the composition of active mechanisms, which are successively created within the framework of the process targeting.

## 6. Findings

### 6.1. The strategic mechanism and Russian model of e-Government

The launch of the digitization process of public services is connected with the Russian President’s Message to the Federal Assembly in 2016 - the programming document for the development of the country’s digital economy (Message of the President of the Russian Federation to the Federal Assembly, 2016). The Strategy for Scientific and Technological Development of the Russian Federation until 2035 (The Strategy for Scientific and Technological Development of the Russian Federation until 2035, 2016), the Strategy for the Development of the Information Society (On the State Programme of the Russian Federation “Information Society (2011-2020)”, 2010), the National program «Digital Economy» are federal acts of normative regulation of the digital environment, information infrastructure and personnel training, information security, digital technologies and digital government. The interaction of the participants of the process and the organizational support of digital transformation of public services is defined by the Russian model of e-Government. The tasks to be carried out within the implementation of the model for the provision of public services include improving the efficiency of the work of FTS regional authorities; establishing multilateral communication links and ensuring responsive delivery of services; public trust and time reduction; increased transparency in decision-making.

### 6.2. Resource Mechanism – a Four-Step Algorithm

In accordance with the UN methodology, the Russian model of e-Government defines a four-stage algorithm for the development of e-services (Table 2).

**Table 2.** Electronic resources of providing public services by the FTS regional authorities in the four-step algorithm of the e-Government model

Level of development in the provision of public e-services	E-services of e-government
Step 1. Developing e-Government	Websites, official web pages of public authorities in the form of visits
Step 2. Enhanced presence of e-Government	Websites of government bodies contain a large amount of information (laws and regulations, reports, downloaded databases, news)
Step 3. E-government transactional presence	The site provides access to the electronic form required to initiate administrative proceedings
Step 4. Online e-government (level 1)	Processing of a limited range of public services in full electronic form through online services
Step 4. Online e-government (level 2)	Complete list of public services fully electronically processed through online services

Source: authors.

According to the proposed algorithm, the level of development of electronic resources for the provision of FTS state services can be attributed to the unfinished network stage. At level 1, the user has access to some of the services provided electronically and the number of such services is limited.

### 6.3. Institutional arrangements for the implementation of the strategy

The institutional arrangements for the provision of the FTS public services unite the capacities of the FTS regional authorities and multifunctional centers (MFCs), the online services of the FTS and the the Integrated portal for state services (IPSS), differentiated by types of services (IPSS) (Table 3).

**Table 3.** Elements of the institutional arrangements for the provision of public services by the Russian FTS

Type of service	FTS regional authorities / MFCs	FTS online services / IPSS
Informing	Obtaining information from a public service specialist	Publication of normative and methodological materials, letters from the FTS and information on the procedure for the provision of public services; receipt, in electronic form, of information on the provision of public services
One-way interaction	Provision of templates/application forms and documents by a specialist	posting templates/application forms and documents on the site
Two-way interaction	Submission and receipt of documents by a specialist	Electronic filing and receipt of documents
Legally relevant two-way interaction	getting the result of the service	Electronic acquisition of the result / recording for reception with the FTS regional authority

Source: authors.

E-services provided on online service platforms do not require any paper-based information, are available as mobile applications linked to a bank card for prompt payment of taxes and fees (Table 4).

**Table 4.** Online services of the FTS public services

Personal Account	Tax calculators	Feedback	Background information	Business Registration / Business Risks
Legal entity	Tax calculator - calculation of patent value; choice of a tax regime	Scheduling appointments	Rates and benefits of property taxes	Business registration
Individual	Insurance premium calculator	Apply to the Russian FTS; learn about the complaint	Letters from the FTS to the regional tax authorities	Start your own business
Individual entrepreneur	Transport tax calculator, land tax and property tax on an individual	Address and payment details of your inspection	Normative and methodological materials	Transparent business
Professional income tax payer (self-employed)	Calculator for calculating the tax burden	Forum of the FTS website; questionnaire	Decisions on complaints; frequently asked questions	Test yourself and your counterpart
Taxpayer of a foreign organization	What kind of a regime is good for my business?	Technical support for services	Information stands; mailing list of the FTS website	-

Source: authors.

The high functionality of online services as part of the institutional arrangements of providing public services confirms the number of registered users on 01.01.2020 (30.3 million people as users of the service “Personal Account of an Individual”; 2.2 million people as users of the service “Personal Account of a Private Entrepreneur”).

#### 6.4. The performance indicator efficiency mechanism and quality assessment tools

The evaluation of the efficiency of electronic forms for the FTS public services is based on an indicative method using general and private performance indicators. The level of quantitative values of the aggregates confirms the high level of dissemination of the service among the user groups. Thus, as of January 1 2020, the number of visits to the FTS official website 145 million, with electronic services “checking the correctness of invoice-filling” (5.4 billion requests), “risks of business: check yourself and the counterpart” (1.2 billion requests), “information on the taxpayer identification number of an individual» (395 million requests) being the most popular among taxpayers. Private indicators estimate the monthly dynamics of efficiency (Table 5) (Your Control, 2020).

**Table 5.** Trends in the number of visitors to FTS website

Month	In 2019, thousand units	Absolute increase over the period 2017-2019, thousand units	Growth rate over the period 2017-2019, thousand units
January	6,643.6	1,063.4	119.1
February	6,501.9	1,303.6	125.1
March	6,900.3	850.4	114.1
April	7,322.8	1,622.0	128.4
May	5,439.1	867.4	119.0
June	5,489.3	1,189.2	127.7
July	5,885.2	1,529.1	135.1
August	5,749.4	1,606.6	138.8
September	6,692.4	2,487.6	159.2
October	8,175.7	1,759.9	127.4
November	9,349.0	1,183.0	114.5
December	8,373.4	2,273.8	137.3
TOTAL	82,522.1	17,736.0	127.4

Source: authors.

The quality assessment of the electronic forms of the provision of the FTS public services is carried out with the help of SMS and terminals of the queue management systems, on the portal «Your control», with the help of services “QR-questionnaire”, “Questionnaire” on the FTS website, as well as in the personal account of individual taxpayers. The point estimation method uses the following criteria: time of

service, professionalism and courtesy of specialists, level of comfort in the place of service delivery, accessibility of information about the service.

### **6.5. The project-based mechanism**

In order to move to level 2 of the «Networked E-Government» level, the Russian FTS plans to launch three digital projects focused on their socio-economic efficiency. The purpose of the project «Development of the Certifying Centre» is to provide legal entities, private entrepreneurs and notaries with certificates of qualified electronic signatures which will make it possible to expand the list of methods for remote identification of the applicant's identity when approaching the Russian FTS without a personal visit. The project «Simplified procedure of deduction on individual income tax» realizes the idea of receiving tax deduction through the personal account of 900 thousand taxpayers. The project «Simplified procedure for registration of a private entrepreneur» activates the opportunities of a mobile application. The expected impact of the project is 10,000 registrations of private entrepreneurs in 2020, 150,000 of them in 2021.

## **7. Conclusion**

The key findings of the evaluation:

- digital transformation of public services - a special kind of goods of a «service state» - should be investigated by new methods, adequate to long-term socio-economic processes;
- the longitudinal case study method proposed in the paper convinces of its effectiveness (1) with successful foreign experience of digital transformation research in Denmark; (2) possibility to develop a research algorithm for the digitization of the FTS public services;
- the content of the algorithm for the research of digital transformation of the FTS public services includes (1) the systematization of the conditions of digitization (a high level of regulation; a peculiarity of the process; an extensive list of services); (2) «secondary data» as a way of information standardization, open access sources; (3) economic and institutional arrangements that are systematically developed and consistently implemented in the management of the digital process; is the way to solve the problem of stopping the rate of digitization of State services of the Russian Federation;
- the project strategy is the solution to the problem of slowing the rate of digitization of the FTS public services, identified on the basis of the longitudinal case study method within the framework of the current Russian model of E-Government;
- the strategic, resource, organizational and indicative mechanisms for the digital transformation of the FTS public services should be integrated within the boundaries of individual services oriented towards social and economic efficiency;
- the implementation of the project mechanism will enable to make the transition of the digital transformation of the FTS public services to the final level of digitization corresponding to the stage «Networked E-Government».

Our survey did not include the government services of other executive bodies besides the Russian FTS, due to practical limitations related to the scope of the work. The data obtained, however, are sufficient for a positive assessment of the longitudinal case study, confirmed by the logic of the study and statistical indicators. Future studies may be applied and carried out in the evaluation of the digitization of public



services provided by federal, regional, municipal, inter-territorial executive bodies, ministries, services and agencies of the Russian Federation.

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