

Digital State Services: Practice and Development Perspectives in Russia and Its Regions

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Abstract—Digital state services development can be considered basic state-reforming management course. In modern pandemic COVID-19 conditions, it acquires exceptional importance. In connection to that, the Russian experience of specialized web sites of digital state services use is reviewed within the article framework. Based upon population usage of federal and regional portal-sites of state services data analysis, regarding importance of digital technologies data for citizens and perspectives of their further betterment in Russia a conclusion was made. Base of the research concludes such methods as statistic data collection and systemisation, its processing with mathematical calculation aid, correlation analysis, and comparative analysis of region experience. By the end of the deed were identified some tendencies of digital state services and portals for their representation. Data analysis has shown that both the population and the state management agencies are interested in digital state services development, especially during the pandemic COVID-19. However, there is a number of other issues in that sphere, obstructing with state services web sites. To overcome them, some advices were provided, using which practically could easen populace interaction with state agencies. To overcome them, some recommendations are proposed, the application of which in practice can simplify the interaction of the population with government agencies.

Keywords—digital services, state sector, region, digital technologies

I. INTRODUCTION

Modern digital post-industrial society is impossible to imagine without digital technologies. They allow quickly processing information, exchanging it, receiving services in time, and in comfortable way. Such societal and economic changes predetermine the necessity of state management change. One of the main innovative digital mechanisms of state management, currently, in Russia are federal and regional web sites of digital state services. Indicated portals allow receiving necessary state services remotely in a convenient way. Relevance of such a form of state services has significantly grown during the pandemic COVID-19, since state services portals, besides convenience, ensure the safety of citizens. In connection with that, the indicated article is devoted to federal and regional web portals of state services research and their demand among the population.

In the framework of this deed, interest of citizens in acquiring digital state services by appropriate regional and federal web sites is being reviewed. The regional experience was reviewed by using the following RF subjects as examples, such as: Bashkortostan republic, Mari El republic, Mordovia republic, Tatarstan republic, Udmurtia republic, Chuvashia republic.

TABLE I. RANGE OF STUDIED STATE SERVICES PORTALS

Studied RF subject	State services web site
RF	https://www.gosuslugi.ru/
Bashkortostan Republic	https://gosuslugi.bashkortostan.ru/
Mari El Republic	https://pgu.mari-el.gov.ru/
Mordovia Republic	https://gosuslugi.e-mordovia.ru/web/guest/service
Tatarstan Republic	https://uslugi.tatarstan.ru/
Udmurtia Republic	https://uslugi.udmurt.ru/Categories
Chuvashia Republic	http://info.cap.ru/action/activity/it/e-gov/portal-gov-services

TABLE II. CITIZEN PORTION THAT USES THE MECHANISM OF STATE AND MUNICIPAL SERVICES IN DIGITAL FORM, %

Studied subjects	2014,00	2015,00	2016,00	2017,00	2018,00	2019,00
Russian Federation	35.20	39.60	51.30	64.30	74.80	77.60
Growth co-efficiency compared to last period		1.13	1.30	1.25	1.16	1.04
Bashkortostan Republic	27.60	52.00	61.20	78.10	84.80	89.70
Growth co-efficiency		1.88	1.18	1.28	1.09	1.06
Mari El Republic	19.00	27.20	40.80	63.90	52.60	68.50
Growth co-efficiency		1.43	1.50	1.57	0.82	1.30
Mordovia Republic	60.70	40.90	60.70	71.90	79.20	80.90
Growth co-efficiency		0.67	1.48	1.18	1.10	1.02
Tatarstan Republic	63.00	65.20	79.70	81.40	86.10	88.60
Growth co-efficiency		1.03	1.22	1.02	1.06	1.03
Udmurtia Republic	24.00	35.50	43.30	64.00	72.00	67.30
Growth co-efficiency		1.48	1.22	1.48	1.13	0.93
Chuvashia Republic	51.60	48.40	69.00	60.00	73.00	72.00
Growth co-efficiency		0.94	1.43	0.87	1.22	0.99

Relevance of the research of how digital technologies may be used in state and municipal management system confirm deeds devoted to digitalisation experience of state management in various countries [1,2] or different spheres [3,4]. Many deeds are devoted to studying of social importance of digital mechanisms incorporation in state agencies framework [5,6,7]. A range of studies reviews the opposite aspect of this topic: digital technologies relevance and convenience for the state management itself and civil servants [8,9]. This is also the acknowledgement of practical and scientific value of indicated topic study relevance.

II. MATERIALS AND METHODS

Base of the research concludes such methods as statistic data collection and systemisation, its processing with mathematical calculation aid, correlation analysis, and comparative analysis of region experience.

Main researched indicator, in the framework of this deed, will be the data about acquisition of state services in digital form by federal and regional portals, shown at table 1.

Data regarding the web sites usage is being reviewed for the duration of 2014-2019 yr.

To execute objective comparative analysis of the chosen regions, standardized indicator was calculated, based on the statistic data, using the following formula:

$$R = (X_i - X_{\min}) / (X_{\max} - X_{\min}) \quad (1)$$

Where X_i – region indicator value for that year, X_{\min} and X_{\max} – minimal and maximal value indicator for the year among all studied regions, R – standardized indicator. Accurate calculations allowed taking into account not only the mere statistical data, but to reflect their proportional ratio in the framework of studied group of regions.

III. RESULTS

Practical research of the aforementioned methods has shown the following results.

According to the unified interdepartmental informational and statistical system of the Russian Federation data [10], population usage of federal and regional portals of state services in individual RF regions as follows (see Table 2).

Data presented from Table 2 shows that receiving of state services in digital form throughout federal and regional portals actually is relevant for citizens. More than half of the population uses portals in every region. Growth co-efficient of portal usage shows the demand for portal usage. Currently, the rates growth are significantly lower than in 2015 year. However, judging by 2019 condition, in 4 out of 6 regions the growth co-efficiency is higher than 1, what tells us about potential multiplying of state digital portals user numbers in the future.

Standardized indicators calculation based on the presented data regarding the portion of the population using the portals of digital state services, presented at table 3.

TABLE III. STANDARDIZED INDICATORS OF POPULATION PORTIONS USING DIGITAL STARE SERVICES

Studied subjects	2014	2015	2016	2017	2018	2019
Bashkortostan Republic	0.20	0.65	0.52	0.85	0.96	1.00
Mari El Republic	0.00	0.00	0.00	0.18	0.00	0.05
Mordovia Republic	0.95	0.36	0.51	0.56	0.79	0.61
Tatarstan Republic	1.00	1.00	1.00	1.00	1.00	0.95
Udmurtia Republic	0.11	0.22	0.06	0.19	0.58	0.00
Chuvashia Republic	0.74	0.56	0.72	0.00	0.61	0.21

TABLE IV. POPULATION PORTION THAT ARE ACTIVE INTERNET USERS, IN TOTAL POPULATION NUMBER (PERCENTAGE, INDICATION VALUE PER YEAR)

Studied subjects	2014	2015	2016	2017	2018	2019
Russian federation	64.9	68.3	71.5	74.1	79.3	81.4
Bashkortostan Republic	60.4	64.7	71.2	75.9	83.1	87.6
Mari El Republic	55.2	63	58.7	66	66.6	71.5
Mordovia Republic	60.5	62.3	63.3	61.2	64.6	72
Tatarstan Republic	67.7	72	77.7	78.4	81.8	84.2
Udmurtia Republic	63.9	64.7	69.9	70	71.1	73.7
Chuvashia Republic	63.2	62.5	66.3	65.7	71.3	74.1

Based on data from table 3 the following can be stated. Leader can be marked precisely (Tatarstan) and the outsider (Mari El). The other regions lie in-between. Moreover, it is possible to notice that if the initial region indicators significantly differ from each other, then their spread has been lowered by 2019 year. This signifies that the regions and the population itself in interested in digital state services, in connection with that, the gap between the regions by using state services portals reducing more and more.

Could be assumed that demand of digital state services is growing as the internet is developing even more, in accordance to what these sites work. Because of that, let us turn to the number of active internet users in the regions. (see Table 4) [10].

It can be noted that this indicator is characterized by the same trends as for the indicator of the demand for electronic public services. If we calculate the correlation coefficient of these indicators for each region, then it can be noted that everywhere it is above 0.9, which indicates a very strong direct relationship between indicators. This gives an idea of how, in the future, the number of users of public service portals can be increased as the number of active Internet users grows.

Separately, we note that the share of the population using electronic government services is greater than the share of active Internet users in most regions. This situation suggests that citizens, in addition to the Internet, use other technologies for obtaining electronic services (for example, the use of terminals or registration services in a medical facility). Accordingly, the development of these technical means can also be considered as a potential for the development of electronic government services.

IV. DISCUSSION

Based on the results of the analysis, a number of conclusions can be drawn. Statistical data and their comparative analysis clearly demonstrated that the population

of the Russian Federation is really interested in receiving electronic services through the corresponding federal and regional portals. However, not all potential users are yet covered. In this regard, the following practical recommendations can be proposed. While regional and federal portals of public services exist separately. The basic reason for this is the federal structure of the country. However, from a technical point of view, this creates a number of inconveniences for users: double registration on different portals, different portal structure, duplication of some services, etc. If we take into account the fact that many portals now have similar mobile applications, this creates an additional inconvenience due to the fact that the user is forced to download two applications and use them separately. In this connection, it is possible to propose the development of a single portal (mobile application), which contains both a block of services related to federal authorities and a block of regional state services. This will eliminate duplication of some services on different portals, eliminate double registration on federal and regional sites or install two mobile applications of government services at once, etc. The attraction of new users can also be facilitated by simplifying the registration procedure on public service portals, for example, through the use of biometric data.

The analysis also showed that the demand for portals is directly related to the activity of users on the Internet. Due to the fact that while the older generation is not so actively using the Internet, the use of portals of electronic government services becomes difficult or impossible for them. Therefore, the development of digital literacy and public awareness of the convenience and safety of electronic public services can also be considered a potential way to increase the demand for public service portals.

V. CONCLUSION

By such means, by the end of the deed were identified some tendencies of digital state services and portals for their representation. Data analysis has shown that both the

population and the state management agencies are interested in digital state services development, especially during the pandemic COVID-19. However, there is a number of other issues in that sphere, obstructing with state services web sites. To overcome them, some advices were provided, using which practically could easen populace interaction with state agencies. To overcome them, some recommendations are proposed, the application of which in practice can simplify the interaction of the population with government agencies.

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