Classification and Trends in Developing Digital Services In Russian Federation

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Abstract

The article defines a number of indicators for assessing the development of the digital market, and groups the digital services offered to consumers in the Russian Federation. The main trends and directions of development of the digital services market in the consumer sector are outlined.

Keywords: segmentation, classification, digital landscape, digital services, marketing metrics, digital development index, digital literacy index, co-branding, co-marketing.

Rationale

The digital landscape rapidly penetrates into different life aspects of a Russian citizen, that has crystallized not only the infrastructure of providing a complete range of digital services, which has resulted in life quality improvement, but it has also provoked various problems in applying the services and concerns of the population of different social categories. The gained considerable momentum of penetration of the digital landscape to everyday life destined the importance of attention to the trends developing Russian market proposing digital services and their classification taking into account their popularity among customers.

Background and Methodologies

Several contemporary economists [1, 2, 5, 10, 11, 12, 13 14, 17, 19] demonstrate an ambitious evidence basis to the lack and irrelevance of classic marketing metrics to the issues of evaluating development and segmentation of the digital landscape; the scientists reveal an application of specific indices purposefully developed or their modifications based on coefficient integration. The research in the sphere, according to the authors [3, 22], should be grounded on the traditional methodologies

of statistical distributions, neural networks, fuzzy set theories, of vertical and horizontal, inductive and deductive segmentation and classification applying adapted indices as the segmentation criteria.

The following indices belong to the evaluation of digital market development in the global scope [4, 15, 16, 18]:

-Networked Readiness Index (WEF, 2001, Samuel Curtis Johnson Graduate School of Management, 2013), reflects a level of development of information-communication technologies in the world market; in Russian Federation it was first adapted as a level to supply the population with access points to the wire internet (the index was introduced as the main one in the basic census survey in 2010).

-Global Innovation Index (INSEAD, Cornell University, World Intellectual Property Organization, WIPO, 2007), characterizes innovation development of the world countries, considering both the innovation potential availability and conditions of its implementation.

Digital Economy and Society Index to compare the European countries (DESI, 2014) and International Digital Economy and Society Index to compare European segment to other world countries (I-DESI, 2015). In addition, domestic Russian indices are really widely spread with using statistical arrays of information:

- Index of digital service availability in regions and per capita.
- Integral index of digitization level.
- Percent of business deals, made by digital e-trading platforms.
- Total number of deals, made in the internet (percent of internet sales within the total trade turnover of consumable goods).
- Volume of co-branding and co-marketing collaboration.
- Relationship indices of population to digital services and platforms.
- Level of population loyalty to digitalization.
- Digital literacy index.
- Population using social networking, correlation of the population using social media to not using social media.
- Number of mobile phones per capita and number of the installed mobile applications per user respectively.

The mentioned above indices are the basis of determining cross couplings with mathematical apparatus to mark the segment limits and the spread of applying digital services: correlation of prosperity level to the population employment level (the number of job places obtained with specialized resources – search engines to search for jobs), population expenditures to the services and decrease in time to obtain services with help of digital services, impact of education level and digital literacy on competitiveness of human assets, use of free time and loyalty to digital services, availability and quality of social connections in the Internet environment and the common satisfaction of the quality of life, simplicity to use digital service and increase in number of the obtained services. [1, 6, 7, 8, 9,18, 20, 21]. However, the consolidated summation of these indices used by the contemporary economists and business people does not to the full extent provide insight to the specific character of consumer perception of a digital service, therefore, the authors of the research will further propose classification of the digital services and segmentation of the digital service consumers, that allows to evaluate the consumers' satisfaction of the digital service in every selected segment. To classify digital services, the authors used content analysis and service grouping of the digital services based on criteria: a service sphere, applied digital platform, types of services in the selected segment, availability of mobile application to realize a service, legal restrictions/ stimuli and the target market.

Key Results

The obtained results completely correlate to the authors' a priori idea concerning the popularity of digital services of the Russian Federation population and correspond to the common trend of the digital service market development in Russia, dependent on the large-scale government campaign to digitalization and realization of the electronic public services programme (Table 1).

Table 1: Grouping digital services, proposed to the population in Russian Federation, 2019.

Service sphere	Digital information systems	Service types	Access conditions to mobile application	Restrictions/ assistance	Target markets
Public services	In every region public services are, as a rule, original	Obtaining passports, ticket systems to hospitals and children education institutions, resident recording and registry, maternity fund certificates, obtaining an Individual Taxpayer Number and tax documents, documents relating to the vehicle and driving licenses, traffic penalties, retirement fund services, housing and utility service, police certificates, legal debts, alleged violations of the law concerning the advertisement, collaborative service with public prosecutions department	With authentication	Availability of passport of a citizen of the Russian Federation, confirmed by the records	Individual customers – RF citizens older than 14 years. Companies – RF residents
Transport	Original (including foreign ones)	Reserving and calling for a taxi, fare, social transport card, complete cycle of airline and railway services, accumulating customer information, consolidated information of product movement and finance	With / without authentication	Some services are for RF citizens only	Individual customers, using public transport, including в том числе receiving aid (pensioners, students and others)
Finance	Original (including foreign ones)	Personal areas in internet-banking, account statements, access to service, money remittance, digital wallets of banks, broker, insurance and reinsurance companies, electronic auctions and others	With authentication	Age-related (having a passport); financial (minimum funds)	Individual customers and companies – RF residents
Logistics and support services	Public; original (including foreign ones)	Coordinating functions of commercial business based on material and technical supply, government order and tender service, freight customs escort, leasing and consultancy	With authentication	Without restrictions	Individual customers and companies – RF residents
Internet of things	Original	Goods selection, purchase order payment, smart home, smart city	With authentication	Without restrictions	Individual customers and companies
Consultancy	Original	Outsourcing, marketing analytics, IT-services, legal services, expertise	With authentication	Without restrictions	Individual customers and companies – RF residents
Search engines	Original	Information search, accumulating customer information	With / without authentication	Without restrictions	Individual customers (RF citizens older 14 years

Service sphere	Digital information systems	Service types	Access conditions to mobile application	Restrictions/ assistance	Target markets
					old) and companies - RF residents
Commercial business and food service industry	Original	Payment, order, preliminary order, accumulating customer information, consolidated information of product movement and finance	With / without authentication	Age-related (having a passport); financial (minimum funds)	Individual customers (RF citizens older 14 years old) and companies - RF residents
Communication	Original	Wire connection and wireless access, payment, tariff selection, invoice itemization, service selection, accumulating customer information, consolidated information of product movement and finance	With / without authentication	Age-related (having a passport); financial (minimum funds)	Individual customers (RF citizens older 14 years old) and companies - RF residents
Medical industry	Public	Customer personal areas, online registry, web-record department, findings of medical tests and operations, medical records	With / without authentication	Age-related (having a passport)	Individual customers (RF citizens older 14 years old) and companies - RF residents
Public utilities	Original	Owner personal areas, service payment	With authentication	Without restrictions	Individual customers and companies
Education	Public; original	Federal Information Systems (FIS), Analysis Information Sysytems (AIS), services giving webinars and publishing longreads, accumulating customer information	With / without authentication	Without restrictions	Individual customers and companies
Journalism, videoservices	Original	Internet-media, social networking websites, publications, longreads, public pages, films, plots	With / without authentication	Without restrictions	Individual customers and companies - RF residents

It should be mentioned, that, first. the target markets for all segments are approximately similar due to gender and demographic indices (an exception is age brackets, in some occasions, the customers should be 14 and older), moreover, in all digital service segments, the authors marked the availability of the self-excluded targeted audience: they are extremely religious population group, marginal category of the population, the customers not having the access to the internet, and conservative people absolutely ill disposed to the internet.

For the mentioned above digital systems and related digital services to function, the main issue is the used information technology pool. Due to the sectoral sanctions for the last 5 years, import substitution programmes have been boosted in Russian legal framework, that results in more companies to propose home-grown technologies and completely generate their information technologies in the segment of government services and, moreover, they demonstrate the ability to develop and operate the programmes of digital super-services. The main difference of super-services is in displacing initiatives to deliver a service to a proposal stage; that makes possible essentially to decrease customer-oriented restrains and motivate customers to obtain services with the digital technologies.

The segment "Electronic government" is the leader in popularity and usage of digital services with web portal "Government services". 86,5 million citizens have been registered to the portal of government services by April, 2019 according to the data of Ministry of Digital Development, Communications and Mass Media of the Russian Federation.

The resource is oriented to inform the population about the government and municipal services, functions including electronic ones performed by the federal and municipal agencies. To use the portal services, it is necessary to register following the specifically developed detailed instructions for companies or an individual customer being Russian or a foreign resident. Receiving services is comparatively easy, that corresponds to minimal level of a PC user, however, there are some problems, and their solutions are connected with inadequacy of legislative base, specific requirements of formal organizations to a document (for example, getting a fact sheet by a person only, illegitimacy of scans and others), regular malfunctions of system functioning are a significant trouble. Availability of mobile application and convenient portal interface, continuous updating the list of the proposed digital services, feedback and monitoring the quality of services by the executives belong to the positive features of the electronic resource. Currently in the regions the Government of Russia has launched and started the project to realize a complex of digital services prompting a customer the necessary list of services in the system preceding a life event minimizing time to obtain the services and their localization in one place – as a rule, with an assistance of multipurpose centres.

Further, there is a segment digitalized due to private company initiative; they consider convenience and fast speed to provide services to be the main criteria to choose a company or a brand. First of all, communication services, transport and the internet of things belong to this in the formats of optically recognized identifiers (bar coding, DataMatrix, QR-codes), they have literally made a technological breakthrough in the sphere of trade, including internet-trading. Totally, all types of transportation services in the sphere of public transport are the services, provided and consumed in accordance to the contracts among the service producers (transport operators, transport agents and forwarding agents) and consumers (passengers, cargo shippers and cargo receivers), where the leader is a sector of airpassenger transportation including foreign airlines and low-cost carriers. The feature of the segment is its inhomogeneity of conditions to obtain the service for residents-non-residents of a certain state. For example, the citizens – residents of some countries sometimes cannot pay for the railway tickets by the bank cards while booking them via the French site https://www.sncf.com/fr.

It should be highlighted the segment is fast developing and upgrading the service list making it more mobile and easy to use by the passengers. In 2019 Joint Stock Company "Russian Railways" developed, tested and launched a portal for passengers "Poputchik (Companion)": it is a service of on-line reservation for the passengers, it uploads the telemetered information of its railway equipment and prevents incidents based on digital analysis. In 2016 company Aeroflot sold tickets worth 30

billion rubles via their site, in 2018 this index increased due to implementing the big data platform and increasing tools of marketing campaign to 13% comparing to the previous period.

The search engines, education, medical industry, public utilities belonged to the same segment based on the principle of dependence on demand and increase in customer digital competencies. It is remarkable in 2007-2008 verb "to google" in Russian appeared due to forming skills to search for the information of educational character by the students, the search engines have really become drivers to increase electronic education portals and resulted in appearing demands for the educational institutions to customize software taking into account specific features of the provided services and the necessity to monitor movement of personnel and students' achievements

The next widely spread segment of digital services consists of the services connected with internet banking and exchange auctions. The segment expands proportionally to its growth of capabilities to provide digital security for their customers' financial data; in Russia the sectoral sanctions and the necessity to create a competing payment system "MIR" have become a stimulus to the segment development.

The segment of logistics services is fast developing. Accumulating big amounts of various information about clients from their demands up to their opportunities the logistics services have become serious competitors to consulting agencies, because the logistics services do research more qualitatively, thoroughly and detailed, and with lower prices.

Comparatively new is a segment of internet-journalism and videocontents, their dynamics depends on the spread availability of mobile gadgets (devices) and increase in the amount of their functionality: starting from specially developed services – longreads (for example, to write articles), created social networking (Instagram) and up to the proposals to form new specific marketing metrics to monitor how media content is sold (for example, the index of Mail.ru Group dock-rolls). The segment thoroughly researches customers' insights occupying a solid rating position of Russian young people's past time.

It should be underlined, in 2019 the structure of digital services in volumes of its nomenclature is enormously vast and continues growing fast, that stimulates the necessity of companies proposing such services to monitor the customers' rationale and scenarios.

Discussion

The analysis in the research allows assuming internet to be a significant resource to obtain reference data, it is used to entertain, work, and write letters. Internet is widely used in all spheres, some of them such as medical advisement, internet-services in the sphere of public utilities, the services in the sphere of purchasing goods, interacting with government agencies, distant learning tend to develop. Bank and financial services will also evolve; however, they need to solve problems, connected with operation security and clients' personal data.

Conclusion

Therefore, the authors consider their next task in developing digital sphere in the customer sector as a deep analysis of prejudices of digital service customers and study of behavior restrictions to overcome them.

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