DOI: 10.37791/1993-7598-2020-14-4-95-112

***Belichenko A.S.**, ORCID 0000-0001-5938-1555, post-graduate student, Saint Petersburg State University, Saint Petersburg, Russian,* *belichenko_spgu@list.ru*

Features of functioning of the Internet economy and digital agencies in the Russian Federation

This article discusses the features of the functioning of digital agencies in the Internet economy of the Russian Federation. The author of scientific work presented market analysis customized web development and marketing, including the basic parameters of the market, property supply and demand, consumption structure of services, the industry's contribution to the Internet economy, the issues of digitalization, the role of the Russian outsourcing IT-companies in the international arena. The main problems facing the Internet economy market are analyzed and methods of their solution are proposed. Based on the study of the conceptual framework of the topic of scientific work, as well as based on the works of economists, leading programmers and consulting companies, the author examines the economic nature of the functioning of full-service agencies, in particular their Russian specifics. The analysis of programs and reforms that regulate the new rules for the use of digital technologies in the legislation of the Russian Federation, and their impact on improving the efficiency of technological entrepreneurship, was also carried out.

Keywords: IT, digital, marketing, web, promotion, production, design, infrastructure, internet economy

Introduction

Digitalization covers a wide range of new ways to use information technologies and mass communications in products, as well as business models that transform the economy and society. The Internet economy creates new business sectors and destroys old ones. However, the lack of consensus on what the "digital economy", "digital business" and "Internet economy" are is a barrier to its correct measurement.

Digitalization is spreading to an increasing number of industries and segments, from agriculture to construction. But if you define the digital economy based on the use of technology by companies, it will cover most of the state's economy. This definition may be correct, but it is not of great interest to economic researchers: it is equivalent to calling the economy "electric".

If you look at the Western countries In Europe, the share of the digital economy in the broad sense of this term will reach 80–90%, while the share of the ICT sector itself will not exceed 10%. The direct contribution of ICT to the entire EU economy in 2012 was measured as 1.7% of GDP, while the indirect contribution, through productivity improvements, digital B2B Commerce and advertising platforms, and free services (all that GDP does not reflect) was 6.7% of GDP. At the same time, researchers from Copenhagen Economics [1], noted that this is a conservative estimate that does not take into account, for example, the value and utility created by social networks.

There is also no generally accepted definition of the digital economy in international documents. The UN classifiers contain concepts such as the ICT sector and the content and media sector, but ICT products are in turn combined with media and content for statistical purposes. At the same time, the activities of platforms from Alibaba to Airbnb are generally difficult to classify, especially when calculating cross — border operations. Data is not classified in any way — it is not a product, despite multibillion-dollar estimates of the turnover of the big data market. Cloud computing turns capital expenditures on infrastructure into marginal costs that depend on production volumes. The national accounts system is recommended to be updated every five years — this is simply not compatible with the pace of new product categories appearing on the market.

The main problem of measuring the digital sector is the method of calculating GDP as such. In 2017, the OECD released a report [2] on measuring GDP in the digital economy. The organization's experts point to several gaps in the methods that do not allow for an adequate assessment of the digital sector:

- New forms of intermediaries and P2P services.
- Blurring the boundaries of production, consumers themselves become producers (for example, content).
- Increase the efficiency of product use, increase the life cycle and investment.
- Free and subsidized products and services.
- Free property produced by farms.
- Unrecorded transactions in e-Commerce.
- Incorrect measurement of the price of ICT goods and services.

Thus, the problems of measuring the digital economy can be reduced to three categories: the conceptual limitations of the concept of GDP, the real value of digital products, and the unaccounted turnover of the digital sector of the economy, for example, ICO or IEO [3].

However, probably the most noticeable problem is measuring the contribution of "free" products and services. They can be produced by platforms and subsidized by revenue from advertising and personal data collection, by volunteers (Wikipedia and other crowd services), and finally by users themselves (YouTube, social networks). Statistics do not take into account even such a huge segment as open source software, despite the huge number of commercial products built on their basis. Cross-border data transfer may not generate revenue by itself, but may support revenue-generating activities in another country (for example, advertising).

At the same time, even Nobel laureates in Economics cannot yet offer effective ways to integrate free goods and services into the calculation of GDP. In the literature, the most common method for calculating consumer gains is [4], but it is incorrect to add it to the volume of GDP — then you need to simultaneously take into account the same gain for companies in order to avoid double counting.

In 2000, consumers took about 80 billion photos a year, today — more than 2 trillion. The cost of the photo was about 30 rubles, but now it is zero. GDP from this sector declined: sales of films, paper, reagents, cameras, development and printing services disappeared. In 1990, the encyclopedia market was in the hundreds of millions of dollars, and Wikipedia's contribution to GDP is again zero. The record industry's contribution to US GDP has roughly halved since 1986, despite multiple increases in consumers and digital platform deductions. GDP is designed to measure the contribution of production and cannot reflect the growing share and diversity of digital goods and services in the modern economy.

In 1987, Nobel prize-winning economist Robert Solow wrote: "We see the computer age everywhere except in labor productivity statistics" [5]. Today we are beginning to understand that this is not a problem of computers, but of statistics. The author of this essay hopes that sooner or later economists and statisticians will create new effective measurement methods for the digital economy. This report presents key figures on the Internet markets that consulting companies have learned to measure, which reflect their size and growth dynamics, as well as consolidated information on the work of digital agencies, which directly makes up a fairly significant part of the Internet economy in the Russian Federation.

Main part

According to research by the Russian Association of electronic communications (RAEC) [6], the audience of Runet in 2019 increased by 4.2% compared to 2018 and amounted to 96.7 million people or 79% of the country's population. The mobile Internet audience is 86.2 million people or 70.5% of the country's population. Users who use only a smartphone to access the Internet make up 34.4 million or 28.2%. The average user spends online using 70% of mobile traffic, 50.3% of desktop traffic and 15.3% using Smart TV. The increase in the frequency of Internet use, along with the increase in the time spent by users on the network and increasing mobile traffic, are the main audience trends of 2020.

In 2017, the Internet audience on mobile devices in Russia for the first time overtook the audience on desktop computers, and in 2020 this trend continued. In 2018, mobile outperformed desktop in terms of exclusive audience on devices.

Social networks continue to lead in terms of time spent by users on Internet resources (78 minutes per day per user, desktop+mobile), but they are rapidly catching up with video (74 minutes per day per user, desktop+mobile). Video resources lead the time on desktop devices, while social networks hold the lead in mobile. Dating sites, online stores, and games are also in the TOP 5 for time spent on desktop devices. In addition to social networks and videos, mobile apps include games, books, reading, and messengers.

In contrast to several previous years of observation, the peak of introducing bills in 2018 occurred in November — December, and not in May — June, as it usually happened — in all likelihood due to the presidential Elections and the change of the government. At the same time, most of the initiatives introduced during this period have an obvious protective and prohibitive tendency and are evaluated extremely negatively by experts. However, decree of the President of the Russian Federation No. 490 "On the development of artificial intelligence in the Russian Federation" dated October 10, 2019 approved the national strategy for the development of artificial intelligence for the period up to 2030. One of the main goals of the Strategy is to make Russia one of the world leaders in the AI market, which should guarantee the country's "technological independence and competitiveness".

The priority areas for the development and use of AI in the Strategy are the use of AI in various sectors of the economy, improving the efficiency of planning and management decision-making processes, automating repetitive production operations, creating logistics management systems, increasing customer loyalty and satisfaction (including sending them personalized offers and recommendations containing essential information), and optimizing recruitment and training processes.

The trend continued in 2017, when a significant proportion of high-profile initiatives have the conceptual support of experts, but are evaluated neutrally (ambiguously) due to the presence of important reference norms that are not currently defined (draft laws are not presented), as a result of which the assessment may change to both positive and negative.

A noticeable increase in the share of positive initiatives can be attributed to one of the main new areas of lawmaking — the development of the digital economy. Despite the fact that the actual draft laws in the framework of the national project (and the action plan Regulatory regulation of the digital economy) for 2018 was not introduced, many existing initiatives are ideologically similar to those contained in the national project, for example, facilitating access of Internet providers to residential buildings.

Both at the beginning and at the end of the year, lawmakers paid special attention to the regulation of social networks, search services and content, in particular, new categories of information prohibited for distribution in the Russian Federation. So, at the very end of December, a new category appeared — information aimed at involving minors in committing illegal actions that pose a threat to their life or health. At the same time, hosting providers and Telecom operators will be required to immediately respond to the relevant regulations of Roskomnadzor. In addition, it is necessary to note initiatives that mitigate penalties for extremist content or demonstration of Nazi symbols.

In the second half of the year, there was an active discussion regarding the regulation of data turnover in the Russian Federation. Against the background of protracted discussions on the future regulation of this area within the working groups of the Digital economy program, the Government, on the one hand, began a certain movement towards European regulation, as part of the signing of amendments to the 108th Convention of the Council of Europe. On the other hand, a bill was introduced to regulate large user data, which was opposed by almost all interested parties.

In 2018, the Ministry of culture did not stop trying to tighten anti-piracy legislation. Draft laws that significantly expand the responsibility of information intermediaries for user content have repeatedly received a negative opinion on the assessment of regulatory impact and it has been re-introduced in a modified form. At the same time, the main innovations occurred not in the legislative sphere, but in the sphere of self — regulation-a Memorandum was signed between the main Internet holdings and copyright holders on measures for pre-trial removal of content that violates copyright or related rights.

In telecommunications regulation, the main expectations for 2018 were related to the entry into force of the so-called "Spring package", but the first part of the requirements for Internet traffic storage systems for Telecom operators appeared only in December. Thus, 374-FZ actually did not work in 2018. However, these are not the only new requirements for operators that have come into force this year. Thus, we can note the further tightening of sales of SIM cards, the Central Bank's initiatives to transfer subscriber data to banks, and, finally, the transfer of control over network routing Roskomnadzor (draft law on the "sovereign Runet"). At the same time, according to the results of 2019, the portal of state services took the 2nd place gosuslugi.ru in terms of traffic in the Law And Government category, second only to the UK public Services portal.

Marketing and custom development market

The marketing and digital production segment is the largest segment of the Internet economy in Russia by structure. As more and more companies turn to direct marketing, and focus on the most dynamically developing form of direct marketing — electronic or Internet marketing. It is an independent marketing approach — an inseparable combination of communication and distribution channels [7]. As part of the segment, consulting agencies usually identify 5 markets:

- the market of contextual advertising (search advertising, as well as performance, CPA, targeted advertising in social networks, lead generation);
- the market of media advertising (placement of advertisements within media content);
- the market of web-development and mobile advertising (services in development of Internet sites and mobile applications, including design and style, testing and design "usability", etc.);
- the video advertising market (services on placement of video ads placed inside the video content: for hosting videos, online cinemas, etc.);
- content marketing market (services for promoting products and services, public relations in social media, as well as analytical services, services in the field of improving the "visibility" of sites in search results through search engines and app stores (not including targeted advertising).

The marketing and advertising segment grew by 19% in 2019 to 314 billion rubles.

As part of the segment, the video advertising market is still growing at a high rate, but the market for content marketing and social media marketing has caught up with (and overtaken) it in terms of growth.

In 2018, the Internet overtook television in advertising revenue for the first time. According to ACAR, in 2018, the volume of the Internet advertising market was 203 billion rubles, while the volume of the TV advertising market was 187 billion rubles. At the end of 2018, online advertising continues to be the leader of the advertising market in terms of volume and growth dynamics.

The contextual advertising market analyzes both search and non-search advertising (Performance, CPA, lead generation, targeted advertising in social networks).

In 2019, the market volume of performance advertising amounted to 194.6 billion rubles, an increase of 18% compared to 2018. In 2020, experts predict that the market growth rate will remain at 20%.

Search advertising continues to be the most popular advertising format, largely due to its wide range of personalization options and the ability to adapt it to various types of marketing and business tasks.

The main trends in the contextual advertising market can be called the desire for maximum automation of advertising campaigns (Already in Yandex.Direct has implemented auto targeting, and Google AdWords has a “Maximum conversions” strategy), and personalization of ads for different user groups. Keyword context is gradually becoming a thing of the past, giving way to targeting by audience segments. As a result of the growth of mobile traffic, users ‘ requirements for page loading speed and quality increase. Response to user requests has been the development of services accelerated page loading (AMP — Google for turbo page — Yandex). The share of voice and visual search is growing, which may lead to new tools and new formats in the near future.

The display advertising market (advertising networks, RTB, direct placement, special projects) grew by 16% in 2019 and amounted to 31 billion rubles. The growth forecast for 2020 is 13%. one of the main factors for increasing market volumes is the growth of the programmatic market.

Banners do not lose their popularity, in particular, due to the simplicity and speed of launching advertising campaigns. The advantage of banners is also a wide range of opportunities for targeting and personalization for various audience segments.

The share of programmatic advertising in media advertising continues to grow, according to Publicis Media, in 2018 it will make up 31.1% of the market, and revenues from programmatic advertising will grow by 60% to $197 million compared to last year. Today, RTB auctions are the easiest and most convenient way to place display ads.

The market analyzes services in the field of development of Internet sites and mobile applications, including design and style, testing and designing their “usability”. The market for web development and mobile advertising is gradually accelerating growth: in 2016, it grew by 4%, in 2017 by 6%, in 2018, the market growth was 7.8%, in 2019 — 10.5%, and the market is projected to grow by 20% relative to 2019. The market volume in 2019 amounted to 31 billion rubles.

The growth in the number of purchases made via mobile devices could not but affect the growth of the mobile advertising market. Google claims that the conversion rate in mobile advertising campaigns is 2 times higher than in desktop ones, and user engagement from advertising on mobile devices is 2.5 times higher.

Spending on mobile advertising is taking up an increasing share of advertisers ‘ budgets. At the same time, the main focus of advertisers is on mobile apps, since their audience targeting capabilities are much broader than those of any other advertising channel.

Users are less likely to part with a smartphone and often use it in parallel with other devices. this has resulted in the emergence of “second screen” technology, which allows you to provide additional, expanded information about content broadcast, for example, on a TV device, as well as use it interactively on mobile devices. There are also solutions that encourage the user to move from the “second screen” to the “first” when the mobile app forces them to pay attention to what is happening on the TV screen. So far, this technology is rarely used in Russia, but in the future we can expect an increase in its penetration into the advertising market.

The volume of the video advertising market, at the end of 2018, amounted to 10 billion rubles, an increase of 25% compared to 2017. For 2019, experts predict an increase of 20% by the end of the year. Anti-piracy initiatives, both from the state and from the industry, are designed to stimulate the growth rate of the market.

The share of video formats in advertising is steadily growing, and the video advertising market retains its position as one of the fastest growing markets in the advertising segment. This is due to the increase in the time that users spend watching videos (second in total time spent on the Internet, after social networks), the growth of the smart-TV market, and changes in users ‘ perception of information in terms of moving from text to image.

First of all, the market growth is concentrated in new networks and distribution channels. User interaction with the Internet is changing and, as a result, the structure of ad placement is changing. Today, social networks are becoming one of the main channels for placing video ads. The transition to mobile devices and, in particular, the explosion of interest in stories in Instagram and Facebook has become a stimulus for growth in the use of vertical format videos.

A new trend that is only gaining momentum is personalized video. Even today in Russia there are examples of successful cases using personalized video advertising based on geolocation data, socio-demographic characteristics, and data on interests, but the mass use of personalized video advertising is still the future.

This year, when analyzing the content marketing market, social media marketing (SMM and Analytics) was singled out as a separate market for the first time. The volume of this market was 13.7 billion rubles. The market volume of content marketing itself (SMO, brand marketing, SEO, ASO) amounted to 16.9 billion rubles. In total, the content marketing and social media marketing market grew by 26% in 2018 to 30.5 billion rubles, becoming the fastest-growing market in the marketing and advertising segment in 2018.

Social networks continue to be one of the most popular resources, despite scandals with user data leaks.

Influence marketing continues to develop dynamically. IAB Russia estimated its volume at 4–5 billion rubles with a forecast of growth for 2018 by 50–100%. Today, we can say that this area has become a separate market segment with its own ecosystem and key players.

Digital agencies

The main activity of digital agencies is the production and administration of a marketing complex, or the direct development of software, various web applications and mobile applications for third-party companies. However, as a rule, the activities of one or another Agency focus on either marketing or production. Other services only complement the main activity.

Analyzing the work of agencies, the author also examines the activities of the Agency Prostudio, of which he is the General Director [9]. Most of the market is focused on the development of websites and applications. The site is developed taking into account the needs of the project and the client (customer). in this regard, the author divides sites into 5 categories depending on the type of client and their needs:

1. Large companies (holdings, corporations): products or services of large companies are

often produced and sold in large volumes or are very expensive. Clients of such companies, as a rule, are also large representatives of the markets. Image sites — unique, complex design, lots of videos. Sites with a list of products, but without prices and other commercial information. They are purely informational in nature. Several languages. Customers want to see a profitable presentation of their company's activities on the site. In addition, the sites contain feedback forms or other functionality that allows the user to get a personal response.

2. Large distributors are engaged in wholesale and retail sales of consumer goods. Distributors may have a large, extensive network of warehouses, but often have only one major resource in the network. The site contains a large catalog and is used for online purchases. Online stores-the main part of the site is an extensive catalog with product descriptions. Good resource optimization for search engines (friendly URLs, meta for each product, unique texts). User's personal account. High performance and fault tolerance of the site. It should be designed for a large number of users. Fast synchronization of the site catalog with accounting systems and aggregates (Yandex.Market, price.ru). Accepting electronic money. Online assistant.

3. Financial and legal organizations: banks, accounting agencies, real estate agencies, and others. The site should contain many different feedback forms. This may include: a Question form for a specialist, various calculators (loans, service costs, etc.). Large Banks and insurance companies may also have an extensive network of branches. the content on the site should change depending on the user's region. It is advisable to display information about currency exchange rates and other financial information on the site in real time. Recently, Internet banking has become more and more widespread. The site user can manage their deposits via online banking. A mandatory requirement for the online banking system is the security of transactions and protection from hacking attempts.

4. Mass media. The main goal is to attract a large audience to the resource, get feedback from the audience, and earn money by placing ads. Placement of heterogeneous content (mainly videos, articles). A large number of employees to fill the site. Ability to discuss content (comments, forums, votes). High performance. Mobile version. Newsletter. Support for microformats. Support for RSS, Atom, and online broadcasts.

5. Government agencies and institutions: create websites for public relations. The main goal is to offload employees of the institution by bringing operations to the network. These operations can include: passport applications, an appointment at a clinic, and information about taxes and fines. Increased resistance to crashes and attacks. Personal accounts of users. If the state. the structure is interregional you need to take into account the user's region when displaying content. Availability of specialized feedback forms. Large state institutions have an extensive structure of representative offices in the regions. Each representative office can have a resource in the network. This fact again creates an important need for centralized management of all sites in the structure, that is, minimizing maintenance costs.

In addition to the listed categories of large customers, there may be categories whose overall global goal is to earn money online by creating content and attracting an audience. Of course, there are customers in the market whose business is smaller and whose needs are largely covered by those already described.

From the point of view of consumer perception, the characteristics of the services provided for website development, in comparison with the products of a competitor, are identical. The two main parameters that determine the perception of website development services by the customer (not the user) are the Agency's popularity and the cost of its services.

The type of market structure of the custom web development market is perfect competition. According to CMSmagazine, 6,719 web development agencies, 2,665 SEO agencies, 285 contextual advertising agencies, 651 mobile development agencies, and 1,142 SMM and PR agencies are registered on the Russian market.

At the moment, the market situation is quite favorable — its volume is growing, the average project price is increasing, and the demand from customers is quite high. However, given the rapid growth in the total number of Runet users (for example, in the regions), this is not surprising and quite natural.

There are a large number of companies on the market (more than 8 thousand), most of which consist of 3–4 people and work in a low price range. Website development is one of the most popular and widespread types of business among technically literate young people. The activities of such companies are absolutely not transparent and are very difficult to account for.

The great complexity of quantifying any market parameters is the main reason for the complete lack of any analytical information, despite the fact that the situation in the “neighboring” Internet advertising market is much more transparent.

The low entry threshold is what makes the website development market so popular for young people (mostly students) and single freelancers. Indeed, to create a web Studio, it is enough to assemble a team of 2–4 people, create your own website and start searching for clients. An office is not required, and a permanent staff is also required. There is a demand for the services of such companies and, given the low literacy of a large number of customers in this area, such companies can compete with more serious players in individual tenders.

Due to the low entry threshold, the market is flooded with a huge number of small studios and just singles. This is a key issue for the development of the market. It is difficult for an inexperienced customer to navigate among a large number of contractors, and they often act at random or “on acquaintance”, receiving a product with a deliberately low quality. Some companies are moving to more professional developers as the next step in their online business development. Many, having made the “first pancake lump”, are convinced of the futility of the idea as a whole and leave everything as it is.

There are no more than two dozen large studios with more than 25 employees on the market. As a rule, they are known to large companies that are customers and it is among them that tenders are held for projects with large budgets.

This small number is due to low payback (with an increase in staff, management costs increase, which reduces profitability) and the lack of external investors (who are not interested in the market due to the small volume and opacity). The established name helps to survive, as well as the business diversification that occurs in the vast majority of leading companies.

The vast majority (more than 50%) of web studios are located in Moscow. Of the top twenty in our rating, only one Studio is based in St. Petersburg (about 20% of the total number of web studios, the second largest concentration center). It can not influence the situation on the market. Many large regional companies are forced to work with Moscow or St. Petersburg studios due to the lack of qualified developers in the regions.

The market is still in an intermediate stage. It is no longer “wild”, but also far from civilized. Most of the large customers and companies for which the Internet is really important have found their way around the situation and are working with market leaders, but a huge number of medium and small customers still turn to small web studios or freelancers.

It has long been known that experts in the web development market consider it one of the few where entry barriers are low, which leads to a significant level of competition. The survey results confirm this: 72% of companies rate the level of competition in the web development market as high or very high. Accordingly, this market has all the characteristics of a highly competitive one: dumping, low margins, a large number of players and their constant rotation.

According to CMS Magazine, the total volume of the custom website development market in 2016 is 16.4 billion rubles. The same figure in 2012 was 17.73 billion rubles [9].

For comparison, the average annual exchange rate of the dollar in 2016 was 66.8 rubles, in 2012 — 31 rubles. At the same time, according to official data, annual inflation in 2016 was 5.4%, in 2015 — 12.9%, in 2014 — 11.36%, in 2013 — 6.45%.

This indicates that the market is Contracting. The main reasons include the following:

- general economic situation;
- expanding the capabilities of boxed CMS and, as a result, reducing the amount of programming in standard projects;
- reduced demand for custom development of small sites in favor of SaaS and advanced social network functionality;
- increasing the number of companies that prefer internal development.

The total mass of studios is very heterogeneous, but there are 4 main “echelons” among them:

- 4th echelon. Microstudies with a staff of 1–3 people and a budget of up to 100 thousand rubles per project. They usually employ one person who has just made their first website for a friend. The vast majority of such studios — about 70%.
- 3rd echelon. Small studios with a staff of 3–10 people and a budget of 100–300 thousand rubles for an average corporate website. As a rule, such studios employ low-skilled personnel who cannot provide high-quality work. Such studios — about 15%.
- The 2nd echelon. Medium-sized studios with a staff of 10–20 people. Typical budget — 500–1000 thousand rubles. Many of these studios are able to provide good quality work and often compete with the 1st tier studios. Some of these studios followed the path of the “site factory”, when the company produces a large number of standard low-level projects. There are about 10% of such studios. This includes the Agency Prostudio.
- 1st echelon. A leading group of companies. Studios with a permanent staff of more than 30 people and an average budget of 1 million rubles. Such studios can guarantee high quality of work. Most of these studios are trying to diversify their business and provide customers with a more complete range of services (for example, corporate identity development, industrial design, printing services, software development services, etc.). These studios serve most major brand companies and often overlap in tenders. There are very few leaders — 5%.

Many customers choose a contractor based on the industry principle (who made the site for the leaders, who made the best sites), reasonably believing that these companies will be able to provide the necessary result for them.

Some companies can be divided by types of sites produced: promo projects, corporate portals, online stores, media, and others. Each type of project has its own specifics and, as a rule, the Studio prefers to make projects of a certain type. When choosing a contractor, the customer often pays attention to the composition of site types in the portfolio.

In General, there is no price elasticity of demand for medium and large businesses. Conditional microbusiness selects companies from 4 echelons, small businesses from 3 echelons, and medium and large businesses can choose from 1 or 2 echelons. For medium and large businesses, the cost is of little importance (a change in cost by 30–70% does not matter at all). For them, the most important thing is the popularity of the Agency and its portfolio, and sometimes the development time.

Excerpt from CMS Magazine research: what kind of activity brings the main profit to web studios? The survey organizers were puzzled by this question and forwarded it to the respondents. And here’s what happened:

79.1% — chose the option “development of new sites”, 50.9% — noted technical support and development of existing sites, 35.5% — SEO, 8.7% — own Internet projects, 8.4% — Agency sales of display and contextual advertising, 7.7% — consulting, 7% — mobile app development, 7% — SMM.

Companies that specialize in web development, but many of them strive to provide a full range of services.

22% of companies specializing in web development also provide search promotion services, 4.3% — mobile development, and 4% — contextual advertising. The number of studios engaged exclusively in website development is gradually decreasing. Increasingly, companies are trying to cover two, three or even four areas of activity at once.

Such diversification is related to both the General economic situation and the market contraction. Studios are simply trying to survive and therefore acquire “airbags”.

Prostudio Agency deals with all of the above. This is due to the fact that the cost of advertising is growing, but the effectiveness is decreasing. In this regard, it is not enough just to develop a website — it is important to think through the entire path of the client from the first communication (SEO, SMM, context, target), and analyzing competitors, to the transition to the site and subsequent processing of the client (CRM, ERP systems). And after developing the site, you will be engaged in maintenance and technical support.

There are not many ways for agencies to sell their services to organizations:

• Direct sale of services to a specific company is typical for all echelons.

• Sales of services to more well-known agencies (subcontracting), as a rule, only the 2nd tier — for the 1st tier.

• Sale (transfer) of applications/clients to another Agency, usually only for the 1st tier — for the 2nd tier.

If we consider channels not in a General sense, but more specifically for this industry, then the main channel will be the Agency’s website, but the ways to find it differ for echelons:

• Search engine promotion (SEO) — for the 4th and 3rd echelon.

• Contextual and targeted advertising — for the 3rd and 2nd echelon.

• Official community — for the 3rd and 2nd echelon, in rare cases for the 1st echelon.

• Being in the Top of the ratings — for the 2nd and 1st echelon.

Moreover, for companies from the 2nd and 1st echelon, the key sales channel is positions in Agency ratings, as well as tenders held by companies. Prostudio Agency, sells its services directly and uses all channels of attraction. Therefore, as such, there are no standard methods of sales promotion for Prostudio Agency, in comparison with companies from the 3rd and 4th echelons (SEO, SMM), directly for end users. The main methods of increasing the sales market for the current position of the Agency can be identified as the following:

• Improving positions in ratings: Runet rating, CMSmagazine, Tagline, RuWard, CSSDA, FWA, Behance, Awwwards;

• Receiving awards for projects, which leads to an increase in the position in the ratings;

• Working with tenders, however, everything is extremely “opaque”;

• Entering the foreign market, the cost of development relative to foreign players is several times lower, and the quality is comparable.

Site production has a seasonal nature in 2 waves, since the company receives the main income during the start of production of projects and their completion. Wave 1 is related to the IT activity of customer companies (approval of the budget for the next year, new trends, etc.), which begins in February and ends in may. And the beginning of the 2nd wave is mainly associated with the closing of the year (“we have funds left, but should we update the site?”), starting from October to December. In the summer, the company completes projects that are completed and accepted by the customer in October, deals with internal projects and conducts advertising campaigns for seasonal goods (services). Let's look at the production technology of one typical project (an average corporate site) (table 1).

As you can see from the table, your site production takes an average of 60 days (2 months), consists of 5 stages, and 7 people participate in it. The Agency employs 35 people in total (fig. 1).

The project Manager coordinates the technical specification with the client and passes it to the Art Director. The art Director organizes the work of the production staff, and after the production of the site passes it to the project Manager, who demonstrates it to the client and, if successful, closes the project.

Production of Prostudio Agency websites for 1 year (fig. 2).

Production, number and average productivity of labor by months (table 2).

The main task of the production staff is to do their work in accordance with the approved terms of reference.

Estimation of the level of production costs and profit in the short-term aspect based on the company's performance in 2019. The capacity load range is considered from 1 project to 6 projects (the peak load of the Prostudio Agency) (table 3).

It should be noted that in the market segment under consideration, the marginal revenue is constant and equal to the market price, since in conditions of perfect competition, when none of the firms individually is able to influence the price of products set by the mechanism of industry balance of supply and demand.

The maximum profit (2.28 million rubles) and profitability (3.17%) is achieved by increasing the number of projects.

It doesn't make sense to analyze costs, since only if the number of projects is 0, the company is in a loss-making position. And if there is at least one project, the company is already starting to earn money. However, as we found out, when analyzing the market, to increase profits, you should go to the first tier of agencies.

Table 1. Stages of production

Stage	Specialists	Days
Design. Analysis of the subject area and source data, description of detailed site requirements. Description of requirements for the design concept, preparation of technical specifications	art director designer manager copywriter	10
Development of the design concept. Drawing a General idea using one or two layouts as an example. Protection of the concept, making changes based on the results of approval	art director designer manager	10
Layout of standard templates and site pages. Rendering pages. Layout. Preliminary testing of templates for standard site pages	designer layout designer	20
Configuring the administration system and building the site Implementation of the site's functional requirements according to the documentation (service catalog, standard pages) pre-debugging. Connecting templates, building a site on a test server	developer layout designer	15
Testing. Training. Delivery of the project. Content processing and design, preparation for final testing. Testing the site with the involvement of the art Director and technical Director. Preparation of instructions for working with the administration system. Training of the customer's specialists. Transferring the working version of the site to hosting, providing external access	art director manager tester	5

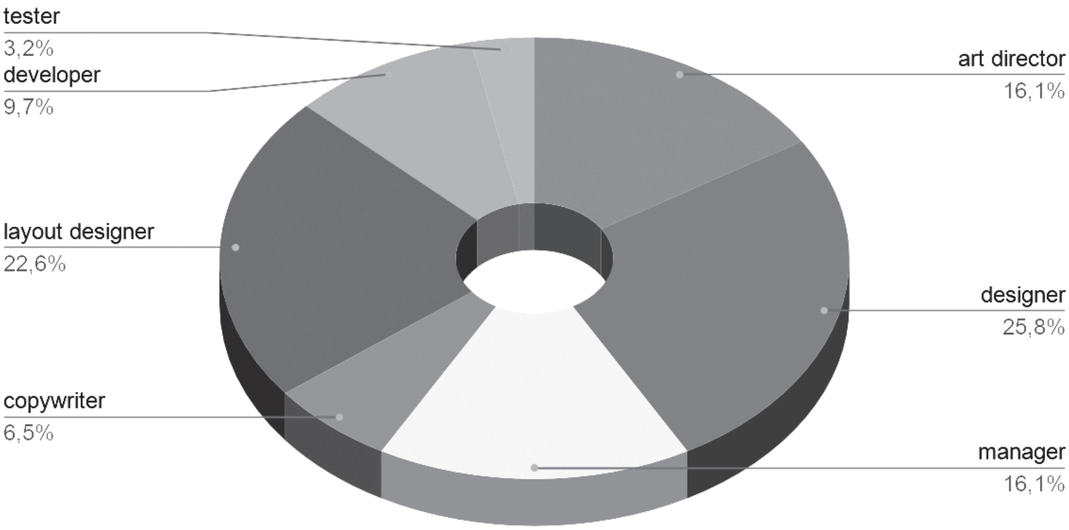

Fig. 1. The development team of the project

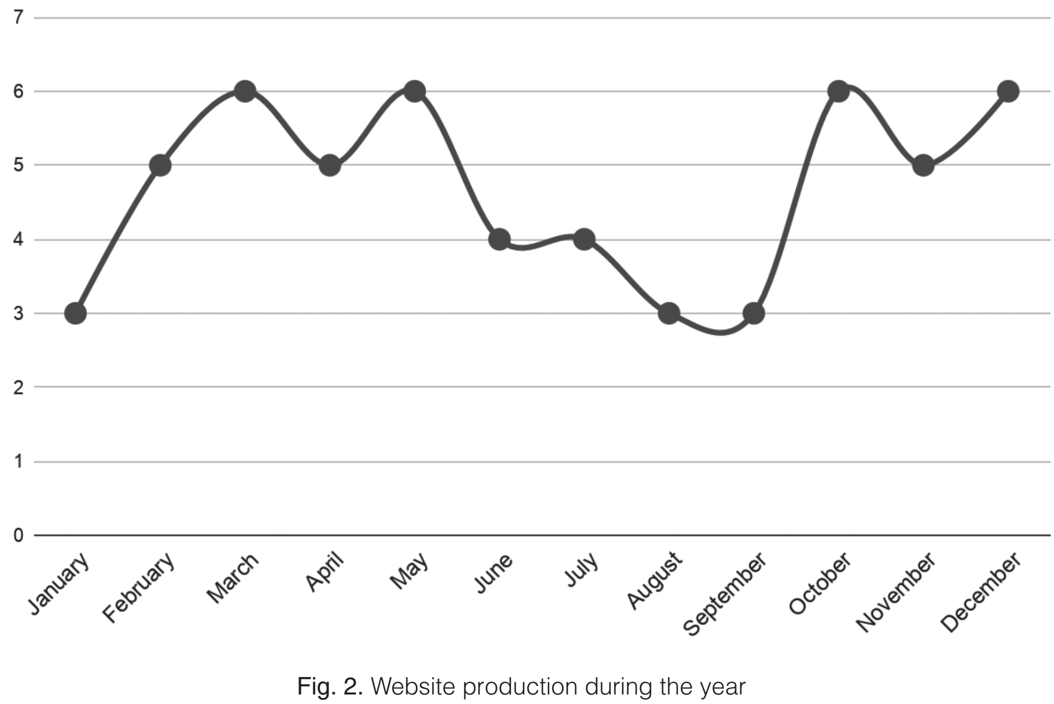

Fig. 2. Website production during the year

Analyzing the long-term development plans of Prostudio Agency, we will Analyze the long-term perspective of the company (table 4).

Analyzing long-term costs and profits, when all the factors used by the firm are variables, shows an increasing return on scale. However, sections 8–10 and 14–16, where marginal costs (*LMC*) are decreasing in nature, that is, they are a decreasing function of the volume of production. This is due to the additional control

Table 2. Labour productivity

Period	*Q*	*L*	AP_L
January	3	35	0.1
February	5	35	0.1
March	6	35	0.2
April	5	35	0.1
May	6	35	0.2
June	4	35	0.1
July	4	35	0.1
August	3	35	0.1
September	3	35	0.1
October	6	35	0.2
November	5	35	0.1
December	6	35	0.2

Table 3. Analysis of short-term costs, revenues and profits

R	*PR*, thds. rub.	*TR*, thds. rub.	*Q*, projects	*FC*, thds. rub.	*VC*, thds. rub.	*STC*, thds. rub.	*AFC*	*AVC*	*SATC*	*SMC*	*MR*
1.27%	280	500	1	20	200	220	20,0	200	220	220	500
2.70%	730	1000	2	20	250	270	10,0	125	135	135	500
2.57%	1080	1500	3	20	400	420	6,7	133	140	140	500
3.26%	1530	2000	4	20	450	470	5,0	113	118	118	500
3.03%	1880	2500	5	20	600	620	4,0	120	124	124	500
3.17%	2280	3000	6	20	700	720	3,3	117	120	120	500

where,

R — profitability; *PR* — profit; *TR* — total revenue; *Q* — number of projects; *FC* — fixed short-term costs; *VC* — variable short-term costs; *STC* — short-term total cost; *AFC* — average fixed costs *AVC* — average variable costs; *SATC* — average total costs; *SMC* — the ultimate total cost; *MR* — marginal revenue.

(the process of attracting new specialists) for monitoring the project teams.

The maximum profit will grow almost proportionally. However, it should also be noted that this profit does not have the maximum possible value, since the company can move to the 1st tier of agencies. Most companies use the USN in the B2B segment. The cost of services is quite high, so the increase in inflation does not affect the company's activities in any way. As mentioned earlier, a change in price even by 20–70% does not play a special role for the customer's company.

In General, when considering the market, price elasticity of demand is absent for medium and large businesses. Conditional microbusiness selects companies from 4 echelons, small businesses from 3 echelons, and medium and large businesses can choose from 1 or 2 echelons. For medium and large businesses, the cost is of little importance (the change in cost by 30–70% does not play any role at all). For them, the most important thing

Table 4. Analysis of the long-term costs, revenues, profits

R	*PR*, thds. rub.	*TR*, thds. rub.	*Q*, projects	*LTC*	*LAC*	*LMC*	*MR*
2.71%	2280	3000	6	720	120	120	500
3.29%	3150	4000	8	850	106	65	500
3.88%	4050	5000	10	950	95	50	500
3.69%	4800	6000	12	1200	100	125	500
4.09%	5700	7000	14	1300	93	50	500
4.25%	6550	8000	16	1450	91	75	500

where,

R — profitability; *PR* — profit; *TR* — total revenue; *Q* — number of projects; *LTC* — long-term total costs; *LAC* — long-term average costs; *LMC* — long-term marginal costs; *MR* — marginal revenue.

is the popularity of the Agency and its portfolio, as well as the timing of development.

As mentioned above, for companies from the 1st — 2nd echelon, which include Prostudio, it is only possible to increase the portfolio and increase the ranks in the ratings.

The possibility is to bring the Agency to the foreign market, and threats can only be made by site designers (Tilda, Wix, etc.), but only for the 3rd and 4th echelon. In General, the company's development strategies can be divided into two. For the 3rd and 4th echelons — increase the number of sites, that is, reduce prices and optimize the development process. For the 2nd and 1st echelons — an increase in the price, that is, comprehensive work on the quality of projects and the Agency's brand.

Digital trends

In recent years, digital has been actively developing a performance approach. Next year, the integration of communication channels and tools will continue: from the overall strategy to its comprehensive analysis using end-to-end Analytics systems, which have also been actively developed recently and provide new opportunities for optimizing marketing and advertising expenses. Even today, dashboards of BI systems allow you to evaluate the effectiveness of all sources and channels of advertising communication in real time in various cross-sections.

Segmentation and personalization based on customer data is becoming a priority for Internet marketing. A huge array of information and tools for combining it make it possible to create consumer portraits, as well as for various communication scenarios in the digital environment. Personalization is moving towards maximum possible automation. The Manager can only control the overall processes of creating and launching advertising campaigns.

Contextual advertising is also undergoing changes. It becomes more complex and smarter every year, and advertising specialists have to learn to anticipate users' desires and simplify the process of purchasing a product (product or service) as much as possible.

Contextual advertising is moving away from standard design formats. To prevent ad blindness, ads are becoming more creative. New visual solutions appear: frames, icons, color selection, and the text block increases.

Yandex. direct is experimenting with text and image ads. now you can add the product price to them, as well as a large image with a link to the landing page, with text and a logo. And in display campaigns, you can now configure mobile campaigns separately.

In Google Ads text ads, you can now add 3 titles and a second description to your ads. In General, we see a trend to "revitalize" ads through the use of gifs, animations, and video inserts.

The share of voice search is also growing, which pushes contextual advertising to adapt to new conditions. Advertising managers should already adapt advertising campaigns to voice requests and train voice assistants to perform the necessary commands (leave requests or place orders).

SEO is also changing. Now search robots look at the mobile version of the site, and not at the desktop version, as it was before. From now on, to stay in the top, you should pay special attention to the mobile version of the site. Namely, to check whether the content adapts correctly to the screen size and whether all elements are displayed on mobile devices.

Usefulness and informativeness are one of the main ranking criteria in 2020. Today, by visiting the site, the user should get the most relevant information and a positive user experience. In other words, the site should contain all the necessary information to facilitate the selection of a product or service. For example, for an online store: product characteristics and descriptions, video reviews, and the ability to compare products.

The content posted on the site is becoming increasingly important for ranking. Requirements for texts are becoming more and more serious and require the most thorough study of them, the relevance of queries and disclosure of the topic.

Search engines try to give users the information they need as quickly and easily as possible. The result is the appearance of blitz forms "question-answer" with the ability to ask a question directly from the search. A certain share of traffic is taken by search engine inserts that offer a quick answer to a question. For example: weather, quick reference on request, information about the organization. This is one of the reasons for the decline in organic traffic. The second reason for its decline is the development of Yandex products. For example, Yandex.Market, Yandex.Video, Yandex.Pictures.

In CRM marketing, the trend towards omnichannel will continue. Another important trend will be to promote brand confidence and position your expertise instead of the usual creation of advertising content.

We will see a movement towards people-based marketing. If CRM marketing now uses well-known information about user behavior in the network, then the next step in the development of the direction will be to anticipate their actions and desires. Given the knowledge of how people's interests are changing, you can effectively use this for communication in various channels.

In 2021, we will see even more active development of chatbots and robot assistants and voice assistants. This saves not only users ' time, but also the company's money, since the content of a "live" consultant is much more expensive than a robot. Plus, robots are available 24/7.

The stereotype that social networks have fundamentally different audiences is changing in SMM. Today, older students are sitting in Odnoklassniki, and pensioners are actively developing Instagram. Therefore, it is important to evaluate not only the audience, but also the functionality of the network in which you plan to promote. The same "Instagram" adapts to direct sales, allowing the audience to buy a product from the image, without going to an external resource. So it's getting easier to sell there.

In communications, personal communication comes to the fore. For example, Vkontakte mailing lists have become popular, where the brand communicates with the user informally through personal messages.

In the blogosphere, preference is beginning to be given not to bloggers with millions, but to small and medium-sized bloggers with an audience of no more than 150 thousand subscribers. Reasons: a lower price for advertising, a higher level of trust, and a more active and engaged audience.

The share of the budget for programming in media splits will increase. Managers and managers will increasingly use smart advertising. Classic display ads that buy space on the site will become a rarity. In mobile programming, ads will be made interactive to increase audience engagement. For example, a user can play a game or take a test in exchange for a discount.

In 2021, we will continue to integrate online and offline communications, especially based on the current situation of remote work and education. Today, it is no longer enough to limit yourself to working offline with online and offline channels. An integrated approach and analysis is important. If you sell an apartment based on brand requests or watch a video on TV, why not catch up with this audience on industry-specific online resources or communities dedicated to discussing the purchase of an apartment/house in social networks?

Another trend — omnichannel — is the ability to reach the target audience as effectively as possible, based on the history of their contacts with the company or product, their interests, requests, and lifestyle. Integrated CRM systems that not only accumulate data about customers, but also analyze this data for further work with them; and wi-fi sensors in retail locations that transmit information to the CRM about how often the user appears in certain places and what they prefer to do, for example, after work. More recently, retail has been rapidly reformatted to online formats (while a number of offline players closed offline points of sale completely), today we see the opposite picture, as Internet giants come offline (for example, the online store Lamoda, which announced the opening of the first offline store in Moscow). These online and offline integration processes are unavoidable, as the consumer becomes more demanding and wants to get as many convenient formats as possible in order to choose the one that suits them right here and now.

This year we also expect growth optimization tools and services inside advertising (Yandex and Google) and from external platforms, managing rates and calculation of the sources of calls from the advertisement services (e.g., Origami, CallTracking.ru etc.). While the market is not a platform that fully implemented the possibility of optimization based on artificial intelligence.

The difficulty lies in the large number of variables that affect the perception of advertising content. Both Russian and foreign colleagues will address this problem in 2021.

Conclusion

The growth of investment in the technological sector and the related infrastructure resulting from program article “Russia, forward!”, published by the Prime Minister of the country Dmitry Medvedev in 2009 and republished in “Gazeta.ru” magazine in 2019 [10], as the thesis of the article is the opinion of the author and publishing remains acatalectic. The article formulated a program for the development of technological entrepreneurship, which has borne fruit in the form of active development of physical infrastructure for innovation, including technology parks and foundations. The Russian government has set a course to develop individual professional skills in the field of technology, ensure closer interaction of ecosystem participants, popularize technology enterprises and develop regional infrastructure in order to increase the degree of integration of the Russian technology industry into the world economy.

One of the main competitive advantages of Russia has always been the level of technology development.no wonder Russian programmers are considered one of the best in the world. Since exact Sciences have been funded in Russia for many years, the country has highly qualified and well-trained human resources in the field of technology and innovation.

However, many important elements of the ecosystem are still under development. The development of the technology entrepreneurship ecosystem requires more active support from the private sector. Russia has relatively low indicators for a number of factors, including the number of startups and the cost assessment of their results, as well as the fact that intellectual property objects created on the territory of Russia are not widely distributed.

Start-UPS that are attractive from an investment point of view can use a simplified procedure for attracting financing, but given the lack of development of the business ecosystem, truly profitable investments are rare here. Venture capital investors find it difficult to find funds, since they rely mainly on private investors or family investment firms. Although the state takes legislative measures to increase the attractiveness of venture capital investments (in particular, to recognize options and share classes), it is possible to completely eliminate the funding deficit only if public funds are invested in technology startups, for example, funds from the pension Fund. In Russia, the most common way to solve this problem has become a strategic takeover. Large companies that are leading in their respective industries are fully absorbing startups, providing entrepreneurs with liquidity, although the volume of such financing is lower than it could be with an IPO.

Most private Russian companies are satellites of a small number of large corporations that control the lion's share of the market, which do not understand why it is necessary to develop technological entrepreneurship, and do not set themselves such a task. This situation significantly limits the ability of owners of technology companies to enter the market at an early stage, to form partnerships, as well as to attract investment and sell businesses.

In Russia, for a long time, the main focus was on training specialists in the field of exact Sciences, but training in the field of business leaves much to be desired. Due to the peculiarities of the historical development of Russia, the culture of doing business has been developing in the country only recently. Training in the field of entrepreneurship and business significantly lags behind the training of specialists in the field of exact Sciences. It will take time to improve the skills of Russian entrepreneurs in the field of business, and it is necessary to start working in this direction with educational institutions.

In the Russian science and innovation culture, it is not yet accepted to value business qualities, without which it is impossible to form a highly developed ecosystem of technological entrepreneurship. Entrepreneurship has relatively recently entered a culture that did not involve high appreciation and encouragement of private initiative. Since there was no entrepreneurship component in the culture of the Soviet period, business people were not particularly respected. If we add to this the factors of cultural development associated with independence and risk-taking, we get an extremely unfavorable business environment. Another factor in this environment is the extremely small number of role models that ambitious start-up entrepreneurs can rely on.

The new rules governing digital technologies that have recently been in force in Russia have a great impact on the information and communication technology industry and technological entrepreneurship. Legislation in this area is often not very specific and requires extensive comments.

The Russian government has made a number of efforts to create an extensive physical infrastructure for universities, technology transfer centers, and state-of-the-art technology parks, with the support of a number of funding agencies, as well as through financial incentives for innovation. The next stage of legislative reforms will need to take into account the need to financially encourage representatives of the private sector to participate more actively in the ecosystem of technological entrepreneurship, as well as encourage consultants, pay attention to the development of an entrepreneurial culture and, in particular, to the effectiveness of regulatory documents being developed.

References

1. Martin H. Thelle. The economic impact of a European digital single market. Final report. Copenhagen Economics, 2010. URL: https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/5/305/1435823773/study_by_copenhagen.pdf
2. OECD Digital Economy Outlook 2017. Paris, OECD, 2017. URL: https://doi.org/10.1787/9789264276284-en
3. Fisch C. Initial coin offerings (ICOs) to finance new ventures. *Journal of Business Venturing*, January 2019, vol. 34, no. 1, p. 1-22.
4. Purchasing Power Parities and the Size of World Economies: Results from the 2017 International Comparison Program. Washington, DC, World Bank, 2020, 208 p.
5. Solow R. M. We'd Better Watch Out. New York Times Book Review. New York, 1987, p. 36.
6. RAEC summed up the results of the year. The volume of the Runet economy grew by 20% in 12 months. *BIT. Business&Information technology*, 2020, no. 1(94), pp. 32-38.
7. Kotler P., Armstorng G. Principles of Marketing, Global Edition. Pearson, 2017, 736 p.
8. Belichenko A. *Voronka prodazh: chto eto, primery i etapy postroeniya* [Examples of building an effective sales funnel]. *Prostudio.ru*, 2020. URL: https://prostudio.ru/journal/sale-funnel/
9. *Issledovanie rynka zakaznoi veb-razrabotki: ekonomika, prognozy, plany, marketing i kadry* [Custom web development market research: Economics, forecasts, plans, marketing and personnel]. *CMS magazine*, 2017. URL: https://cmsmagazine.ru/journal/research-market-research-for-custom-web-development/
10. *Dmitrii Medvedev: Rossiya, vpered!* [Dmitriy Medvedev: Russia, go!]. *Gazeta.ru*, 2019. URL: https://www.gazeta.ru/comments/2019/09/10_a_12639409.shtml

DOI: 10.37791/1993-7598-2020-14-4-95-112

Беличенко А.С., ORCID 0000-0001-5938-1555, аспирант, Санкт-Петербургский государственный университет, Санкт-Петербург, Россия, belichenko_spgu@list.ru

Особенности функционирования интернет-экономики и digital-агентств в Российской Федерации

В данной статье рассматриваются особенности функционирования digital-агентств в интернет-экономике Российской Федерации. Автором научной работы представлен анализ рынка заказной веб-разработки и маркетинга, в том числе основные параметры рынка, свойства спроса и предложения, структура потребления услуг, вклад отрасли в интернет-экономику, рассматриваются вопросы цифровизации, определяется роль российских аутсорсинговых IT-компаний на международной арене. Проанализированы основные проблемы, стоящие перед рынком интернет-экономики, и предложены методы их решения. На основании изучения понятийного аппарата темы научной работы и на основании трудов ученых-экономистов, ведущих программистов и консалтинговых компаний автор исследует экономическую природу функционирования полносервисных агентств, в частности их российскую специфику. Также проведен анализ программ и реформ, регламентирующих новые правила применения цифровых технологий в законодательстве Российской Федерации, и их влияние на повышение эффективности технологического предпринимательства.

Ключевые слова: ИТ, цифровой, маркетинг, веб, продвижение, разработка, проектирование, инфраструктура, интернет-экономика

Об авторе: А. Беличенко, *аспирант, Санкт-Петербургский государственный университет*

For citation: Belichenko A. Features of functioning of the Internet economy and digital agencies in the Russian Federation. *Journal of Modern Competition*, 2020, vol. 4, no. 4(80), pp. 95-112.