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revistacienciaseconomicas@gmail.com

The Impact of the Human Capital of an Audit Company on Increasing its Revenue

El impacto del capital humano de una empresa de auditoría en el aumento de sus
ingresos

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Mikhail Anatolyevich Gorodilov

Perm State National Research University, Perm, Russia.

Email: m.gorodilov@psu.ru

ORCID: <https://orcid.org/0000-0002-4609-4888>

Matvey Sergeevich Oborin

Perm Institute (Branch) of the Plekhanov Russian University of Economics, Perm, Russia.

Perm State National Research University, Perm, Russia.

Perm State Agrarian and Technological University named after ac. D.N. Pryanishnikov,
Perm, Russia.

Email: m.s_oborin@mail.ru

ORCID: <https://orcid.org/0000-0002-4281-8615>

Alina Vitalievna Posokhina

Perm State National Research University, Perm, Russia.

Email: PosokhinaPerm@psu.ru

ORCID: <https://orcid.org/0000-0003-3173-8940>



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Resumen

El artículo analiza la situación actual en el mercado de auditoría regional del Territorio de Perm, teniendo en cuenta el desarrollo de la auditoría rusa y la investigación teórica de los académicos modernos. El estudio se basó en el estudio de datos estadísticos disponibles públicamente, información de clasificaciones nacionales y regionales. Se tomó como base el año 2019. El criterio de valoración fue julio de 2020. En el estudio se llevó a cabo un análisis de regresión y varianza. Después de analizar la información sobre las organizaciones de auditoría registradas en el Territorio de Perm, los autores confirmaron la hipótesis: los ingresos dependen significativamente del número de empleados, auditores que trabajan en ellos y la duración del trabajo de la empresa en el mercado de auditoría. Existe una alta probabilidad de una disminución en los ingresos de las organizaciones de auditoría en 2022 y, por lo tanto, una disminución en el número de organizaciones de auditoría regionales.

Palabras clave: mercado de auditoría, pandemia de COVID-19, organización autorreguladora de auditores "Commonwealth", informática y auditoría.

Abstract

The article analyzes the current situation in the regional audit market of the Perm Territory, taking into account the development of the Russian audit and theoretical research of modern scholars. The study was based on the study of publicly available statistical data, information from national and regional rankings. The year 2019 was taken as a basis. The endpoint was July 2020. Regression and variance analysis was carried out in the study. After analyzing the information on audit organizations registered in the Perm Territory, the authors confirmed the hypothesis: revenue significantly depends on the number of employees, auditors working in it, and the duration of the company's work in the audit market. There is a high probability of a decrease in the revenue of audit organizations in 2022, and, therefore, a decrease in the number of regional audit organizations.

Keywords: Audit Market, COVID-19 Pandemic, "Commonwealth" Self-Regulating Organization Of Auditors, IT And Audit.

Introduction

Audit services indicate the degree of economic maturity of the business and the high level of responsibility of management. The audit procedure is aimed at the reliability of the facts of the financial and economic activity of the management object and the quality of its reflection in the accounting financial statements and primary documentation. The area under consideration is not developing intensively enough in Russia, due to the instability of demand, which is mainly represented by public business with a high share of state participation and large business. This trend was largely due to the development of self-regulation mechanisms and market integration, intensified by global crisis phenomena, when, in conditions of reduced liquidity and falling production volumes, many enterprises were forced to abandon the services of auditors.

Therewith, it is a recognized fact that the competitive economy and the successful integration of companies into world markets depend on the quality of the audit, which affects the rating positions of the business, ensures transparency of activities, and reduces financial risks for international investors and partners.

Currently, the factors of the development of auditing activities in the Russian market can be considered a single form of audit organization, the introduction of classification standards of the main factors of auditing activities, and the provision of audit information. There are no optimal conditions in Russia for the development of a mechanism of loyal competition since the main purpose of legal regulation in the audit industry of legal relations is the formation of a competitive market for the provision of audit services. The legal standards of the Federal Law need to be corrected, especially those chapters in which the terms of the contract system are stipulated within the framework of a competition to identify audit companies – entities that need an audit.

The factors of the low level of demand for audit evaluation services are the understatement of the effectiveness of audit by companies, potential clients, the lack of state support for proactive audit, the state's interest only in the mandatory audit.

Consequently, an active audit by specialized organizations or individual auditors does not have a high level of demand during the crisis state of enterprises.

Many foreign economists have studied the correlation between the pricing policy of audits by an audit company and the effective effects of the internal audit system. During the analysis, it was found out that the higher the level of preparation and final results during inspections by the internal control service, the more money can be saved on audits.

The principle of rationality plays a significant role during the economic crisis in Russia. Combining the indicators of the control system with the audit indicators into a common information base makes it possible to implement the principle of rationality in the formation of internal reports of the enterprise. The risk-oriented approach in the audit system is also relevant today. The higher the risk, the more conditions the audit measures contain, the more complex the evaluation procedures, in which there is a need to control the process of a rational and accurate accounting and analytical process.

The current statistics published by Rosstat are not encouraging. The COVID-19 pandemic has had an impact on the development of the economy. Thus, industrial production in Russia decreased by 4.2% for seven months of 2022 compared to January-July 2019. Compared to July 2019, all types of economic activity included in the industrial production index showed a decrease in volumes (Federal State Statistics Service, 2020). The index of the physical volume of GDP in market prices following the methodology of SNA 28 (Q1 2022 to Q1 2019) is 11.6%. Industrial production index (January-July 2022 to January-July 2019) 95.8% (Federal State Statistics Service, n.d.). The situation is clear and predictable. N.V. Zubarevich (Zubarevich & Safronov, 2020) back in May-June 2022 indicated that "deterioration of global conjuncture and domestic demand" led to a significant decline in industrial production. It is also assumed that "the recovery growth of the regions after the coronavirus crisis will be slow and will last for several years".

Since the crisis affected all industries, the audit was no exception. In addition, the audit is directly related to the real sector of the economy. Its further development will depend on how quickly the entire economy as a whole, both Russian and global, will recover. In this

study, we will be interested in the Russian audit in its regional key – the audit market of the Perm Territory.

It is necessary to briefly highlight the historical aspect for further research. To date, the audit in Russia has passed several stages. The first one was before 1993. The earliest stage of the Russian audit was very diverse, more like an audit, on the other hand, it was characterized by the penetration of the world leaders of the audit market. Our audit was developing in two directions from 1993 to 2001. On the one hand, the need for standardization of audit was already clear, and on the other hand, the great subjectivity of the auditors' conclusions was clear, since the market was not regulated by law. Certification of auditors was often formal. This formed a certain distrust of the opinion and recommendations of the auditors. The next stage of the audit began with the adoption of the law "On Auditing Activities" in 2001 No. 119-FZ (State Duma of the Federal Assembly of the Russian Federation, 2001b) and new federal auditing standards.

The fourth stage (2009-2017) was already associated with the adoption of the following law "On Auditing" No. 307-FZ (State Duma of the Federal Assembly of the Russian Federation, 2008b), the emergence of self-regulation (SRO auditors) and the development of quality control, the adoption of federal standards – analogs of international auditing standards, changing approaches to certification of auditors. The number of SROs was reduced to two at the fifth stage (the period from 2017 to 2019). Amendments were made to Federal Law No. 307-FZ, directly affecting the development of auditing and its principles, which introduced International Auditing Standards as a basis for law enforcement. This refers to expanding the scope of Laws No. 115-FZ "On countering the legalization (laundering) of proceeds from crime and the financing of terrorism" (State Duma of the Federal Assembly of the Russian Federation, 2001a) and No. 273-FZ "On Combating Corruption" (State Duma of the Federal Assembly of the Russian Federation, 2008a) to the audit sphere. The regulatory influence of the state on the audit has increased¹. It continued at the next, sixth, current stage of the audit (since the beginning

¹ Stages from the second to the fifth are highlighted according to V.F. Massarygina (2017).

of 2002). We single out the sixth stage quite close to the fifth. There are objective reasons for this. This stage is associated with the consolidation of only one SRO – "Commonwealth" SRO; with the emergence of a modular hierarchical order of the qualification exam for obtaining the auditor's qualification certificate. The forced abrupt transition to the remote format of audit firms due to coronavirus quarantine. Finally, the rapid development of information technologies in the conditions of digitalization of the economy, especially accounting and analytical systems of enterprises.

Such a fairly understandable movement in the development of Russian auditing is complicated by the unsettled nature of many areas of audit legislation. Thus, since 2017, the criteria of financial indicators that oblige organizations to conduct mandatory audits have remained in question. It was supposed to increase them to exclude small enterprises from the field of view of auditors for audits (increase revenue from 4 to 8 million rubles, and balance sheet assets from 6 to 4 million rubles). The new criteria were defined in the law only on December 3, 2002. The designation of the audit market regulator and the requirements for audit firms in terms of the number of auditors remain in question. The indicated decline due to the pandemic was added to this uncertainty. How do Russian auditors work against this background? What are their prospects? This study is devoted to the regional aspect of the issue (on the example of the Perm Territory).

Materials and Methods

Literature Review: The business environment has often raised the question of the importance and necessity of auditing in the modern economy in recent years. Several scandals (Enron Corporation 2001 and Thomas Cook tour operator 2019), in which both audit firms (including BIG4) and their clients were involved, often made us think about the expediency of audits, about their quality. Why do we need a modern audit? Let us summarize the understanding:

- 1) to attract financing;
- 2) to get ratings;
- 3) to meet the requirements of regulators (Pogulyaev, 2020);

- 4) to increase the transparency of investment objects;
- 5) to ensure the independence of the verification findings (Epishin & Svetlakov, 2016);
- 6) to make the right management decisions by users;
- 7) to reduce financial risks.

According to the International Federation of Accountants, more than 4 companies with an exchange listing go through audits every year (Audit-it.ru, 2020; Federal State Statistics Service, 2020).

We agree with E.M. Gutzait's statement that if the audit is of high quality, i.e. the probability of erroneous conclusions about the reliability of the audited entity's accounting statements is small, then external audit users make the right management decisions for the most part, which provides better indicators of their economic activity than without an audit, which means that the external effects of such an audit are positive. With a low-quality audit, the probability of incorrect management decisions increases, so that the economic performance of several external users of the audit and the national economy as a whole may be worse than without an audit; externalities are negative for these external users (Gutzait, 2015, p. 4).

Accordingly, the importance of developing an audit and improving its quality and value for the audited persons is undeniable.

The authors' opinion on this point coincides with the opinion of most scholars: audit is necessary as an institution that guarantees the economic stability of the state, as indicated by the Constitutional Court of the Russian Federation (2003) in its resolution No. 4-P of April 1, 2003. The key question here is different: is an audit necessary in the toy form in which it exists now: in conditions of severe dumping, reduction of quality requirements on the part of audited persons, reduction in the volume of audits, overregulation on the part of the state and the only surviving SRO, reduction in the prestige of the profession, reduction in the number of audit firms in the regions due to the expansion of the capital audit organizations, often performing the functions of general contractors or agents for the

sale of audit services, and, as a result of the above, in conditions of a decrease in the cost and profitability of audit services?

Many scholars have been researching the development of audit and improving its quality in recent years. Which ones in our study are recognized as significant for today?

1) Development of audit as a science. Formation of audit statistics for the formation of directions for its further development (Gutsait, 2002, 2015, 2017).

2) Ensuring the informational value of the audit through improving its quality (Eccles, Herz, Keegan, & Phillips, 2002; Gorodilov, & Posokhina, 2017).

3) IT and audit. Digitalization of audit (Gorodilov & Belyavtseva, 2020; Petukh & Safonova, 2019).

4) Definition of new methods and directions of audit of tomorrow (Bulyga & Melnik, 2015).

Consider the above in more detail.

(1) The study of auditing as a science abroad has been going on for a long time. Starting with the works of R. Montgomery (1872-1953). Ya.V. Sokolov, A.D. Sheremet, A.A. Terekhov, and others can be attributed to the pioneers in Russia. We will focus on the works of E.M. Gutzait in this study. Methodological problems of the audit are considered by the researcher throughout all the main stages of the domestic audit. Scholars identified three groups of audit problems in 2003: methodological, technological, and others. Methodological problems are divided into four more groups: theoretical, organizational, economic, and complex (Gutsait, 2002). One way or another, all audit researchers still face these issues today. In the works on the statistics of the audit market, E.M. Gutzait (2017) gives an interpretation of the development of the audit services market in Russia: "the time of the economic crisis, the years of depression, and even the period of weak economic growth are difficult times for this market" (p. 3).

(2) The development of an audit is impossible without the trust of users in it, their circle is quite large (Gorodilov, & Posokhina, 2017, p. 55). Auditors evaluate the reliability of

accounting (financial) statements, but the management of companies should also be responsible for the reliability of their data. Therewith, we understand that very often management and owners fall into the "short-term profit trap" while reducing the value of their reports. PwC surveyed hundreds of institutional investors and stock analysts in 14 countries in 1997 and 1998. Only 19% of investors surveyed and 27% of analysts considered financial reports to be a very useful tool for determining the value of companies. The compilers of reports and managers of firms have a similar opinion. Reporting is significant for only 38% of the heads of firms in the USA. Among representatives of the high-tech industries of the USA and Canada, only 13% agree with this (Eccles et al., 2002, p. 14). Namely, the information value of reporting is important for both users and auditors.

There were various ways to increase the informational value of accounting and audit reports. Examples of this can be the rotation of the audit team (Lennox, Wu, & Zhang, 2014).

Thus, a trend has been found: a higher frequency of audit recommendations and comments occurs during the last year of stay as an auditor before mandatory rotation, and for new partners – in the first year after mandatory rotation. In contrast to the rotation of auditors, there are data on the organizational and financial complexity of the rotation of audit firms in general. The unique combination of the characteristics of the audit market – its role in the transparency of the capital market, mandatory demand, and concentrated supply – means that it receives considerable attention from the state (Gerakos & Syverson, 2015). The next example is the interaction of large and small audit firms during inspections, which is often practiced by BIG4 to increase the speed of audit processes. Joint audits, according to M. Deng, T. Lu, D.A. Simunic, & M. Ye (2014), can worsen the quality of the audit because the accuracy of audit evidence decreases. It is more logical to distribute the levels of checks between audit firms and their clients, rather than combine them into a single whole. This is confirmed by several studies (Gerakos & Syverson, 2015; Huang, Wen, & Zhang, 2020). Therewith, for 2018, BIG4 Deloitte, PricewaterhouseCoopers, KPMG, and Ernst&Young control from 7% to 9% of the audit market in various countries (GAAP.RU, 2018).

(3) IT and audit, digitalization of audit are important trends of modern audit not only in the pandemic. The digital economy as "a set of relations developing in the system of production, distribution, exchange, and consumption of tangible and intangible goods at such a level of use of digital technologies that provides a direct positive impact on economic growth" (Mirolyubova, Karlina, & Nikolaev, 2020, p. 378) integrates all traditional and new spheres of activity. This became especially acute during the period of remote work at the time of the current crisis associated with the pandemic.

The digital economy includes economic activities that produce ICT goods and services ..., as well as all types of economic activities that use information and communication (digital) technologies, in proportion to the share of ICT specialists in the total number of people employed in these activities. (Mirolyubova et al., 2020, p. 379).

The audit takes advantage of all the opportunities that arise in the digital economy, the possibilities of artificial intelligence are actively used abroad (Gorodilov & Belyavtseva, 2020).

(4) R.P. Bulyga and M.V. Melnik believe that "it is necessary to control key business processes based on audit procedures since in this case, it becomes possible to rationally organize management and production processes following business trends, market integration, and legislation. This refers to the return of auditors to their classic role of a business mentor, which they had at the dawn of the formation of auditing and accounting as a branch of knowledge" (Bulyga & Melnik, 2015, p. 69).

Intellectual capital audit, business process efficiency audit, and strategic audit are among the new areas identified. In the era of the remote audit option, it is necessary to focus attention on system processes, processes of perception of business as a single, but multidimensional phenomenon. A deeper study of the possibilities of continuous accounting and auditing is also necessary. It is also important today to focus on the future, the formation of strategic plans, the analysis of the organization's strategy, including through the involvement of auditors.

The development of the audit, in our opinion, will also be facilitated by the appearance of information on audit reports issued to Russian organizations – audited persons, published since 2002 on the website of the PIR AR (State Information Resource of Accounting, n.d.). In cases where audit reports together with accounting (financial) statements are provided to the tax authorities, information about this, together with the audit reports themselves, becomes public, which can serve as an additional tool (guarantee of reliability) for users (stakeholders) to make management decisions based on such reports.

Our hypothesis: the revenue of an audit firm depends significantly on the three parameters we study: the number of employees, auditors working in it, and the duration of work.

Methods: The first stage of our research consisted of analyzing the situation in the audit market based on the document analysis method. For this, we have collected and selected various types of data sources. The data for our study were divided into two groups. The first is the all-Russian audit market data for 2019 according to the Ministry of Finance of the Russian Federation (2021), the rating agency RAEX (RAEX-Analytics, n.d.) and statistical data affecting this market. The second is the information of the Ministry of Finance of the Russian Federation (n.d.) on audit organizations included in the register of auditors in the Perm Territory. The year 2019 is taken as a basis (the starting point of the analysis). July 2002 – as far as the data allowed - for the endpoint. Since the data of the half-year and the year are not quite comparable, the basis of the analysis was still 2019. The year 2002 is shown more as an established trend, confirmed by statistical and scientific data.

At the second stage, on the basis of the information obtained as a result of the first stage, a model was built.

To build the model, we took 42 audit organizations out of 58 registered in the Perm Territory. This is due to the partial lack of data on the companies seized by us. In the course of the study, a model was compiled and evaluated for the dependence of the revenue of an audit firm in the Perm Territory for 2019 on the number of auditors and other

employees working in it, as well as the duration of the firm's work. The collected data for 42 audit firms are shown in Table 1.

(Table 1): Data on auditing firms in Perm*

Nº	Number of auditors (people)	Term of work (years)	Number of employees (people)	Revenue for 2019 (thousand rubles)
	3	4	2	4,153
	8	5	6	24,413
	4	7	3	1,334
	4	9	8	23,953
	5	11	1	271
	3	12	2	1,399
	6	12	5	4,182
	5	14	1	966
	6	14	7	4,256
	9	14	12	1,154
	3	16		492
	3	16	1	684
	3	16	2	38
	4	16	6	6,116
	3	17	1	2,974
	3	17	4	2,787
	4	17	1	766
	5	17	1	14,257
	3	18	2	18
	3	18	2	735
	4	18	3	2,427
	5	18	7	8,395
	4	18	11	6,199
	3	19		162

	3	19	1	1,476
	3	19	1	44
	3	19	1	2,583
	3	19	2	647
	3	2	4	2,918
	5	21	1	491
	3	21	3	4,241
	3	21	4	225
	3	21	4	234
	4	21	4	1,625
	4	23	6	1,623
	4	23	15	21,661
	4	24	3	4,354
	3	24	5	3,538
	8	25	4	311
	3	25	29	42,891
	31	26	47	52,692
	3	27	2	767

* Compiled by the author according to the Register of Audit Organizations (Ministry of Finance of the Russian Federation, n.d.)

Result and discussion

1. Analysis of the audit services market

Thus, consider the starting point. What did we come to in the audit market at the beginning of the crisis caused by the coronavirus?

According to the statistical analysis conducted by E.M. Gutzait (2017), the share of audit services in Russia's GDP decreased monotonously after 2009. Also, the volume of audit services decreased in absolute size from 2008 to 2016: from 5.1 to 29.5 billion rubles (by

41.1%). In 2017, we noted (Posokhina & Nikitina, 2017) that the audit market went into recession in 2015 and the recovery was expected to be protracted. There was also a decrease in the revenue of Russian audit organizations in 2019 (see Table 2).

(Table 2): Change in revenue of Russian audit organizations for 2018-2019

No.	Indicator	For 2018, billion rubles.	For 2019, billion rubles.	Change	
				Absolute, billion rubles.	Relative, %
1	Revenue of audit organizations from the Top 1 (RAEX-Analytics, n.d.)	39	38.24	-.76	98
2	The volume of services rendered by all Russian audit organizations (Ministry of Finance of the Russian Federation, 2021)	58.5	57,	-1.5	97.4

Moreover, the decline in revenue took place in 2019 for the largest companies and in the market as a whole. This was influenced by dumping and a decrease in revenue from customers. There was also an understandable desire to reduce audit costs for those who care about formal compliance with legal requirements and the very appearance of such an opportunity. For customers, this is a reduction in unproductive expenses.

The share of income in the total income of all audit organizations of the largest firms (BIG4) remains large. Although studies (Alsmairat, Yusoff, Ali, & Ghazalat, 2019; Dunn, Tan, & Venuti, 2002) suggest that the Big Four auditors are not superior to other auditors in terms of professionalism. However, BIG4 has more room for maneuver, for games with a cost (De Angelo, 1981), which allows them to be better adapted to survive in any crisis.

Nothing has changed for the better in 2019 in terms of the ratio of mandatory audits over the initiative in 2019. The share of revenues from mandatory audits in the total revenues of all firms for the year increased by 2.5% and reached 88.5%. This is also confirmed by the number of inspections of TOP-1 organizations: only 11% of all audits are initiative audits. Therewith, it is known that it is the initial audit that is the main "driver" of audit development, a seriously interested party.

Unfortunately, there is a decrease in audit organizations (from 4.4 thousand in 2017 to 3.9 thousand in 2019 and auditors (from 19.6 thousand to 18.8 thousand). It is a good thing that the number of auditors – individual entrepreneurs have not changed.

Traditionally, the bulk of auditors (46%) are concentrated in the Central Federal District. Meanwhile in Moscow – 33.9%.

There are 5 audit organizations (12%) operating in the Volga Federal District. Their number has not changed since 2018. The Volga Federal District ranks second of the eight federal districts in terms of the number of audit firms, sharing it with the North-Western District. In the Perm Territory, 58 audit firms worked in 2019 (11.6% of all firms in the district). It should be noted that in January 2017, 66 local audit firms were functioning. There is also a KPMG office (KPMG, n.d.) and a PwC Office in Perm (PwC, n.d.). Only local firms were subject to our analysis since the data of these offices are not available to us.

According to the Ministry of Finance of the Russian Federation (2021), the main clients of audit organizations for the audit of accounting (financial) statements in 2018 and 2019 are presented as follows: wholesale and retail trade (on average 17.65% per year), construction (8.25% on average), transport and communications (4% in both years), electricity (2.3% in both years), mining (1.65% on average), financial activities (1.15% on average).

According to Ya.A. Dolganova, two clusters for economic security are clearly distinguished in the Volga Federal District. Perm Territory in 2006-2018 was part of the first cluster and

occupied a worthy third place out of five subjects in it. Only the Republic of Tatarstan and the Samara Region were ahead of the Perm Territory (Dolganova, 2019). Successful export industries, in particular, manufacturing, chemical enterprises, manufacturers of medicines, electricity, food were named among the strong positions of the Perm Territory in 2017-2018 (Butorina, Karpovich, & Lyakh, 2019; Rudenko, 2019).

It can be said that the pandemic has changed a lot of the above in the Perm Territory. The coronavirus crisis "hit the largest cities with a more modernized consumption structure and the maximum share of people employed in the market services sector" (Zubarevich & Safronov, 2020, p. 5). In the Perm Territory at the beginning of 2020 (December 2019), the industrial production index was 16.6% compared to the previous period (Territorial body of the Federal State Statistics Service for the Perm Territory, 2020). The same indicator is 95% for the second quarter of 2020.

In January – June 2020, compared to the same period last year, the situation for previously successful sectors for the Perm Region is as follows. In the manufacturing sector, the growth index totaled 99.2%, in the electric power industry – 89%, in the production of chemicals and products – 73.9%, in the production of medicines – 14%, in the production of food products – 14.7%. Retail trade also showed a decrease in turnover. The dynamics of retail trade turnover in the first quarter of 2020 amounted to 92.5%, and in the second quarter – 79.1% compared to the same period last year. It is similar for public catering: the turnover was 7.1% in January-June of 2020. Wholesale trade turnover increased (111.4% compared to the same period of 2019). Paid services to the population in January – June amounted to 83.7% compared to the same period last year. In terms of construction, the dynamics of the volume of work in January-June 2020 amounted to 19.1% compared to the level of 2019. Transport – 88.9% (cargo transportation) and 78.3% (passenger transportation). Statistical data confirm the negative impact of the pandemic on the economy of the region. As mentioned earlier, the audit is closely related to the state of the economy as a whole.

According to P.A.Minakir (2019), "a polarized structure of the economic space is being formed in Russia, and in part has already been formed" (p. 967). The uneven distribution of audit organizations by country makes us pay attention to the fact that the main share in the audit services provided falls on Moscow (76.9% in 2019). The concentration is also evident in the structure of the distribution of audit organizations. By the scale of activity, 63.6% of the audit is carried out by large audit organizations (the number of more than 5 people) (Ministry of Finance of the Russian Federation, 2021).

According to the register of the Ministry of Finance, there is only one large audit organization in the Perm Territory – Invest-Audit LLC (1.7% of the total number of audit firms in the region). Perm company ranks 51st out of 100 in the ranking of the largest audit firms (RAEX-Analytics, n.d.). The revenue growth rate was 21.6% in 2019. This is a very good position, growth is visible (it was 52nd place in 2018). The barrier of the "average" audit firm (from 15 to 50) has been overcome by only five companies (8.6%).

2. Influence of factors on the development of the audit services market

Let's analyze the factors affecting the revenue of audit organizations of the Perm Territory.

Model

We conducted regression and variance analysis.

Parameter 1 – the number of auditors working in the audit organization.

Parameter 2 – the duration of the company's work.

Parameter 3 – the number of employees working in the audit organization (except auditors).

Using the method of least squares in the course of regression analysis, we found that the dependence of the company's revenue on the first or second parameter is insignificant. This dependence cannot be chosen for the model (this is indicated by the value of the R-square, that is, the coefficient of determination R^2) (Tables 3, 4).

(Table 3): Regression analysis of the dependence of the company's revenue on the number of auditors

Multiple R	,672835
R-square	,45277
Normalized R-square	,438674
Standard error	844.9
Observations	41

(Table 4): Regression analysis of the dependence of the company's revenue on the duration of the company's work

Multiple R	,125384
R-square	,15721
Normalized R-square	-.952
Standard error	11271.5
Observations	41

Next (Table 5) we will trace the relationship between the company's revenue and the number of employees working in it who are not auditors (in this case, the coefficient of determination is greater *than* R^2 than 8). We see that the company's revenue is directly related to the number of employees working in it (3rd parameter).

(Table 5): Regression analysis of the dependence of the company's revenue on the number of employees

Multiple R	,91657
R-square	,839161
Normalized R-square	,83537
Standard error	4556.36
Observations	41

The obtained data is also confirmed by the correlation Table 6.

(Table 6): Correlation table

Parameter	Number of auditors (parameter 1)	Service life (parameter 2)	Number of employees (parameter 3)	Revenue
Number of auditors (parameter 1)	1			
Working period (parameter 2)	,14777585	1		
Number of employees (parameter 3)	,782856158	,297951234	1	
Revenue	,67343355	,1314217	,9157852	1

The most significant model was the dependence of the company's revenue on all three parameters (Tables 7 and 8).

(Table 7): Regression analysis of the dependence of revenue size on three parameters

Multiple R	,94234898
R-square	,8886369
Normalized R-square	,8566228
Standard error	4487.18496
Observations	42

(Table 8): Variance analysis of the dependence of the amount of revenue on three parameters

Indicator	df	SS	MS	F	Significance of F
Regression	3	6226375295	275458432	13.78	2,63318E-18
Balance	39	78525836.8	2134828.38		
Total	42	71163362			

The variance analysis of the mixed dependence showed that in this case, the significance of F is less than the standard 3rd level of significance and the coefficient of determination, which means it is R^2 statistically significant. The resulting model adequately describes the phenomenon, since the approximation is satisfactory (R-squared is greater than,8).

Results: Revenue is the most important indicator of the activity of any company, including audit companies. Based on the analysis data, we see that among audit firms there is a clear dependence of revenue on the number of employees (auditors and not only) and on the time of work in the market. Knowing that there is a downward trend in revenue in 2020, audit companies in the Perm Territory should think through their actions and their strategy in advance.

We believe that audit companies can help themselves by the means of their clients (the idea of a "closed circle"). This opportunity lies in increased attention to consulting services related to the management of enterprises, as well as the development of a new direction related to forensic expertise (from the analysis of success factors of Invest-Audit LLC, it should be noted that the increasing share in revenue from the provision of this particular range of services – over 15% in 2019, against the background of declining revenue from audit services proper, according to a survey of its head). It is necessary to improve the reliability of business processes, work with the analysis of risk zones, which will then affect the financial statements and will contribute to the development of supported companies, and, consequently, in the future, audit organizations operating in this market.

If the audit companies of the Perm Territory do not take any actions on the strategy of self-preservation and development, then in the next period they are doomed to leave this market. In our opinion, this is unacceptable, because, after the audit organizations themselves, a layer of highly qualified audit specialists may disappear. We believe that this situation applies to all regional audit companies in Russia.

Conclusion

Our proposals for the development and support of audit organizations of the Perm Territory (and similar regional firms) are divided into two parts.

The first part depends on the adaptation capabilities of the audit companies themselves. We see the following prospects.

- 1) Development of consulting areas. Formation of various "points of growth" (anti-crisis, tax, financial, legal consulting, risk assessment, forensic economic expertise). It is necessary to remember the importance of maintaining audit as the main activity.
- 2) Increasing the digitalization of audit following the digitalization of business. Improvement of verification technologies. Accounting outsourcing – outsourcing of accounting functions, tax, and legal consulting – is already on a remote format with most audit firms. Electronic document management, online video communication, cloud storage device, organization of authorized access (Perkovskaya, 2020). Digitization and automation of internal processes, barcode scanners, EDS (Pogulyaev, 2020), the use of radiofrequency tags FRID (Zubarevich & Safronov, 2020), cognitive technologies, underwriting contractors using specialized information services (SBIS, Contour). IT systems that provide sufficient efficiency and detail. Audit continuity. Transfer of labor relations to the virtual space.
- 3) Focus on the conclusion of audit contracts for a long time. Audit companies with long-term audit contracts turned out to be the winners during the pandemic.
- 4) Intersectoral and interregional diversification by audited entities.

The second part is related to the introduction of amendments to Russian legislation and International Auditing Standards, as well as to internal standards of audit organizations and individual auditors in terms of the development of auditing technologies based on digitalization and remote work techniques with databases of audited persons. In the context of the use of IT systems for processing accounting information, the remote audit can reduce the costs associated with the movement of employees of audit organizations, allows automating the process of conducting routine audit procedures, freeing up time to analyze the data obtained to express a reasoned audit opinion.

It is necessary to complete the current audit reform. This is important because there are more and more uncertainty factors in this market. The lack of clear rules can contribute to a large outflow of professionals from the audit market and its monopolization.

On November 29, 2019, the Ministry of Finance of the Russian Federation approved the Main Directions for the Development of Auditing Activities in the Russian Federation for the period up to 2024. On March 27, 2020, an action Plan ("Roadmap") was approved for the implementation of the main directions of development of auditing activities in the Russian Federation for the period up to 2024. It is indicated that ensuring the stability of the audit institute is of particular relevance. Therewith, amendments No. 975888-7 "On Amendments to the Federal Law "On Auditing Activities" were made to the State Duma (in terms of exemption from mandatory audit of small businesses, clarification of the provisions governing the activities of self-regulatory organizations of auditors, as well as issues of professional ethics of auditors and the rules of independence of auditors and audit organizations) (State Duma of the Federal Assembly of the Russian Federation, 2020). We draw attention to the fact that changes in legislation should be carried out very carefully. The state wants to support small businesses by removing the costs of conducting an audit. However, we also see that the share of inspections related to organizations the financial indicators of which are above the minimum values is half of the total number of audits conducted (53.5% in 2019) and this share increased by 4.7% compared to 2018 (Ministry of Finance of the Russian Federation, 2021). It is also known that all enterprises are subject to audit in Denmark, Norway, Canada, and several other countries (Fedosimov, n.d.).

The following proposal is related to the promotion through the SRO of auditors "Commonwealth", the Bank of Russia, and the Ministry of Finance of the Russian Federation of proposals to amend the International Standards of Auditing, if possible, to issue a decision with an unconditionally positive opinion without full-time (i.e. remote) presence of auditors at the audit; to create rules for working with electronic versions of documents (scans) with the objective impossibility of face-to-face testing.

The support of regional audit firms is needed at all levels in the coronavirus crisis.

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