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**ЦИФРОВАЯ ТРАНСФОРМАЦИЯ ЭКСПОРТНО-ОРИЕНТИРОВАННОЙ ЭКОНОМИКИ РОССИИ**

**Аннотация.** Исследованы данные статистики по объему реализации продукции четы-  
рехсот ведущих российских компаний, консолидированные медиахолдингами «Эксперт»  
и «РосБизнесКонсалтинг». Процесс трансформации экспортно-ориентированной экономи-  
ки России в цифровую предложено косвенно оценить по объему реализации ведущих оте-  
чественных компаний. Сделано предположение, что повышение доли объема реализации  
IT-ориентированных производств в совокупном объеме ведущих отечественных компаний  
отражают процесс цифровизации экономики. Результаты исследования показывают, что  
31,8 % от общего объема реализации десяти крупнейших компаний России можно отне-  
сти к сфере цифровой экономики, что позволяет заявить об устойчивом движении в сто-  
рону трансформации экономики, основой которой являются процессы, связанные с созда-  
нием, преобразованием, передачей и хранением нематериальных цифровых сущностей.

**Ключевые слова:** цифровая экономика, цифровая трансформация, статистические  
исследования, объем реализации, макроэкономические агенты, выручка, прибыль.

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**DIGITAL TRANSFORMATION OF EXPORT-ORIENTED ECONOMY OF RUSSIA**

**Abstract.** The subject of the study of this article are the statistics on the volume of sales  
of four hundred leading Russian companies, consolidated by media holdings «Expert» and  
«RosBusinessConsulting». The process of transformation of the export-oriented economy of Russia  
into a digital economy is proposed to indirectly assess the volume of sales of leading domestic  
companies. The author supposes, that the increase in the share of sales of IT-oriented industries  
in the total volume of leading domestic companies reflect the process of digitalization of the  
economy. The results of the study show that 31,8 % of the total sales of the 10 largest companies  
in Russia can be attributed to the digital economy, which allows us to declare a steady movement  
towards the transformation of the economy, which is based on the processes associated with the  
creation, transformation, transfer and storage of intangible digital entities.

**Key words:** digital economy, digital transformation, statistical studies, sales volume, macroeconomic  
agents, revenue, profit.

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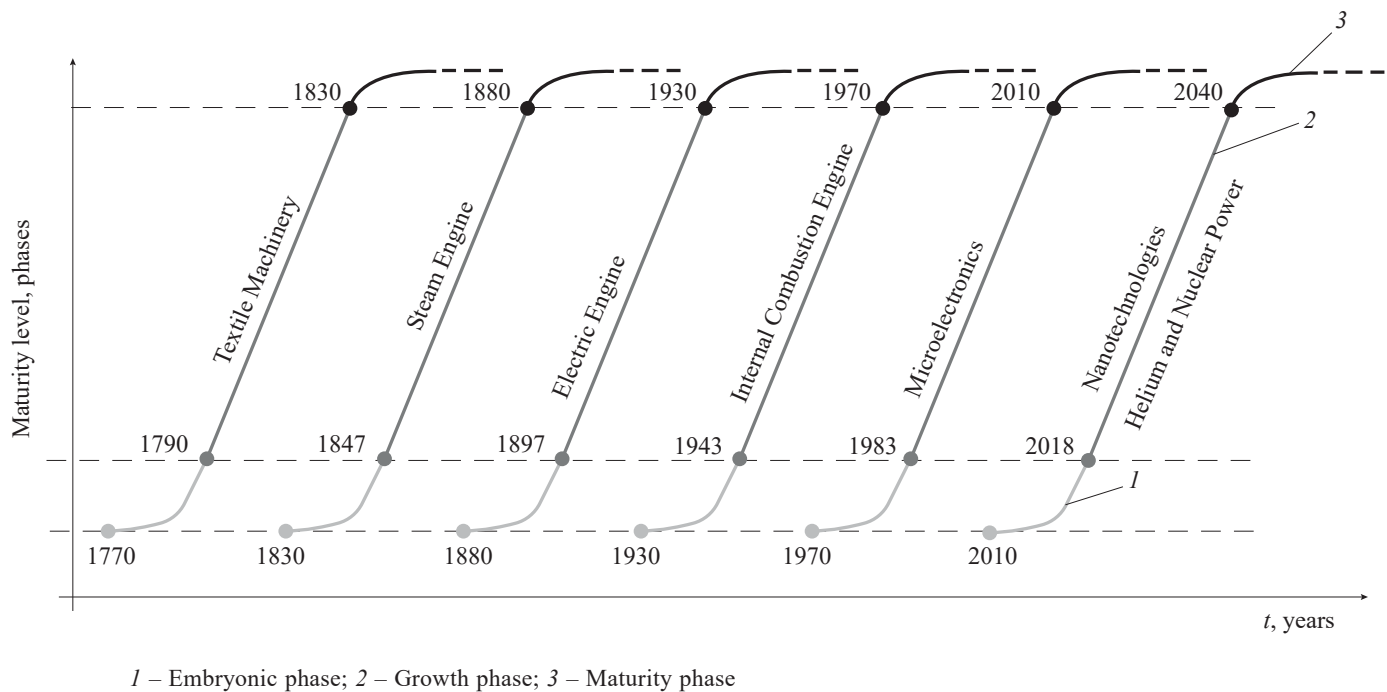
Decree of the President of the Russian Federation of May 9, 2017 No. 203, approved the “Strategy of in-  
formation society development in the Russian Federation for the years 2017-2030” [1]. In accordance with this  
program, by the government order, was approved the program “Digital economy of the Russian Federation”  
(№ 1632-R of July 28, 2017) [2]. The information society presupposes a change in the economic basis and the  
corresponding superstructure – the creation of specialized information and communication technologies and state,  
social and legal institutions serving them. State institutions can be easily transformed to correspond to the new  
post-industrial realities by the relevant decrees and legal acts, because such institutions are mainly topologies,  
that transport and filter the flow of structured information (turnover of government securities). Public institu-  
tions have long been fully prepared to accept the change in the basis, because even the generation of “Millen-  
nials” already overcomes the forty-year mark. The main barrier to the full digitalization of the economy is the

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inertness in the replacement of technological processes. For example, according to [3], the change of technological structures takes at least forty years (Fig. 1), and in heavy industry to 60-70 years [4]. It should be taken into account, that in the modern economy the duration of “maturity cycles” of information technologies has a clear tendency to decrease [7].



Source: [3]

Figure 1. Phases of change of technological structures according to Academician of the Russian Academy of Sciences S. Y. Glaz'ev

Process of transformation of the Russian economy into a digital one can be estimated indirectly by the volume of sales of leading domestic companies. At the same time, we deliberately do not consider net and economic profits, as these are indicators of the efficiency of a particular company, while the total volume of sales of all companies in the country (including for any reason unpaid claims) characterizes the declared and satisfied needs of society. We are also deliberately moving away from recalculating ruble values in world currencies and taking into account the inflation component, since the assessment of specific industries will be carried out as a percentage of the total sales of Russian companies. The study [5, 6] suggests, that the increase in the share of sales of IT-oriented industries in the total volume of leading domestic companies reflect the process of digitalization of the economy. To the IT-oriented industries should also be included the companies on mobile data and (partial) services of the enterprises of the banking sector [12]. It's need to say, that the highlight actually of the IT component in the activity of banks can also be made only indirectly on the share of expenditure on computerization. It should be taken into consideration, that part of the work on informatization banks transfer either to external outsourcing or create subsidiaries of IT-companies. So, for example, did the Sberbank (state savings bank) of Russia, creating a number of subsidiaries: JSC “Sberbank-Technologies”, JSC “United Credit Bureau (OKB)”, LLC “Sberbank Telecom” (mobile communications, broadband access to the Internet), LLC “KORUS Consulting SNG” (software development), LLC “Real Estate Center from Sberbank” (the development of the services for purchasing property in the mortgage, carries the brand name “Domclick”), LLC “Sberbank-Service” (maintenance of POS terminals and ATMs of the Sberbank), total revenues amounted to 87 billion 789 million 977 thousand Rubles (table. 1).

Table 1

**Revenue subsidiary business IT-companies of Savings Bank in million rubles  
on the account of 2017 year**

<b>Subsidiary business company PJSC Savings Bank</b>	<b>Revenue, mln RUB</b>
JSC «Sberbank-Technologies»	30 319,977
CJSC «United Credit Bureau» (UCB)	1 375,00
LLC «Sberbank Telecom»	46 600,00
LLC «KORUS Consulting CIS»	1 132,00
LLC «Real Estate Center from Sberbank »	1 360,00
LLC «Sberbank -Service»	7 003,00
Total revenue subsidiary IT-companies of Sberbank:	87 789, 977

Compiled by the author on the materials: [10]

Summary data on the results of 2017 (table. 2), presented in the Rosstat (the Russian Federal State Statistics Service) database on the official accounting statements of commercial organizations of the Russian Federation (more than 2.3 million organizations, registered in the territory of the Russian Federation) [10], show that fifteen Russian IT companies received revenues of 227 billion 131 million rubles. In the first place is the Russian IT Giant Yandex (the largest national Internet search engine and computer applications) with 86 billion 60 million rubles. A subsidiary of Sberbank of Russia JSC “Sberbank-Technologies” earned a little less than 3 times less from Yandex – 30 billion 319 million rubles. Closes the three leaders of JSC “Kaspersky Lab” (antivirus and computer security) with revenues of 19 billion 723 million rubles, which is 4.36 times less than Yandex. Median value was made by JSC “Nefteavtomatika” with 8 billion 419 million rubles of revenue. And completes this small rating CJSC “Center of Financial Technologies” with 4 billion 950 million rubles of revenue.

Table 2

**First fifteen national business IT-companies by revenue volume of products in million rubles  
on the account of 2017 year**

<b>Place</b>	<b>Business organization</b>	<b>Indicators, mln RUB</b>	
		<b>Revenue</b>	<b>Assets</b>
1	LLC «Yandex»	86 060,00	97 411,00
2	JSC «Sberbank-Technologies»	30 319,00	6 219,00
3	JSC «Kaspersky Lab»	19 723,00	11 975,00
4	LLC «RT-Invest transport systems	10 992,00	37 435,00
5	JSC «Production Company «SKB KONTUR»	10 176,00	3 758,00
6	LLC «Microsoft Rus»	9 246,00	3 545,00
7	LLC «Yandex.Taxi»	9 024,00	4 504,00
8	JSC «Oil Automation»	8 419,00	3 609,00
9	LLC «Russian Venture Society»	7 899,00	543,00
10	LLC «FORS – Center Development»	6 748,00	2 579,00
11	LLC «Luxoft Professional»	6 461,00	1 423,00
12	LLC «ANT-Service»	6 391,00	3 370,00
13	LLC «Deutsche Bank Technological Center»	5 621,00	1 329,00
14	LLC «Yandex.Market»	5 102,00	2 719,00
15	CJSC «Center of Financial Technologies»	4 950,00	5 118,00
Total revenue of 15- business IT-companies of Russia:		227 131	

Compiled by the author on the materials: [10]

Analytical center of media holding “Expert” provides free access to the data compiled in the rating of “400 largest companies in Russia” (Expert 400), which will take as a source material for the analysis of the level of digital transformation of the export-oriented economy of Russia [13, 14]. Similar data are prepared by RosBusinessConsulting media holding (RBC) [7]. As has been noted above, the level of transformation will be indirectly estimated on sales volume, expressed in million rubles. The number of business companies in table 3 is not a multiple of ten, as the volume of sales of the first companies in the ranking will be compared with the companies of the IT sector, which in this report are 18. At the same time, a comparison will be made with the data of last year's rating, which featured only 10 domestic IT companies. It should be noted, that the cut-off of 400 (the “Expert”) and 500 (RBC) leading companies in the rating is somewhat arbitrary, but the analysis of financial statements more than 2.5 million firms registered in Russia, which is provided by Rosstat, will require a more fundamental approach than the volume of this article allows. The objective of this study is to make a greater extent qualitative indicator assessment, which would allow conclude about the presence or absence of an active process of digital transformation of the Russian economy.

Table 3

**First eighteen national business companies by sales volume in million rubles  
on the account of 2018-year**

№ in rating	Business company	Sales volume (mln RUB)	Profit before taxation (mln RUB)	Net profit (mln RUB)
1	PJSC «Gazprom»	6 524 711,00	1 018 006,00	766 879,00
2	PJSC «LUKoil»	5 475 180,00	524 184,00	420 422,00
3	PJSC «Rosneft»	5 030 000,00	395 000,00	297 000,00
4	Sberbank of Russia	2 840 900,00	943 200,00	748 700,00
5	OJSC «Russian Railways»	1 697 553,00	52 426,00	17 500,00
6	X5 Retail Group	1 295 008,00	308 938,00	31 394,00
7	VTB Group	1 185 800,00	159 700,00	120 100,00
8	PJSC «Surgutneftegaz»	1 175 019,00	246 433,00	194 718,00
9	Retail Network «Magnet»	1 143 314,40	45 398,60	35 539,00
10	PJSC «Russian Networks»	948 344,00	177 604,00	137 122,00
Total sales volume of 10 companies:		27 315 829, 400		
11	«Inter RJSC» Group	917 049,00	64 982,00	54 448,00
12	AC «Transneft»	884 337,00	242 167,00	191 805,00
Total sales volume of 12 companies:		29 117 215, 400		
13	AFC«System»	704 551,00	-50 090,00 (announced losses)	-66 528,00 (announced losses)
14	PJSC «Tarneft»	681 159,00	163 538,00	123 892,00
15	SC «Megapolis»	676 965,00	18 115,00	14 486,00
16	«Evraz» (Evraz Group)	631 786,80	67 397,60	44 289,90
17	NLMK2 Group	587 321,90	106 377,30	84 728,40
18	PJSC «NovaTAK»	583 186,00	200 839,00	166 470,00
Total sales volume of 18 companies:		32 982 185, 100		

Compiled by the author on the materials: [11; 13]

The top ten companies of the rating coincided with the top ten last year (table. 3, 4), increasing the total volume of sales by 2 trillion. 702 billion 746 million 800 thousand rubles (table. 3) up to 29 trillion. 117 billion 215 million 400 thousand rubles. Five leading companies – Gazprom, LUKoil, Rosneft, Sberbank of Russia, and

Russian Railways-remained at the same positions in the rating as last year. VTB group moved from the 6th place to the 7th, claiming 31 billion 700 million rubles of loss (table. 5). Two positions down (from 7 th to 9th) moved and the retail network “Magnet”, having increased the sales volume by 68 billion 502 million 800 thousand rubles., the Leading multi-format Russian food retailer X5 Retail Group has strengthened its position, rising just two points from eighth to sixth place. Also, one position up rose oil and gas company PJSC “Surgutneftegaz”.

Table 4

**First ten national business companies on the sales volume of products in mln rubles  
on the account of 2017 year**

№ in rating	Business company	Sales volume (mln RUB)	Profit before taxation (mln RUB)	Net profit (mln RUB)
1	PJSC «Gazprom»	6 071 793,00	1 285 138,00	997 104,00
2	PJSC Lukoil Oil Company	4 743 732,00	272 515,00	207 642,00
3	PJSC «Rosneft»	4 134 000,00	317 000,00	201 000,00
4	Sberbank of Russia	2 835 300,00	677 500,00	541 900,00
5	OJSC «Russian Railways»	1 577 465,00	43 621,00	6 500,00
6	VTB Group	1 217 500,00	65 500,00	51 600,00
7	Retail Network «Magnet»	1 074 811,60	68 780,00	54 409,00
8	X5 Retail Group	1 033 667,00	249 985,00	22 291,00
9	PJSC «Surgutneftegaz»	1 020 833,00	-72 197,00 (announced losses)	-62 033,00 (announced losses)
10	PJSC «Russian networks»	903 981,00	119 842,00	98 341,00
Total sales volume:		24 613 082, 600		

Compiled by the author on the materials: [14]

All the top lines of the rating are occupied by companies, that clearly indicate, that the structure of the Russian economy is dominated by resource companies (Gazprom, Lukoil Oil Company, Rosneft, Surgutneftegaz); companies engaged in logistics and the export of material resources (OJSC “Russian Railways”, Transneft); food and related small-scale wholesale and retail goods (X5 Retail Group, Retail Network “Magnet”), as well as financial structures providing these processes (Sberbank of Russia, VTB Group) and energy network operators (PJSC “Russian Networks”).

Table 5

**Rating change on accounts of 2017 and 2018 years**

Dynamics in rating points	Business company	№ in rating 2018	№ in rating 2017	Disparity of sales volume (mln RUB)
-	PJSC «Gazprom»	1	1	452 918,00
-	PJSC «LUKoil»	2	2	731 448,00
-	PJSC «Rosneft»	3	3	896 000,00
-	Sberbank of Russia	4	4	5 600,00
-	OJSC «Russian Railways»	5	5	120 088,00
↑ at 2	X5 Retail Group	6	8	261 341,00
↓ at 1	VTB Group	7	6	-31 700,00 (reduction)

End of table 5

Dynamics in rating points	Business company	№ in rating 2018	№ in rating 2017	Disparity of sales volume (mln RUB)
↑ at 1	PJSC «Surgutneftegaz»	8	9	154 186,00
↓ at 2	Retail Network «Magnet»	9	7	68 502,80
-	PJSC «Russian Networks»	10	10	44 363,00
Total disparity of sales volume:		2 702 746, 800		

Compiled by the author on the materials: [11; 13; 14]

The rest of the companies from the 12th to 29th place of the rating are somehow connected with the transformation of material resources, retail and financial services (for example, Sistema – 13th place, Megapolis – 15th place, Severstal – 23rd place, Magnitogorsk iron and steel works – 26th place and so on).

And only on the 84th place of the rating there is a purely IT-company – the National Computer Corporation with a sales volume of 161 billion 271 million 100 thousand rubles (table. 6), which is only 2.4 % of the sales volume of PJSC Gazprom. Further, with a substantial lead is an IT company SC LANIT at the 122nd place. In addition to the noted in the past analytical material [5] ten companies included in the segment of “Information technology”, for the first time the rating includes two IT-companies: Holding ITG (317 place) and “SAP SE SIC” (381 place).

Table 6

**Business companies, which are included in the segment “Information technologies” of rating in 2018 year**

№ in rating 2018	№ in rating 2017	Dynamics in rating points	Business company	Sales volume (mln RUB)
84	89	↑ at 5	National Computer Corporation	161 271,10
122	125	↑ at 3	SC LANIT	118 094,90
150	165	↑ at 15	«Yandex»	94 054,00
243	275	↑ at 32	Mail.ru group	51 744,00
253	265	↑ at 12	Softline	48 387,50
271	348	↑ at 77	Google	45 220,00
282	251	↓ at 31	SC «Technoserv»	43 064,90
287	For the first time in rating		1C	42 700,00
296	For the first time in rating		«Kaspersky Lab»	40 730,30
302	318	↑ at 16	SC Vervysell	40 117,00
317	For the first time in rating		Holding ITG	38 236,00
381	For the first time in rating		«SAP SE SIC»	32 004,00
Total by rating 2018:			755 623 700	
Total by rating 2017:			504 605 900	
Increase in sales volume:			251 017 800	

Compiled by the author on the materials: [11; 13; 14]

The increase in sales volume in the group of Russian IT companies compared to the rating of last year amounted to 251 billion 017 million 800 thousand rubles. Compared with the 12 first companies in the rating (table. 3) it is less than one percent – 0.86%. It should be noted a very small strengthening of the position of companies



in the segment of “Telecommunications and Communications” (table. 7). At the declared losses of 5 billion 500 million rubles the Russian Telecommunications Company “Tele2 Russia” (founded by the Swedish group of companies Tele2 AB on the basis of integration of Russian mobile assets and networks) moved one point up to the 119th position. For the first time in the rating entered the Telecom operator “Dom.ru” (JSC “ER-Telecom holding”), which allowed to increase the volume of sales in the group “Telecommunications and Communications” to 114 billion 573 million 400 thousand rubles compared to last year's data (table. 7).

If we compare the volume of sales in 32 trillion 982 billion 185 million 100 thousand rubles of the 18 first in the rating of national companies (table. 3) with a total sales volume of 2 trillion 110 billion 424 million 700 thousand rubles segment “Information Technology” and “Telecommunications and Communications”, it will be almost 6.4 %.

Table 7

**Business companies, which are included in the segment “Telecommunications and communications” of rating in 2018 year**

№ in rating 2018	№ in rating 2017	Dynamics in rating points	Business company	Sales volume (mln RUB)
30	35	↑ at 5	SC «Megafon»	373 297,00
35	30	↓ at 5	«Vimpelcom»	341 422,00
39	40	↑ at 1	PJSC of Intercity and International Electric Communication «Rostelecom»	305 329,00
74	73	↓ at 1	«Mail of Russia»	178 053,00
119	120	↑ at 1	«Tele2 Russia» (announced losses in 5 500,00 mln. RUB)	123 000,00
364	For the first time in rating		Telecom-Provider «Dom.ru» (JSC «ER-telecom Holding»)	33 700,00
Total by rating 2018:			1 354 801, 000	
Total by rating 2017:			1 240 227, 600	
Increase in sales volume:			114 573, 400	

*Compiled by the author on the materials: [11; 13; 14]*

With regard to the services<sup>6</sup> provided by the banking sector, it is difficult to identify the part, that could be attributed to information or telecommunications technologies. However, there is no doubt that the banking sector offers mainly services not related to the processing of material resources or their extraction. Therefore, these services can be attributed to the sphere of digitalization of the economy. Total sales volume of 26 banks and banking groups included in the rating (table. 8), amounted to 6 trillion. 580 billion 51 million 500 thousand rubles [11, 13, 14] (more than 4 billion rubles. there are only two giants of this group – Sberbank of Russia and VTB Group), which in total sales with the segments “Telecommunications and Communications” and “Information Technology” (8 trillion. 690 billion 476 million 200 thousand rubles) will give 31.8 % of the total sales of the 10 largest companies in Russia.

Announced losses 6 of 26 banks in the ranking: Rosselkhozbank, Bank "Otkrytie", Bank Group “Binbank”, Promsvyazbank, Moscow Industrial Bank, Banking Group “Zenit”. General losses (table. 8 – column “Net profit”) in this segment amounted to 866 billion 008 million 200 thousand rubles. Such a large amount was formed by the losses of only two banks: Bank Otkrytie in connection with the decision of the Central Bank of the Russian Federation (Bank of Russia) “On measures to improve the financial stability of PJSC Bank Otkrytie financial

Corporation” [8] and Promsvyazbank in connection with the decision of the Bank of Russia “On the implementation of measures to improve the financial stability of PJSC “Promsvyazbank” [9]. The remaining 4 banks claimed losses of less than 4% of this amount.

Table 8

**Business companies, which are included in the segment “Banks” of rating in 2018**

№ in rating	Business company	Sales volume (mln RUB)	Profit before taxation (mln RUB)	Net profit (mln RUB)
4	Sberbank of Russia	2 840 900,00	943 200,00	748 700,00
7	VTB Group	1 185 800,00	159 700,00	120 100,00
28	“Gazprombank” Group	392 479,00	43 165,00	33 822,00
48	“Alpha-Bank” Group	258 335,10	68 086,30	54 964,60
49	Rosselkhozbank	258 227,00	-14 635,00	-19 479,00
62	Bank “Otkrytie”	219 338,00	-432 941,00	-426 750,00
102	Moscow Credit Bank	142 469,00	26 817,00	20 703,00
114	Bank Group “Binbank”	126 223,00	-5 752,00	-8 848,00
120	Promsvyazbank	122 563,00	-395 890,00	-405 551,00
125	Unicredit Bank	116 225,60	22 713,80	18 056,70
126	Raiffeisenbank	115 110,90	37 000,40	29 143,00
148	Rosbank	94 838,00	14 038,00	10 396,00
158	Sovcombank	89 005,00	36 659,00	29 571,00
183	TKS Bank	74 588,00	23 761,00	18 743,00
200	Joint-Stock Bank “Russia”	68 924,00	6 352,00	3 880,00
225	Home Credit and Finance Bank	60 033,00	17 841,00	14 245,00
238	Bank “Saint-Petersburg”	53 777,00	9 355,30	7 491,10
249	Bank Uralsib	48 684,10	5 223,00	4 163,70
250	SMP Bank	48 671,70	1 682,20	1 089,20
263	Bank Russian Standard	46 957,00	3 559,00	2 412,00
280	CB “Vostochnyi”	43 362,50	5 354,40	4 380,10
292	Citybank	41 953,60	17 770,70	12 754,80
343	Ural Bank for Reconstruction and Development	35 812,60	9 739,00	8 364,00
360	«Ak Bars»	34 032,40	8 690,80	7 278,50
387	Moscow Industrial Bank	31 420,20	-3 906,90	-3 908,10
399	Bank Group “Zenit”	30 321,80	-564,9	-1 472,10
Total sales volume of 26 banks:		6 580 051, 500		

Compiled by the author on the materials: [11; 12]

Although the first three companies in the rating of PJSC “Gazprom”, “LUKoil” and “Rosneft” are directly associated only with the production of oil and gas, one cannot argue, that they have no significant and expensive processes of digitalization. As with the banking sector, it is quite difficult to allocate the share of internal costs in the amount of resources (cash and human) aimed at the creation and implementation of digital infrastructure, in addition, these companies invest significant funds in research and development work, which can also be attributed to the creation of intangible digital products, which are now embedded in the chain of added value of exported goods, even the most low technological redistributions. Thus, the study shows that almost 32% of the sales volume (34 % according to the analysis of last year's rating [5]) of domestic companies can be attributed



to the digital economy, which in turn allows us to notify about a systematic and sustainable movement towards the transformation of the raw export-oriented “real” economy of Russia into the economy, the basis of which are the processes directly related to the creation, transformation, transfer and storage of intangible digital entities.

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