

The Hundred Largest Employers in the Russian Empire, circa 1913

The article analyzes a list of the hundred largest private and state-owned employers in the Russian Empire in 1913. It explains the validity of sources underlying the data and contributes to the methodological debates concerning the interpretation of such lists. It examines the geographical and sectoral distribution as well as the ownership structure of the largest Russian employers in a comparative context, using lists from Germany and the United Kingdom. The annexed list contributes to a more representative dataset of large firms beyond western Europe and therefore adds to the discussion on the rise of big business.

Keywords: largest employers, big business, foreign entrepreneurship, business leadership, Russian Empire

Ranking large firms can be an important analytical tool for business historians. In the past, researchers have compared such lists in order to explain the success or failure of a company or an entire industry. Comparative national lists of the largest enterprises can illustrate the level of development of national economies. Analyzing such lists helps us to understand the role the state does play in creating and sustaining large firms. Global ranking lists are a means to analyze the relationship between business performance and economic development.

Since the late 1960s, business historians have been actively composing and using listings in their studies, including lists of the largest employers.¹ However, for the period just before World War I researchers

I thank the anonymous reviewers for their valuable comments and suggestions to improve the manuscript.

¹ See, for example, Christine Shaw, "The Large Manufacturing Employers of 1907," *Business History* 25, no. 1 (1983): 42–60; Martin Fiedler, "Die 100 größten Unternehmen in Deutschland—nach der Zahl ihrer Beschäftigten—1907, 1938, 1973 und 1995," *Zeitschrift für Unternehmensgeschichte* (1999): 32–66; Youssef Cassis, *Big Business: The European*

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still have at their disposal mostly lists of the companies operated in western Europe and North America. Consequently, our present knowledge about the history of big business and the emergence of modern enterprise during the Second Industrial Revolution is mostly based on studies of American and western European companies. If scholars conceptualize big business and its global effect, it should be based on a more representative dataset; otherwise, their results only apply to the western part of the world. Adding a new dataset on business performance outside of North America and western Europe can contribute to a better understanding of Western business history as well, since many large companies founded by American and western European entrepreneurs operated in eastern Europe, Asia, Africa, and South America.

The aim of this study is to compile the hundred largest employers in the Russian Empire in 1913 in a list that can contribute to existing rankings of large companies.² A study of significant employers in Russia (the largest European country by territory, with one of the largest economies) will allow a more representative analysis of large businesses at the beginning of the twentieth century. One of the most popular ways to measure the size of a company is by calculating the number of its employees. Since large employers are not necessarily equal to the largest enterprises, it is also possible to rank total assets, revenues, market capitalization, and nominal capital. As Howard Gospel and Martin Fiedler point out, measurement by employment favors labor-intensive firms and industries

Experience in the Twentieth Century (Oxford, 1999); Peter Wardley, "The Emergence of Big Business: The Largest Corporate Employers of Labour in the United Kingdom, Germany and the United States c. 1907," *Business History* 41, no. 4 (1999): 88–116; Howard Gospel and Martin Fiedler, "The Long-Run Dynamics of Big Firms: The 100 Largest Employers from the United States, United Kingdom, Germany, France, and Japan, 1907–2002," in *The Third Industrial Revolution in Global Business*, ed. Giovanni Dosi and Louis Galambos (Cambridge, Mass., 2013).

² Scholars have identified some of the largest employers in the late Russian Empire only in certain regions (Robert B. McKean, *St. Petersburg between the Revolutions: Workers and Revolutionaries, June 1907–February 1917* [New Haven, 1990]) or economic sectors (Peter Gatrell, *Government, Industry and Rearmament in Russia, 1900–1914: The Last Argument of Tsarism* [New York, 1994]; Leonid I. Borodkin et al., "*Ne rublem edinyim*": *Trudovye stimuly rabochikh-tekstil'shchikov dorevoliutsionnoi Rossii* [Labor incentives of textile workers in pre-revolutionary Russia] [Moscow, 2010]). Probably the first attempt to compile a list of the largest Russian employers is Peter Wardley, "A Global Assessment of the Large Enterprise on the Eve of the First World War: Corporate size and performance in 1912." Paper presented at the Workshop on Global Stock Markets in the Twentieth, Faculty of Economics, University of Tokyo, 25 July 2006, <http://www.computer-services.e.u-tokyo.ac.jp/p/sousei/Wardley1.pdf>, in which Wardley defines the seven largest Russian employers ca. 1912. Volodymyr Kulikov and Martin Kragh's "Big Business in the Russian Empire: A European Perspective," (*Business History* [advance online publication 5 Oct. 2017], <http://dx.doi.org/10.1080/00076791.2017.1374369>) presents an inventory of the largest private and public companies in the Russian Empire according to the criteria set up in Cassis, *Big Business*, based on ordinary capital and employment. These include thirty-two firms that employed more than 10,000 people.

that, at the same time, may not be asset-rich or have high market valuations.³ However, combined with other criteria showing the company's financial performance, number of employees can be used to measure a company's size. In addition, since the largest employers concentrated a large amount of the labor force, the present analysis can also be useful for studying labor markets and labor relations.

Compiling a list of the largest employers requires solving a number of methodological questions concerning the source validity, which is an important prerequisite for proper interpretation. A discussion between David Jeremy, Douglas Farnie, and Peter Wardley uncovered some methodological issues in lists they had compiled of the largest employers in the United Kingdom at the beginning of the twentieth century, such as those connected to the range and impact of cyclical and seasonal variations of the workforce, the impact of casual and part-time labor, and the problem of mergers and acquisitions.⁴ Based on sources from the Russian Empire, this study will corroborate the arguments that are adduced in the historiography.

Finally, lists of the largest firms can offer a better understanding of business processes when put into a comparative contextual analysis. This article demonstrates that the largest employers in Russia were comparable in size with those in Germany and the United Kingdom. Therefore, it is necessary to incorporate the largest firms operating in Russia into analyses of big businesses in Europe in order to have a more representative dataset.

The List

The hundred largest employers in the Russian Empire in 1913 are ranked in the appendix. The list includes the name of each firm, number of employees, type of ownership, major economic sector of activity, the associated International Standard Industrial Classification codes, and geographical location of its major economic activity.⁵ This list includes companies of all economic activities apart from public administration, agriculture, armed forces, education, human health, and social work.⁶ It covers the entire territory of the Russian Empire in 1913,

³ Gospel and Fiedler, "Long-Run Dynamics," 71.

⁴ David J. Jeremy and Douglas A. Farnie, "The Ranking of Firms, the Counting of Employees, and the Classification of Data: A Cautionary Note," *Business History* 43, no. 3 (2001): 105–18; Peter Wardley, "Debate – On the Ranking of Firms: A Response to Jeremy and Farnie," *Business History* 43, no. 3 (2001): 119–34.

⁵ United Nations, *International Standard Industrial Classification of All Economic Activities (ISIC), Rev.4* (New York, 2008).

⁶ The manufacturing enterprises owned by the mining department, the ministry of the navy, the main artillery department, and the Crown land office are included in the present list.

including the Kingdom of Poland, but it excludes the Grand Duchy of Finland.⁷

Each company among the top hundred employers in the Russian Empire circa 1913 employed at least 5,200 people; the median value is 12,450. Some employers smaller than the hundred largest were nonetheless very big companies. Overall, more than 135 enterprises that operated in Russia employed at least 4,000 individuals. The hundred largest enterprises employed a total of 1,689,918, that is, 1 percent of the entire population of the Russian Empire (without Finland).⁸

Regarding the regional distribution of these firms, the largest employers in Russia can be characterized as provincially orientated. Although Saint Petersburg and Moscow accounted for more than half the total corporate headquarters, the absolute majority of the hundred largest employers operated in a Russian city different from where their headquarters were located.⁹ Saint Petersburg, situated in the North of Russia, hosted a few large enterprises, such as the Putilov Works Co., with 13,513 workers; the Russian-American Rubber Company, with 11,100 workers; and some state-owned weapon manufacturers. As Table 1 shows, around 60 percent of the largest employers and number of employees originated from the Central, Southern, and Volga-Ural regions.¹⁰ These were regions where either mineral resources (Donets Basin and Ural) or labor (Moscow region) were concentrated.

Table 2 shows that in 1913 it was still those industrial sectors that had emerged in the First Industrial Revolution and were largely powered by steam that dominated. Textiles, transportation, and heavy industry altogether accounted for more than 90 percent of the largest employers by personnel. Nonetheless, at this point there were already a few firms whose primary activity related to sectors that emerged during the Second Industrial Revolution, such as petroleum refining and rubber manufacturing.

Table 3 shows that the absolute majority of Russia's largest employers were private and public companies. Incorporated joint-stock companies and partnerships with their headquarters in Russia, along with three

⁷ Finland enjoyed a high degree of autonomy until its independence in 1917. In most cases, imperial statistical publications did not include this territory in their observations.

⁸ By January 1913, the entire population of the Russian Empire had reached 170,902,900 or 174,099,600 together with the Finnish provinces. Source: TsSK MVD, *Statisticheskii ezhegodnik Rossii za 1913 god (god desiatyi)* [Statistical Yearbook of Russia, 1913] (Saint Petersburg, 1915), 58.

⁹ Thomas C. Owen, *Russian Corporate Capitalism from Peter the Great to Perestroika* (Oxford, 1995), 9.

¹⁰ Local distribution is specified according to Thomas Owen's classification used in the RUSCORP database. *Codebook for RUSCORP: A Database of Corporations in the Russian Empire, 1700–1914* (Ann Arbor, 1992), 68–109.

Table 1
Regional Distribution of the Hundred Largest Employers in the Russian Empire, ca. 1913

<i>Region</i>	<i>Employers</i>	<i>Employees (thousands)</i>	<i>Employees (%)</i>
Center	35	410.0	24.3
South	18	373.2	22.1
Volga-Ural	14	218.7	12.9
North	7	105.6	6.2
Poland	7	86.3	5.1
West	6	134.6	8.0
Entire Empire	4	174.2	10.3
Caucasus	3	67.9	4.0
Siberia	2	61.1	3.6
Baltic	2	23.4	1.4
Central Asia	2	35.0	2.1
Total	100	1,689.9	100.0

Source: Appendix.

Table 2
Sectoral Composition of the Hundred Largest Employers in the Russian Empire, ca. 1913

<i>Economic activity</i>	<i>Employers</i>	<i>Employees (thousands)</i>	<i>Employees (%)</i>
Textiles	32	274.2	16.2
Transport & communication	29	878.5	52.0
Metals & mining	22	267.4	15.8
Mechanical engineering	5	76.1	4.5
Food & beverages	4	75.6	4.5
Shipbuilding	3	37.5	2.2
Brick, pottery, glass	1	17.0	1.0
Leather	1	7.0	0.4
Petroleum refining	1	12.5	0.7
Rubber	1	11.1	0.7
Retail sales	1	33.0	2.0
Total	100	1,689.9	100.0

Source: Appendix.

freestanding corporations headquartered in London and Paris, aggregated 69 percent of the companies on the list. However, twenty-eight state-owned enterprises in the list of the hundred largest companies employed almost half of the entire workforce. Eight of the ten largest Russian

Table 3
Ownership Distribution of the Hundred Largest Employers in
the Russian Empire, ca. 1913

<i>Ownership</i>	<i>Employers</i>	<i>Employees (thousands)</i>	<i>Employees (%)</i>
Share partnerships	34	307.2	18.2
Joint-stock companies	32	515.5	30.5
State-owned companies	28	807.1	47.8
Foreign companies	3	37.0	2.2
Private unincorporated	3	23.1	1.4
Total	100	1,689.9	100.0

Source: Appendix.

employers were state-owned companies. By comparison, only one state-owned enterprise was among the ten largest employers in the United Kingdom, while in Germany, five out of ten were state owned in 1912. According to data collected by Peter Wardley, in the same year forty of the hundred largest employers in the world were state-owned companies.¹¹ State-owned enterprises were the only contributions to the global list from many countries all over the world. Therefore, comparison with other countries shows that the significant number of state-owned enterprises among the largest employers was not a phenomenon exclusive to Russia.¹²

The Russian government concentrated its entrepreneurial interests in particular sectors, mostly those with a direct military relevance. Aside from railways, the postal service, and weapon manufacturers, the only other state-owned companies traded alcoholic beverages (which was a state monopoly) and operated a few metallurgy enterprises in the Ural region. It seems that the Russian government was ready to leave all sectors to private entrepreneurial initiative except for those of armament and transportation. This approach characterized many other European countries as well.

Sources and Methods

There is no source that would contain data on the workforce of all significant companies in the Late Russian Empire, only on individual

¹¹ Wardley, "Global Assessment."

¹² This opens a new perspective in the old discussion about the "deviant" character of the Russian model of economic development. As Alexander Gerschenkron noted, much of Russian economic history "has been written with the 'norm' of the English development in mind." Gerschenkron, "An Economic History of Russia," *Journal of Economic History* 12, no. 2 (1952): 146. The global perspective can probably show that the Russian model was not unique as has sometimes been claimed.

firms or smaller groups of them.¹³ Therefore, data for this list were collected from different reference materials published by governmental departments and public organizations. Additional information was gleaned from industrial and business histories and company records, as well as with the help of archivists and curators of corporate museums.

The basic source underlying the data is the list of manufacturing enterprises in a volume entitled *The Factories in the Russian Empire* published in 1914 (hereafter, *List of Factories 1914*) by the Association of Industry and Trade, a representative organization of Russian businesspeople.¹⁴ It includes information on the enterprises that operated in mining and quarrying, manufacturing, and utilities.¹⁵ The compilers of the *List of Factories 1914* and of other similar lists (see Table 4) collected information by sending questionnaires to the owners of the enterprises.¹⁶

The *List of Factories 1914* and other published factory lists each failed to take into account some Russian manufacturing enterprises of various sizes. The omissions, however, mainly concern small-scale enterprises that are not critical for this study. The editors of the *List of Factories 1914* assured readers that they had checked all of the most relevant information directories previously published as well as lists of enterprises in order to avoid omissions.¹⁷

One of the most problematic aspects regarding published information on a firm's workforce is that individual establishments with the same owner were included separately in the lists of enterprises published by the government or business organizations. For example, one of the largest Russian employers, the Briansk Rail and Machinery Company, incorporated nine enterprises, including machinery and metallurgy plants, coal and iron ore mines, lumber, and brick factories in five different provinces of the Russian Empire. Since a firm could have more than one operational unit, data about companies and their business units were organized into a relational database for this research. The database consists of two tables: the one with data on the companies related via a one-to-many relationship to the one containing information on specific operational units such as location, primary economic activity, and number of employees. With the help of this structure, the analysis

¹³ For example, the mining department published statistics on the main mining companies in Russia in 1911, including the number of workers. See *Sbornik statisticheskikh svedenii o gornozavodskoi promyshlennosti Rossii v 1911 godu* (Petrograd, 1918).

¹⁴ Dmitrii R. Kandaurov, *Fabrichno-zavodskie predpriiatia Rossiiskoi imperii (iskliuchaia Finliandiiu)* [The industrial enterprises of the Russian Empire] (Petrograd, 1914).

¹⁵ Codes 05–39, 49, and 53 according to the UN International Standard Industrial Classification of All Economic Activities.

¹⁶ Kandaurov, *Fabrichno-zavodskie predpriiatia*, 1.

¹⁷ *Ibid.*, 10.

Table 4
Published Lists of Manufacturing Enterprises in the Russian Empire, Early Twentieth Century

<i>Year of survey/ publication</i>	<i>Title</i>	<i>Institution conducting survey (editor)</i>	<i>Method</i>	<i>Number of operational establishments observed</i>
1900–02/1903	List of Factories and Plants in European Russia	Ministry of Finance; Department of Trade and Manufacture(Vasilii Varzar)	industrial census & survey via factory inspection	15,677
1908/1912	List of Factories and Plants in the Russian Empire	Ministry of Trade and Industry(Vasilii Varzar)	industrial census & survey via factory inspection	20,046
1909/1910	List of Factories and Plants in Russia	Ministry of Trade and Industry; Mining Ministry; Taxation Ministry(“Torgovo-Promyshlennaia Gazeta” & “Vestnik finansov”)	survey	32,082
1909/1909	Factories and Plants of the Russian Empire	Association of Representatives of Industry and Trade(Leon Ezioranskii)	survey	18,855
1914/1914	Factories and Plants of the Russian Empire, 2nd ed.	Association of Industry and Trade(Dmitrii Kandaurov & Son)	survey	25,658

Sources: Vasilii E. Varzar, *Spisok fabrik i zavodov Evropeiskoi Rossii* [List of Factories and Plants in European Russia in 1900–1902] (Saint Petersburg, 1903); Vasilii E. Varzar, *Spisok fabrik i zavodov Rossiiskoi imperii* [List of Factories and Plants of the Russian Empire in 1908] (Saint Petersburg, 1912); *Spisok fabrik i zavodov Rossii. 1910 god* [List of Factories and Plants in Russia in 1910] (Moscow, 1910); Leon K. Ezioranskii, *Fabrichno-zavodskie predpriiatiia Rossiiskoi imperii* [The Industrial Enterprises of the Russian Empire in 1909] (Saint Petersburg, 1909); Dmitrii R. Kandaurov, *Fabrichno-zavodskie predpriiatiia Rossiiskoi imperii (iskliuchaia Finliandiiu)* [The industrial enterprises of the Russian Empire] (Petrograd, 1914).

could be built on the total number of all operational units belonging to a company.

The database was filled in a number of steps. The list of incorporated firms was taken from the RUSCORP database.¹⁸ To it was added all operational units with at least 1,000 employees. At this stage, fifty state-owned and private unincorporated firms were added to the list of companies. Next, all other smaller operational units of the same firm were added to the already filled large units. Then the index was checked, and all remaining firms with at least four operational units were included in the database. This algorithm ensured that all companies with at least 4,000 employees appeared. Nevertheless, in order to ensure complete coverage, all establishments employing over 2,000 workers in all of the factory lists mentioned in Table 4 have been double-checked.

Information on the railway companies was extracted from the statistical digest published by the ministry of transport of the Russian Empire; this provided information on the workforce of state-owned and private railroad companies from 1913.¹⁹ The 1913 statistics of employees in the branches of the main department of the Posts and Telegraphs was taken from the statistical yearbook published by the ministry of internal affairs.²⁰ Workforce numbers for other state-owned manufacturing enterprises were specified in the official reports and statistical yearbooks issued by their respective departments.

The top one hundred list includes the state-owned Post Office, railroads, and the state-owned company trading alcoholic beverages (*kazennye vinnye sklady*), but excludes state-owned financial, health care, and educational institutions so as to make the list of the largest Russian employers comparable to preexisting published lists. However, in addition to those presented in the appendix, some further government departments also employed a huge number of people. The Russian Armed Forces under the control of the ministry of war totaled 1.3 million in 1912.²¹ In 1914, the naval ministry managed a total of 55,744

¹⁸ Thomas C. Owen, *RUSCORP: A Database of Corporations in the Russian Empire, 1700–1914*, 3rd ICPSR release, Baton Rouge, LA, 1992 [Producer]. Ann Arbor, Mich.: Inter-university Consortium for Political and Social Research [distributor], 1993, <https://doi.org/10.3886/ICPSR09142.v3>.

¹⁹ A. A. Brandt, V. E. Kuvichinskii, and L. E. Lebedev, *Statisticheskii sbornik Min-va putei soobshcheniia. Vyp. 141: zheleznye dorogi v 1913 g. Chast' 3: Finansovoe sostoianie. Ekspluatatsiia. Chislo i sodержanie sluzhashchikh i rabochikh* [Statistical Yearbook for 1913 published by the Ministry of Railways] (Petrograd, 1917).

²⁰ TsSK MVD, *Statisticheskii ezhegodnik Rossii za 1914 god (god odinnadtsatyi)* [Statistical yearbook of Russia, 1914] (Petrograd, 1915), sec. 11, 95.

²¹ Andrei M. Anfimov and Avenir P. Korelin, *Rossiiia, 1913 god: statistiko-dokumental'nyi spravochnik* [Russia, 1913: A statistical handbook] (Saint Petersburg, 1995).

officers and lower ranks.²² Over 82,000 medical staff worked in 7,860 hospitals in 1911.²³ This top one hundred list does not cover the agriculture sector, either, which also could include large employers. There were probably some large employers among water transport companies and docks that have been omitted in this study.

The accuracy of the number of employees in the sources has been one of the main concerns of researchers. All previously published lists of factories have been based on information provided by company owners or factory administration. Surveys conducted by state departments involved factory and mining inspectors; their role, however, was mostly to assist the interviewees and to repeat requests to the administrators of the operational units in cases of obvious errors and omissions.²⁴ Therefore, it is difficult to estimate the accuracy of workforce numbers as well as other technical indicators of the enterprises delivered by the company management or enterprise administration during the survey. The law obliged managers to keep their lists of workers updated, and therefore managers knew precisely how many workers they employed.²⁵ However, employers sometimes did not have actual information on the exact number of their part-time workers.

Variations in the timing of the collection of employment data as well as the different approaches toward counting part-time labor resulted in a wide variation of numbers in workforce statistics. The labor market was unstable in the Late Russian Empire, experiencing significant annual and seasonal fluctuations. For example, in 1914 an average of 185,823 miners worked at coal mines in the Donbas, the main coal- and iron-producing region of the country. However, within the same year, the number fluctuated between 215,460 (in January) and 137,460 (in July).²⁶ While the index of maximum variation of the workforce in mining and quarries in the United Kingdom was 103.7 percent in 1907, in the Donbas mining industry it was 118.2 percent in the same year, with an average of 133.4 from 1900 to 1914.²⁷

²² Morskoe ministerstvo, *Vsepoddaneishii otchet po Morskomu ministerstvu za 1914 god* [Report of the Russian Ministry of the Navy, 1914] (Petrograd, 1915), 8, 19.

²³ TsSK MVD, *Statisticheskii ezhegodnik 1914*, sec. 3, 5–6.

²⁴ *Massovye istochniki po sotsial'no-ekonomicheskoi istorii Rossii perioda kapitalizma*, [Mass sources on the socio-economic history of Russia during the period of capitalism] (Moscow, 1979), 54.

²⁵ Mikhail S. Balabanov, *Fabrichnye zakony: Sb. zakonov, rasporyazhenii i raz"iasnenii po vopr. rus. fabrich. zakonodatel'stva* [The factory laws] (Kiev, 1905), 32.

²⁶ Nikolai F. fon Ditmar, *Kamennougol'naia promyshlennost' v Rossii v 1914 g. № 1: Ezhe-mesiachnaia statistika* [Coal industry in Russia in 1914] (Kharkov, 1914), 2–5.

²⁷ Index of Maximum Variation: Maximum reported employment as a percentage of minimum reported employment. Data for the United Kingdom from Wardley, "Debate," 123; data for the Donbas in Tamara F. Izmest'eva, "Sezonnyi trud. Istochniki, priemy analiza, rezul'taty," [Seasonal labor: Sources, analytical methods, results] in *Istoricheskaia*

Annual fluctuation in the workforce is partly due to the different approaches applied when calculating part-time and auxiliary labor. In some cases, contemporary statisticians excluded auxiliary (*vspomogatel'nye*) workers from the total workforce, while others included them in the total number of workers. Since auxiliary workers were an essential part of the entire labor force, their inclusion or exclusion could sufficiently impact the total. Statistics from the ministry of transportation indicate that 37 percent of workers of the private and state-owned railroad companies were part-time and/or casual workers in 1913.²⁸ The same proportion of auxiliary workers (37 percent) was noted by statisticians of the mining department at enterprises located in the Ural region in 1907.²⁹ However, this does not mean that they were all part-time employees. In most cases, auxiliary work was a term used by statisticians for workers operating in fuel procurement, loading, and building.³⁰

If managers did know the workforce numbers, whether they told the truth in the records is another question. Since sharing such information about their enterprises in public was optional, not obligatory, there is no reason to suspect the owners or managers of misstating the data in the provided materials. In cases where archival company records contain information about the company workforce and can therefore allow comparison with the *List of Factories 1914*, the comparative analysis does not show a significant difference in these numbers. Overall, although this source of data is still imperfect, the *List of Factories 1914* offers the most complete comprehensive compendium of information about employers in Russia in the early twentieth century.

That being said, use of this source requires that several methodological issues be solved first. For instance, how can one deal with the monopolistic associations between large companies and the code-diversified economic activities among them? From the late nineteenth century, due to the processes of cartelization and monopolization typical in all industrialized economies, large companies consolidated into business groups, interfirm networks, and cartels. Should subsidiaries be included in the list separately or should they be consolidated with the parent firm? Christine Shaw, Martin Fiedler, and Howard Gospel, when creating the list of the largest British and German employers, counted a subsidiary as

informatika. Informatsionnye tekhnologii i matematicheskie metody v istoricheskikh issledovaniakh i obrazovanii, no. 2 (2013): 77–78.

²⁸ Brandt et al., *Statisticheskii sbornik*, table 12.

²⁹ Gornyi departament, *Otchet Gornogo departamenta za 1906 i 1907 gody* [Report of the Mining Department for 1906 and 1907] (Saint Petersburg, 1909), 118.

³⁰ Tat'iana K. Gus'kova, *Nizhnetagil'skii gornozavodskii okrug Demidovykh vo vtoroi polovine XIX – nachale XX v. Zavody. Rabochie: Monografiia* [Nizhny Tagil Gornozavodsky District of Demidovs' in the second half of the nineteenth – early twentieth century: Factories, workers] (Nizhnii Tagil, 2007), 5.

part of the parent firm if the latter held more than 50 percent of the voting capital.³¹ Nonetheless, it is extremely difficult in the Russian case to define the owner of shares since shares were often not registered but were in the anonymous bearer form.³² Estimates for the allocation of stocks among all large companies would require a special study. Therefore, the top one hundred list includes state departments and firms authorized by the Russian government to act as a single entity despite the level of dependency on the parent company. Subsidiaries of multinational corporations such as the Singer Company, registered in Russia in 1897 by the American Singer Manufacturing Company, will be considered as a separate firm as well.³³ Three freestanding companies (the British-owned New Russia Company Ltd. and two French-owned companies, the Russian Mining and Metallurgy Union Co. and the Krivoy Rog Iron Ore Co.) were included in the list because their prime operating assets were located in the Russian Empire.

The Singer Company can also be used to demonstrate the difficulties of defining the principal economic activity of some firms. In the scholarly literature, Singer is strongly associated with the manufacturing sector; however, the majority of Singer employees in the Russian Empire worked in the service sector. The Russian subsidiary employed 5,567 workers and administrators for its sewing machine factory in Podolsk (Moscow region) in 1914. In addition, its sales division—with its head office, three regional offices, and estimated 4,000 depots, stores, and shops—engaged a total of 27,439 people in Russia. Therefore, in the list of the hundred largest employers it appears under two separate codes: 475 (Retail sale of other household equipment in specialized stores) and 282 (Manufacture of special-purpose machinery). Another example, the British-owned New Russia Company, which operated in the Donbas region, employed 17,980 workers in 1913, including 9,935 miners and 8,045 factory workers.³⁴ It was coded 051 (Mining of hard coal) and 241 (Manufacture of basic iron and steel).

Railroads in Russia represent another difficult case. Many Russian railroads were registered as private businesses by 1913. However, the Russian government had guaranteed payment of interest and dividends on the securities of the private railroads. The railroad engineers for both

³¹ Shaw, "Large Manufacturing Employers," 46; Gospel and Fiedler, "Long-Run Dynamics," 72.

³² John P. McKay, *Pioneers for Profit: Foreign Entrepreneurship and Russian Industrialization, 1885–1913* (Chicago, 1970), 29.

³³ *Ustav Aktsionernogo Obshchestva Kompaniia Zinger vysochaishe utverzhden 13-go iunია 1897 goda* [Charter of a joint stock company Singer, approved 13 June 1897] (Saint Petersburg, 1909).

³⁴ Theodore H. Friedgut, *Iuzovka and Revolution*, vol. 1: *Life and Work in Russia's Donbas, 1869–1924* (Princeton, 1994), 52.

private and state-owned railroads were graduates of state education institutions. The board of directors for each private Russian railroad included a representative of the ministry of ways and communication. The government established railroad tariffs.³⁵ However, Russia was not unique in this respect. Youssef Cassis completely excluded railways from his analysis of European big business in the early twentieth century, explaining that they were “increasingly regulated” by the state.³⁶ Fiedler and Wardley each included both private and state-owned railroads in their lists of the largest employers in Germany and Britain, respectively.³⁷ Wardley combined the dates for the Russian state-owned railroad enterprises as a single entity when compiling the list of the world’s hundred largest employers of 1912.³⁸ Although the Russian state purchased many railroads from private businesses in the late nineteenth century, these railroads operated in a manner resembling that of separate companies in many respects. Therefore, they are listed in the appendix as separate employers.

Comparative Context

The lists published previously originate from various years around 1910, which allows a comparative analysis between the largest firms in Russia and firms in other countries. Fiedler and Gospel’s list of the hundred largest British and German firms measured by employment, from 1907 to 1911, was used for comparison here.³⁹ According to estimations by Jeremy and Farnie on the United Kingdom, data cited for 1907 might underestimate a firm’s 1913 position by as much as 10 or 15 percent.⁴⁰ Consequently, an international comparison would place Russian companies in a better position in the ranking than they would have held in 1907.

Table 5, with its descriptive statistics of the hundred largest companies, shows that the minimum number of employees for entry into the top one hundred was 4,000 for Germany, 5,000 for the United

³⁵ See Aleksandr S. Senin, *Zheleznodorozhnyi transport Rossii v epokhu vojn i revoliutsii (1914–1922 gg.)* [Railroads in Russia during wars and the Revolution, 1914–1922] (Moscow, 2009).

³⁶ Cassis, *Big Business*, 31.

³⁷ Fiedler, “Die 100 größten Unternehmen”; Wardley, “Emergence of Big Business.”

³⁸ Wardley, “Global Assessment.”

³⁹ Martin Fiedler and Howard Gospel, “The Top 100 Largest Employers in UK and Germany in the Twentieth Century. Data (ca. 1907, 1935/38, 1955/57, 1972/73, 1992/95),” *Cologne Economic History Paper*, no. 3 (2010): 1–67. Fiedler and Gospel took the data on the United Kingdom’s large employers mostly from Wardley, “Emergence of Big Business.” They corrected the number of employees in five cases, including the General Post Office, the largest employer (203,600 versus Wardley’s figure of 199,178).

⁴⁰ Jeremy and Farnie, “Ranking of Firms,” 108.

Table 5
Descriptive Statistics of Lists of the Hundred Largest Employers

<i>Statistic</i>	<i>Germany</i>	<i>U.K.</i>	<i>Russia</i>
mean	20,136	15,574	16,899
median	8,000	8,767	12,450
sum	2,013,613	1,557,408	1,689,918
minimum	4,000	5,000	5,213
maximum	486,318	203,600	80,010
lower quartile	5,079	6,297	7,018
upper quartile	12,293	15,611	19,236
coef. var.	285.6	148.7	81.4
skewness	6.9	6.0	2.0
kurtosis	50.6	45.0	4.6

Sources: For Russia, see appendix; data for Germany and United Kingdom adapted from Martin Fiedler and Howard Gospel, "The Top 100 Largest Employers in UK and Germany in the Twentieth Century," *Cologne Economic History Paper* no. 3 (2010): 1–67.

Kingdom, and 5,213 for Russia. The maximum company size was 486,318 employees for German firms, 203,600 for British firms, and 80,010 for Russian firms. The significant difference between mean and median, as well as high skewness and kurtosis coefficients in the case of Germany and the United Kingdom, indicates that values were distributed extremely steeply in these two countries. The distribution of Russian firms was moderately smooth compared with that of their western European counterparts. In other words, big employers in Russia were more similar to one another in size than were those in the United Kingdom and, especially, in Germany.

Railroads and heavy industry accounted for 91 percent of employers in Germany, 74 percent in the United Kingdom, and 60 percent in Russia. These industries especially favored new technologies that allowed firms to achieve scale and scope effect.⁴¹ Table 6 demonstrates that Russia's light industry had a significantly larger share than did German and British industries. Textile companies mostly contributed to the high share of the manufacturing sector. In Russia, the thirty-three largest textile companies employed 285,281 workers, or 17 percent of all workers among the hundred largest employers. In comparison, eight textile companies in the United Kingdom employed 103,980 workers, or 6.7 percent of the total top one hundred employers, while in Germany only one textile company, with 8,000 workers (0.4 percent), entered the top one hundred list.

⁴¹ See Alfred D. Chandler, "The Emergence of Managerial Capitalism," *Business History Review* 58, no. 4 (1984): 491.

Table 6
Sectoral Composition of Largest Employers in Germany, the United Kingdom, and Russia

<i>Sector</i>	<i>Germany</i>		<i>U.K.</i>		<i>Russia</i>	
	<i>Employers</i>	<i>Employees (%)</i>	<i>Employers</i>	<i>Employees (%)</i>	<i>Employers</i>	<i>Employees (%)</i>
Heavy industry	80	46.1	53	33.5	31	23.3
Light industry	5	1.6	10	7.7	35	18.3
Transport & communication	11	51.2	21	49.2	29	52.0
Food, beverages, tobacco	1	0.3	5	2.8	4	4.5
Trade & banking	1	0.2	8	5.0	1	2.0
Construction	2	0.6	1	0.5	0	0.0
Utilities	0	0.0	2	1.4	0	0.0
	100	100.0	100	100.0	100	100.0

Sources: For Russia, see appendix; data for Germany and United Kingdom adapted from Martin Fiedler and Howard Gospel, "The Top 100 Largest Employers in UK and Germany in the Twentieth Century," *Cologne Economic History Paper* no. 3 (2010): 1–67.

The outstanding share of textile companies in Russia compared to Germany and Britain can explain the smoother distribution of the hundred largest employers in the Russian Empire: the coefficient of variation of the textile employers was 51 percent; that of metallurgy and metalworking employers was 66 percent.

Manufacturers of nonmetallic mineral products such as brick, pottery, and glass were usually small scale in the Russian Empire. Therefore, the presence of Matvei Kuznetsov Porcelain and Pottery Company, the largest Russian porcelain manufacturer, is surprising in the list of the largest employers. At the same time, no tobacco firm is on the list for Russia, while tobacco companies were among the largest employers in the United States and the United Kingdom. The Asmolov Company, the largest Russian tobacco firm, based in Rostov-on-Don, employed 3,860 workers, and the second largest, the Laferm Company, based in Saint Petersburg, employed 2,880 workers in 1913.

Eight firms among the top one hundred U.K. employers were in trade and financial services, while Germany and Russia had only one firm each in the commerce and banking sector. Overall, the largest German and Russian employers were less varied in their economic activities than those in the United Kingdom.

The hundred largest employers in the Russian Empire collectively employed 1.53 million (or 43 percent) of all 3.94 million manufacturing and transportation workers.⁴² By comparison, the hundred largest companies in the United Kingdom in 1907 collectively employed a total of 1.5 million workers, or 8.2 percent of the entire workforce.⁴³ That same year, the hundred largest companies in Germany collectively employed a total of 2.0 million workers, or 7.5 percent of all employees in the country.⁴⁴ However, calculated as a percentage of the whole urban population, the workforce concentration in the largest Russian enterprises is not that striking: 7.0 percent in Russia, 5.4 percent in Germany, and 4.3 percent in the United Kingdom.⁴⁵

There are several explanations for the higher labor concentration in Russia compared to the United Kingdom and Germany. One possible cause could be the peculiarities of how labor statistics were calculated in the Russian Empire. Olga Crisp noticed that official industrial statistics excluded many microscale enterprises if they did not use mechanical

⁴² Excluding employment in the postal service and retailing trade. Anfimov and Korelin, *Rossiia, 1913 god*, sec. 9, table 7.

⁴³ Wardley, "Emergence of Big Business," 93.

⁴⁴ Eric A. Johnson, *Urbanization and Crime: Germany 1871–1914* (Cambridge, Mass., 2002), 186.

⁴⁵ Nikolai A. Rubakin, *Rossiia v tsifrakh: Strana. Narod. Sosloviia. Klassy* [Russia in numbers: Country, population, estates, classes] (Saint Petersburg, 1912), 28, 39.

engines and they employed fewer than sixteen employees. Also, many firms that were listed among the largest ones were in fact composed of numerous operational units. Therefore, the real level of labor and production concentration could be substantially lower than statistical tables show.⁴⁶ However, even at the scale of separate operational units, the concentration of workers was still very high: in 1913 each of the hundred largest factories and plants in the Russian Empire exceeded 3,500 workers, and each of the top fifty exceeded 5,400.

One explanation for the high level of workers' concentration might be the low productivity of labor in Russia as compared to western Europe.⁴⁷ To achieve the scale and scope effect, companies operating in the Russian Empire had to employ more workers than did their Western counterparts. Another explanation might be the peculiarities of Russian incorporation law. There was no general incorporation in the Russian Empire, and those firms that chose to incorporate had to go through a complicated and time-consuming process.⁴⁸ This limited the number of corporations in the Russian Empire compared to countries with more open incorporation processes. In 1910, there were 10 corporations for every million people in Russia (the lowest rate in Europe), while there were 2,913 in the United States, 1,241 in the United Kingdom, and 403 corporations per million people in Germany.⁴⁹ Consequently, it was often easier to unite the interests in an already existing company than to found a new one.

Alexander Gerschenkron suggested two more explanations for the high level of workers' concentration. First is the issue of a general lack of educated managers in tandem with a larger number of subordinates compared to the ratio in western European enterprises. Second, the Russian government favored the development of larger enterprises and neglected small businesses. Russian bureaucrats preferred to deal with big businesses because it opened up ample opportunities for bribery.⁵⁰

Table 7 presents summary statistics of the combined list of the hundred largest employers in Germany, the United Kingdom, and Russia. Almost half of the companies on the list originated in Russia. However, due to the presence of a few mammoth firms, German

⁴⁶ Olga Crisp, "Labour and Industrialization in Russia," in *The Cambridge Economic History of Europe*, vol. 7: *The Industrial Economies: Capital, Labour and Enterprise*, part 2: *The United States, Japan and Russia* (Cambridge, Mass., 1978), 344.

⁴⁷ *Ibid.*, 402–3.

⁴⁸ See Thomas C. Owen, *The Corporation under Russian Law, 1800–1917: A Study in Tsarist Economic Policy* (Cambridge, U.K., 2002); Amanda G. Gregg "Shareholder Rights and Share Capital: The Effect of the 1901 Russian Corporation Reform, 1890–1905," *Economic History Review* 70, no. 3 (2017): 919–43.

⁴⁹ Leslie Hannah, "A Global Corporate Census: Publicly Traded and Close Companies in 1910," *Economic History Review* 68, no. 2 (2015): 558.

⁵⁰ Alexander Gerschenkron, *Economic Backwardness in Historical Perspective: A Book of Essays* (Cambridge, Mass., 1962), 129.

Table 7
 The Hundred Largest Employers Combined from Firms Operating in Germany, the United Kingdom, and Russia, 1907–1914

	<i>Germany</i>	<i>U.K.</i>	<i>Russia</i>	<i>Total</i>
Number of companies	23	29	48	100
Sum of employees	1,465,780	1,003,960	1,279,123	3,748,863
Share of country's employees (%)	39	27	34	100

Sources: For Russia, see appendix; data for Germany and United Kingdom adapted from Martin Fiedler and Howard Gospel, "The Top 100 Largest Employers in UK and Germany in the Twentieth Century," *Cologne Economic History Paper* no. 3 (2010): 1–67.

companies employed the relative majority of employees on this list. Several gigantic German companies topped the list, but in the bottom quartile, German companies were smaller than those in the United Kingdom and Russia. Both the German and U.K. lists are topped by six companies that significantly exceeded the size of their Russian equivalent. In the upper-middle group (ranked between 6 and 64), Russian companies were larger than their equivalents on German and British lists.

The above explanations of national contributions in part reflect the size of markets and national economies. A country's contribution to the aggregated top one hundred list can correct this bias when related to its size. Although Russia contributed forty-eight companies to the aggregated list of the largest employers, it had 3.0 companies to 10,000 inhabitants, while Germany had 3.5 and the United Kingdom 7.2.⁵¹ Consequently, the United Kingdom had many more large employers than Germany or Russia relative to the size of its population.⁵²

Conclusion

Data for the list of the largest employers in Russia were collected from various documents published by governmental departments and business organizations on individual operational establishments because none of the sources contain comprehensive data on firms operated in Russia. The compilation of such a list raises a number of general methodological issues that need to be sorted out case by case, such as the number of operational units under the same owner as well as the sectoral belonging of all subsidiaries under a parent firm.

⁵¹ The population numbers are from 1910 for both the United Kingdom and Germany. The United Kingdom does not include British colonies.

⁵² See the detailed comparison of British and German big businesses in Wardley, "Emergence of Big Business."

Although the primary aim of the article is to publish a list of the hundred largest employers in the Russian Empire in 1913 and to explain methodological issues arising from the character of sources, some conclusions relevant to the discussions of big business historiography can be suggested based on this new empirical evidence. The most important is a general one: it is necessary to include the largest employers that operated in Russia in the analysis of European big businesses in order to have a more representative dataset since they are comparable in size. Another important conclusion concerns the role of state in big business in the Russian Empire. While most of the largest employers in Russia were private and public corporations, a few gigantic state-owned enterprises operated with a significant number of employees. However, comparison with other countries shows that a significant presence of state-owned enterprises among the largest employers was a common phenomenon elsewhere in the world at that time.

In 1913, most of the large employers in Russia were capital-intensive enterprises such as railways and manufacturers of basic metals and metal products, as well as machinery. Germany and Britain display a very similar pattern in this respect. However, one-third of large employers in Russia were labor-intensive textile factories. The significant share of textile enterprises among the largest employers in Russia is especially striking in a comparative context: only eight textile companies in the United Kingdom and one in Germany are included on their lists of the largest employers.

The largest employers clustered either in the densely populated regions, with the most favorable labor markets, or moved workers to places where significant mineral resources were located. Analysis of the list confirms the observations presented in previous literature concerning the extraordinarily high level of workers' concentration in Russia. This phenomenon has been attributed to the low productivity of labor in Russia as compared to western Europe. However, processes of concentration of workers and production were a characteristic phenomenon for all industrialized economies in the Second Industrial Revolution.

Finally, it should be kept in mind that the largest employers are only a part of big business; such a system of ranking based on the number of employees is biased toward labor-demanding enterprises such as manufacturing. It hides the real significance of financial organizations and firms in other low-labor-demanding services. Still, employment offers an important measure of how the size of corporations changed over time, by region, and by economic activity. In the future, the list of the largest employers in the Russian Empire can be amplified and balanced by lists of the largest companies measured by revenues, profits, assets, and market value. In addition, since the largest employers concentrated a large amount of the labor force, the present list can also be useful for studying labor markets and labor relations.

Appendix

The Largest Employers in the Russian Empire, ca. 1913

<i>Rank</i>	<i>Employer^a</i>	<i>Employees</i>	<i>Ownership^b</i>	<i>Activity</i>	<i>ISIC^c</i>	<i>Location^d</i>
1	General Postal & Telegraph Office / <i>Glavnoe upravlenie pocht i telegrafov</i>	80,010 ^e	05	Transport & communication	531	Entire Empire
2	South-Western Railroad / <i>Iugo-Zapadnye zh. dor.</i>	54,827	05	Transport & communication	491	South
3	State-owned Alcohol Trade ^f / <i>Kazennye vinnye sklady Ministerstva finansov</i>	54,095	05	Food & beverages	110	Entire Empire
4	Southern Railroad / <i>Iuzhnye zh. dor.</i>	52,560	05	Transport & communication	491	South
5	Catherine Railroad / <i>Ekaterininskaia zh. dor.</i>	50,426	05	Transport & communication	491	South
6	South-Eastern Railroad / <i>Iugo-Vostochnykh zh. d. ob-vo</i>	47,896	01	Transport & communication	491	South
7	Riazan-Ural Railroad / <i>Riazansko-Ural'skikh zh. d. ob-vo</i>	45,527	01	Transport & communication	491	Volga-Ural
8	Trans-Siberian Railroad / <i>Sibirskaia zh. dor.</i>	42,997	05	Transport & communication	491	Siberia
9	North-Western Railroad / <i>Severo-Zapadnye zh. dor.</i>	34,850	05	Transport & communication	491	West
10	Nikolas Railroad / <i>Nikolaevskaia zh. dor.</i>	32,638	05	Transport & communication	491	Central
11	Vladikavkaz Railroad / <i>Vladikavkazskoi zh. d. ob-vo</i>	32,398	01	Transport & communication	491	Caucasus
12	Vistula River Basin Railroad / <i>Privislinskaia zh. dor.</i>	31,597	05	Transport & communication	491	Poland

13	Moscow-Kiev-Voronezh Railroad / <i>Moskovsko-Kievo-Voronezhskoi zh. d. ob-vo</i>	31,461	01	Transport & communication	491	Center
14	Briansk Rail & Machinery Co. / <i>Brianskogo rel'soproskatnogo, zhelezodelatel'nogo i mekhanicheskogo zavoda ob-vo</i>	31,396	01	Metals & mining	051&241	South
15	Moscow-Kazan Railroad / <i>Moskovsko-Kazanskoi zh. d. ob-vo</i>	31,108	01	Transport & communication	491	Center
16	Mining Department of the Ministry of Trade and Industry ⁸ / <i>Gornyi departament Ministerstva torgovli i promyshlennosti</i>	30,361	05	Metals & mining	051&241	Volga-Ural
17	Rigo-Oryol Railroad / <i>Rigo-Orlovskaiia zh. dor.</i>	29,692	05	Transport & communication	491	West
18	Singer Co. in Russia / <i>Zinger kompaniia, AO</i>	33,006	01	Retail sales	475&282	Entire Empire
19	Northern Railroad / <i>Severnye zh. dor.</i>	26,378	05	Transport & communication	491	North
20	Moscow-Kursk, Nizhnii Novgorod & Murom Railroad / <i>Moskovsko-Kurskaia, Nizhegorodskaia i Muromskaia zh. dor.</i>	23,874	05	Transport & communication	491	Center
21	Transcaucasian Railroad / <i>Zakavkazskaia zh. dor.</i>	22,987	05	Transport & communication	491	Caucasus
22	Perm Railroad / <i>Permskaia zh. dor.</i>	22,810	05	Transport & communication	491	Volga-Ural
23	Savva Morozov & Sons Cotton Textile Mfg. Co. / <i>Tov Nikol'skoi manufaktury "Savvy Morozova syn i Ko."</i>	22,000	02	Textiles	131	Center
24	Ministry of the Navy / <i>Morskoe ministerstvo</i>	20,846	05	Shipbuilding	301	North
25	South Russian Dnieper Metallurgical Company / <i>Iuzhno-Russkoe Dneprovskoe metallurgicheskoe obshchestvo</i>	19,584	01	Metals & mining	051&071&241	South

Continued.

Appendix Continued

Rank	Employer ^a	Employees	Ownership ^b	Activity	ISIC ^c	Location ^d
26	Warsaw-Vienna Railroad / <i>Varshavo-Venskaia zh. dor.</i>	18,888	05	Transport & communication	491	Poland
27	Tashkent Railroad / <i>Tashkentskaia zh. dor.</i>	18,466	05	Transport & communication	491	Central Asia
28	Moscow-Vindava-Rybinsk Railroad / <i>Moskovsko-Vindavo-Rybinskoi zh. d. ob-vo</i>	18,254	01	Transport & communication	491	West
29	Transbaikal Railroad / <i>Zabaikal'skaia zh. dor.</i>	18,122	05	Transport & communication	491	Siberia
30	Alexander Railroad / <i>Aleksandrovskaia zh. dor.</i>	18,012	05	Transport & communication	491	West
31	New Russia Company Ltd. / <i>Novorossiiskoe obshchestvo kamennougol'nogo, zheleznogo i rel'sovogo proizvodstva</i>	17,743	03	Metals & mining	051&071&241	South
32	Ministry of War / <i>Voennoe ministerstvo</i>	17,700	05	Mechanical engineering	252	Volga-Ural
33	Libava-Romny Railroad / <i>Libavo-Romenskaia zh. dor.</i>	17,670	05	Transport & communication	491	West
34	Maltsov Factories in Moscow Co. / <i>Moskovskoe ak. Ob. Mal'tsovskikh zavodov</i>	17,221	01	Mechanical engineering	302&231	Center
35	Matvei Kuznetsov Porcelain & Pottery Co. / <i>Tov. proizvodstva farforovykh i faiansovykh izdelii M. S. Kuznetsova</i>	17,000	02	Brick, pottery, glass	239	Center
36	Central Asian Railroad / <i>Sredneaziatskaia zh. dor.</i>	16,511	05	Transport & communication	491	Central Asia

37	Samara-Zlatoust Railroad / <i>Samaro-Zlatoustovskaia zh. dor.</i>	16,358	05	Transport & communication	491	Volga-Ural
38	Russo-Belgian Metallurgical Co. / <i>Russko-Bel'giiskoe metallurgicheskoe obshchestvo</i>	16,354	01	Metals & mining	051&071&241	South
39	Polesie Railroad / <i>Polesskie zh. dor.</i>	16,109	05	Transport & communication	491	West
40	Syzran-Vyazma Railroad / <i>Syzrano-Viazemskaia zh. dor.</i>	15,995	05	Transport & communication	491	Center
41	Main Artillery Administration (GAU) / <i>Glavnoe Artil'eriiskoe Upravlenie</i>	15,242	05	Mechanical engineering	252	North
42	Vikul Morozov & Sons Cotton Textile Mfg. Co. / <i>Tov. manufaktur Vikula Morozova s synov'iami v mestchke Nikol'skom</i>	15,200	02	Textiles	131	Center
43	Bogoslovsk Mining Co. / <i>Bogoslovskoe gornozavodskoe Ob.</i>	14,871	01	Metals & mining	051&071&241	Volga-Ural
44	Tver Cotton Textile Mfg. Co. / <i>Tverskoi manufaktury bumazhnykh izdelii</i>	14,070	02	Textiles	131	Center
45	Konshin Cotton Textile Mfg. Co. in Serpukhov / <i>Tov. manufaktury Nikolaia Nikolaevicha Konshina v Serpukhove</i>	14,000	02	Textiles	131	Center
46	Putilov Works Co. / <i>Putilovskikh zavodov AO</i>	13,513	01	Mechanical engineering	302	North
47	Conductor Telegraph Equipment Co. "Provodnik" / <i>Tov. Russko-Frantsuzskikh zavodov rezinogo, guttaperchevogo i telegrafnogo proizvodstv pod firmoiu "Provodnik"</i>	13,500	02	Textiles	131	Baltic
48	Bogorodsk-Glukhovo Textile Co. / <i>Ko. Bogorodsko-Glukhovskoi manufaktury</i>	13,000	02	Textiles	131	Center

Continued.

Appendix Continued

Rank	Employer ^a	Employees	Ownership ^b	Activity	ISIC ^c	Location ^d
49	Lysva Mining Co. / <i>Ak. ob. Lys'venskii gornyi okrug naslednikov Grafa Petra Pavlovicha Shuvalova</i>	12,555	01	Metals & mining	241&051	Volga-Ural
50	Nobel Bros. Petroleum Co. / <i>Nobel' brat'ev t-vo nefti-anogo pr-va</i>	12,500 ^h	02	Petroleum refining	192	Caucasus
51	Kolomna Machinery Co. / <i>Ob. Kolomenskogo mashinostroitel'nogo zavoda</i>	12,399	01	Mechanical engineering	302	Center
52	Russian Mining & Metallurgy Union Co. / <i>Union miniere et metallurgique de Russie</i>	12,241	03	Metals & mining	051&241	South
53	Iset River Mining Co. / <i>Ak. ob. Verkh-Isetskikh gornykh i mekhanicheskikh zavodov</i>	12,225	01	Metals & mining	241&051	Volga-Ural
54	Iaroslavl Cotton Textile Mfg. Co. / <i>Tov. Iaroslavskoi bol'shoi manufaktury bumazhnykh izdelii</i>	11,617	02	Textiles	131	Center
55	Donets-Iurevka Metallurgical Company / <i>Donetsko-Iurevskoe metallurgich. Ob-vo</i>	11,500	01	Metals & mining	241&051	South
56	Russian-American Rubber Mfg. Co. / <i>Tov. Rossisko-Amerikanskoi rezinovoï manufaktury "Treugol'nik"</i>	11,100	02	Rubber	221	North
57	Sormovo Metalworking Co. / <i>Ob. zhelezodelatel'nykh, stal'iteinykh i mekhanicheskikh zavodov Sormovo</i>	11,000	01	Shipbuilding	301	North
58	Successors of Pavel Demidov Prince San-Donato / <i>Demidova Pavla P. kniazia San-Donato N-ki</i>	10,469	02	Metals & mining	241&051&071	Volga-Ural
59	Northern-Donetsk Railroad / <i>Severo-Donetskoi zh.d. ob-vo</i>	10,070	01	Transport & communication	491	South
60	Kraehnholm Cotton Textile Mfg. Co. / <i>Tov. Krengol'mskoi manufaktury bumazhnykh izdelii</i>	9,900	02	Textiles	131	Baltic

61	Taganrog Metallurgical Company / <i>Taganrogskoe metallurgicheskoe obshchestvo</i>	9,850	01	Metals & mining	051&071&241	South
62	Lazarev-Abamelek Firm / <i>Abamelek-Lazarev, Semen S. (Chermozskii chastnyi gornopromyshlennyi okrug)</i>	9,368	04	Metals & mining	241&051	Volga-Ural
63	Gille & Dietrich Woven & Knitted Mfg. Co. / <i>Ak. Ob. Zhirardovskikh manufaktur Gille i Ditrikha</i>	9,130	01	Textiles	131	Poland
64	Gorbunov Bros. Cotton Textile Mfg. Co. / <i>Tov-vo bumago-tkatskoi manufactory brat'ev G. i A. Gorbunovykh</i>	8,594	02	Textiles	131	Center
65	Anna Krasil'shchikova & Sons Cotton Textile Mfg. Co. / <i>Tov. manufaktur Anny Krasil'shchikovy s synov'iami</i>	8,200	02	Textiles	131	Center
66	Prokhorov Trimount Cotton Textile Mfg. Co. / <i>Prokhorovskoi Trekhgornoii manufactory tov. na paiakh</i>	8,200	02	Textiles	131	Center
67	Tereshchenko Bros. Tula-Cherkassy Sugar Mills Co. / <i>Tul'sko-Cherkasskoe tov. sveklosakharnykh i rafinadnykh zavodov brat'ev Tereshchenko</i>	8,200	02	Food & beverages	107	Center
68	Sulin Metallurgical Co. / <i>Sulinskogo zavoda AO</i>	8,179	01	Metals & mining	241&051	South
69	Nechaev-Mal'tsev Firm / <i>Nechaev-Mal'tsov, Iurii S.</i>	7,523	04	Textiles	131	Center
70	Scheibler Cotton Textile Mfg. Co. / <i>Ak. ob. bumazhnykh manufaktur Karla Sheiblera</i>	7,500	01	Textiles	131	Poland
71	Nevskii Thread Mfg. Co. / <i>Tov. Nevskoi nitochnoi manufactory</i>	7,500	02	Textiles	131	North
72	Maliutin & Sons Cotton Textile Mfg. Co. / <i>Promyshlennoe i torgovoe tov. "P. Maliutina synov'ia"</i>	7,100	02	Textiles	131	Center
73	Crown Land Office / <i>Udel'noe vedomstvo</i>	7,088	05	Food & beverages	106	Entire Empire

Continued.

Appendix Continued

Rank	Employer ^a	Employees	Ownership ^b	Activity	ISIC ^c	Location ^d
74	Kyshtym Metallurgical & Mining Co. / <i>Kyshtymskikh gornyykh zavodov aktsionernoe obshchestvo</i>	7,064	01	Metals & mining	241&051&071	Volga-Ural
75	Poznanski Cotton Textile Co. / <i>Ak. Ob. bumazhnykh manufaktur I. K. Poznanskogo v Lodzi</i>	7,035	01	Textiles	131	Poland
76	Alafuzov Trd & Mfg. Co. / <i>Torgovo-promyshlennoe Ob. Alafuzovskikh fabrik i zavodov</i>	7,000	01	Leather	151	Volga-Ural
77	Krivoy Rog Iron Ore Co. / <i>SA des minerais de fer Krivoi Rog</i>	6,970	03	Metals & mining	051&071&241	South
78	Egor'evsk Cotton Yarn Co. / <i>Tov. na paiakh Egor'evskoi bumagopriadil'noi fabriki brat'ev A. i G. Khludovykh</i>	6,850	02	Textiles	131	Center
79	White River Iron Co. / <i>Ak. ob. Beloretskikh zhelezodelatel'nykh zavodov Pashkovykh</i>	6,600	01	Metals & mining	051&241	Volga-Ural
80	Tula Copper & Brass Co. / <i>Ob. Tul'skikh mednoprokatnykh i patronnykh zavodov</i>	6,500	01	Metals & mining	242&252	Center
81	Razorenov & Kokorev Cotton Textile Mfg. Co. / <i>Tov. manufaktur Gerasima Razorenova i Ivana Kokoreva</i>	6,500	02	Textiles	131	Center
82	Kostroma Linen Mfg. Co. / <i>Tov. novoi Kostromskoi Unianoi manufakury</i>	6,500	02	Textiles	131	Center
83	Skvortsov Cotton Yarn Mfg. Co. / <i>Tov. manufaktur, osnovannykh I. I. Skvortsovym</i>	6,500	02	Textiles	131	Center
84	Ekaterinovka Mining Co. / <i>Ekaterinovskoe gornopromyshlennoe Ob.</i>	6,468	01	Metals & mining	051	South

85	Derbenev & Sons Cotton Textile Mfg. Co. / <i>Tov. manufaktur Nikanora Derbeneva synovei</i>	6,392	02	Textiles	131	Center
86	Kharitonenko Firm / <i>Kharitonenko, Pavel I.</i>	6,255	04	Food & beverages	107	South
87	Konovalov Cotton Textile Mfg. Co. / <i>Tov. manufaktur Ivana Konovalova</i>	6,175	02	Textiles	131	Center
88	Sosnowiec Coal & Metal Co. / <i>Ob. kamennougol'nykh kopei, rudnikov i zavodov v Sosnovitsakh</i>	6,088	01	Metals & mining	051&241	Poland
89	Zawiercie Cotton Textile Co. / <i>Ob. bumagopriadil'noi, tkatskoi i belil'noi fabrik "Zavertse"</i>	6,050	01	Textiles	131	Poland
90	Pokrovsk Cotton Textile Mfg. Co. / <i>Tov. Pokrovskoi bumago-priadil'noi i tkatskoi manufaktury</i>	6,000	02	Textiles	131	Center
91	Danilov Cotton Textile Mfg. Co. / <i>Tov. Danilovskoi manufaktury</i>	6,000	02	Textiles	131	Center
92	Karetnikova & Son Cotton Textile Mfg. Co. / <i>Tov. manufaktur "Aleksandry Karetnikovoi s synom"</i>	6,000	02	Textiles	131	Center
93	Serginsk-Ufaleisk Mining Co. / <i>Tov. Serginsko-Ufaleiskikh gornykh zavodov</i>	5,782	02	Metals & mining	241&071	Volga-Ural
94	Nikolaev Shipyards Co. / <i>Ak. ob. Nikolaevskikh zavodov i verfei</i>	5,700	01	Shipbuilding	301	South
95	Vasil'ev & Kashaev Cotton Textile Mfg. Co. / <i>Tov. Vysokovskoi manufaktury Vasil'eva, Kashaeva i Ko.</i>	5,582	02	Textiles	131	Center
96	Iartsevo Cotton Textile Mfg. Co. / <i>Tov. Iartsevskoi manufaktury bumazhnykh izdelii Alekseia Khludova</i>	5,460	02	Textiles	131	Center
97	Berg Cotton Yarn Mfg. Co. / <i>Tov. Rozhdestvenskoi manufaktury Pavla Vasil'evicha Berga</i>	5,400	02	Textiles	131	Center
98	Baranov Cotton Textile Mfg. Co. / <i>Tov. na paiakh manufaktury Baranovykh</i>	5,364	02	Textiles	131	Center

Continued.

Appendix Continued

Rank	Employer ^a	Employees	Ownership ^b	Activity	ISIC ^c	Location ^d
99	Balin Cotton Textile Mfg. Co. / <i>Tov. manufakturny Asigkrita Iakovleva Balina</i>	5,339	02	Textiles	131	Center
100	Golubovka, Berestov, & Bogodukhov Mining Co. / <i>Golubovskoe Berestovo-Bogodukhovskoe Gornopromishlennoe t-vo</i>	5,213	02	Metals & mining	051	South
	<i>Total</i>	<i>1,689,918</i>				
Lower-ranked companies						
101	Razorenov Bros. Cotton Textile Mfg. Co. / <i>Tov. Vichugskikh manufaktur brat'ev F. i A. Razorenovykh</i>	5,200	02	Textiles	131	Center
102	Sim River Agricultural Machinery Co. / <i>Simskoe ob. gornykh zavodov i pervoi na Uralskoi fabrike sel'skokhoziaistvennykh mashin i orudii</i>	5,100	01	Metals & mining	241&071	Volga-Ural
103	Nizhnii Novgorod Linen Mfg. Co. / <i>Tov. Nizhegorodskoi Vnopsriadil'noi manufakturny</i>	5,000	02	Textiles	131	Center
104	Mindovskii & Bakakin Textile Mfg. Co. / <i>Tov. Volzhskoi manufakturny bumazhnykh i Vnianskykh izdelii P. Mindovskogo i I. Bakakina</i>	5,000	02	Textiles	131	Center
105	Riabov Cotton Textile Mfg. Co. / <i>Tov. Riabovskoi manufakturny bumazhnykh izdelii</i>	5,000	02	Textiles	131	Center
106	Ivanovo-Voznesensk Cotton Textile Mfg. Co. / <i>Tov. Ivanovo-Voznesenskoi tkatskoi manufakturny</i>	5,000	02	Textiles	131	Center
107	French-Russian Co. of Berestov-Krynka Collieries / <i>Soc. Franco Russe des Houilleres de Berestov Krynka</i>	5,000	03	Metals & mining	051	South

108	Donets Glass & Chemical Plats Co. / <i>Verreries et Usines chimiques du Donetz a Santourinowka</i>	4,955	03	Brick, pottery, glass	231	South
109	Resurrection Cotton Textile Mfg. Co. / <i>Tov. Voskresenskoi manufaktury</i>	4,883	02	Textiles	131	Center
110	Melenki Linen Textile Mfg. Co. / <i>Tov. Melenkovskoi lniano manufaktury</i>	4,850	02	Textiles	131	Center
111	Kama Steel Co. / <i>SA des forges et acieries de la Kama</i>	4,807	03	Metals & mining	241	Volga-Ural
112	Riabushinskii & Sons Cotton Textile Mfg. Co. / <i>Tov. manufaktur P. M. Riabushinskogo s synov'iami</i>	4,770	02	Textiles	131	Center
113	Donets Iron & Steel Co. / <i>Donetskoe Ob. zhelezodelatel'nogo i staleliteinogo proizvodstv</i>	4,747	01	Metals & mining	051&241	South
114	Sosnowiec Iron Pipe Co. / <i>Ak. Ob. Sosnovitskikh truboprokatnykh i zhelezodelatel'nykh zavodov</i>	4,680	01	Metals & mining	051&071&241	Poland
115	Czestochowa Cotton Spinning Co. / <i>Chenstokhovskoe priadi'l'noe anon. ob.</i>	4,670	03	Textiles	131	Poland
116	Russian Providence Company / <i>Providence Russe a Marioupol, SA</i>	4,655	03	Metals & mining	241&051&071	South
117	Vyksa Mining Co. / <i>Vyksunskikh gornyykh zavodov ob-vo</i>	4,583	01	Metals & mining	051&241	Center
118	Aseev Bros. Trading House / <i>Aseevy Br-t'ia Mikh. i Vas. Torg. d.</i>	4,525	04	Textiles	131	Center
119	Sobinka Cotton Textile Mfg. Co. / <i>Tov. Sobinskoi manufaktury bumazhnykh izdelii</i>	4,508	02	Textiles	131	Center
120	Krusche & Ender Cotton Textile Mfg. Co. / <i>Ak. ob. Pabianitskikh khlopchatobumazhnykh manufaktur "Krushe i Ender"</i>	4,500	01	Textiles	131	Poland
121	Geyer Cotton Textile Mfg. Co. / <i>Ak. Ob. bumazhnykh manufaktur Lui Geiera</i>	4,500	01	Textiles	131	Poland
122	Zimin Cotton Textile Mfg. Co. / <i>Tov. Zuevskoi manufactory Ivana Nikiticha Zimina</i>	4,500	02	Textiles	131	Center

Continued.

Appendix Continued

Rank	Employer ^a	Employees	Ownership ^b	Activity	ISIC ^c	Location ^d
123	Garelin & Sons Textile Mfg. Co. / <i>Tov. manufaktur Ivana Garelina s synov'iami</i>	4,500	02	Textiles	131	Center
124	Varvaropol Mining Co. / <i>Société des Charbonnages de Varvaropol</i>	4,500	03	Metals & mining	051	South
125	Voronin Textile Mfg. Co. / <i>Ak. Ob. manufaktur I. A. Voronina</i>	4,444	01	Textiles	131	North

Sources: For manufacturing companies: Dmitrii R. Kandaurov, *Fabrichno-zavodskie predpriiatia Rossiiskoi imperii (iskliuchaia Finliandiiu)* (Petrograd, 1914); for railway companies: A. A. Brandt, V. E. Kuvichinskii, and L. E. Lebedev, *Statisticheskii sbornik Min-va putei soobshcheniia. Vyp. 141: zheleznye dorogi v 1913 g.* (Petrograd, 1917); for General Post Office (1): TsSK MVD, *Statisticheskii ezhegodnik Rossii za 1914 god (god odinnadtsatyi)*, sec. 11, 95; for State-owned Alcohol Trade (3): *Sovet s'ezdov predstavitelei promyshlennosti i torgovli, Statisticheskii ezhegodnik na 1913 god* (Saint Petersburg, 1913), 671; for mining department (16): Gornyi departament, *Otchet Gornogo departamenta za 1906 i 1907 gody* (Saint Petersburg, 1909), 118; for Singer Co. in Russia (18): Fred V. Carstensen, *American Enterprise in Foreign Markets: Singer and International Harvester in Imperial Russia* (Chapel Hill, 1984), 69; and Tat'iana I. Griko, "Zinger, kompaniia," in *Ekonomicheskaiia istoriia Rossii s drevneishikh vremen do 1917 g. Entsiklopediia v 2-kh tt.*, vol. 1 (Moscow, 2008), 761; on New Russia Company (31): Theodore H. Friedgut, *Juzovka and Revolution*, vol. 1: *Life and Work in Russia's Donbass, 1869–1924* (Princeton, 1994), 52; for Putilov Works (46): *Krasnyi Putilovets. 125 let: 1801–1926* (Leningrad, 1927), 24; for Nobel Bros. Petroleum (50): *Spisok fabrik i zavodov Rossii. 1910 god. Po ofitsial'nym dannym fabrichnogo, podatnogo i gornogo nadzora*, LV; and Howard Kennard, *The Russian Year-book for 1913* (London, 1913).

Notes: ^aNames of Russian-affiliated companies have been translated into English; original Russian or French transliterated title follows. ^bType of ownership is coded according to the Russian word for "company" (*obshchestvo* or *tovarishchestvo*): 01 = joint-stock company (*obshchestvo*); 02 = share partnership (*tovarishchestvo*); 03 = multinational or free-standing (foreign) company; 04 = private unincorporated enterprise; 05 = state-owned enterprise. ^cISIC = International Standard Industrial Classification of All Economic Activities. In the case of multi-unit enterprises with different economic activities, codes are separated by an ampersand; primary and secondary activities are defined based on number of workers. ^dCompanies operating in several regions are defined based on the primary regional activity; "Entire Empire" denotes cases of activity in many regions of the Russian Empire. ^eGeneral Post Office staff in 1913 consisted of 47,220 senior and 32,790 lower-rank employees. ^fIn 1911. ^gA part of the data is from 1907. ^hIn 1908; Kennard (1913, 183) reported 13,500 workers in 1910.

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