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The role of Old Believers' enterprises: Evidence from the nineteenth century Moscow textile industry

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von

Danila Raskov und Vadim Kufenko

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The Role of Old Believers' Enterprises: Evidence from the Nineteenth Century Moscow Textile Industry

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Abstract

The early accumulation of capital and the pioneering of capitalist enterprise have been undertaken in many countries by heterodox religious communities. The role of the Old Believers (further OB) in the early development of Russian industry and trade was noted by many economic historians (Blackwell, 1965; Gerschenkron, 1970; Beliajeff, 1979; Stadnikov, 2002; Kerov, 2004; Raskov, 2012); however, empirical and statistical research on the topic is still scarce. Therefore one of our goals is to analyze the role of the OB entrepreneurship in a dynamic dimension using statistical data. Taking advantage of official censuses of 1850, 1857 and, what is more important, 15 archive sources for confessional data for 1808 - 1905 and 7 industrial reports, we analyze the role of the OB firms in the Moscow textile industry for the period of 1832 - 1890. We find that the share of the OB firms in turnover and employment was over-proportionate prior to 1879, which hints at a higher propensity to entrepreneurship. The turnover per worker of the OB firms was significantly higher only in the wool sub-sector. Additionally, the OB firms tended to employ more labor. We capture the continuous process of the rise and fall of the OB entrepreneurship, especially in cotton-paper and wool weaving sub-sectors. Bearing in mind cyclical waves of repressions against the OB, we can state, that the performance of their firms was impressing. We discuss the Weber thesis and the Petty-Gerschenkron argument, and state that various factors contributed to their success: working ethics and minority status; social capital, networking and access to interest free financing; own informal institutions and reputation mechanisms; human capital and literacy.

Keywords: economic history of Russia, the Old Believers, religious minority, minority entrepreneurship, textile industry

JEL classification: N33, N83, J15, L26, Z10

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1 Introduction

The Starovery, adherents of the old faith, or literally the "Old Believers" of the Russian Orthodox Church played a very prominent role in the formation and development of capitalism in Russia. This group not only dominated trade and industry from the end of the eighteenth century, but also developed a unique manner and conduct and was very close to the genesis of Russian capitalism. Alexander Gerschenkron was one of the most influential economic historians to highlight the Old Believer entrepreneurship: "The fact of the Old Believers' participation in the creation of modern textile industry in Russia cannot be doubted. At the same time, the historical significance of that participation must not be exaggerated" as stated in Gerschenkron (1970, p. 42). This question is still characterized by the lack of evidence and statistical generalizations through time.

The early accumulation of capital and the pioneering of capitalist enterprise have been undertaken in many countries by heterodox religious communities and Russia is not an exception. The role of the Old Believers in the early development of Russian industry and trade was noted by many economic historians Blackwell (1965); Gerschenkron (1970); Beliajeff (1979); Stadnikov (2002); Kerov (2004); Raskov (2012). The fact that the strict and conservative Old Believers became industrial pioneers is a paradox. This phenomenon was expressed by Gerschenkron (1970, p. 21): "The worshippers of religious immobility, the irrational adherents to letter and gesture appear as energetic modernizers in their very rational economic pursuits". Indeed the Old Believers since the Great schism of 17th century and their anathematization in 1667 managed to survive and obtain leading positions in Russian 19th century industry. The main purpose of our paper is to collect and analyze the evidence of the role of Old Believers in Moscow textile industry through 19th century. The confessional data include official revisions or censuses¹ and archive sources (protocols, synodicons, necropolises, correspondence and internal documents of communities) dating from 1808 to 1905. The industrial data cover the textile industry for 1832 - 1890 in Moscow city (gorod) and district (uezd) which allows us to analyze the economic role of the Old Believers in a dynamic dimension.

The paper is organized as follows: in the second section we consider literature related to the role of the Old Believers in the Russian economic history, and define the main research questions: what was the dynamic role of Old Believers in the 19th century Moscow textile industry and how this role can be explained; the third section is focused on confessional and industrial data and provides details on the sources - we describe the composition of our data and its advantage over

¹Occasionally named revisions due the Russian title 'Reviziya'

the existing empirical research on the Old Believer enterprises; the fourth section is devoted to empirical results and performance of the Old Believer firms in the period of 1832 - 1890 - in this section we build a dynamic picture of the role of the Old Believers in the Moscow textile industry; in the fifth section we summarize all potential theories explaining the success of the Old Believers and compare them with other known minority entrepreneurs. In the fifth section we provide different interpretations of the role of confessional entrepreneurship and consider the Old Believers from the different points of view, including Weber, Petty and Gerschenkron. In addition, in numerous examples we find evidences of advantages of the Old Believers' informal institutions, social capital due to networking and access to finance and human capital due to literacy, scribing and book-keeping. The main goal of the paper is to provide empirical evidence on the participation of the Old Believer firms in the Moscow textile industry in a dynamic dimension.

2 Literature overview: Old Believers and their economic activities

The Old Believers become irreconcilable opponents of the church reforms of Patriarch Nikon between 1650 and the 1660s. The Old Believers, also called the Old Ritualists, defended the two-fingered sign of the cross, immersion baptism, a liturgy with seven prosphora, and the right to use old, pre-reform scriptures in services. The Great Schism (Raskol) of the Russian Orthodoxy of the seventeenth century led to a new situation in which the substantial part of layman refused to follow the hierarchy. These people were excommunicated, severely persecuted and condemned as schismatics (see Zenkovsky, 2005; Meyendorff, 1991). The Old Believer conception of the world was made unique by three key components: (1) the starting point for their thinking was the eschatological teaching of Moscow as the Third Rome (see Cherniavsky (1966)); (2) the concept of the sacrosanctity of rituals, according to which a ritual was virtually elevated to the level of dogma; (3) the inevitability of an impending end to the world underscored the importance of saving one's soul, and leading a truly Christian life as in Voznesensky (1996).

There have been established several stable platitudes, even myths, about the significant role of the Old Believers in the pre-revolutionary Russian economy. However, comprehensive studies based on the large scale of sources have not yet been undertaken. This can be explained by several difficulties. First, the investigations on the theme of the Old Believers in the Russian Empire and the Soviet Union as well were forced by political and ideological pressure from the authorities. Second, most of the documents exist in Russian and Church Slavonic, which complicates

the study for Western researchers. A large array of materials has not been published and is still in the archives. Third, even though that the interdisciplinary study of the relationship and interdependence of economic and religious life, exists (e.g. Barro and McCleary, 2003), it is still relatively scarce.

In the Russian Empire, there prevailed invective literature on the Old Believers. Most of published materials were far from being objective or scientific. However, quite early missionaries, historians and writers have found the connection between the Old Belief and wealth. To some extent, it even justified the fact that the government could do nothing in their fight with the schism - the number of adherents of the Old Belief was not getting smaller. The former official of the Ministry of Internal Affairs and the persecutor of schismatics, who later became a writer, Pavel Melnikov-Pechersky described the Old Believers and even embellished them. In his work, Melnikov-Pechersky (1909) draws attention to the economic success of the Old Believers, who concentrated a significant proportion of the capital in their hands. "Narodniks", or populists, including Afanassy Shchapov (1906), Vassily Andreev (1870, pp. 149-165), Alexander Prugavin paid attention to the prosperity of the Old Believers. Ivan Liprandi (1883) acknowledges the advantages of the Old Believers in literacy, sobriety, and the regulation of life. A significant contribution to interpretation of the economic ethics and success of the Old Believers was made by Ivan Kirillov (2008) in the book "The Truth of the Old Belief".

In the Soviet years, several decent works based on primary sources were published. First of all, it was economic and historic study of the socio-economic organization of the Moscow 1840s community of "Fedoseevtsy" conducted by Pavel Ryndzyunsky (1950). Other historians also contributed to the study of economic history of the Old Belief (Nikolsky, 1985; Rustic, 1934; Klibanov, 1973, 1978; Milovidov, 1983).

The economic successes of the marginal religious group could not but attract attention of Western researchers. Baron August von Haxthausen (1968, p. 529) after visiting Russia in the 1840s noted a remarkable ability of the Old Believers to accumulate capital and to create business and commercial enterprises in the major cities of Russia (including Moscow, St. Petersburg and Riga). In a broad study of Russia, A. Leroy-Beaulieu (1898, pp. 358-359 and 389-394) also draws attention to the distinctive culture of the Old Believers: he highlights their solidarity, which allows them, like in case of the Protestants in Europe, to show entrepreneurial spirit. In the 1960-1970's the role of the Old Believers in the 19th Russian economy was discussed in several publications : William Blackwell (1965) studied the role of the Old Believers in the industrial growth of Moscow, Alexander Gerschenkron

(1970) questioned the applicability of Weber's thesis to the historical role of the Old Believers in the development of Russian capitalism, Robert Crummey (1970) compared the economic achievements of the Old Believers with entrepreneurial success of Jews (pariahs), indicating the similarity of the social positions of the two persecuted groups, and also gave a detailed account of the economic activities of Northern priestless community known as Vyg community. The works of Thomas Owen (1981) and Alfred Rieber (1982) are also of interest in economic history of the Old Believer entrepreneurs. The dissertation of Anton Beliajeff (1975), dedicated to the rise of the Old Orthodox Merchants of Moscow, is noteworthy. Perhaps this author has succeeded more than others in his attempts to answer the question about the real role of the Old Believers in the central region industry. Later on the limitations and the shortcomings of Beliaeff's work will be shown.

Nevertheless, there is very little empirical research on this topic. Stadnikov (2002) held descriptive economic study of the Moscow Old Believers, based on archival documents of the Central Government Archive of Moscow. He claimed that "during the 1860s around 34.14% of cotton-paper and around 45.25% of wool-weaving industry in the Moscow region was owned by the Old Believers" Stadnikov (2002, p. 92). In addition, he noted that the Old Believers were most successful in the weaving-related production. There exists a number of exaggerations of the role of the Old Believers in the 19th century Russian industry. For instance, Douling (2005, p. 213) mentioned that "by 1843 the share of Old Believer firms in the textile production of the Moscow region was roughly 80%". Kerov (2004) attempted to run a broad investigation of the religious and ethical factors of the Old Believers' entrepreneurship. To some extent, Kerov followed Weber's interpretation in showing the special features of economic ethics of the Old Believers, manifested in the sacralization of everyday life, religious rationalism and secular austerity. The most substantial attempt to combine the study of the statistical role of Old Believers in Moscow industry and the critical investigation of the doctrine of the Old Believers and works were done by Raskov (2012). However, our paper is based on a wider range of confessional and industrial data.

It is important to note that the impact of the Russian schism can be traced throughout the whole Russian history and particularly, considering such milestones as the bourgeois revolution of 1905 and February 1917. Though the Old Believers struggled to preserve their rituals, they were promoting various institutional innovations. For the Old Believers the schism meant social and political opposition to the government. According to the famous quote, attributed to Alexander Solzhenitsyn, it is impossible to understand the revolution of 1917 without understanding the schism of the 17th century. The religious schism shattered

belief in the church and the state. Subsequent generations of the Old Believers - Ryabyshinskie, Guchkovy, Konovalovy and Morozovy who became one of the richest dynasties of that time - were running industrial and financial societies, committees, unions and organizations and, as a result of the schism, were opposing the monarch. The richest Old Believer merchant families of Moscow ² were not only supporting arts and publishing, but also fostered the development of organizations which promoted liberal values, civil rights and constitutional monarchy. These organizations contributed to destabilization of the Russian absolutism in the beginning of the 20th century. Sobolevskaya (1993) acknowledges the involvement of the Russian bourgeois, partly descendants from the Old Believer dynasties, in political destabilization which made the revolution of 1917 inevitable. We can further note relatively bold statements of Pyzhikov (2013) who writes that the Old Believer merchants supported the bourgeois revolution of 1905 and promoted constitutional monarchy and creation of the first parliament - the Duma.

In the context of our study, we'll look in detail at two works which are much more related to economic history: works by Gerschenkron and Beliajeff. As McCloskey (2010, pp. 375-376) notes, many economic historians, even those who are not specialized in Russian economic history, have heard about Russian Old Believers due to a small polemical note by Gerschenkron (1970). Indeed, this topic leads to unexpected convergence of the East and the West, and shows the religious roots of capitalism. The main question asked by Gerschenkron is how to interpret the success of the Old Believers in business. The answer is obvious for him. It could be traced back to the argument of William Petty according to which any group that is a "heterodox part of the whole" has a chance to become more important in industry and commerce (see Petty, 1691, p. 26.). Gerschenkron treats Weber's thesis with certain skepticism. Old Believers, who acted rather against the reforms, and were often characterized not by inherent rationalism, but by mysticism and irrational desire to preserve the accuracy of the rituals and books, were not so successful in the period of the greatest burst of economic activity in the end of the 19th century. These are his main arguments in this dispute. Additional arguments about the role of literacy, sobriety, honesty, thrift and hard work somehow decrease the intensity of discussions. Gerschenkron's intention was to show that Weber's framework is not convenient for the interpretation while Petty's argument of the effect of persecuted minority works better.

Petty's argument has something in common with the idea on the success of entrepreneurial minorities. They can be classified into "chosen" endogenous sects

²including dynasties of Old Believers, converted into the Orthodox belief, but maintaining their relationship with the Old Believer communities and sharing their values

and diasporas, according to Rubinstein (2000, p. 113). Consequently, Rubinstein (2000) categorizes Huguenots, Quakers, Unitarians and other similar religious movements into the "chosen" endogenous sects. Rubinstein (2000, p. 115) mentions another distinguishing feature of endogenous sects: high marginality and self-esteem. Indeed, due to the eschatology and the "antichrist" threat, the Old Believers were convinced that they are the chosen ones and must struggle for their survival, even if it required turning away from the world. However, there were two sources of this marginalization: the state-driven church reformation (exogenous) and the "anti-christ" fear (endogenous). The eschatological fear existed prior to the reformation and prosecution of the Old Believers; however, the prosecutions served as a catalyzer of these fears. In fact, this fear was imported together with a wide range of apocalyptic literature from the Territory of modern Ukraine, where the clash between the Orthodox and Catholic churches was most severe and contributed to apocalyptic sentiments, as stated in Crummey (2011, p. 38). On the contrary, the society, especially Orthodox serfs shared certain compassion to the Old Believers and the prosecution of the Old Belief was mainly associated with the state and local authorities. The marginalization of the Old Believers can be found in their attempt to isolate themselves from the outsiders, which were, especially during the early period of the schism, associated with the "anti-christ" threat. Even in some modern Old Believer houses, the outsider guests eat from special dishes and sleep in separate parts of the house. The high self-esteem can be seen in their deep and sincere conviction to maintain true faith. In fact, the Old Believers tend to prefer calling themselves "true believers". This argument will be further discussed in Section 5, where we will summarize all substantial theories of the success of the Old Believers.

Beliajeff (1979) was closer to the aim of this paper than any other author. He complements Gerschenkron's research in a certain way. His main conclusion was that the role of the Old Believers in the textile industry has been greatly exaggerated: "Despite the achievements of individual Old Believer entrepreneurs, the commercial importance of these Old Believers group may not have been as great as commentators suppose ... they should not be presented as playing a dominant or disproportionally large role in the Moscow textile industry ..." as in Beliajeff (1979, p. 41). According to his estimation, the Old Believers controlled 12,71% of the total output in the city and in Moscow county in 1843 even if they constituted more than 15% of the merchant guild. Obviously, the conclusions of Beliajeff (1979) about the exaggerated role of the religious minorities are justified, keeping in mind that the above-mentioned research was one of the first substantial attempt to approach this question empirically. However, one should note that Beliajeff (1979) has certain flaws: firstly, only one source of confessional data was

used (the IX census of Moscow merchant guild of 1850-1851); secondly, the industrial data are limited to 1843, providing only a snapshot of the textile industry.

In our paper we have resolved these issues by expanding the number of confessional data sources and using internal documents of the Old Believer communities and by including further years up to 1890 into the analysis. These data sources are described in detail in the related section of the paper. Therefore, taking advantage of the reports available for 1832-1890, we are able to analyze the question in a dynamic dimension rather than static. We have to note, that though the majority of the authors emphasized the success of the Old Believers, they rarely used large scale statistical data and prefer case studies and examples. Beliajeff (1979), on the contrary, claims that the role of the Old Believers is exaggerated; however, his conclusions are also limited to only one confessional source and to one year, 1843. Therefore we would like to fill this gap.

3 Data

The main goal of our research is to analyze the role of Old Believers in the Russian 19th century industry. Using the example of the textile industry, one of the leading industries of the Russian industrialization, we explain the dynamics of the share of Old Believers in this industry. The choice of Moscow city and its county textile industry for the period of 1832-1890 as a source for the data can be explained due to the following factors: firstly, the textile manufacturing industry of the 19th century Russia was very well documented and was one of the most developed of that time; secondly, Moscow was one of the leading industrial regions throughout the 19th century (see Figure 1: Industrial map of the 19th century Russia); thirdly, the market entry to the textile industry was not strictly regulated, allowing different layers of the society, including free peasants, to start business; fourthly, the period of 1832 - 1890 allows us to cover most of industrialization to trace the dynamic changes in the contribution of Old Believers to the overall textile industry. The data and related sources can be divided into two categories: confessional and industrial.

3.1 Confessional Data

The confessional structure of Moscow entrepreneurs, including merchants as well as peasants and other layers of the society, can be restored with the help of official census data - the most massive and representative data source. In addition,

official reports, including published police records on monitoring of Old Believers, can be used to refine the data. A substantial contribution to confessional data was made by analyzing archive sources: protocols of election of patrons, synodicons ³, data on necropolises, private correspondence and other documents from the Old Believer communities of Moscow and particularly, the documents from the Rogozhskoe cemetery of the Old Believer priestly community (popovzy) and the Preobrazhenskoe cemetery of the Old Believer priestless community (bezpopovzy). One should note that according to censuses of 1850 and 1857 these two communities constituted 82 and 87% respectively of the Old Believer merchants in Moscow. Other previous research results on the role of merchants in the Moscow industry, as stated in Stadnikov (1999), and on the history of Old Believer family businesses (particularly on the Morozov family) were also used to enforce the confessional data.

Taking advantage of more than 15 unique historical sources dated for various years during 1808-1905 allowed us to obtain one of the most precise data on Old Believers in the 19th century Moscow ⁴. Nevertheless, we expect that even these data can contain a downward bias due to conspiracy of the Old Believers and the fact that some Old Believers tended to falsify their religious views and therefore provide artificial information in the reports. This phenomenon is often referred to as "hide behind the priest" because the adherence to the Old Belief was preserved and falsifying the religious views in the official reports allowed escaping potential threats of non-pecuniary penalties. Let us briefly describe the sources for the confessional data.

The official published censuses IX and X of 1850 and 1857 have the best coverage and were one of the first official reports to account for confessional data (Naydenov, 1889). Revisions included date of collection, guild level, names, patronymics and last names, age or information on the death, family status, children and confession. Honorary citizens, including citizens who inherited this status, were listed separately. One of the valuable features of these censuses is that all relatives were listed. This fact allowed tracing the dynasties up to three or even four generations.

³Memorial books, used in religious services to commemorate the names of the dead

⁴See Revision and secret data of Ministry of Internal Affairs, protocols of elections to community Council, Synodicon and other archival sources which give a more realistic picture of Old Believer's among merchants and peasants in Moscow region: see RGIA, 673-2-2, lists 7-8; RGB, 246-2-5, lists 2-4ob and 93-96ob; 246-3-5, lists 166-175 and 304-318; RNB, 2292-Titov, lists 138-146 and 185-192; 2293-Titov, lists 33-35; 2294-Titov, lists 93-112, 170-179 and 181-207; 2334-Titov, lists 94-106. The most valuable sources on Ninth and tenth censuses are contained in Naydenov (1889), additional information was taken from Grishina et al. (1995) and Stadnikov (1999).

According to IX census by 1850 officially 624 merchant families were listed as Old Believers which was roughly 15% of total number of merchant families in Moscow. Keeping in mind that the overall official share of Old Believers in Moscow population at that time was around 5%, this fact allows us to assume that Old Believers had a higher propensity to entrepreneurship and were more actively participating in manufacturing. Indeed, Old Believers share in merchant population was three times larger than their share in overall population of Moscow according to official census. Moreover, 45 of 624 or 7.2% of Old Believer merchants were granted a status of honorary citizens.

The next X census captures the transition of many Old Believer merchants from the Old Belief to the Orthodox Church or the "Like-Believers" (Edinoversty). This transition can largely be explained by the decree of 1853 urging the merchants to convert to either the Orthodox Church or to the "Like-Belief", which were the only confessions allowed for the guild merchants after the introduction of the decree. Needless to say, a guild membership was highly desired and as a result, in 1857 officially only 383 merchant families or only 8% of total number of merchants were officially listed as Old Believers in Moscow. However, in 1857 exactly 197 new families, previously not mentioned in the IX census, were captured in the records of the X census, which allowed us to expand the horizons of the confessional data. Both censuses allowed us to gain information on 821 Old Believer merchant families in Moscow (see Table 5 in Appendix).

Another valuable source of confessional data is the "List of most important Old Believer residents of ancient capital Moscow in 1838" from the documents of Andrey Titov, stored in the Saint-Petersburg public library (see RNB, 2334-Titov). This list provides information about 160 merchants who were members of the Rogozhskaya community of priestly Old Believers (popovzy). One should highlight the fact that this list included additional information such as status, guild level, career and service record, main occupation and sphere of business. Out of 160 listed Old Believer merchants 21 belonged to the first level guild and 28 to the second and 19 were listed as honorary citizens. While comparing the list of A.A. Titov with the IX 1850 census, we have discovered 71 new identities. Out of the listed merchants 96 were engaged in trade, 83 had manufacturing firms and 10 received various rents from their real estate. Some merchants combined trade and manufacturing. 46 manufacturing firms were listed as textile business.

A substantial source on the second major Old Believer community - the priestless community - were documents and records of the Preobrazhenskoe cemetery for

January - April 1847 and official records on "listing of raskolniki" submitted by local officials of Moscow and stored in the Central Historical Archive of Moscow. These data sources are limited to 1850 - 1880 time frames; however, at least for 1864 we were able to locate 18 new merchants of the Rogozhskaya community.

The archives of the Rogozhskoe cemetery were obtained from the department of manuscripts of the Russian State Library. These archives provide information on guardians for the period of 1869-1918. The guardians of the community were elected mainly from wealthy Old Believers who owned real estate in Moscow. The data on guardians and other Old Believers from this community allowed us to gain additionally 326 identities for 1878 and 454 for 1903-1906. The confessional sources are summarized in Table 5 in Appendix.

Additional sources which were used consisted of internal documents, regulations, meeting protocols, resolutions, discussion materials, election results and correspondence. These internal documents allow us to fine-tune the confessional data and shed light on the working ethics and formal and informal institutions of the Old Believers. The most transparent data sources were the necropolis books and lists from the Old Believer cemeteries. Labels on the graves and data from the books often contained sufficient information to identify the buried Old Believer, reconstruct the occupation, status and guild level. Similar materials were obtained from the Rogozhskoe cemetery for the earlier period of 1820-1840 and the beginning of the 20th century.

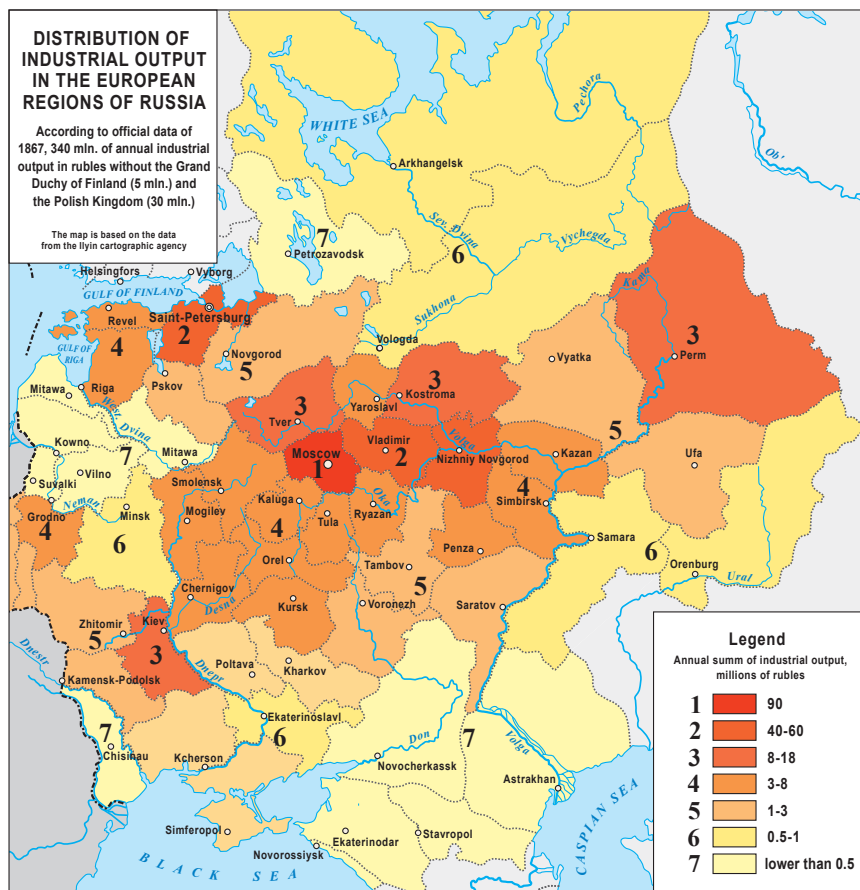
Therefore we have covered official sources, revisions and censuses initiated by the state or guilds, as well as lists of the most important parishioners, internal reports and documents of the Old Believer communities, and finally, synodicons and the records of the main Old Believer cemeteries. The diversification of the sources allowed us to maximize the precision and coverage of the confessional data and mitigate the downward reporting bias linked to the official sources. Additional sources which were used consisted of internal documents, regulations, meeting protocols, resolutions, discussion materials, election results and correspondence. This allows us to cover more Old Believers than in other sources: e.g., we outperform Beliajeff (1979, p. 38, Table 2) by 30-40%.

3.2 Industrial Data

The core of the industrial data consists of statistical reports for 1843 (see Samoilov, 1845); for 1853 (see Tarasov, 1856); for 1867 (see Timiryazev, 1869); for 1871 (see Matisen, 1872); for 1879 (see Orlov, 1881); and for 1890 (see Orlov and Budagov, 1894) on Moscow industry. Further we will discuss the data sources and measure-

ment errors.

Figure 1: Industrial map of 19th century Russia



Source: Timiryazev (1869)

The advantage of the given sources is a relatively stable methodology, used throughout 1843-1890. Though, the methodology of data collection was not significantly changed, it had certain drawbacks. Only the 1871 report was revised by technical experts, who contributed data on technical equipment and reviewed the report of 1867. The latter report was used to map the distribution of manufacturing. The data collection proceeded in the following way: the firm owners submitted data to the local policemen and the latter redirected the data to the local governors, who sent the data to the related federal ministries. The ministries formatted and aggregated the data. We should highlight the potential downward biases of the data: firstly, the entrepreneurs could be reluctant to reveal the complete information in

order to avoid taxation; secondly, unclear definition of the turnover and number of workers employed since this category could also involve temporary workers and under-aged workers, who were reported only for 1871; thirdly, fuzzy division between manufacturing firms and peasant handicraft production; fourthly, missing data and rounding up, which are general problems of many historical data. In addition, the turnover for each firm is aggregated; however, many firms were engaged in various activities and this fact creates difficulties in assigning the firms to specific industries. The data on the equipment helps to reconstruct the production structure: e.g., a firm possessing many colouring vats and only one loom would be assigned to dyeing; whereas in the opposite case, it would be assigned to weaving. Nevertheless, the common data collection methodology for the period 1843-1890 is certainly an advantage for analysis in the time dimension. Let us examine the features of the given reports.

Samoilov (1845) was the first to establish the above-mentioned data collection methodology: the entrepreneurs submitted the data to the local police and then the information was channelled to the governor and to ministries consequently. Samoilov (1845, p. 35) estimates the measurement error to be around 20% or roughly 50 million roubles for all industries. The report covered 1283 firms in the Moscow region. In 1843, total 80 steam machines were listed with 1330 horse powers in total, in addition to 70 water-driven machines with 1576 horse powers. Total horse powers were 2906. The 1843 report as well as the 1853 report had no major cut-offs.

Tarasov (1856) has analyzed and listed a total of 1485 firms. With regard to the wool industry, Tarasov (1856, p. 11) notes that there were only around 20 firms in Moscow, which had a long life span and were founded during the times of Peter I, in the end of the 18th century. Tarasov (1856, p. 12) also states that during the first half of the 19th century the quality of goods produced in the wool industry improved and the prices lowered by 20-25%. Obviously, both observations are consequences of an increase in competition and new firms entering the market. Tarasov (1856, pp. 14-15) mentions technology diffusion and provides examples of techniques learned by the Guchkov family in Alsace such as cloth printing and finishing techniques. Tarasov (1856) specifically mentions the important role of the exported machinery from Great Britain and the British export regulations of 1822 and 1842.

The subsequent report of Timiryazev (1869) introduced the cut-off below 10 000 roubles turnover, whereas the previous 1843 and 1853 reports covered all the available firms. In addition, Timiryazev (1869) notes a substantial under-reporting bias

of up to 20%.

Matisen (1872) examined 2516 firms. This report was more precise due to verification with data from the Russian Manufacturing Expo 1870. The editor, N. Matisen, was working as a main engineer at the Moscow Manufacturing Council and he personally revised the collected raw data. The last reports, Orlov (1881) and Orlov and Budagov (1894), are considered to be less precise in terms of technical information. However, Orlov (1881) and Orlov and Budagov (1894) introduced the cut-off 2 000 roubles turnover.

Keeping in mind the above-mentioned issues, the under-reporting is the most problematic. Unfortunately, we cannot resolve this problem and have to rely on the reported data. Nevertheless, we acknowledge the under-reporting bias. The problem of different cut-off levels is resolved by expanding the 10 000 roubles turnover cut-off to all the reports. An alternative solution would be to exclude 1867 out of the analysis; however, our priority was dynamic completeness of the data and the 1867 data were kept. The real turnover was generated with the help of the General Price Index from Mironov (2012, p. 416). The given index is available for the period of 1703 - 1913 and is composed of food, rent and clothing price sub-indices obtained by the author with the help of historical raw data.

4 Empirical results: discussion of new findings

The main period of our analysis is 1843-1890; however, we were able to obtain data for 1832 separately. Due to the fact that the list of factories and plants of the Russian Empire of 1832 and the subsequent statistical reports of 1843, 1867, 1871, 1879 and 1890 have different formatting, we had to consider the data for 1832 separately. The report of 1832 did not cover turnover and amount of workers. In addition, the 1832 report considered Moscow region on aggregate, without the division into Moscow city and county (uezd). Therefore, our main arguments will refer to the statistical reports of 1843-1890, and the data of 1832 is provided to show the historical continuity.

4.1 Old Believer's textile firms in 1832

The List of factories and plants of the Russian Empire in 1832, compiled by the Department of Internal Trade and Manufactures according to the statements of governors, is one of the most valuable sources published on industrial development of this period (see List, 1833). In the given list the surname, name and social status of the manufacturer, the location of the enterprise and the final product

were indicated.

The classification helped us to decompose the textile data into cotton, silk and wool sub-industries. These categories will be kept for the statistical reports and further we will also consider specific types of manufacturing. Comparison of confessional and industrial data for 1832 gives the following results:

Table 1: Old Believer textile firms of the Moscow region (guberniya)

Firms by type	OB firms (Moscow region)	OB firms (city and county)	Total firms (Moscow region)	Share of OB firms (Moscow region)
Cotton	44	38	232	19%
Silk	27	17	115	12%
Wool	5	5	76	2%
Total	76	60	423	18%

Compiled using the "List for the fabricants and plant-owners of the Russian Empire", part 2, St. Petersburg, 1833 (see List (1833)).

We see that the Old Believers showed the highest activity in cotton production already by 1832, both in absolute and relative terms. The silk production occupies the next position, with the woolen production being the weakest.

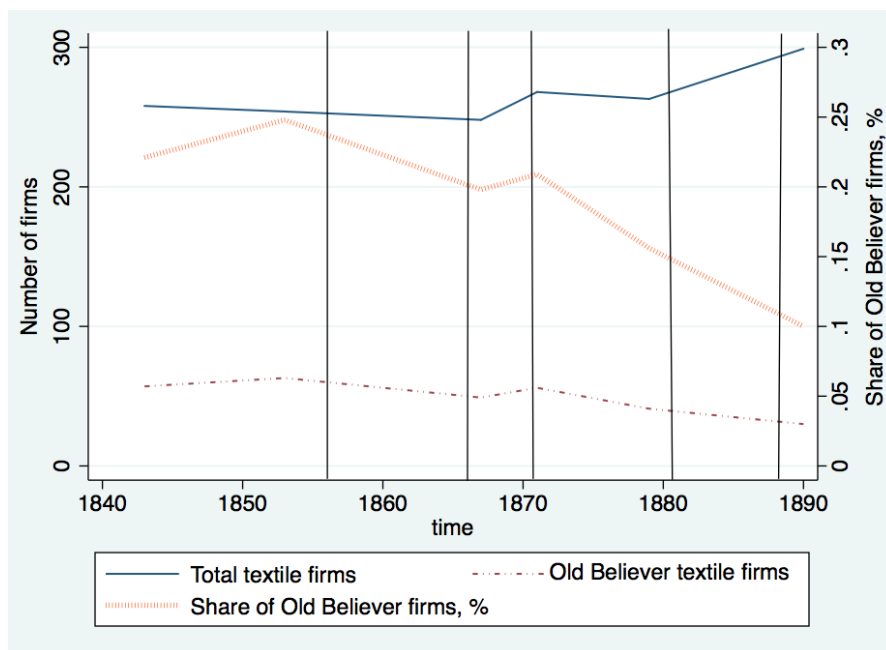
The Old Believers comprised 16% of the population: out of 616 518 people from the population census of P.I. Keppen for 1838 taken from Kabuzan (1963, p. 148), 99 605 were attributed to Old Believers, according to the score of Ministry of Internal Affairs for 1837 as stated in Varadinov (1863, pp. 374-375) in the population of Moscow region. In accordance with these data, the share of the Old Believers in the textile industry should be assumed slightly higher to their share in the population. We will demonstrate this in the following sub-section.

4.2 Old Believer's textile firms in 1843 - 1890

Let us proceed to analyzing the statistical reports of 1843 - 1890. Observing the aggregated data on textile manufacturing allows us to state that the share of the firms owned by the Old Believers was relatively constant prior to 1871 and started to decrease afterwards. Indeed, before the 1870s, the share of Old Believer firms was following the rapid growing textile industry, which can be observed from Graph 1. One should note that not only the share of firms was relatively stable but also the share of the employment in the textile industry and the turnover share were stable. From Graph 2 it follows that in the end of the 19th century, the role of the Old Believer firms in the textile industry and on the related labour market was decreasing. On general, we see that the share in turnover is slightly below the share of firms and the share of employment is marginally higher. Bearing in mind that

according to the estimations of P.I. Keppen, taken from Kabuzan (1963, p. 148), the Old Believers comprised 16% of Moscow population, Graph 1 and 2 provide an indirect evidence of a higher propensity to entrepreneurship of the Old Believers⁵. Indeed, the share of the Old Believer firms in textile until 1870s was higher than 20% which means that Old Believers were over-proportionately represented in the textile industry. We could expect a downward bias in the measurement of Old Believer population; however, for the purposes of our research we select the benchmark of 16%, which is one of the highest estimates.

Figure 2: The share of the Old Believer firms in the Moscow textile industry

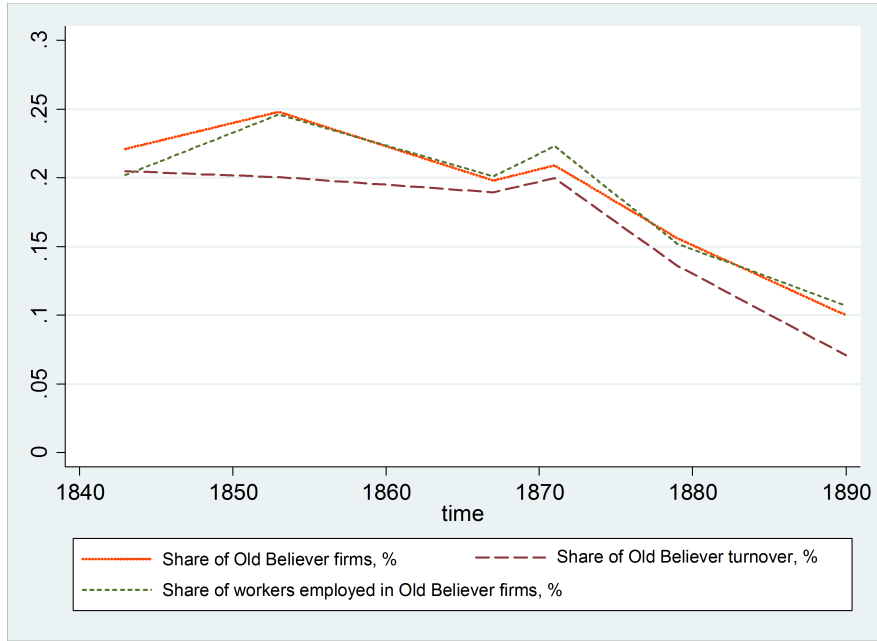


Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881) and Orlov and Budagov (1894); vertical lines denoting business cycle peaks: Owen (2013, p. 903)

In addition, we highlight the peaks of business cycles with vertical lines according to Owen (2013, p. 903). The peaks of 1857, 1866, 1869-1871, 1879-1881, 1887-1888 allow us to state that the participation of the Old Believer firms was pro-cyclic at least for the first three peaks; however, in the last two business cycles their participation declined. The overall trends in the textile industry suggest that the share of the Old Believer firms before the 1870s was relatively stable fluctuating between 20 and 25%. The share of the employment in textile was following the same pattern

⁵As stated in Bushen (1863, pp. 216-217) there were 9.7% of the Old Believers in Moscow region; according to De Livron (1874, p. 16) there were 4.8% of the Old Believers in Moscow region.

Figure 3: Textile: Old Believer firms, turnover and employment



Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881) and Orlov and Budagov (1894)

and the share of turnover was fluctuating between 19 and 20%, or slightly below the share of firms. An over-proportionate participation in the textile industry is a clear signal from the aggregated data; however, to verify the statement we have to decompose the textile industry and find out whether this statement holds for all sub-sectors. In addition, we will consider a proxy for productivity, the turnover per worker, to find out whether the Old Believer firms were more efficient: in the right column we report the difference between the median value of the Old Believer firms and the median value of the other firms.

In the table below we observe key indicators in the silk sub-sector for the reported years. If we recall Table 1, the share of Old Believer firms in silk was around 12% in 1832. It appears that the Old Believers followed the consumer and technological trends of that time and focused on the silk production in the first half of the 19th century. Afterwards, the production was switched to wool and for 1867 and 1871 there were no Old Believer firms involved in silk production in Moscow. Nevertheless, the shares of employment and turnover were below the share of firms and the median turnover per worker of the Old Believer firms was significantly lower than the median turnover per worker of other firms in the sub-sector (see delta column).

Table 2: Silk sub-sector

Year	Share ^a in textile	Firms			Turnover (roubles)			Workers			Delta ^b
		Total	O.B.	Share	Total	O.B.	Share	Total	O.B.	Share	
1843	0.190	49	11	0.224	2 386 363	424 732	0.178	4 007	682	0.170	-29
1853	0.146	37	4	0.108	1 987 882	130 893	0.066	3 074	200	0.065	-135
1867	0.133	33	0	0.000	1 791 843	0	0.000	2 986	0	0.000	0
1871	0.078	21	0	0.000	1 812 515	0	0.000	2 729	0	0.000	0
1879	0.099	26	1	0.038	2 167 039	73 390	0.034	3 209	151	0.047	-165
1890	0.194	58	2	0.034	7 290 786	52 442	0.007	9 910	100	0.010	-215

Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881), Orlov and Budagov (1894)

^aShare of sub-sector firms in the textile sector

^bDelta: median turnover per worker in the O.B. firms minus median turnover per worker of other firms

Table 3: Wool sub-sector

Year	Share ^a in textile	Firms			Turnover (roubles)			Workers			Delta ^b
		Total	O.B.	Share	Total	O.B.	Share	Total	O.B.	Share	
1843	0.291	75	13	0.173	5 402 606	1 400 762	0.259	10 432	2 039	0.195	36
1853	0.287	73	13	0.178	5 804 353	1 360 754	0.234	13 962	2 942	0.211	21
1867	0.565	140	34	0.243	14 619 430	3 801 883	0.260	26 775	6 466	0.241	41
1871	0.653	175	35	0.200	18 632 390	4 678 702	0.251	36 955	9 137	0.247	49
1879	0.608	160	29	0.181	23 869 776	4 834 480	0.203	33 106	7 295	0.220	13
1890	0.522	156	24	0.154	16 547 497	3 364 826	0.203	25 854	5 773	0.223	6

Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881), Orlov and Budagov (1894)

^aShare of sub-sector firms in the textile sector

^bDelta: median turnover per worker in the O.B. firms minus median turnover per worker of other firms

A completely different picture is observed in the wool sub-sector. Bearing in mind that in 1832 there were only around 2% of Old Believer firms in this sub-sector, the subsequent shares of Old Believer firms are impressive: in 1867 there were 24% of Old Believer firms producing wool or wool-related products. The decline in the wool subsector was the smallest: in 1890 the Old Believers had 15% of firms. We should note that in the wool sub-sector the share in turnover and share of employment were persistently higher than the share of firms: e.g., in 1843 17% of the Old Believer firms made 25.9% of turnover and employed 19.5% of workers in the wool sub-sector. Even in 1890 15% of the Old Believer firms made 20% of turnover and employed 22.3% of workers of the given sub-sector. In addition, the median turnover per worker of the Old Believer firms in the wool sub-sector was persistently higher than the median turnover per worker of other firms. It follows

that the wool textile sub-sector can be seen as a stronghold of the Old Believers in 19th century Moscow: the role of their firms in the wool sub-sector is stable and the above-mentioned indicators suggest that they outperformed other firms throughout the whole period.

Table 4: Cotton-paper sub-sector

Year	Share ^a in textile	Firms			Turnover (roubles)			Workers			Delta ^b
		Total	O.B.	Share	Total	O.B.	Share	Total	O.B.	Share	
1843	0.516	133	33	0.248	9 199 098	1 655 030	0.180	23 346	4 927	0.211	-80
1853	0.555	141	46	0.178	12 585 305	2 625 112	0.209	26 899	7 816	0.291	-70
1867	0.302	75	15	0.200	8 499 968	916 712	0.108	16 779	2 880	0.172	-37
1871	0.269	72	21	0.292	13 419 266	2 080 608	0.155	20 009	4 178	0.209	70
1879	0.293	77	11	0.143	13 884 640	523 006	0.038	19 489	1 052	0.054	-3
1890	0.274	82	4	0.049	26 583 646	159 949	0.006	23 485	496	0.021	-168

Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881), Orlov and Budagov (1894)

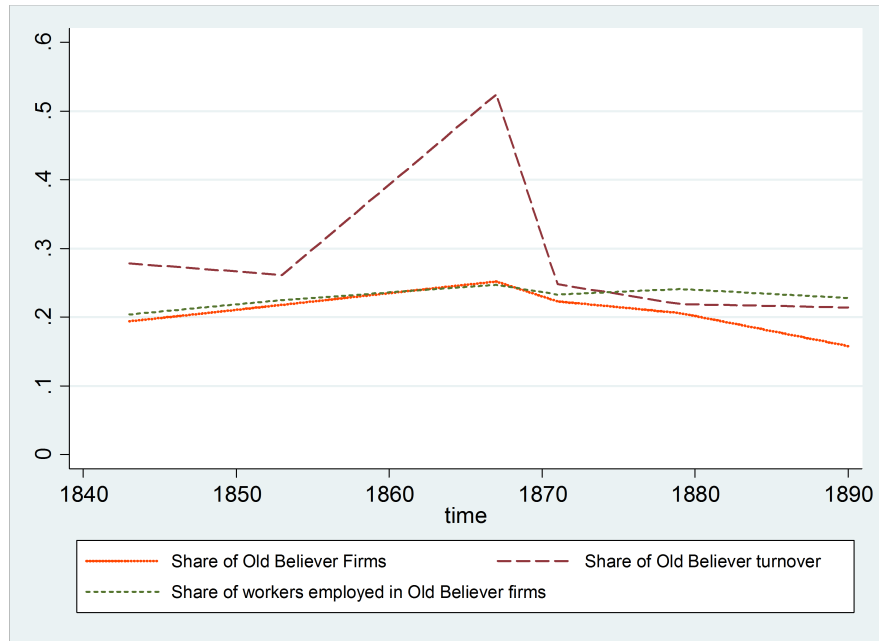
^aShare of sub-sector firms in the textile sector

^bDelta: median turnover per worker in the O.B. firms minus median turnover per worker of other firms

The cotton-paper sub-sector provides a less impressive picture: here, the Old Believers had relatively high share of firms, e.g., 24.8% in 1843 or 29% in 1871; however, the turnover share was mostly lower, as well as the share of employment. The median turnover per worker of the Old Believer firms in this sub-sector was also below the median of other firms. However, the data on the cotton-paper sub-sector suggests that in this sphere, the Old Believer firms were employing an over-proportionate number of workers: e.g., in 1853 17.8% of firms employed 29% of workers of this sub-sector. Naturally, in this case the median turnover per worker in the Old Believer firms would be lower, simply due to a larger number of workers - this partly explains the negative values in the right column. Considering types of manufacturing, we have selected two most interesting categories: wool and cotton-paper weaving. The selection focuses solely on firms that were involved in weaving according to the description in the report, that is, had weaved products in their output or/and technical equipment necessary for weaving, e.g. yarns, looms, mills.

According to technologies and methods, textile industry can be categorized into spinning, weaving and dyeing. From Graph 3 it follows, that in wool weaving, the Old Believers had an over-proportionate share in turnover: e.g., in 1843 there were 19.4% of Old Believer firms generating 27.8% of the turnover and in 1867 25.2% of firms generated 52.4% of the turnover. Their share in turnover prevailed over the share of firms throughout the whole period. The share of workers was proportionate to the share of firms. These facts resemble the data in Table 3, on

Figure 4: Wool weaving: Old Believer firms, turnover and employment

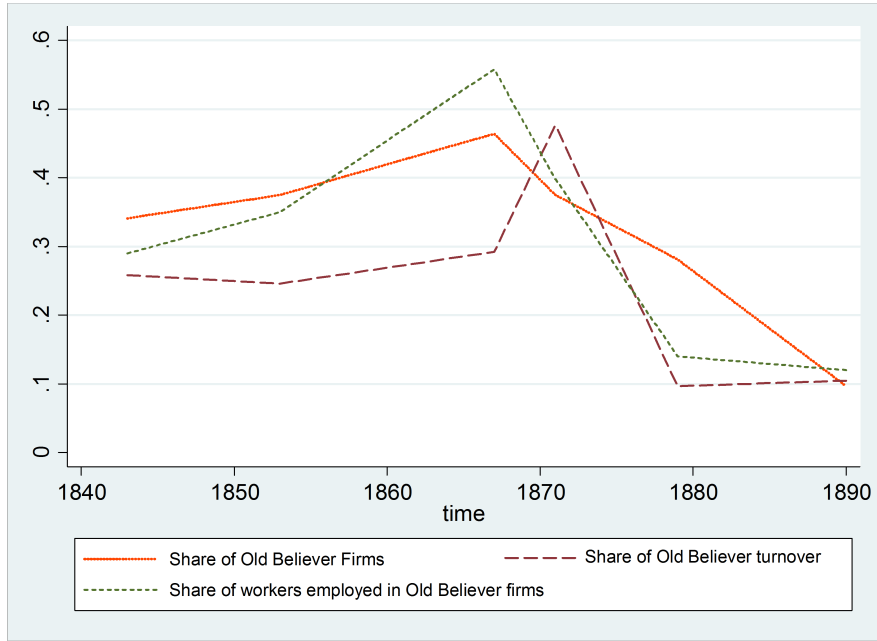


Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881) and Orlov and Budagov (1894)

the wool sub-sector.

The pattern in the cotton-paper weaving sub-sector reflects the data in Table 4. Indeed, the share in turnover was persistently lower than the share of firms; however, the share in employment was over-proportionate. Therefore, though the Old Believer firms enjoyed a lower share of turnover in the cotton sub-sector, they were among the major employers on the labor market for the related workforce.

Figure 5: Cotton-paper weaving: Old Believer firms, turnover and employment



Source: Samoilov (1845), Tarasov (1856), Timiryazev (1869), Matisen (1872), Orlov (1881) and Orlov and Budagov (1894)

4.3 Analysis of distributions

Another interesting observation is related to the distribution of turnover and workers in the textile industry (see the Appendix). One could assume that the distributions within the textile industry would be positively skewed, which means that the peak frequencies would be observed for small firms considering turnover and labour. Using the histograms we try to answer two questions: whether the production shifted from a small scale to a larger scale; and whether the Old Believer firms tended to form large enterprises or not. For the first question, we have to examine whether the positively skewed distribution pattern changed throughout time. For the second question, we would have to check whether the distribution patterns for the Old Believer firms are different. We have used histograms with equal number of bins (50) and adjusted the frequencies for a clearer comparison. The histograms are put in the Appendix for better presentation.

It appears that according to turnover distribution the positively skewed pattern is relatively constant throughout 1843 - 1890. Moreover, since 1871 the peaks at the first bin increase and the tails become thinner which means that relatively

small firms prevail. In the period 1843 - 1871 the distribution pattern of workers slightly changes and the first bin becomes smaller which means that the size of firms slightly increases. Therefore the overall distribution pattern does not hint at the fact that the firms have become larger; however, during 1853 - 1871 one observes a certain enlargement of firms considering employment. The distribution of workers is particularly interesting when analyzing the Old Believer firms.

Let us consider the 1843 distribution of turnover and workers in the whole textile industry. In the first row there are normal firms and on the second row - the Old Believer firms. For normal firms, the positively skewed distribution is obvious, as well as for the turnover of the Old Believer firms. However, the number of workers has a different distribution pattern - the first peak is located at the second bin, not at the first bin as in the other graphs. This confirms the fact that the share of the Old Believer firms in the textile industry employment was higher. Empirical evidence shows, that the Old Believer firms tended to employ more labour. Similar striking differences are seen in the distributions for 1867, 1871 and 1879.

4.4 Summary

In the empirical part we were able to reveal the following facts: firstly, the Old Believers were over-proportionately represented in the entrepreneurship sphere in the textile industry, which is an indirect evidence of higher propensity to entrepreneurship; secondly, in some sub-sectors of the textile industry, the Old Believer firms were prevailing: e.g., in 1843 around 17.3% of firms in the wool sub-sector were owned by the Old Believers, providing up to 25.9% of the turnover of the given sub-sector and in 1867 in wool-weaving 25.2% of firms, which were owned by the Old Believers, generated 52.4% of the turnover; thirdly, from 1832 to 1871 we observe a relatively stable share of Old Believers in the textile industry, especially considering wool and cotton-paper production, with a sharp decline after 1871; fourthly, the distributions allow us to state that Old Believer firms tended to employ more labour, which was not necessarily more efficient, since the median turnover per worker of the Old Believer firms was not significantly different from other firms.

Therefore, according to the empirical data for 1832 - 1890 the Old Believers were more successful in terms of over-proportionate entrepreneurial participation, and the Old Believer firms enjoyed over-proportionate shares in turnover and in labour especially in the wool sub-sector during 1843 - 1871. However, the Old Believer firms were not more efficient in terms of turnover per worker than other textile firms. A decline after 1871 can be partly explained by the sample limitation, e.g. the general trend of moving production into the regions and the corporatization: in many cases, joint ventures were established and it was difficult to trace the owner

and impossible to identify mixed ownership as an Old Believer firm. It appears that the Old Believer firms indeed demonstrated an impressive performance, in spite of the new wave of repressions initiated by Nikolay I, during 1825 - 1855. The last section of this paper is dedicated to potential reasons for such performance of the Old Believer firms.

5 Theories of success of Old Believers and discussion

We have established mixed empirical evidence of the economic success of the Old Believer firms in the 19th century. In the following section we will discuss the possible reasons for the impressive performance of the Old Believer firms. Various hypotheses will be presented: from Max Weber's theory of business ethics and the contrasting Petty-Gerschenkron argument of the minority status, to modern explanations due to networking and human capital.

5.1 Weber Thesis, Labour and Social ethics

It is impossible to discuss the issues of the relationship of economic and religious life without mentioning Max Weber. His essay "The Protestant Ethic and the Spirit of Capitalism" caused considerable controversy. The so-called Weber Thesis about the significance of Protestantism for the development of capitalism discussed in later papers made the original meaning of Weber's work unclear and exaggerated. It is important to understand Weber's concept of the relationship of religion and economy, highlighting the significance of "elective affinity" (Die Wahlverwandtschaften) which arises between these two fields, according to Weber.

Weber associates Western capitalism with a particular form of rationality. It manifests itself in the organization of work, reporting, the use of securities, and capital investment in production. Dedication, respect for professional activity, of any kind, combined with paradoxical parsimony in the use of earned benefits (austerity), according to Weber, are realized in Protestantism, particularly in Calvinism.

On closer consideration, Weber himself would have doubted his own thesis, as he stipulates that the bond itself is not sufficient, and the unique constellation of diverse spiritual, economic, legal and political factors is very important to make the unity of rational capitalism and religious ethics possible. In this context, he treats the role of Protestantism as cultural and historical, but not universal. Puritanism was only the cradle of modern capitalism: "The people filled with the

spirit of capitalism to-day tend to be indifferent, if not hostile, to the Church” , - Weber explains and continues: ”The thought of the pious boredom of paradise has little attraction for their active natures; religion appears to them as a means of drawing people away from labour in this world” as stated in Weber (2001, p. 32). Weber warned against unnecessary simplification: ”.. it is, of course, not my aim to substitute for a one-sided materialistic an equally one-sided spiritualistic causal interpretation of culture and of history. Each is equally possible, but each, if it does not serve as the preparation, but as the conclusion of an investigation, accomplishes equally little in the interest of historical truth” (see Weber, 2001, p. 125). This idea is reinforced by the concept of ”elective affinity.” It emphasizes the alchemical complexity of this process, when some elements are attracted to each other and some are repelled. Protestant ethics, according to Weber, is both a purely religious phenomenon, and one more step towards the rationalization of ethical relations. It is this rationalization that is demanded by the new capitalist relations. Original religious spirit can disappear afterwards. As a result of a combination of many factors, Protestant ethics formed a new phenomenon in connection with material culture.

It is important to emphasize that Weber’s explanation of the facts of successful economic activity of Protestants in Europe is based on sustainable originality of their theological doctrine. Indirect ethical consequences of Protestant doctrine allowed them to express themselves in the field of economics in both cases: when they were in the minority and were persecuted, and when they were in the majority, like in Geneva, New England and some areas of Germany or in the Netherlands as stated in Barro and McCleary (2003). In various external socio-political conditions, Protestants showed a tendency towards economic rationalism and promoted modern (industrial) capitalism.

Weber was much criticized (see Tawney, 1998). Robertson (1933) stated that the energy of the Jesuits, thriftiness of the Franciscans, and the attitude to usury of the Jansenists were close to Calvinist ones. In addition, Samuelsson (1993) rejected the presence of any connection between religion and the economy, showing the unity of the modernization process in the Catholic Belgium and the Protestant England. The methodology of ideal types was questioned (for details see Schumpeter, 1954, p. 80), and the facts of the successful development of Catholic cities and orders were found in the history of capitalism (see Febvre, 1992). However, most authors have found a number of fair points in the concept of Weber. In the context of our work, it is interesting to relate the Old Believers and Protestants in terms of their impact on secularization and rational type of economy.

Expert of the Old Believers' seventeenth century history Sergei Zenkovsky (2005, p. 450) draws a direct analogy between Fedoseevskaya and Calvinist communities: "By their strict discipline, formally puritanical approach to the world, hard work and constant frugality, the consciousness of their exclusiveness and being chosen by God, secular priesthood, which they called mentoring, Nevelskaya community of Theodosius and other communities of this "consent" looked more like Geneva of Calvin's times than Orthodox monasteries." There are other examples of comparison which emphasize individualization of faith (see Glinchikova, 2008, p. 13). Formally, these two movements have much in common: methodical order, rationalism, the elimination of hierarchy, high literacy and willing to work with texts. However, it should be noted that the Old Believers and Protestantism represented opposite trends. Protestantism embodied the reformist movement aimed at the abolition of hierarchy, centralization, and separation of church and secular spheres. Old Believers, on the contrary, sought to preserve the integrity of the form and content of the Russian Orthodox Church, opposed the "novelties" and reforms affecting ceremonies, books and liturgical practice. The Protestant fundamentally opposes the church hierarchy, while the Old Believer-bezpopovez was forced to abandon the institution of priesthood in order to save the faith in the conditions of lack of priesthood. The result was similar, but the purposes were radically different. Protestantism is an organic phenomenon of Western Christianity, a certain stage in European history, while the Old Believers were a part of the Russian version of Eastern Orthodoxy. There is another significant difference: the Old Believers never became a dominant project. What is more important, rationalism of the Old Believers, to a large extent, remained to be traditional, and personal relations prevailed over the impersonal ones.

One of the most interesting ethical features promoted in the Old Believer communities is the attitude to savings coupled with praise for hard work. As Pavel Melnikov notes (see Usov, 1898, pp. 153-154), Peter Egorovich Bugrov (1792 - 1857) had large scale orders from the government and participated in bread trade, which brought him enormous profits, lived very modest life, being used to simple living. Despite the fact that the business of Bugrov had a volume of hundreds of thousands of rubles (he owned several houses, a mill and other assets), he rejected luxury and was never mentioned in wasting money. Similar lifestyle had Fedul Gromov, one of the major timber traders in Saint-Petersburg. Obviously, business ethics of the Old Believers is a subject, open to further debates; however, at this point we have to note that modest lifestyle, savings and reinvestment, and hard work were always considered as merits in the Old Believer communities.

The attitude to entrepreneurship and money had caused ideological frictions inside

of the Old Believer movement. For example, the most extreme branch of the Old Belief, the so-called "stranniki" (vagabonds or wanderers), or the wandering Old Believers, in the first half of the 19th century faced debates on these issues: the schism and the anathema of 1667 meant for the "stranniki" complete abandonment of the property due to the coming of the antichrist; however, the fact that after decades the anti-christ did not reveal himself released the tension and after a series of debates relaxed the attitudes towards money, trade and property. It is worth noting, that the "stranniki" movement divided into two main groups: a group led by Aleksander Vassilievich Ryabinin (1852 - 1937) consisted of those who decided to establish mills and trade were called "mel'nichnue" and a second group "nemel'nichnue", who rejected entrepreneurship as stated in Raskov (2012, pp. 186-203).

Another interesting feature of the Old Believer ethics is avoidance of alcohol, as stated in Hildermeier (2013, p. 818). Needless to say, abstention from alcohol might have a positive impact on working discipline and, hypothetically, productivity. Even if we assume that a certain proportion of the entrepreneurial success of the Old Believers can be attributed to specific business ethics, there is no precise empirical way to confirm this hypothesis. Therefore we can only speculate that certain informal institutions were channeling the ethics of the Old Belief and therefore contributing to economic success. In our opinion, minority status, social and human capital can also be considered as factors of success.

5.2 Minority status

To a large extent, the minority status of the Old Believers was enforced by the legislation of that time. The reforms introduced after 1652 by the patriarch Nikon caused a schism in the Russian church. Whereas the Old Believers urged for purification of the church from sin and maintenance of discipline, the proponents of Nikon urged for restoration of old medieval practices of the original Greek church. The degree of confrontation between the proponents of Nikon, including the state, and the Old Believers was so high, that the latter referred to Nikon as a precursor of the anti-Christ, as stated in Crummey (2011, p. 45). After the gradual introduction of ecclesiastical reforms by Patriarch Nikon, the Great Moscow Synod of 1666-1667 anathematized the Old Believers. Immediately harsh repressions followed and the key proponents of the Old Belief such as Avvakum, Fedor, Lazar, Epifanii and Kapiton opposing the reforms and defending the Old Belief (see Zenkovsky, 2005) were captured. The state officials haunted the Old Believers down and punished them as well as anyone who was helping them. A wave of protests, local conflicts and prosecutions covered Russia: most striking examples of these unrests was the uprising in Solovetsky monastery in 1668, which lasted

for 8 years and the 1682 rebellion of the garrison of Moscow. The Tsar Alexey Mikhailovich, in power during 1645 - 1676, urged to "execute and burn without mercy all those, who stand against the church and official belief" as stated in Subbotin (1876, pp. 219-220) and Deyaniya (1893, list 14). To enforce the repressions against the Old Belief, in 1685, tsaritsa Sofia Alekseevna, in power during 1682 - 1689, issued 12 detailed instructions, proposed by the patriarch. Among many harsh statements in these instructions one can find the following: the most stubborn Old Believers should be "burned in their houses" or "executed in other ways" and those who assisted them should be "birched" and sent in exile to remote cities (for details see PSZ, 1830, Tom II, N 1102). Facing such severe repressions, the Old Believers fled out of the country or tried to hide in distant and wild regions.

Severe repressions fuelled the anticipation of the apocalypse and the anti-Christ, and the end of the 17th century and the beginning of the 18th century were a struggle for survival for the Old Believers. Afterwards the repressions of the Old Believers followed a cyclical pattern. Under Peter I, who reigned during 1682 - 1721, the degree of the repressions decreased: first time since the anathema of 1667 the Old Believers were allowed to obtain a legal status; however, only after agreeing to pay a double soul tax or imposition (*podushnaya podat'*), particularly during 1718, and were allowed to dwell in cities and vilages (for details see Varadinov, 1863; PSZ, 1830, Tom V, N 2991, 2996 and 3232). However, in 1722, the Old Believers were labeled together with the "borodachi", or people, who refused to shave off their beards as Peter I urged, by special distinctive clothing (see PSZ, 1830, Tom VI, N 3944). Keeping a beard during this period of time was costly and the person was obliged to pay a special tax and always wear a printed certificate as the evidence for the payment made. During 1725 - 1763 the Old Believers were monitored and supervised by a governmental body called "Raskolnicheskaya Kontora" (see RGADA-Fond-288).

Another milestone in the history of the Old Believers was the liberal reign of Catherine II during 1760 - 1790. In 1762 the Old Believer refugees, who fled from Russia, were offered to settle in Siberia, Volga and Irgiz regions, with a 6-year tax free period. In addition, they were allowed to wear beards and were freed from an obligation to wear specific clothing, introduced in 1722. The supervising body "Raskolnichya Kontora" was eliminated in 1763, in 1769 the Old Believers were allowed to be present at the court hearings and in 1782 were freed from double taxation. Already in 1783 the Old Believer printing houses were legalized and in 1785 they were allowed to be elected as public servants. During this period in 1771 in Moscow two major Old Believer communities were founded: the Rogozhskaya priestly community (*popovzy*) and the Preobrazhenskoe priestless

community (bezpopovzy). These communities later formed the core of a large economic network and were often named in historical literature (e.g. Hildermeier, 2013, p. 871).

The liberal approach to the Old Believers was carried on by Pavel I and Alexander I; however, during the reign of Nikolay I during 1825-1855 the repressions continued: community centres and buildings were destroyed, many Old Believers lost their civil rights, the marriage and birth under the Old Belief lost its legal status, communities were deprived of the right to own property. This wave of repressions was distinguished by centralization: special committees were created to manage the issue. Even the bequests in favour of the Old Believer communities were cancelled and many of the communities lost their assets and houses. One should note that these measures were not always effective due to corruption among the executives and an increasing economic power and leverage of the Old Believers. Alexander II and Alexander III resumed liberal policies towards the Old Believers.

The "Golden Age" of the Old Believers was the short period from 17th April 1905, when Nikolay II, in power during 1894 - 1917, issued the manifest of "Fostering the religious tolerance", until the revolution of 1917. During 1905 - 1917 the Old Believers received equal rights, were allowed to build churches and officially register their communities. Obviously, after the revolution of 1917 the Old Believers as well as the representatives of other religions were suppressed.

The Old Believers most of the time had a legal status which made them vulnerable to repressions due to confessional reasons. Prior to 1905 the risk of being prosecuted for "crimes against the established belief" was very high. As Stadnikov (2002) showed, many peculiar non-judiciary methods of repressions were police supervision, limitations on election as public servants, charity activities and travelling abroad. In addition, the Old Believers were deprived of receiving state awards and honours. The worst status had the Old Believer priests and tutors: they were illegal until 1905. Therefore, the repressive measures were harsher for the Old Believer clerics and priests than for the Old Believer flock. Under these conditions the role of the Old Believer merchants as mediators between the Old Believer communities and the repressive government was growing. The marginalization forced the development of strict rules, institutions and codes of conduct. The economic life of Old Believers was governed by a variety of institutions, most of them being informal. Informal institutions were governing the internal life of the communities as well as the conduct with the outside world. The cyclic pattern of repressions allowed the Old Believers to gain economic power, especially during the reign of Catherine II and increase the flock, for example during the reign of

Alexander I. Therefore the originally religions movement evolved into an industrial network with production and trade nodes united by their belief and informal institutions. Therefore repressions of Nikolay I were not efficient and could not breakdown the communities. The Old Believer communities are a bright example of minority entrepreneurship. This statement can be confirmed by Gerschenkron (1970, p. 32): "In the long run, despite all the fluctuations in government policies, the intolerance must be described as persistent but not extreme; and even in periods of renewed severe persecutions, the intensity of intolerance was held in check by the easy corruptibility of the civil service".

The minority status played another interesting role: it stimulated the developments of informal networks and institutions. This allowed the Old Believer entrepreneurs to gain certain advantage in obtaining information, reputation mechanisms, alternative access to capital and labour markets. Further we will focus on the aspects of networking and institutions.

5.3 Networking and social capital, institutions, access to markets and financing

A substantial portion of literature is focused on networking, which is relevant for the Old Believer communities. A recent contribution by Hillmann and Aven (2011) analyses entrepreneurship in fragmented networks in the Russian Empire. The authors question whether the reputation mechanism existed and how it functioned in Russia during the industrial revolution of the 18th and 19th centuries. The above-mentioned authors provide "the Old Believers" as an example of trust-based networks, where trust enabled the merchants to receive interest-free financing and obtain support as in Hillmann and Aven (2011, p. 503). However, this is the only episode, where the Old Believers are mentioned in the given paper. Hillmann and Aven (2011, p. 505) set the amount of basic capital of newly founded companies as a proxy for the amount of raised capital and previous success as a proxy for positive reputation. Success was measured by a relation of capital, raised by the given founder, to the median capital raised by other founders in the given industry. Applying the Order of the Least Squares and Fixed Effects estimation to the data of 1869 - 1913 they find that the previous success was a significant positive determinant of the basic capital of new companies. The estimated effect of reputation on basic capital is in range of 14-17%. One has to note, that basic capital can be raised via different channels, and some of them may not require a reputation mechanism. One could assume that previous successes, even when occurring not in a consequent row, enabled the founders to accumulate capital and re-invest. The authors show the absence of the self-selection mechanism, that is,

success leading to subsequent success; however, they diverge from the composition of the basic capital and methods of raising funds. Dividing the network into core and periphery, Hillmann and Aven (2011, pp. 511-512) show that the effect of reputation was larger at the periphery.

One has to investigate networking coupled with informal institutions and rules, relevant for the given network. The Old Believers resemble many features of endogenous sects. Since Rubinstein (2000) mentioned Quakers to be an example of such formations, we may want to investigate the informal institutions of Quakers. Walvin (1998) sheds light on Quakers and determinants of their success in Britain associated with a large impact on social, cultural and economic levels. One of the key success factors Walvin (1998, p. 27) mentioned was "the instinct to be mutually helpful" in the Quaker network. Rejection of temptations and pleasures, and asceticism coupled with entrepreneurial motivation ensured their economic success. Internal benefits within the network were secured by penalties of leaving the Quaker network: adherence to established principles and codes of conducts was required and enforced by a threat of exclusion from the network. Moreover, Walvin (1998) often refers to Quakers as to a "society of friends", highlighting the nature of tight links and close relations within narrow Quaker status societies. Though Quakerism was not welcomed in the new world and in the UK as well, due to their rejection of authorities and the strict code of conduct posed a serious threat to membership, Quakerism survived and nowadays is often associated with entrepreneurial success. Walvin (1998) also describes the cartelisation of the confectionary industry driven by the Quaker connections ⁶. As Davison (2011) notes, Quaker business culture also played a significant role: identity of reputation and wealth, attitude to business as to a religious service and to business failure as to a sin, commitments, integrity and other spiritual values attached to real life, discretion and respect towards information, minimization of leverage and avoidance of debt. Davison (2011, p. 12) states that the Quaker code of business conduct of 1661, "The Line of Righteousness and Justice stretched Forth Over", promoted these values with an emphasis on honesty and transparency. Moreover, the often mentioned principle of "yea and nay" limited speculation and urged for direct and clear conduct during negotiations. Another interesting feature of Quaker networks, as in Davison (2011, p. 13), was internalization of conflicts and disputes inside of the community.

Considering the Old Believers, we should highlight that their own reputation mechanisms based on family ties are worth mentioning. Stadnikov (2002, p. 404) highlights that "each family line was incorporated into the community with religious,

⁶See: <http://www.nytimes.com/books/98/03/01/reviews/980301.01hirstt.html>

genealogical and economic ties". One of the bright illustrations is the Rahmanov dynasty in the Rogozhskaya community: several family lines of the Rahmanov dynasty controlled bread, corn and meat trade. In addition, they were genealogically linked to other influential dynasties of the Ovsyannikov, who traded bread and Dubrovin merchants. These inter-linked family lines were the major leaders in the community and played important role in the decision-making. Yurii Petrov (2010, p. 691), who analyzed the historical Moscow entrepreneurship, stated that "family business was one of the most distinctive features of the Old Believers, which pre-defined establishing special forms of capital formation, e.g. partnerships on equal footing and self-financed enterprises". Family business provided additional trust and enforced reputation mechanism, making investments easier.

Networking and trade were always closely associated considering the Old Believer entrepreneurship. The Vyg community, often mentioned in Filippov (1862) and Crummey (1970), was founded in 1694 and serves one of the brightest among first examples of the Old Believer community trading. At that time the Vyg community was also one of the main spiritual centers of the Old Belief in the Karelia region. One should note that the spiritual leader of the Vyg community, Andrey Denisov, himself initiated bread trade exploiting the price differentials in other regions. The bread trade was very successful during the 1705 - 1712 famine. Obviously, in order to be informed about the regional price differentials one should have a certain inter-regional network. In 1737 it was documented that the Vyg community also was reselling bread from the Volga region to Saint-Petersburg. In order to finance the trade, Old Believer entrepreneurs took credit from their community members and divided the profits by half. In 1740 a first code of conduct for Old Believer merchants was written: trade was appreciated if it was for the good of the community and fair trading was promoted ("fair weights are a god's will"), it was shown in more detail in Raskov (2012, pp. 147-161). The spiritual leaders took active part in organizing trade and formulate further principles: all the major decisions had to be consulted with the community and the elders, everything must be documented and be transparent. The latter principle was promoted through, scribing, book-keeping and accountancy. Another notable example is the timber trade, organized by Fedul Gromov⁷ in Saint-Petersburg and the Karelia region. Fedul Gromov took advantage of the timber mills he owned near Petrozavodsk and successfully competed with other producers offering lower prices and quoting them on one of the first timber exchange markets which he ran. By the end of his life he owned a large network of timber mills, warehouses and factories. As a result, many tenders from the state and large scale orders went through Gro-

⁷Fedul Gromov is also known for charity activities. In addition, on a large piece of land purchased by him, and Old Believer's cemetery was opened commemorating his name.

mov's network, making him one of the major timber suppliers in Saint-Petersburg. Therefore networking and social capital was always one of the distinctive features of the Old Believer entrepreneurship.

Access to interest-free or low interest financing is another distinctive feature of the Old Believers. The practice of accumulating capital and investing at a certain return rate was widely spread in Moscow, especially Fedoseevtsy and priestly communities. The community acted as a financial intermediary channeling capital to those in need of money as well as to successful entrepreneurs. Most of the loans were interest-free; however, in some occasions an interest was agreed on, for example, when the money was lent from groups of peasants to the leaders of the community (see Raskov (2012, pp. 162-185). The access to interest-free capital inside the community was a natural advantage of the Old Believer entrepreneurs. The loans varied in their size, purpose and duration: e.g., in 1848 the Fedoseevtsy community in Moscow provided 100 000 roubles to a female merchant Nosova and an equal sum to a merchant Guchkov for purchasing land and buildings. Another 150 000 roubles were provided to finance the transaction in Taganrog made by merchant Egorov and 100 000 roubles were directed to merchant Nikiforov for purchasing a small forest in order to produce timber and provide it further as firewood for poor people (see Raskov, 2012, pp. 239-240). Hildermeier (2013, p. 819) states that access to capital of the community could also play a role of insurance coverage in case of disasters or other unfortunate events.

5.4 Human capital and literacy

There exists a block of relevant literature which covers the topic of entrepreneurial religious minorities with a focus on human capital. Botticini and Eckstein (2012) discuss the factors which shaped the success of Jews in medieval Europe from 70 to 1492 A.D.: the tendency towards literacy and urbanization due to more attractive returns of the high-skilled labour and creation of a network of Diasporas obviously contributed to their success. Moreover, Botticini and Eckstein (2012, pp. 4-7) state that educating own children was a religious obligation explicitly defined in Talmud. This involves the human capital theory argument, which is one of the core topics of the above-mentioned book.

Becker and Woessmann (2009) investigate the statement that due to certain religious propensity to literacy protestants had higher levels of human capital and thus were able to extract a higher rent from this advantage. Becker and Woessmann (2009, p. 539) explain this propensity by the religious obligation to be able to read the bible by him-/herself. By applying instrumental variable framework, the authors explain economic prosperity by the literacy rate, instrumented by the

distance to Wittenberg, the centre of dispersion of the protestant beliefs. In the final stage of their paper, Becker and Woessmann (2009, pp. 576-577) formulate a three-stage model where income is explained by literacy, instrumented by share of protestants, which is in the third equation instrumented by the distance to Wittenberg. Taking into account a wide range of control variables, the authors ensure the robustness of the human capital-based explanation of comparative success of protestant communities in Prussia.

Another interesting example of research on entrepreneurial minorities is Hornung (2014), focusing on technological diffusion caused by Huguenot migrants to Prussia. As stated in Hornung (2014, p. 90), around 43 000 Huguenots left France for German territories. The composition of the Huguenot migrants as of 1705 is extremely interesting: approximately 45% were craftsmen, 20% of workers, 15% of farmers, 8% of traders and bourgeoisie, 7% of various occupation and 5% of nobility. In other words, these economically active Huguenot migrants represented a small copy of the French society. Building a causal bridge from 1700 to 1802, Hornung (2011) showed a link between high-skilled Huguenot migrants and a rise in productivity in Prussian textile manufacturing. The main channel for the increase of productivity, according to Hornung (2014), was technology and knowledge diffusion. Hornung (2014, p. 101) exploits the instrumental variable framework and explains output per worker by endogenous share of Huguenots in local population. In the first stage the share of Huguenots is explained by an exogenous instrument of population losses after the 30-year war since, according to Hornung (2014), Huguenot migrants were filling the gaps in population. Hornung (2014) in fact uses the share of Huguenot population as a proxy for knowledge and technological diffusion; however, one can find this proxy selection questionable, assuming an indirect link between them. Additionally Hornung (2014) examines the reception and treatment of the Huguenot migrants in Prussia: high-skilled migrants were welcomed and not only as workers, but rather as organizers, counsellors and supervisors; the Prussian king also expected them to produce substitutes for certain imported goods. However, the above-mentioned author notes that German Catholics refused to buy from Huguenots or to do business with them. Similar attitudes were displayed by some local Lutheran population. Nevertheless, Frederick William urged for cooperation between French and German skilled workers and in Halle it was even proclaimed, that local citizens should send their children to become apprentice to French manufacturers as stated in Hornung (2014, p. 94). Naturally, this mixed reception of the Huguenot entrepreneurial minority group hindered and promoted knowledge diffusion at the same time. However, we should be careful when drawing parallels between Huguenots and the Old Believers, because Huguenots in most cases in Prussia enjoyed a number of privileges whether

the Old Believers were facing cyclical waves of repressions.

The Old Believers fostered special attitude towards literacy, scribing and book-keeping. This served as an externality to overall human capital of the community and therefore maintaining precise accountancy books, tracking and analyzing transactions was never a problem for the Old Believer entrepreneurs. Book-keeping in the Old Believer communities was an extremely important task, providing that during repressions the manuscripts and books were endangered and the communities had to make copies to save the content. Therefore, reproducing books and home education became the vital features of the Old Believer communities. Due to the remarkable scribing and book-keeping, many ancient manuscripts were saved and later stored in the state archives. The works of Bubnov (1995) and Voznesensky (1996) also mention exceptional book keeping traditions of the Old Believers, where even the smallest and remote communities would store large libraries, where the number of books could exceed the number of community members. Hildermeier (2013, p. 819) notes, that education was one of the competitive advantages of the Old Believers at that time.

6 Conclusion

In our paper we have shown that several generations of historians have been working on the phenomenon of the Old Believer entrepreneurship (including but not limited to: von Haxthausen, 1968; Leroy-Beaulieu, 1898; Blackwell, 1965; Gerschenkron, 1970); however, only few dealt with the large scale statistical data (see Beliajeff, 1975, 1979; Stadnikov, 2002; Raskov, 2012). Therefore, our dynamic analysis of the role of the Old Believers in the Moscow 19th century textile industry using a broad range of confessional and industrial data was intended to fill this gap. The evidence of their important role in the Russian economic history has additional meaning due to the involvement of the Old Believers in culture and politics, including their important role in the bourgeois revolution of 1905 and February 1917, their support of the opposition movements and constitutional monarchy.

In the empirical section we found out the following facts and trends: firstly, the Old Believers were over-proportionately represented in the textile industry, which is an indirect evidence of higher propensity to entrepreneurship; secondly, according to business cycle peaks from Owen (2013, p. 903), the Old Believer firms were performing pro-cyclically prior to 1871; thirdly, in some sub-sectors of the textile industry, the Old Believer firms were prevailing (in wool-weaving); fourthly, from 1832 to 1871 we observe a relatively stable share of the Old Believers in the textile

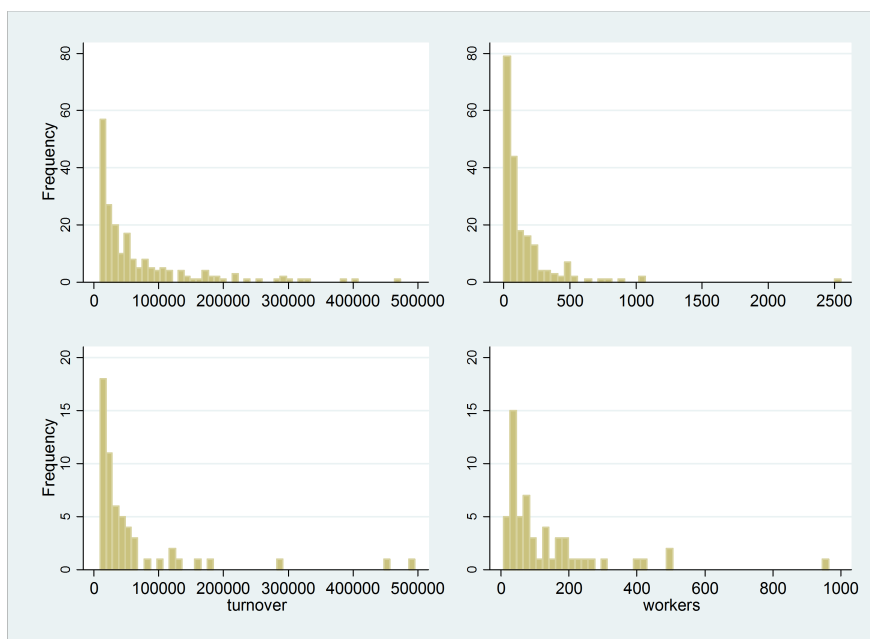
industry, especially wool and cotton production, with a sharp decline after 1871; fifthly, according to the distributions the Old Believer firms tended to employ more labour.

Therefore, according to the empirical data for 1832 - 1890, the Old Believers in general were more successful enjoying over-proportionate shares in turnover and in labour especially in the wool subsector (1843 - 1871). However, the Old Believer firms were not more efficient in terms of turnover per worker. A decline after 1871 can be partly explained by the sample limitation and general trends in industry. It appears that the Old Believer firms indeed demonstrated an impressive performance, bearing in mind the cyclical waves of repressions including those initiated by Nikolay I (1825 - 1855).

Various theories that could be helpful in explaining the success of the Old Believers were discussed. The Max Weber hypothesis is partly applicable since the Old Believer denied luxury, promoted secular ascetics and fair conduct, enforced with religious rules and stimulated saving and reinvestments. However, we show that their minority status (Petty-Gerschenkron argument) urged creation of formal and informal institutions, fostered accumulation of human capital through literacy in order to save manuscripts from repressions and stimulated the development of social capital in order to maintain production, distribution and sales networks. Additional analysis was intended to sort the contribution of various factors: ethics, minority status and institutions to the rise and fall of the Old Believers in 19th century Russia.

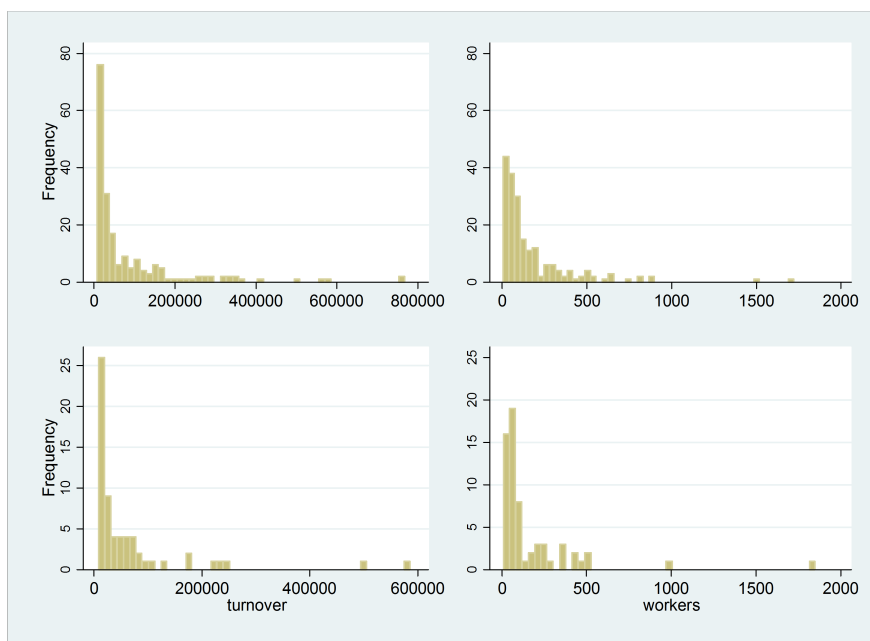
A Appendix

Figure 6: 1843 Distribution



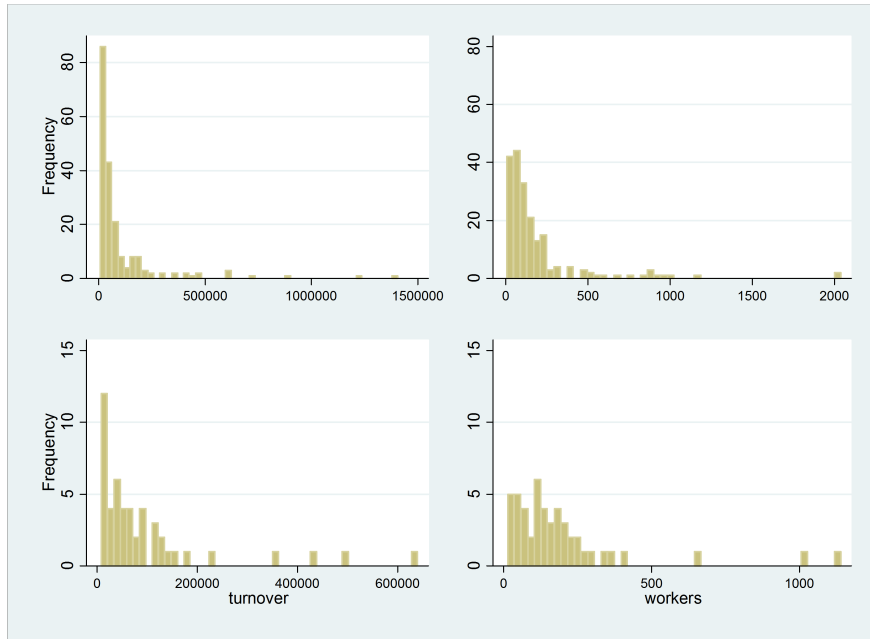
Source: Samoilov (1845)

Figure 7: 1853 Distribution



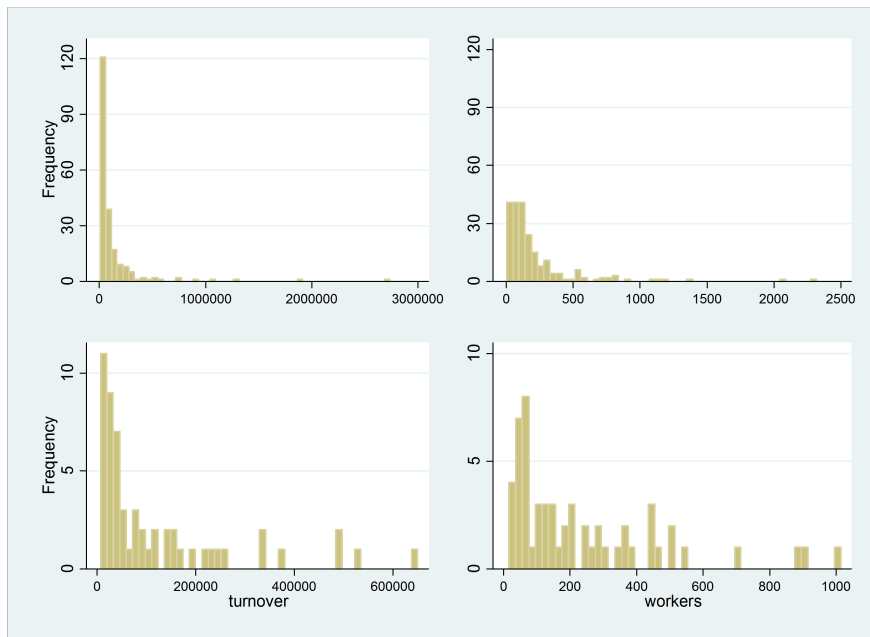
Source: Tarasov (1856)

Figure 8: 1867 Distribution



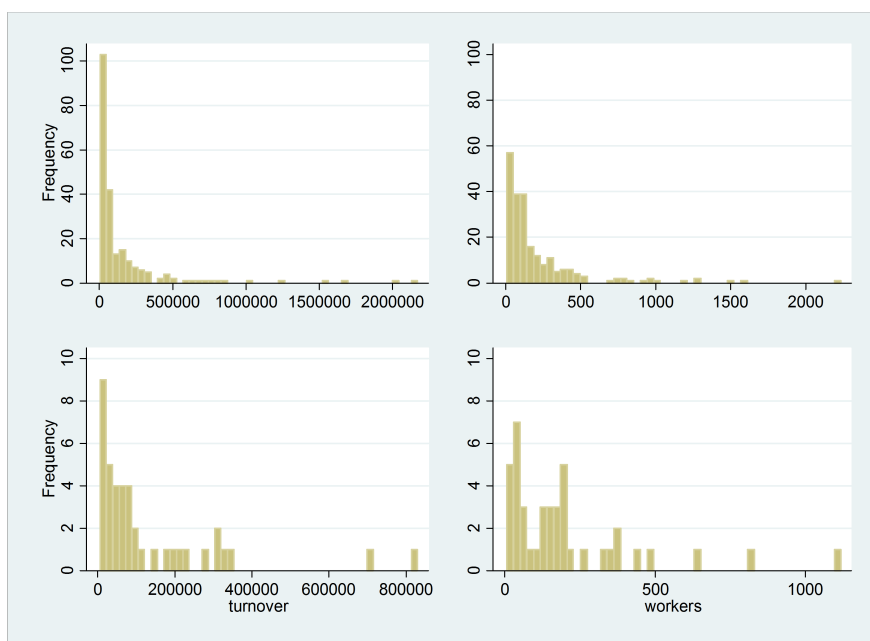
Source: Timiryazev (1869)

Figure 9: 1871 Distribution



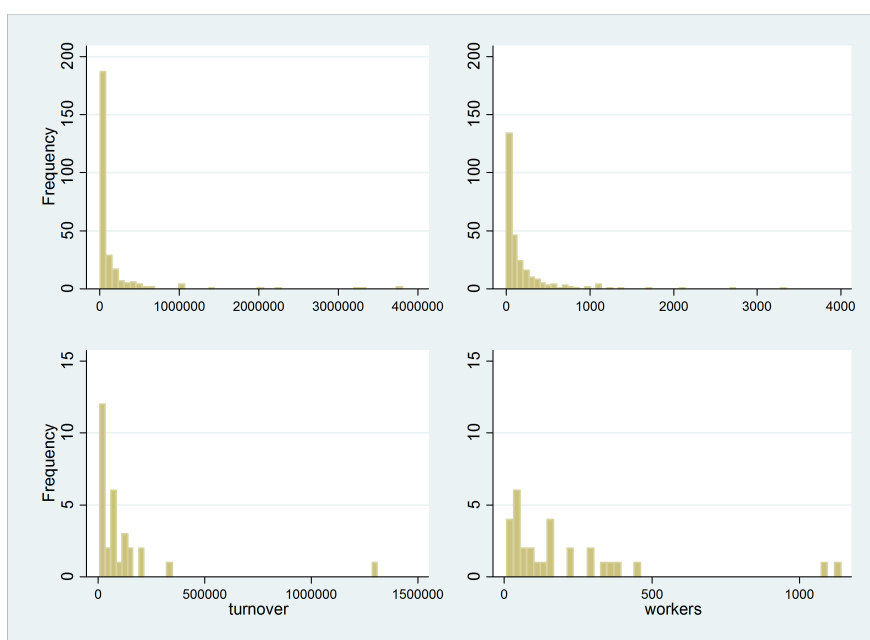
Source: Matisen (1872)

Figure 10: 1879 Distribution



Source: Orlov (1881)

Figure 11: 1890 Distribution



Source: Orlov and Budagov (1894)

Table 5: Sources, used to identify Old Believers

Year of data	Source	Name of document	Number of Old Believers
1808	RGIA 673-2-2	Plan of Moscow Old Believer's Community, Preobrajenskoe cemetery	75
1823	RGB 246-2-5	Selection protocol	39
1838	Titov 2334	List of prominent Old Believer citizens of ancient Moscow in 1838	138
1846	Titov 2292	Statistical reports on bezpopovtzy community in 2nd Quarter of Lefortovo	78
1847	Titov 2292	Statistical reports on bezpopovtzy community in 3rd Quarter of Lefortovo	120
1846	Titov 2293	Statistical reports on bezpopovtzy community in 4-5th Quarter of Lefortovo	22
1846	Titov 2293	List of the Fedoseev community members	43
1847	Titov 2294	Description of supervisors and community members of the Preobrajenskoe cemetery	53
1847	Titov 2294	Statistical reports on the marriages in the Prokrovskaya community	40
1847	Titov 2294	Statistical reports on the Pomorskoe soglasie community	19
1850	Naydenov 1889	Ninth revision or census	624
1857	Naydenov 1889	Tenth revision or census	383
1869	RGB 246-2-5	List of Rogozhskoe cemetery community members	151
1878	RGB 246-3-5	List of Rogozhskaya community members, who own real estate	326
1903-1906	RGB 246-3-5	List of influential members of the Rogozhskaya popovzy community	375
19th century	Private collection	Synodicon of the churches of the Rogozhskoe cemetery	more than 500

Archives and Manuscripts

RGIA: Rossiiskii Gosudarstvennyi Istoricheskii Arkhiv (Russian State Historical Archive)

673-2-2.

Lists 7-8. Plan Moscovskogo staroobriadcheskogo objectva, Preobrajenskoe kladbije [plan of Moscow Old Believer's community, Preobrajenskoe cemetery], 1808, 7-8.

RGB: Rossiiskaya Gosudarstvennaya Biblioteka (Russian State Library)

246-2-5.

Lists 2-4ob. Spisok podpisavshihsia pod objectvennym prigovorom Rogozhskogo

kladbija [list of Rogozhskoe cemetery community members], 1869.

Lists 93-96ob. Objestvennyi prigovor po vyboru popechitelei (supervisors election protocol), 1823.

246-3-5.

Lists 16-27ob. Reestr o prihojanah staroobriadcheskogo Rogozhskogo kladbischa, imeujih v Moskve nedvijimuu sobstvennost', 1878 [list of Rogozhskaya community members, who own real estate, 1878]. [published in Yukhimenko (2005), pp. 166-175]

Lists 16-24. Spisok vliatel'nyh prihojan Rogozhskoi objiny popovtsev (MSORK). 1903-1906 [list of influential members of the Rogozhskaya popovzy community, 1903-1906]. [published in Raskov (2012), pp. 304-318].

RNB: Rossiskaya Nazional'naya Biblioteka (Russian National Library)

2292-Titov.

Lists 138-146. Statisticheskie vedomosti bezpopovtzev, projivaujih vo 2-m kvartale Lefortovskoi chasti, 30 iunia 1846 [statistical reports on bezpopovtzy community in 2nd Quarter of Lefortovo, june 30, 1846].

Lists 185-192. Statisticheskie vedomosti bezpopovtzev, projivaujih v 3-m kvartale Lefortovskoi chasti, 18 Iulia 1846 [statistical reports on bezpopovtzy community in 3rd Quarter of Lefortovo, 18th july 1846].

2293-Titov.

Spisok fedoseevtsev v Moskve, 23 Avgusta 1846 [list of the Fedoseev community members, 23rd August 1846].

Lists 33-35. Statisticheskie vedomosti bezpopovtzev, projivaujih v 4-m i 5-m kvartalah Lefortovskoi chasti, 18 Iulia 1846 [statistical reports on bezpopovtzy community in 4-5th Quarter of Lefortovo, 18th July 1846].

2294-Titov.

Lists 93-112. Opisanie popechitelei i glavneishih prihojan uchastvuujih v sovejaniiah Preobrajenskogo kladbischa, 26 Janvaria 1847 [description of supervisors and community members of the Preobrajenskoe cemetery, 26 January 1847].

Lists 170-179. Lefortovo Statisticheskie vedomosti po Pokrovskoi molel'ne drevnego pomorskogo soglasia, 16 Fevralia 1847 [statistical reports on the Pomorskoe soglasie community, 16th february 1847].

Lists 181-207. Statisticheskie vedomosti po Pokrovskoi molelâne pojenivshihsia, 16 Fevralia 1847 [statistical reports on the marriages in the Prokrovskaya community, 16 February 1847].

2334-Titov.

Lists 94-106. Spisok znachitelneishih iz chisla staroobriadtzev jitelei drevnei stolizy Moskvyy v 1838 godu [list of prominent Old Believer citizens of ancient Moscow in 1838].

RGADA: Rossiiskii Gosudarstvennyi Arkhiv Drevnih Aktov (Russian State Archive of Ancient Acts)

RGADA-Fond-288.

Raskolnicheskaya kontora.

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Synodicon.

Sinodik Hramov Rogozhskogo kladbischa [synodicon of the churches of the Rogozhskoe cemetery], 19-20th centuries.

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