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## **Representatives of the sugar industry of the Russian Empire at the World's Fair in Paris in 1900**

**Abstract.** *Nineteenth-century world exhibitions were platforms to demonstrate technical and technological changes that witnessed the modernization and industrialization of the world. World exhibitions have contributed to the promotion of new inventions and the popularization of already known, as well as the emergence of art objects of world importance. One of the most important world events at the turn of the century was the 1900 World's Fair in Paris. Participation in the World's Fair was not the first experience of this kind of activity for sugar growers in the Russian Empire. Most of them were members of the Kyiv branch of the Russian Technical Society, which in turn took the most active part in the work of blighty and international industrial exhibitions, receiving high awards. The main sugar enterprises were concentrated on the territory of modern Ukraine in the possession of several large companies owned by Tereshchenko, Kharitonenko, Khanenko, Brodskiy, Simirenko, Yakhnenko and others. The Russian sugar industry occupied a prominent place at the World's Fair in Paris in 1900, as its share in world sugar production was 17%, and the area of beet crops, it was ahead of all other countries (in 1900 sugar beets were sown 548,796 hectares). The exposition testified to this powerful development of the industry. At the World's Fair in 1900, Russia's sugar industry was housed in the Palace of Agriculture and was represented in the pavilions by well-known sugar firms, such as the Department of Land (Timashiv Beet Sugar and Refinery), I. H. Kharitonenko and his son; brothers Lazar and Lev Izrailevich Brodskiy; O. N. Tereshchenko, heirs of F. A. Tereshchenko; the Tereshchenko brothers, the Botkin brothers (Novo-Tavolzhanskyi sugar factory); joint-stock companies of sugar and refineries: “Constance”, “Germanov”, “Gmina Lyshowiche”; E. A. Balasheva (Mariinskyi Sugar Plant of Kyiv Province), H. H. Balakhovskiy (Mariinskyi beet-sugar and refineries of the Kursk province). A characteristic feature of the sugar industry was that they mainly represented family businesses based on strong family ties, ethno-cultural and religious values. In addition, they intertwined the functions of owners and managers. Thus, the author tries to analyze the participation of representatives of the sugar industry in the World's Fair in 1900 and define the role of exhibitions as*



*indicators of economic development, to show the importance and influence of private entrepreneurs, especially from Ukraine, on the sugar industry and international contacts.*

**Keywords:** *World exhibition; sugar industry; economic cooperation; private entrepreneurs*

### **Introduction.**

The sugar industry of the Russian Empire was one of the leading branches of agriculture, the level of development of which largely determined the economy of the state as a whole in the mid-19th – early 20th century. The relevance of the study is determined by the importance of the appearance of world exhibitions as platforms for demonstrating technical and technological changes that have become evidence of the modernization and industrialization of the world. World exhibitions have contributed to the promotion of new inventions and the popularization of already known, as well as the emergence of art objects of world importance.

In addition, world exhibitions are the historical context in which we can assess the economic condition of the country. With the development of capitalism, especially after the reforms of 1860–1870's in Russia, the nature of the organization, scale and specialization of exhibitions were begun to change. Their role and significance has increased. Economic, scientific and technical societies and unions became more and more often organizers of industrial exhibitions, which testified to the growth of new tendencies in society. Entrepreneurs from all over the Russian Empire actively participated in such events and tried to demonstrate their achievements in various fields of science, technology, agriculture, railway construction and the sugar industry in particular. World exhibitions of the early twentieth century served to develop international trade, strengthen and expand economic cooperation between states. Exhibiting innovations in various fields of science, technology and production was of great cognitive importance for many areas of human activity. The rate of economic growth in Russia in the active phase of capitalist industrialization at the turn of the 19th and 20th centuries was comparable to the rate of growth of the leading countries of the Western world at that time.

It was a market economy integrated into the world economy. Undoubtedly, the economic potential of tsarist Russia was concentrated in the agricultural sector. The sugar industry is a branch of the food industry that specializes in the production of white granulated sugar from sugar beets or sugar cane. Also, the sugar industry includes enterprises for the production of refined sugar from granulated sugar. In 1914, Russia ranked 2nd in the world for the production of beet sugar (after Germany). Of the 241 sugar factories then operating in the Russian Empire, 203 were located in modern Ukraine. The main enterprises were concentrated in the ownership of several large companies owned by Tereshchenko, Kharitonenko, Khanenko and Brodskyi.

## **Research methods.**

Analysis of publications on the problem shows the existence of different areas of its study. Investigation concerning the architecture of exhibition complexes by B. Kuperstein (Kupershtejn, 1899a), (Kupershtejn, 1899b), E. Zeidler (Tsaidler, 1988) should be noted. The history of Russia's participation in world exhibitions is covered by V. Kokorev and I. Inozemtseva. Some data on the formation of the agricultural market, the sugar industry, the penetration of foreign capital into Ukraine, are contained in the works of S. L. Ronin (Ronin, 1926), K. H. Voblyi (Voblij, 1928).

Among the researchers who study the history of pre – Soviet sugar refining entrepreneurship in Ukraine and consider some aspects of this problem, we should mention V. Olyanich (Olyanich, 2000), T. Lazanska (Lazanska, 1996), Yu. Belikov (Bielikov, 2003), M. Moskaliuk (Moskaliuk, 2008). The works of P. Vinokurov (Vinokurov, 2001), M. Lachaeva (Lachaeva, 1991), N. Ovchinnikova (Ovchinnikova, 1990), E. Rakov (Rakov, 2000) are devoted to Russia's participation in the World Exhibition in Paris in 1900. Publications by O. Benoit (Benua, 1900a; Benua, 1900b), P. Ge (Ge, 1900), S. Diaghilev (Diagilev, 1900) are devoted to artistic life at the Paris Exhibition of 1900. In Polish historiography, the research topic is covered in the monograph of Eleonora Jedlinska (Jedlińska, 2015).

The author dedicated her work to one of the most important world exhibitions of the late nineteenth century. According to E. Edlin, the exhibition of the nineteenth century is a kind of phenomenon of European civilization, and was used mainly to demonstrate the achievements of science and its application in industry. An important element of world exhibitions were works of art, considered by the author as an expression of the synthesis of matter and spirit of modern times.

The main content of her monograph is artistic issues, which is accompanied by historical, sociological, political and philosophical problems that shape the social attitudes of the late XIX century. Large fragments relate to the presence of Polish artists at the 1900 World's Fair – their work and role in shaping the consciousness of Poland's existence.

The publications of A. Basirov (Basyrov, 1985) and D. Kogan (Kogan, 1964), I. Shudryk (Shudryk, 2003) and D. Hryhoriev (Grigorev, 2003) are devoted to the activities of the artist Konstantin Korovin, his participation in the design of Russian pavilions at the Paris Exhibition in 1900. O. Gaidai (Gaidai, 2013) wrote directly about the participation of the Kharitonenko trading house in the World Exhibition in Paris. The activity of sugar magnates of merchant origin and their influence on the economic development of Ukraine became the subject of O. Donik's (Donik, 2006) research. T. Vodotyka wrote about outstanding Ukrainian entrepreneurs of the new generation who made themselves (Vodotyka, 2019). An interesting group of sources is represented by the reports of various committees and persons sent to the exhibition (Ministerstvo finansov, 1901, 117), (Shvarts, 1900). Another group of works of the pre-revolutionary period is intelligence on the history of the sugar industry. The vast majority of such publications contain economic and statistical analysis of the development of the sugar

industry of the Russian Empire in the late nineteenth – early twentieth century. First of all, these are the works of L. Brokl (Brokl, 1885), L. Volokhov (Volokhov, 1913), M. Tsekhanovsky (Tsekhanovskii, 1904; Tsekhanovskii, 1911), Y. Janson (Janson, 1869). The technical intellectuals was an advanced detachment of Russian scientific thought. In the mid-1960s, it founded the Russian Technical Society, an organization that, from its founding in 1866 until 1917, not only engaged in research in industry, applied science, and technology, but also concentrated the cultural initiative in its hands (educational initiatives). 9 branches of this society, which operated in Ukraine, namely in Kyiv, Mykolayiv, Odesa, Kharkiv, Katerynoslav, Sevastopol, Zhytomyr, Kremenchuk and Poltava, made a significant contribution to the development of educational and exhibition work. The most effective of them were Kyiv (Otchet o dvadtsatipyatiletney deyatelnosti Kievskogo otdeleniya Imperatorskogo russkogo tehnikeskogo obschestva (1871–1896), 1896), Odessa (Otchet o deyatelnosti Odesskogo otdeleniya Imperatorskogo russkogo tehnikeskogo obschestva za 1895 g., 1896), Kharkiv (Otchet o deyatelnosti Harkovskogo otdeleniya Imperatorskogo russkogo tehnikeskogo obschestva za 1880–1881 g., 1881) and Mykolayiv (Otchet o deyatelnosti Nikolaevskogo otdeleniya Imperatorskogo russkogo tehnikeskogo obschestva za 1898 g., 1899) branches. O. Pylypchuk wrote a monograph on the contribution of the Kyiv branch of the Russian Technical Society to the development of the sugar industry in 2019 (Pylypchuk, 2019).

Information about the life and work of prominent figures of various branches of the society can be found in obituaries written by the head of the Kyiv branch M. Bunge in memory of L. Brodskyi (Bunge, 1904, p. 567) and N. Tereshchenko (Bunge, 1903, p. 18). O. Donik (Donik, 2001) dedicated his dissertation to the activities of the Tereshchenko family. A thorough article by Arthur Chandler, published in *World's Fair*, Volume VII, Number 3, in 1987 (Chandler, 1987), is devoted to the activities of the World's Fair in Paris in 1900.

The purpose of this article is to analyze the participation of representatives of the sugar industry of the Russian Empire in the World Exhibition of 1900 and to determine the role of exhibitions as indicators of the achievements of economic development of society. It is necessary to show the importance and influence of private entrepreneurs, especially from Ukraine, on the development of the sugar industry and the establishment of international contacts.

The research is based on the fundamental principles of scientific knowledge of objectivity and historicism. The principle of objectivity obliges to consider historical phenomena and events in all their complexity, versatility and contradiction. The historical approach places the object of our study in the context of certain socio-political and economic conditions. Important in the process of working on the topic was the observance of the dialectical principle, which requires considering the phenomena in the relationship and interdependence. The principle of historicism involves the analysis of historical facts in a particular historical environment, in the dynamics. Adherence to these principles is necessary, given that the theme of business,

exhibition activities today has not only scientific but also socio-cultural and economic significance.

The study is based on universal general scientific methods – analytical, synthetic, logical and special historical methods. The structure of the work is due to the problem-chronological approach, which made it possible to study the entrepreneurial activity of sugar producers in the historical dynamics. The chronological method helped to penetrate deeper into the essence of the problem and consider it in chronological order of historical facts. Of particular importance in this article is the comparative-historical (comparative) method, which involves the analysis of events and facts, which are determined in terms of common and different between them, which becomes the basis for further interpretations, considerations, explanations and conclusions. After all, in the process of comparison there is an opportunity for a new, deeper and unbiased view of the issue. The comparison allows us to show the degree of effectiveness of management and organizational actions aimed at creating conditions for exhibition activities.

The structural-system method is necessary because it provides a view of exhibition activity as a complex system with various socio-economic ties. This method helped to clarify the nature and features of the interactions of government structures on business.

The method of social psychology allowed to determine which elements of consciousness played a major role in the formation of socio-psychological phenomena inherent in individual entrepreneurs, which played a major role in the development of the sugar industry. Each study of a problem is based on the general theory of scientific knowledge, as well as on specific methodological tools.

Ukrainian and foreign historical science are in search of new conceptual guidelines and approaches that could be used to recreate the multidimensional history of mankind. Modern historians A. Bolebrukh, J. Kalakura, S. Kulchytskyi, O. Reyent, V. Smolii, and others work fruitfully in this direction.

Leading for this article is a multidisciplinary (interdisciplinary) approach, which is reflected in the conceptual apparatus.

The conceptual apparatus of the work is characterized by the use of terms and categories of both traditional historical and borrowed from other related sciences.

### **Results and discussions.**

For sugar growers in the Russian Empire, participation in the World's Fair was not the first experience of this kind of activity.

Most of them were members of the Kyiv branch of the Russian Technical Society, which in turn took the most active part in the work of blighty and international industrial exhibitions, receiving high awards. For example, in 1873 at the Vienna World's Fair for a specific collection of items typical of the sugar industry presented by the Kyiv branch of the Russian Technical Society, including a model of the diffuse apparatus of the member of the Volyn Beet and Sugar Plant Friedrich Henrikhovich

(Gavrilovich) Annie system and a model for Oleksii Bobrynskyi – The international jury of the exhibition awarded the Kyiv branch a bronze medal with a diploma.

In the same year, 1873, members of the society presented sugar products at the Third London Annual International Exhibition. In particular, on behalf of the Queen of Great Britain, the sugar in the tiles was awarded a special medal, presented at the exhibition and first obtained by the method of the director of the Smilyanskyi refinery – engineer-technologist and inventor Mykola Cherykovskyi. It was the only enterprise in the Russian Empire that produced such a product. The Smilyanski Sugar Plant, which belonged to Counts Bobrynskyi, was a model of scientific and technological progress at that time. Smilyanskyi and Balakliivskyi plants became the basis for the development of the sugar industry in Ukraine and a practical school of sugar production for the factories of the Russian Empire (Yelesina, 2012, XXXII, p. 135).

In addition, two more Gold medals were awarded to exhibits presented by the Yakhnenko-Simirenko firm, organized by the brothers Terentii, Kondrat and Stepan Mykhailovych Yakhnenko and Vasyl Fedorovych Simirenko. In 1849, “Kievskie gubernskie vedomosti” noted: “In terms of the perfection of building construction, excellent instruments and apparatus used here, the size of spacious premises and production, the Yakhnenko and Simirenko plant not only ranks first among the beet sugar and refinery plants in Russia, but has few rivals even abroad”. In July 1876, in Philadelphia, the International Industrial and Art Exhibition was held, timed to coincide with the 100th anniversary of the United States, in which almost all European countries took part. Samples of sugar from 9 Ukrainian factories were exhibited from the Russian Empire, presented by a separate group “Collection of the Kyiv branch of the Russian Technical Society”. The examination recognized all sugar samples as products of the highest grade and presented them to the awards of the 1st and 2nd classes, and the Exhibition Commission awarded the Kyiv branch of the Russian Technical Society a large Gold Medal. In 1878, at the Paris World Exhibition, the sugar industry of the Russian Empire was represented by more than ten sugar factories of Ukraine (Kaganov, 2016).

Unfortunately, to date, there are no comprehensive, thorough works on the study of the participation of representatives of the sugar industry of the Russian Empire in the 1900 World's Fair in Paris.

The World's Fair is a historic event, a chance for each country to demonstrate its achievements in a variety of fields and an opportunity to improve its trade, cultural and political reputation in the world. World exhibitions are a kind of tool used by governments for dialogue with the public, demonstration of the achievements of national industry, the use of the latest technologies. From another point of view, according to Arthur Chandler the 1900 exhibition demonstrated in every respect the feeling that profit and entertainment should come first in the minds of all participants. In a sense, this is a return to the late medieval spirit of the annual fair, where saints are honored and decorum, but the motive for profit worried the minds more than the main task that gave rise to the event. However, this does not mean that the authors or

exhibitors have lost faith in progress or become cynical about the prospects for achieving “the greatest good for the greatest number of people” (Chandler, 1987).

Historian Richard Mandell, in his book “Paris 1900: The Great World's Fair”, wrote:

*...As much as France saw its power and fame slip away in other areas, there was one cultural manifestation in which French supremacy was not contested – the organization of multipurpose exhibitions. For the French by this time, the thought of exhibitions evoked emotions surprisingly similar to those that evoked the thought of the French colonial empire. In the face of political embarrassment, humiliation in diplomacy, and economic stagnation, the exposition and empire made up for another defeat to some extent. Although it is unlikely that the creation of a republic by itself (the empire was promoted by free-planting adventurers, expositions of autonomous bureaucrats) simultaneously showed (or seemed to be in this important aspect) a dynamic, resourceful French republic for the whole world (Mandell, 1967, p. 30).*

The World's Fair in Paris opened on April 14, although many pavilions had not been completed and equipped yet. It lasted until November 12, 1900. Russia was an exception: the opening of its branch took place on April 17. Due to the special relations of France with Russia, the government was the first to allocate the largest area for the Russian exposition – 24 thousand square meters (Rakov, 2000). The symbol of the exhibition was the meeting of the new century. To participate in it, the empire spent 5,226,895 rubles (of which the government allocated 2,226,895 rubles, and institutions and exhibitors another 3 million rubles). The commission for the preparation of the Russian department was headed by the director of the Department of Trade and Manufactures V. Kovalevskiy. V. Tenishev was appointed General Commissioner of the Russian department, and R. Meltzer was appointed chief architect (Ovchinnikova, 1990, p. 27). The main pavilion was built in the medieval Russian style, with many towers, tent roofs, jagged walls, patterned windows, reminiscent of the Moscow Kremlin. The exhibition focused on the ethnography of the so-called suburbs – Siberia, the Far North, Central Asia, the Caucasus. Several halls and an exposition in the Palace of Civil Engineering were dedicated to the construction of the Great Siberian Way, the Russian oil industry, and a rubber manufacturing company (Zdaniya i sooruzheniya Vsemirnoy vyistavki v Parizhe 1900 g., 1899).

The Russian sugar industry occupied a prominent place at the World's Fair in Paris in 1900, as its share in world sugar production was 17%, and the area of beet crops, it was ahead of all other countries (in 1900 sugar beets were sown 548,796 hectares). The exposition testified to this powerful development of the industry (Otzyiv “Journal des Fabricants de Sucre” o nashey saharnoy promyishlennosti na Parizhskoy vsemirnoy vyistavke, 1900, 1–39, p. 1034).

Special exhibitions such as the Sugar Industry Exhibition had two main objectives. The first one was to acquaint visitors with the history of the sugar industry, the technique and technology for processing beets into sugar, with the final product

intended for consumption. And the second task was to acquaint specialists with the latest machines, technical improvements and devices. And if the first task was easy enough to implement at exhibitions, then with the second, certain problems arose. First of all, it was the reluctance of factories supplying new machines for sugar processing to exhibit them at world exhibitions, since progress in mechanical engineering was visible only in the way of work, and it was impossible to show it at the exhibition. Therefore, the exhibitions mainly demonstrated equipment and devices related to scientific and chemical research, chemical and technical control of production, and the fight against pests of sugar beet. There was no direct benefit to the owners of sugar factories from exhibitions. Sugar, as an item of trade, which has the same composition and appearance, cannot be subject to competition on external grounds, as in other areas of industry. Sugar markets at the end of the 19th century were already defined, and it was not realistic to find new buyers through exhibitions. Therefore, many sugar refineries did not see the point in serious participation in world exhibitions. The sugar department at the 1900 Paris World's Fair confirmed this position (*Vestnik saharnoy promyshlennosti*, 1900, p. 753). Among the countries participating in the exhibition, the most successful was the exposition of the Society of Austrian Sugar Makers. In a small pavilion, the Sugar Industrial Museum of the Czech Polytechnic exhibited models of 39 shells and apparatus used in sugar production and developed mainly by Czechs. A collection of different types of sugar and a collection of production waste were presented. On live specimens, diseases of the beet tops and roots were demonstrated. As a result of scientific research, changes in sucrose under the influence of high temperatures, all kinds of chemical compounds of sugar, a collection of bacteria developing on beetroot were presented. In addition, there were presented bagasse, fodder for oxen and horses, made from peat and molasses, from bagasse and molasses, a systematic collection of molasses de-sugar products. For chemists, the latest instruments used in laboratories at sugar factories were exhibited, such as the Strohmer revolving polarimetric device with 18 polarimetric tubes, the Strohmer beet respiration monitor, the newest Fritsch polarimeter with glass rocks (*Vestnik saharnoy promyshlennosti*, 1900, p. 754). There was no collective exhibition in the Russian department. At the World Exhibition, the Russian sugar industry was housed in the Palace of Agriculture and was represented in the pavilions by well-known sugar firms, such as the Administration of Lots (Timashevskiy Beet Sugar and Refinery), I. H. Kharitonenko with his son; brothers Lazar and Lev Izrailevich Brodskiy; O. N. Tereshchenko, the heirs of F. A. Tereshchenko; brothers Tereshchenko, brothers Botkin (Novo-Tavolzhansk sugar plant); joint stock companies of sugar beet and refinery factories: "Constance", "Hermanov", "Lyszkowice"; E. A. Balasheva (Mariinski sugar factory, Kyiv province) H. H. Balakhovskiy (Maryinskiy sugar beet and refinery of Kursk province) (*Sliaskii*, 1900, p. 755). The government of the Russian Empire sought to collect as many original exhibits as possible, therefore, for the exhibitors, it approved a number of benefits: free provision of premises at the exhibition, acceptance, at the expense of the treasury, costs of shipping exhibits, their

insurance, arrangement and finishing of the Russian department. Another characteristic feature of the representatives of the sugar industry was that they mainly represented family enterprises based on strong family ties, ethno-cultural and religious common values. In addition, they intertwined the functions of owners and managers. The success of the family business was determined by the ability to accept and use foreign experience, the willingness to cooperate with representatives of different national and religious groups. The World's Fair provided such an opportunity. It was only necessary to use it wisely.

The largest exposition was at the Trading House “I. H. Kharitonenko and his son”, whose products were of high quality. Its enterprises actively implemented the latest achievements in the field of sugar beet production. At the family's sugar factories there were quite powerful experimental fields at that time (Zhukov, 1898). P. Kharitonenko attracted talented engineers and designers to work at his sugar enterprises, which had a positive effect on production. Kharitonenko's sugar warehouses were not only in many cities of the Russian Empire (Sumy, Moscow, St. Petersburg, Kharkiv, Tomsk, Vladivostok, Novosibirsk), but also in France, Scotland, and Persia (Derzhavnyi arkhiv Sumskoi oblasti, f. 235, op. 1, spr. 93).

P. Kharitonenko's showcases were designed by the famous architect F. Shekhtel (Berton, 1991, p.265). At one time he designed the neo-Gothic mansion of S. Morozov, the house of Ryabushynskiy (now the museum-apartment of O. Gorkiy), the house of Derozhynska (now the Australian Embassy in Moscow) and the mansion of P. Kharitonenko in Moscow (now the residence of the British ambassador) (Berton, 1991, p. 15). On fairly spacious scaffolding were installed on three sides of oak cabinets, distinguished by elegant carvings. On the fourth side was an entrance protected by two lions made of wood. In the middle was a table on which are albums with photographs of factories and outbuildings. In addition, awards of previous exhibitions, portraits of Ivan Herasimovych and Pavel Ivanovych Kharitonenko, photos of the main savings, horse breeding, cattle breeding, a group of employees led by the owner. The cabinets housed the massecuite (a thick, viscous mass formed after evaporation from sugar syrup water, which consists of sugar crystals and intercrystalline liquid, containing 92–93% dry matter), sugar I crystallization and yellow II crystallization, refined main and sawn. According to the list of items intended for the World's Fair in Paris in 1900, refined sugar was prepared in pieces, tiles, in ordinary wrappers, mixed and thin 5 poods of each type; split in height and width – 3 poods. Samples of sugar and yellow sand were taken from 8 plants in the usual form for sale (3 poods each). In addition, samples of bread, corn and beet seeds (4 varieties) produced on the estates were placed in the showcases. Bread in grain was presented in a variety of varieties, 2 varieties of winter wheat, spring, rye, oats, barley, millet (Derzhavnyi arkhiv Sumskoi oblasti, f. 235, op. 1, spr. 57).

Brochures were compiled especially for the exhibition, from which visitors could learn basic information about the participants. In particular, it was reported that the Trading House “I.H. Kharitonenko with his son” owned in Kharkiv, Kursk, Chernihiv

and Poltava provinces own arable land and meadows (35, 535 acres), leased land (17,193 acres), forests (10,842 acres), a total of 63,570 acres of land (Sliaskii, 1900, p. 755). In addition, the Trading House owned 1 sugar refinery and 7 sand and sugar factories (one leased). Among them were the Pavlovsk refinery in Sumy and sand and sugar factories: Natalivskiy, Parkhomovskiy, Yankovo-Rogskiy, Ugroyedskiy, Chervono-Yaruzskiy, Rzhavskiy and Parafievskiy. They processed beets produced mainly on their own estates. For sowing beets, 11,700 tithes and 2,000 tithes were leased annually, and the average beet harvest was 1.4 million and 1.75 thousand berkivtsi. Beet processing and annual sugar production were expressed in the following figures: Pavlovsk refinery produced up to 2.2 million poods of refined, and sand and sugar factories processed about 1.575 million beets and produced 2.065 million poods of crystalline sand, using 1758 horsepower and 3124 workers. The average sugar yield was 52.5 pounds (Sliaskii, 1900, p. 756). It should be noted that all factories had schools for the children of workers, hospitals, pharmacies and free medical care for both sick workers and the local population. In addition to the factory hospitals, the Kharitonenko family also maintained a 30-bed central hospital in Sumy.

The exhibition of sugar factories and factories of N. A. Tereshchenko and the heirs of F. A. Tereshchenko was placed in cupboards around the stage. The jars exhibited: white sugar I crystallization, yellow sugar II crystallization, massecuite, molasses with an indication of chemical analysis, several copies of beetroot and cutting samples. Chemical engineer, Mr. Kohlen, gave explanations to the visitors of the Tereshchenko pavilion. The average annual production of sugar at their factories was 2,257,772 poods, with 1,698,166 berkovts of beet processed. N. A. Tereshchenko owned Tetkinskiy, Andrushevskiy, Staro-Osotyanskiy sugar factories. The heirs of F. A. Tereshchenko owned the Chervonskiy, Korovinetskiy, Martynovskiy sugar factories. The partnership of the Tereshchenko brothers owned the Voronezh and Krupetskiy factories (Vestnik saharnoy promyshlennosti, 1900, p. 757). The estates Andrushevskoe, Golovkovskoe, Volfinskoe and Manukhovskoe, owned by N. A. Tereshchenko, consisted of 23,619 tithes of arable land and 13,788 dessiatines of forests. Every year, 417,000 berkovts were collected on N.A. Tereshchenko's own plantations. Tula and Mykhailovskiy refineries exhibited head refined, sawn and chopped, refined massecuite. Numerous photographs were exhibited depicting factories, schools, hospitals, outbuildings. The average annual processing of sugar at these factories was 900 poods at Tula, 800 pounds at Mykhailovskiy (Vestnik saharnoy promyshlennosti, 1900, p. 757).

The estates of the heirs of F. A. Tereshchenko: Chervonske, Korovinetske, Martynovske, Hlushetske, Privitovske, Miastkovske and Olshanske had a total of 58,857 dessiatines of land. Of these, the arable land was 33,199 dessiatines, and the forestry 18,171 dessiatines. An average of 490,000 berkovites were collected from these lands. In total, the amount of arable land and forests of the Tereshchenko family reached 101,639 dessiatines with an annual beet production on their own plantations of 907,000 berkovts (Vestnik saharnoy promyshlennosti, 1900, p. 758).

The pavilion of brothers Lazar and Lev Izrailevich Brodskyi was presented in the Russian style with high towers. In cabinets with glass walls on all sides, jars with samples of massecuite I, II, III crystallization, white sugar I crystallization, yellow sugar II crystallization and molasses were exhibited. In addition, refineries presented samples intended for processing, crystalline sand, syrups, sawn and crushed refined sugar of various sizes. All items on display were accompanied by chemical analysis. A large number of photographs told about the internal structure of factories, factory and economic structures, schools and hospitals. The Brodskyi's issued a brochure that could serve as a model for the exhibitors, in which they reported that they owned 16 sugar factories. Of these, 3 are sand refineries and 13 are sugar refineries (*Vestnik saharnoy promyshlennosti*, 1900, p. 789). The average annual productivity of three refineries in Odessa (2,500,000), Lebedinskyi (1,000,000) and Koryukovskiyi (1,500,000) was 5,000,000 poods of sugar. The equivalent value of 5,000,000 poods of refined sugar was 27,500,000 rubles (*Vestnik saharnoy promyshlennosti*, 1900, p. 790). The Brodskyis owned 34,796 tithes of their own land, including 17,842 tithes of forests and 31,615 tithes of leased land. The area of their own and leased land for sowing beets was 30,900 tithes. The wages of workers and employees of the plant a year amounted to 1,517,490 rubles. The excellent technical equipment of the plant and the efficient management allowed Brodskyi to reduce the cost of producing one pound of sugar. Its cost was: for technical expenses – 50.05 kopecks, for management costs 20.37 kopecks, a total of 70.02 kopecks. The cost of producing one pound of refined sugar was 41.25 kopecks. At the Brodsky factories there were 10 savings banks with a capital of 226,000 rubles, 16 hospitals for 160 beds with pharmacies and constant medical care, 2 two-grade schools for 400 children, 2 one-class schools for 200 children. In addition, there were 10 libraries, 2 reading rooms, 2 own orchestras of workers and artisans, 4 cheap teahouses and 20 barracks for 8000 workers (*Vestnik saharnoy promyshlennosti*, 1900, p. 791).

Kharytonenky, Tereshchenky and Brodskyis represented the world's largest sugar-processing firms. The owners of these firms were called sugar kings. Later, less significant firms were presented at the exhibition and, accordingly, their showcases were more modest.

A fairly systematic collection of sugar products was exhibited in the window of the Mariinskyi sugar factory, which was located in the Kyiv province, in the Moshno-Horodishchenskyi estate of E. A. Balasheva. Visitors were exposed to: beet cutting, diffusion juice, massecuite I and II crystallization, white sugar I crystallization and yellow II crystallization, samples of lime, molasses, separation waste sugar, beet seeds. An informational description of the estate was attached to the display case. It indicated that the estate occupies 43,481 tithes, of which 20,640 tithes of land, and 22,841 tithes of forests. The farm was operated on 20 farms, of which 12 were beet farms. Own beets were grown on an area of 1,700 acres of land. The plant had a savings and loan, a two-year school, a 12-bed hospital and a meteorological station. The description showed graphical data on production. The next in the exposition was a cabinet with products

produced by the Maryinskyi sugar beet and refinery of the Kursk province owned by H. H. Balakhovskiy. He presented several samples of head and sawn refined sugar, white sugar of I crystallization and samples of beets. How the plant worked, how it was equipped, one could learn from the collection of photographs of the sand and refinery departments. No explanatory note was provided on the size of the production.

Novo-Tavolzhanskyi beet sugar plant, which belonged to the Botkin brothers, placed its exposition on the table. There were presented two small barrels with sugar of I crystallization, samples of beet seeds and breads produced in the estates.

At the World Exhibition in Paris, joint stock companies of sugar beet and refineries were presented. These were "Constance" (Warsaw province, Kutnovskiy district, commune Kutno, village Constance. Joint-stock company of Kutnovskiy sugar-beet refinery. Steam engines were used, the number of workers was 561 people), "Hermanov" (Joint-stock company of beet-sugar and refinery plant, Sokhachevskiy county, commune and the village of Szymanow (Spisok fabrik i zavodov Rossiyskoy Imperii. 1912 g., 1912, p. 136). Steam engines were used, the number of forces was 450, the number of workers was 652 people) and "Lyszkowice" (Joint-stock company of Lovici district, commune and village of Lyszkowice. Steam engines were used number of forces 258, number of workers 392 people), which jointly exhibited a collection of refined sugar samples. In the Russian sugar department, the well-known machine-building plant "Borman, Shvede and Co" was presented, which exhibited an apparatus for boiling refined sugar (Spisok fabrik i zavodov Rossijskoj Imperii, 1912, p. 134–136).

The Department of Districts placed the products of the Timashevsk sugar beet plant on Trocadero Square, in the Kremlin, next to other industrial products. Everything at this exposition was thought out to the smallest detail. Numerous statistical and graphic tables showed production data, photographs made it possible to see the technical equipment of factories, houses and hospitals. Detailed brochures have been compiled to guide the display. Timashevsk plant displayed samples of beets, massecuite, white sugar I crystallization, yellow II crystallization, heads of refined sugar of various sizes. From the description, visitors to the exhibition could learn that the Timashevsk sugar beet and refinery was located in the Samara province. It owes its origin to the English company "Johnson Montgomery Woker & Co", which first introduced the sugar beet culture in the Samara province. The daily processing of beets at the plant was 1500 berkovts. The plant processed beets exclusively from the plantations of specific estates, calculated for it according to the sugar content of the beets. The refining department processed granulated sugar, which was purchased from other factories and produced about 650,000 poods of refined sugar per year. There was a hospital at the plant, medical assistance was provided, there was a school for 130 workers' children and a meteorological station. A distinctive feature of the sand and refinery was the presence of electric motors driven by turbines, which were located on the Kineli River, at a distance of 300 fathoms from the plant.

The French “Journal des Fabricants de Sucre” published a review of the participation of the Russian sugar industry in the Paris World's Fair. The article noted that the Russian sugar industry had developed quite rapidly over the past ten years. However, the author noted that the intensive means of production, typical of France, Germany, Belgium, and the Netherlands, were rarely used in Russian farms, as a result, their yields were extremely low. As an example, the following figures were given: 1899–1900 in Germany, 399 plants produced 1.791 million tons of sugar with 428,142 hectares of crops, that is, an average of 1,073 hectares per plant. In Russia, at the same time, 269 plants produced, for 510,568 hectares of crops (that is, an average of 1,892 hectares per plant), only 925 thousand tons of sugar. On the other hand, from 1 hectare of crops in Germany received 4180 kg of sugar, and in Russia only 1813 kg. Thus, the author came to the conclusion that Russia was dominated by extensive farming. In terms of sugar consumption, Russia also occupied a rather modest place among other countries, which was due to the high tax on sugar and, consequently, its high cost. Thus, the consumption of sugar in 1898–1899 in Russia was about 5.86 kg per person, while in Sweden or Norway – 15.76; The Netherlands – 13.13; Germany – 14 kg (Otzyiv “Journal des Fabricants de Sucre” o nashey saharnoy promyshlennosti na Parizhskoy vsemirnoy vystavke, 1900, 1–39). Although in the early twentieth century, Russia was forced to sell surplus sugar production abroad.

In addition, the author of the article in the “Journal des Fabricants de Sucre” drew attention to the exhibits of the Trading House “I. H. Kharitonenko with his son”, the companies of the brothers Lazar and Lev Brodski, the Society of the Tereshchenko Brothers, noting that all the high awards they received deservedly won. However, the greatest reward during the World's Fair for P. Kharitonenko was the news that the definition of the Department of Heraldry of the Government Senate of October 26, 1900, his wife, daughters Elena, Natalia and son Ivan recognized in the hereditary nobility, with the right to enter the first part of the noble genealogical book (P. Kharitonenko himself was raised in the hereditary Russian Empire Noble Dignity on April 18, 1899, for particularly useful activities in the field of blighty industry) (Derzhavnyi arkhiv Sumskoi oblasti, f. P-2362, op. 1, spr. 4.)

The World Paris Exhibition of 1900 demonstrated not only the success of sugar production in the Russian Empire, but also the fruitful work of industrialists and entrepreneurs. During the exhibition, the Russian exposition received 1,589 awards: 212 higher, 370 gold medals, 436 silver, 347 bronze and 224 honorary awards (Tsvetkov, 2018).

By the end of the exhibition, France could congratulate itself on the most successful exhibition ever organized. While the attendance figures fell short of expectations – 60 million visitors was the figure expected by the panelists – the results (51 million) made it by far the highest attendance of any exhibition. More than 83,000 exhibitors took part in the exhibition, more than 42,790 prizes of various degrees were awarded. The 127 congresses brought together over 80,000 participants and renewed Paris' reputation as a meeting place for the world. Paris showed the world that the city

was at the forefront of technological innovation. Yet for all the statistical triumphs, the 1900 exhibition marked the end of an era. The industrial exhibitions, architecture, and art of 1900 symbolized a summary of the nineteenth century rather than an omen of the twentieth, except that technology promised to be a major force in the entertainment industry.

### **Conclusion.**

Turning to the history of participation in the World's Fair, which had become a colossal common cause, a real manifestation of a public initiative that brought together thousands of people from different walks of life, is important in both historical and practical contexts. An exhibition or international fair is a platform where a country can share its achievements with the rest of the world. At the beginning of globalization, these events were organized in the form of pavilions from different countries of the world, providing information about their citizens and culture. It was also popular to present new inventions from all over the world at the exhibitions.

However, such events were sometimes held for propaganda purposes, since politics and money were of great importance in this area.

A comprehensive study of the participation of sugar producers in the Russian Empire in the exhibition business of the early twentieth century will help not only to analyze their contribution to improving the quality of industrial development, to characterize the interaction of industrial cultures of Russia, Western Europe and the world, but also to consider it as part of the Russian Empire as part of the modernization process. Becoming one of the recognized leaders of the world community in the sugar industry, sugar growers at the World's Fair in Paris in 1900 significantly contributed to strengthening the prestige of the Russian Empire abroad. The exhibition gave a powerful impetus to the further spread of the industrial revolution and the development of advanced industries in the sugar industry.

Thus, the experience of exhibition activities at the turn of the XIX–XX centuries can be taken into account in terms of studying the development of the global economy and culture. To date, the world has accumulated vast experience in organizing and conducting exhibition and fair activities. The Exhibition today enables a particular enterprise to carry out simultaneously communicative, pricing, sales and product policies. An appeal to the history of the preparation and holding of exhibitions in the pre-reform period, and especially in the post-reform period, when they became a colossal common cause, a real manifestation of public initiative, bringing together hundreds and thousands of people from different social strata, is useful both in historical and practical terms.

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### Представники цукрової промисловості Російської імперії на Всесвітній виставці у Парижі 1900 року

**Анотація.** Всесвітні виставки дев'ятнадцятого століття були майданчиками для демонстрації технічних і технологічних змін, що стали свідченням модернізації та індустріалізації світу. Всесвітні виставки сприяли просуванню нових винаходів і популяризації вже відомих, а також появи арт-об'єктів світового значення. Однією з найважливіших світових подій на рубежі століть стала Всесвітня Виставка в Парижі 1900 року. Для цукрозаводчиків Російської імперії участь у Всесвітній виставці не була першим досвідом такого виду діяльності. Більшість з них були членами Київського відділення Російського технічного товариства, яке в свою чергу брало найактивнішу участь у роботі вітчизняних та міжнародних промислових виставок, отримуючи на них високі нагороди. Основні цукрові підприємства були сконцентровані на території сучасної України у володіннях кількох великих компаній, що належали Терещенкам, Харитоненкам, Ханенкам, Бродським, Симиренкам, Яхненкам та іншим. Російська цукрова промисловість займала помітне місце на Всесвітній виставці в Парижі 1900 р., адже її участь у світовому виробництві цукру складала 17%, а за площею бурякових посівів вона випереджала всі інші країни

(на 1900 р. цукровими буряками було засіяно 548796 га). Експозиція засвідчила цей потужний розвиток галузі промисловості. На Всесвітній виставці 1900 року цукрова промисловість Росії розміщувалася в Палаці землеробства і була представлена в павільйонах відомими цукровими фірмами, такими як Управління уділів (Тимашівський бурякоцукровий і рафінадний завод), І. Г. Харитоненко з сином; брати Лазар і Лев Ізраїлевичі Бродські; Н. А. Терещенко, спадкоємиці Ф. А. Терещенко; брати Терещенки, брати Боткіни (Ново-Таволжанський цукровий завод); акціонерні товариства цукрових і рафінадних заводів: “Констанція”, “Германов”, “Гміна Лишковіце”; Е. А. Балашева (Маріїнський цукровий завод Київської губернії), Г. Г. Балаховський (Мар'їнський буряково-цукровий і рафінадний заводи Курської губернії). Характерною особливістю представників цукрової промисловості було те, що вони в основному представляли фамільні підприємства, засновані на міцних родинних зв'язках, етнокультурних і релігійних спільних цінностях. Крім того в них перепліталися функції власників і управлінців. Таким чином авторка в статті зробить спробу проаналізувати участь представників цукрової галузі у Всесвітній виставці 1900 р. та визначити роль виставок як показників досягнень економічного розвитку суспільства, показати значення та вплив приватних підприємців, особливо з України, на розвиток цукрової промисловості та встановлення міжнародних контактів.

**Ключові слова:** *всесвітня виставка; цукрова промисловість; сільське господарство; економічне співробітництво; приватні підприємці*

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### **Представители сахарной промышленности Российской империи на Всемирной выставке в Париже 1900 года**

**Аннотація.** *Всемирные выставки девятнадцатого века были площадками для демонстрации технических и технологических изменений, стали свидетельством модернизации и индустриализации мира. Всемирные выставки способствовали продвижению новых изобретений и популяризации уже известных, а также появлению арт-объектов мирового значения. Одним из важнейших мировых событий на рубеже веков стала Всемирная Выставка в Париже 1900 года. Для сахарозаводчиков Российской империи участие во Всемирной выставке не было первым опытом такого вида деятельности. Большинство из них были членами Киевского отделения Русского технического общества, которое в свою очередь принимало активное участие в работе отечественных и международных промышленных выставок, получая на них высокие награды. Основные сахарные предприятия были сконцентрированы на территории современной Украины во владении нескольких крупных компаний,*

принадлежавших Терещенко, Харитоненко, Ханенко, Бродским, Симиренко, Яхненко и другим. Российская сахарная промышленность занимала заметное место на Всемирной выставке в Париже в 1900 г., ведь ее участие в мировом производстве сахара составляла 17%, а по площади свекловичных посевов она опережала все остальные страны (в 1900 сахарной свеклой было засеяно 548 796 га). Экспозиция подтвердила такое мощное развитие этой отрасли промышленности. На Всемирной выставке 1900 года экспозиция сахарной промышленности России размещалась во Дворце земледелия и была представлена в павильонах известными сахарными фирмами, такими как Управление уделов (Тимашевский свеклосахарный и рафинадный завод), И. Г. Харитоненко с сыном; братъ Лазарь и Лев Израилевичи Бродские; Н. А. Терещенко, наследники Ф. А. Терещенко; братья Терещенко, братья Боткины (Ново-Таволжанский сахарный завод); акционерные общества свеклосахарных и рафинадных заводов: “Констанция”, “Германов”, “Лышковице”; Е. А. Балашева (Мариинский сахарный завод Киевской губернии) Г. Г. Балаховский (Марьинский свекольно-сахарный и рафинадный заводы Курской губернии). Характерной особенностью представителей сахарной промышленности было то, что они в основном представляли фамильные предприятия, основанные на прочных родственных связях, этнокультурных и религиозных общих ценностях. Кроме того, в них переплетались функции владельцев и управленцев. Таким образом автор в статье попытается проанализировать участие представителей сахарной отрасли во Всемирной выставке 1900 года и определить роль выставок как показателей достижений экономического развития общества, показать значение и влияние частных предпринимателей, особенно из Украины, на развитие сахарной промышленности и установления международных контактов.

**Ключевые слова:** Всемирная выставка; сахарная промышленность; сельское хозяйство; экономическое сотрудничество; частные предприниматели

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