Institutional Practices of Economic Experiments in the Field of Money Circulation in Crimea (1783-1917)

Nataliia Simchenko*, Svetlana Tsekha and Aurika Murava-Sereda
V. I. Vernadsky Crimean Federal University, Simferopol, Russian Federation; natalysimchenko@yandex.ru

Abstract
On the basis of archive materials, the article attempts to study the institutional practice in the history of money circulation development in Crimea in the context of conducting a number of economic experiments. We have studied the historical development of the institution of money and its impact on the monetary policy formation in Crimea since the joining of Crimea to Russia in 1783 until the 1917 revolution and have come to a conclusion that the process of development and formation of the money circulation in Crimea was accompanied by a number of economic experiments of institutional nature and demonstrating the regularities of historical and economic transformations. The most important role in the monetary policy formation in the region belongs to the institution of money. The problematics under consideration in part of understanding the money circulation peculiar features, depending on the historical period of initiation, is of undoubted interest for contemporary economists and experts in the field of the monetary policy of Russia.

Keywords: Crimea, Currency, Economic History, Institutions, Institution of Money

1. Introduction
The modern monetary system of Crimea is being developed in the context of the transformation processes that took place on the territory of imperial Russia, the Soviet Union and the post-Soviet space. The institutional characteristics of the existence of a particular economic system are determined by the structure of the relations of political and economic actors, their intrinsic functions and their fulfillment in the formation of a purposeful economic policy and in the implementation of social practices. In this regard, we find it important to study the experience of institutional transformations in the monetary area of the region in historical and economic terms.

2. Literature Review
In the institutional economic theory, institutions are seen as a kind of structures that characterize the richness of social life in terms of the structuring of a significant proportion of interactions and activities of people in terms of explicit and implicit rules. J. Knight defines institution as “a set of rules that structure social interactions by certain ways.” Institution is understood as a social form of typification of features of business entities, which defines their status and role in the social product production and creates a system of relations in the functional structure of the society.

A new institutional theory, as well as the traditional institutionalism, considers the institutions in the context of explaining the behavior of economic agents. The new institutional theory in the research of institutions focuses on the aspects related to the effectiveness, explaining the formation of institutions through the model of rational choice. Within the framework of the new institutionalism, the importance of institutions is considered in the context of assessing their impact on the decisions taken

* Author for correspondence
Institutional Practices of Economic Experiments in the Field of Money Circulation in Crimea (1783-1917)

by economic agents. Institutions in the form of sets of rules and regulations do not fully define the behavior of a person and only limit the set of alternatives, from which the individual can make certain choices in accordance with its criterial function. Moreover, the individual can choose between the rules, which justifies the idea of the institutional market. The highlighted provisions correspond to the idea that institutions are a form of rationalization of the interests of economic entities. In general, institutions to some extent order the thinking, expectations and activities of individuals. Partly the viability of institutions is conditioned by the fact that they create stable expectations. Institutions constrain the behavior, but at the same time make it possible. It should be noted that the existence of rules provides for their restrictions, but the restrictions opening new opportunities for the choice and certain actions that would not exist in the absence of such restrictions. Thus, institution is a kind of information system supporting the implementation of rules, norms, mechanisms which, in turn, structure the relations between economic entities.

Revealing the socio-economic content of the institution concept, it is advisable to pay attention to the definition of J. Hodgson who in accordance with the generally accepted tradition defined institution as a system of well-established and generally accepted rules that structure social interactions. However, within the new institutional economics, the matter of argument is how appropriate it is to consider institutions as rules or regulations. According to J. Hodgson, the conflict arises in the interpretation of the intellectual tradition, in which individual tastes or objectives are taken as given. Noting the relative stability of institutions, J. Hodgson points out that institutions possess the qualities of equilibrium, even if the equilibrium conditions can be violated. These equilibrium conditions are reproduced and reinforced when the goals are reflected in the results of the institutions' functioning. As for the rules and regulations, according to the scientist, they cannot be reduced solely to the "environment," in which an economic (rational) agent must make a decision and act. These rules and regulations are replicated in the behavior of the individual. As a result, the repeating, conditional behavior follows certain standards and acquires regulatory meaning if people perceive the customs as moral and ethical standards, contributing to the stabilization of the institutional equilibrium.

3. Methodology

In this article, we used the comparative historical analysis methods to analyze the institutional peculiar features of a number of economic experiments in the development of the money circulation in the territory of Crimea. The use of the method of content analysis of economic texts helped to perform a quantitative analysis of archival materials on the economic development of Crimea, as well as of text arrays for subsequent substantial interpretation of the revealed regularities.

4. Results

The system of institutions forms the institutional environment. We take the institutional environment as an ordered set of institutions that define the restrictions for economic agents in the process of decision-making. Functioning features of the Institutional environment is determined by the mutual support of the institution, which is provided by performing their respective functions.

The institution functions, as a rule, are understood as their activities, which contribute to maintaining the social stability. Along with that, dysfunctions are the activities of individual institutions which make it impossible to meet the needs of a certain economic and financial system and results in its destruction. The dysfunction appears if the activities of the institution targets self-sufficiency rather than focuses on the society.

Institutional support of the monetary policy development is based on the formation of a number of formal and informal institutions and their functions. Formal institutions having the status of legally approved rules and regulations are binding for certain groups of actors. The informal institutions are the forms of interaction that exist in real life, but are not legally institutionalized - traditions, customs, behavior patterns and other forms of interaction between people, which are mainly determined by the culture, psychology and ideology of a particular society. According to D. North informal institutions, which were formed as a means of coordinating stable recurring forms of human interaction, are the development and modification of formal rules; socially sanctioned norms of behavior; internal binding standards of behavior. It should be noted that informal
institutions emerge based on information transmitted by means of social mechanisms that characterize the structure of values in the society. The development of a system of interrelations between formal and informal institutions is one of key factors of the institutional trends. Formal restrictions, rules and institutions mostly appear on the principles of already existing informal rules and mechanisms that ensure their implementation.

The basis of institutional support of the monetary policy comprises such economic institutions as money, interest, credit market, trust and a number of others. The most important regulatory institution of monetary policy is the institution of money. As A. Zolotareva noted in her study, the basic institutions of the modern monetary policy are the institutions of money and trust, since they determine the content of the modern monetary policy. Traditionally, economic sociology has understood the institution of money as a system of social obligations, rules, regulations, which authorize, regulate and normalize operations with money.

Within the framework of our research, it is very important to identify the historical development of the institution of money in Crimea and its impact on the economic behavior of the actors of the monetary policy — the economic entities. Various individuals and organizations, as well as entire communities or the state, can be the actors.

Development of the institution of money in Crimea as part of the Russian Empire is more than 250 years old. With the annexation of the Crimea to Russia in 1783 and the creation of the Taurian Oblast, and later in 1802 — Taurian Province, qualitative changes took place in the monetary system of the region. The Russian ruble became the main monetary unit. The monetary system that formed at the time in Russia existed virtually up to World War I and more precisely until 1915, when the silver coin ceased being issued completely.

The most significant event in the financial policy of Russia in the end of the eighteenth century was the banknotes introduction into circulation. By the time, Crimea was annexed to Russia, paper money had already been in the circulation for 14 years. The first paper money in Russia was issued by a decree of Empress Catherine 2 in 1769 under the name of “assignations” in the total amount of one million rubles. The banknotes were issued in denominations of 25, 50, 75 and 100 rubles. However, the technical imperfection of their performance and the relatively easy conversion of 25-ruble banknotes in 75-ruble ones forced the government two years later, in 1771, to cease issuing 75-ruble banknotes. In 1786, a new type of banknotes was introduced, which existed until 1818, the Government of Catherine quickly understood the seeming benefits of issuing paper money, taking into account the factor that the excessive issue of the money, its cost drops significantly. This money was used to finance the wars in the second half of the eighteenth century. The government tried to defray its multiple expenses by issuing money. Such economic experiments of the authorities resulted in a situation when the inflation actually devalued the issued banknotes. By the end of the reign of Catherine 2, the issue of banknotes reached enormous scopes and equaled to 157 million rubles.

One of the most pressing financial problems of Russia at that time was the existence of the dual-money system. As is known, in 1766, two banks located in St. Petersburg and Moscow were granted the right to issue banknotes. In 1769, these two banks were merged into the so-called Assignation Bank, which began to issue paper money. The 25, 50, 75 and 100-ruble banknotes to the total amount of 157 million rubles were issued in the turnover. By 1786, the free exchange of banknotes for silver coins was discontinued, after which the rate of paper money began to decline. As a result, Russia had a dual-money system — in assignation rubles and in silver rubles. By the end of the century, the rate of paper rubles fell to 68 silver kopecks, i.e. the ruble depreciated by a third.

Military events of 1805-1815 had a negative impact on the performance of the monetary system of Russia. Napoleon’s government authorized the issue of fake banknotes of the Russian Empire and flooded the country through the western borders of Russia. By 1817, the total amount of paper money (original and fake) in circulation equaled to 836 million rubles. The Russian government was forced to take steps to buy out people’s money. From 1818, it launched the issue of banknotes of a new type and took a number of steps to reform the monetary system in order to introduce silver monometallism in the country. 1818-year banknotes were subsequently replaced with State Credit Notes.

These steps ended in 1839-1843 with the reform of E.F. Kankrin, the Minister of Finance of the Russian Empire. Speaking against subsidizing certain industries at the expense of state-owned credit institutions, Kankrin introduced the rule that every long-term industrial loan...
was to be issued by official banks under the permission of the Ministry of Finance. In 1829, he decreased the interest paid by public credit institutions on deposits from 5% to 4% and the interest charged on loans from 6% to 5%. In 1842, Kankrin took part in the initiated establishment of thrift institutions in the country. These thrift institutions accepted deposits from the population in the amount between 50 kopecks and 750 rubles. Thanks to the support of the Minister, the first insurance companies appeared in Russia, offering fire insurance (1827) and personal insurance (1835).

In accordance with the decree of Nicholas 1, starting from January 1, 1840, the deposit institution was established in Russia, which was meant for storing silver coins. Depositors received deposit institution notes instead of silver. These notes were used for payment across the entire territory of the Russian Empire equally with silver coins (at the rate of 1:1) and could be exchanged for silver. In the future, they were to replace the government banknotes. At the beginning of 1841, in order to solve the financial problems caused by the crop failure of the precedent year, a special committee was established and chaired by the Emperor Nicholas 1. Among other issues, they discussed replacing banknotes with credit notes (Emperor’s offer) or new deposit notes (offer of the Minister of Finance). The manifest of 01.07.1841 announced the issue of new monetary units — credit notes that were circulated across the entire empire on a par with fractional money. The credit notes were secured by all funds (assets) of public credit institutions and were exchanged for coins at the rate “1 credit ruble for 3.50 rubles in banknotes”.

The replacement of monetary units with the state credit notes was performed gradually and ended in the spring of 1853. After that only one type of paper money left in Russia — the state credit notes, exchanged for silver coins at a rate of 1:1. In total, during the monetary reform, 600 million rubles in banknotes were exchanged, which allowed to support the monetary system for some time. As exchanging offices were opened in November 1843, it was permitted to deposit in coins, as well as in golden and silver bullions. The deposits were credited to the exchanging fund of credit notes and were not used to cover other expenses.

Thus, in the course of the monetary reform of 1839-1843, the first silver monometallism was established in Russia. In the future, particularly in relation to the Crimean War, the issue of fiat money continued. And the Russian government repeatedly had to devalue the ruble. In this manner, the replacement of credit notes was performed in 1876-1878 and 1886-1887 according to the plan of Minister of Finance Witte.

With the Crimea annexation by the Russian Empire, the development of traditional industries (mainly agriculture) focused on the Russian market. Those were such branches as the sheep industry, horticulture, viticulture and production of tobacco. Crimean tobaccos were supplied not only to Russia, but also to European markets and successfully competed with the best blends of Turkish tobacco. Salt pits also became of particular importance.

The reforms of the 1860s gave an impetus to the growth and development of industrial production. A major step in this direction was made by the construction of the Kharkov – Sevastopol railway in 1869-1875. The most important industrial enterprises were metallurgical plants in Kerch and the shipbuilding and ship repair plants in Sevastopol. Besides, such industries as flour milling, tobacco, canning, food, which specialized in the processing of local raw materials, were developing.

Since the end of the nineteenth century and up to World War 1, the financial policy of Russia was carried out as an outcome of Witte’s monetary reform. The gold ruble formed the basis of the Russian monetary system. Free exchange of paper money for gold coins was introduced. During this reform, a substantial gold reserve was created, reaching 1,247,000,000 rubles. At the same time, the issue of paper money was severely limited by the size of the gold reserve. The reform resulted in favorable conditions for the economic development of Russia. The inflow of foreign capital in all spheres of the national economy was a powerful incentive for the development of all sectors of the economy and was the factor of acknowledgement and convertibility of the Russian ruble. Russian goods were internationally recognized. For example, before World War 1, Russia exported only 600-700 million tons of grain per year. It should be noted that by the beginning of World War 1, Russia had made a significant progress in industry and agriculture and reached the level of most developed countries of the world by economic indexes.

The beginning of the warfare caused irreparable damage to the entire Russian economy. On the eve of World War 1 (27.07.1914), a decree on the termination of free paper exchange for gold was adopted. The
increase in military spending demanded more and more investment. To cover the ever-increasing costs, a mass production of unsecured paper money began. Starting from 1915, one- and five-ruble credit notes were issued in the amount of one hundred notes of the same series. The series number was a three-digit number. By 1916, only a tenth of the paper money was backed by the gold reserves. Bullion coins and then copper coins were withdrawn from circulation. Since 1915, the coin was replaced with paper money and money-stamps that were similar to post stamps. Chasing of fractional coins continued in small numbers and in some cases even in single pieces and was ceased completely on August 4, 1917.

The government resorted to a forced ruble exchange rate, but the inflation rate and mass issue of paper money resulted in the ruble rate fall to 27 kopecks by February 1917, compared to the pre-war level. From July 1914 to August 1917, the prices for foodstuff increased by 6.5 times, for primary commodities (clothing, footwear, wood, soap) — by 12 times. At the same time, salaries for the same period grew only by 6 times. This process continued to grow — 14 billion rubles were not secured with goods.

Attempts of the Provisional Russian Government to stabilize the economic and financial situation in the country and put an end to the crisis by issuing new monetary units in denominations of 20, 40, 250 and 1000 rubles were unsuccessful. Treasury notes in 20 and 40 rubles were used for payment in sheets, without cutting them into individual notes. Prices were set in thousands, tens of thousands and millions by that time.

One of the most interesting economic experiments is the circulation in Crimea of local and private monetary units, mandatory for circulation only in the sphere of influence of the issuer. The issue of such monetary units was launched in the end of 1917, when there was not enough fractional money and credit notes of small denomination. Local issues were carried out on behalf of the branch of the Crimean Provincial Bank or County Treasuries. As a rule, those were Commitments of the State Treasury or Bonds of the Freedom Loan and had respective overlays. In addition, monetary units were issued by a decision of local governments. An example is the temporary receipts of the Ye夫patoria City Council or banknotes of the Kerch Municipal Government.

The issue of private money, in addition to objective economic laws, was encouraged by the socio-political situation that existed in Crimea during the Civil War. A well-known fact is that the most educated and cultured part of the Russian intelligentsia, the vast majority of officers; representatives of the business world did not accept the Bolshevik Revolution and chose the grief path of emigration instead of cooperation with the new government. In this regard, by the beginning of 1918, Crimea became the last refuge for the refugees from the northern provinces of Russia. Cities and villages of Crimea were flooded with businessmen, merchants, military men and the intelligentsia representatives. The urban population of Crimea increased rapidly. All this led to a significant increase in the business activity of both the local population and the newly arrived representatives of the business community. Multiple co-operative societies, co-partnerships, trading organizations emerged. And as each organization or enterprise was not that significant by the capital size, the number of members of private entrepreneurship in Crimea during 1918-1920 was rather indicative. According to archival data, there were about 275 private firms and organizations, which released their money in Crimea at the end of 1917. The following historical data on local and private issues of monetary signs by organizations of the peninsula is available by settlements: Simferopol — 1 organization (local issues), 72 organizations (private issues); Sevastopol — 2 organizations (local issues), 77 organizations (private issues); Ye夫patoria — 3 organizations (local issues), 42 organizations (private issues); Yalta — 2 organizations (local issues), 36 organizations (private issues), etc. According to the Crimean researcher A.M. Rodionova, the ethnic structure of the owners of organizations was mainly represented by the Greeks, Tartars, Karaites, Armenians, Jews, Ukrainians, Russians and Georgians. The bulk of private monetary units were the units of shops, cafes, restaurants, coffee shops. The units of charity and various consumer associations, unions, cooperatives and associations were used in a lesser amount. And while the former were in circulation mainly in 1918-1920, the latter issued their units mainly between 1921 and 1935. At the same time, all sorts of in-house plant and factory vouchers and checks appeared, which circulated only within the territory of the issuing enterprises.

Consumer societies, mutual aid societies, cooperatives, labor groups also resorted to the issue of private monetary units, which facilitated transactions between their members in the situation of the overall shortage.
of money. The most interesting is the Tartar Consumer Society “Tukenmez” and the collective of trade unions of gardeners and horticultural workers in Yevpatoria, the cooperative of disabled in war persons in Yevpatoria and Saki, the Kerch port cooperative, the Threkh-Ablamsky cooperative, the Black Sea cooperative partnership, the “Society of Salvation from Famine” in Sevastopol, the Soglasie cooperative in Balaklava, the Kacha Military School of Marine Pilots named after Trotsky, the “Gmilas Hesed” consumer society in Simferopol and the “Progress” consumer society in Dzhalman-Kil-Burun (State Archives in the Republic of Crimea).

It should be noted that in the second half of the 1920s – early 1930s, many companies issued their monetary units for in-house payments. Their existence is probably explained, on the one hand, by the lack of money, but on the other hand, by the distributive nature of the supply with primary commodities, which was conducted by enterprises. Owning a currency was a measure of labor of each employee and gave the right to purchase a product at his enterprise. The cash equivalents existing then played their role and ceased to be as the economic situation stabilized in the country. In February 1924, it was prohibited to issue and accept any private money or substituting securities. However, in-house monetary signs remained until May 1935, when a criminal punishment for their issue and use was introduced. Only at our time, as economic accountability was introduced, the tradition was revived at some enterprises and collective and state farms. Currently, these cash equivalents have also completed their mission.

5. Discussion

Since 1918, the Soviet Government launched the issue of rebranded monetary units. However, this fact was more of political than economic significance. The population refused to use them as payment means, preferring imperial currency and even “Kerensky notes” of the Provisional Government. And then the Soviet Government resorted to an economic experiment — mass production of the imperial currency and Provisional Government notes of all merits with the signature of the manager I. Shipov. These moneys were issued from 1917 to 1920 and remained in circulation until 1922, when it was prohibited to receive payments in any monetary units of previous issues.8–10.

The crisis phenomena described above in the monetary system of Russia directly affected the economic development of Crimea. The separatist tendencies, which had arisen in the course of the revolution and civil war, also had an effect on the Crimean Peninsula. On November 26, 1917 (old style) the Kurultai of the Crimean Tartars in Bakhchysarai established the Government — the Directorate that proclaimed the Crimean Popular (Democratic) Republic. There was an attempt to issue its own monetary units. The sample banknotes in denominations of 25 and 100 rubles on the model of “Kerensky Notes” were issued. However, the power of the Directory did not last long. As a result of armed clashes with the Bolsheviks, the latter won and in January 1918 the Soviet power was established in Crimea.

The Decree of the Central Executive Committee of January 21 (February 3), 1918 introduced the issue of interest-bearing securities with coupons or without them at nominal value with respective overplays of the relevant branches of the State Bank. In Crimea, 5% short-term commitments of the State Treasury and the bonds and Svoboda Loan were used for these purposes. The issues were carried out by all city offices of the State Bank. These cash equivalents were mandatory for acceptance in all kinds of payments on a par with the state credit notes.

The begun occupation of Ukraine by the Kaiser troops resulted in occupation of Crimea by the end of April 1918 by the Germans and Austrians. Under the auspices of the Command of the occupation forces, the Crimean Regional Government was established and chaired by the former tsarist general Maciej (Suleyman bey) Sulikiewicz. By the decision of the Council of Ministers dated August 16, 1918, the Provincial Treasury Obligations of three major denominations (500, 1000 and 5000 rubles) for a total amount of 20 million rubles were issued (State Archives in the Republic of Crimea). The obligations were intended for large payments and circulated for a short time (from September 1 to November 30, 1918) (State Archives in the Republic of Crimea).

On June 24, 1919, Crimea was occupied by the Volunteer Army divisions. Since that time, the peninsula came under the power of the Government of Southern Russia, which lasted about one and a half year, until November 1920, that is until the evacuation of Wrangel’s troops from Crimea27. Led by a prominent statesman, the Minister of the Russian Empire A.V. Krivoshein, the Government of Southern Russia in Crimea conducted a
fruitful economic and financial policy and implemented a land reform. Another important fact is the circulation of foreign currency in the Crimean territory. The largest number of foreign banknotes circulated in Crimea during the foreign intervention in the Civil War. As the invaders left in 1920, the circulation of all foreign currency was discontinued.

Summing up the peculiar features of the money circulation in Crimea in the context of a number of economic experiments conducted from 1783 to 1917, we should highlight the importance and role of the institution of money in shaping the monetary policy in the region. At the same time, the monetary policy can give a significant result if it is regulated and recognized by such an important political and economic institution as the legitimate power.

6. Conclusion

The Institution as a certain information system ensures the abidance by norms, regulations, mechanisms, which in their turn structure the relationships between the actors. Institutions restrict the behavior of actors and at the same time make it possible. Institutional support for the development of the monetary policy is based on the formation of a number of formal and informal institutions and their functions. The basis of the institutional support of the monetary policy comprises economic institutions such as money, interest, loan market, trust and some others. The most important regulatory institution of monetary policy is the institution of money.

We have studied the historical regularities of the development of the institution of money in Crimea and its impact on the economic behavior of the monetary policy actors — the economic entities; analyzed the changes in the monetary system of the region caused by the annexation of Crimea by Russia in 1783; noted the key features of the monetary system formed by the end of the eighteenth century, the basic architectonic of which existed until World War I; characterized the main stages of the issue of paper money and coins in Russia and Crimea; and emphasized the destructive role of warfare in the regulation of money circulation, results in a collapse of the entire monetary system.

We have provided the results of the archival research of the circulation of monetary units of local and private issues in Crimea, mandatory for circulation only within the sphere of influence of the issuer. The issue of these monetary units started in the late 1917, which was due to the shortage of small coins and credit notes of small denominations. More than 275 private companies and organizations issued their monetary units in the territory of Crimea. We have also paid attention to the interdependence of the institution of money and such an important economic institution as the legitimate power.

7. Acknowledgement

This publication was prepared within the framework of Research Project No 15-32-10103 supported by Russian Foundation for Humanities.

8. References

1. Shcherbin VK, Simchenko NA. Sushchnostnye kharakteristiki sotsialnykh institutov ekonomicheskogo razvitiya gosudarstv [Essential characteristics of social institutions of economic development of states]. Rossiyskii zhurnal menedzhmenta [Russian Management Journal]. 2015; 3(1):42–7. [in Russian].
2. Knight J. Institutions and Social Conflict. Cambridge: Cambridge University Press; 1992.
3. Hodgson GM. What are institutions? Journal of Economic Issues. 2006; 40(1):1–25.
4. North DC. Institutions, institutional change and economic performance; 40. Cambridge. 1990.
5. Zolotareva OA. Instituty denezhno-kreditnoi politiki: su-shchnost, vidy, vzaimodeistvie [Institutions of Monetary Policy: the Nature, Types, Interaction]. Rossiiyskoe pred-prinimatelstvo [Russian Entrepreneurship]. 2014; 20:29–43. [in Russian].
6. Lebedev DS. Transaktcionno-setevoy podkhod k otsenke institutsionalnykh izmeneniy [Transaction-network approach to the assessment of institutional changes]. Problemy sovremennoi ekonomiki [Problems of modern economy]. 2011; 4(40). Available from: http://www.m-economy.ru/art.php?nArtId=3785 [in Russian].
7. Gavrila VE. Dengi kak istoricheskii pervyi ekonomicheskii institut [Money as the historically first economic institution]. Ekonomicheskiye nauki [Economic Sciences]. 2009; 8(57):48–50. [in Russian].
8. Rodionov AM. Ot drakhmy do rublia. Kratkiy ocherk istorii denezhnogo obrashcheniya v Krymu [From Drachma to Ruble. A short history of money circulation in Crimea]. Simferopol: Crimean Printing Press Committee. 1994; 32. [in Russian].
9. Spassky IG. Russkaya monetnaya sistema [Russian Monetary System]. Leningrad: Publishing House of the "Aurora". 1970; 256. [in Russian].
10. Malyshhev AI, Tarankov VI, Smirennyy IN Bumazhnye denezhnye znaki Rossii i SSSR [Paper Banknotes of Russia and the USSR]. Moscow: Finansy i Statistika; 1991. [in Russian].
11. Kolomiitseva VA. Istoriiia finsansov Tavridy. Khroniki (1783-1917) [History of finance of tauris. Chronicles (1783-1917)]. Simferopol: OJSC "Simferopol City Printing House" (CGT). 2010; 412. [in Russian].
12. Statistiko-ekonomicheskii atlas Kryma [Statistical and economic atlas of the Crimea] (1922, Issue 1; 78). Simferopol: Publication Krymstatupravlzenia i Krymizdata. [in Russian].
13. Fondy Gosudarstvennogo arkhiva v Respublike Krym [State archives in the Republic of Crimea]. Archive #71, inventory 1, files 253, 526, 1737, 2426, 2494, 2199, 2200. Simferopol: Tavricheskaya Gubernskaya Tipografiya. [in Russian].
14. Fondy Rossiiskogo gosudarstvennogo istoricheskogo arkhiva. Statisticheskie svedeniia ob ekonomicheskom i finansovom sostojanii Rossii, rasmatrivayemye v Sovete Ministrov [Archives of the Russian State Historical Archive. Statistical information about economic and financial situation in Russia discussed in the Council of Ministers]. St. Petersburg: State Printing House. Archive #560. Inventory 26. File 27. 3–9 [in Russian].
15. Obzor "o sostojanii Tavricheskoy gubernii za 1900 god" [Review of the State of Tauris Province for 1900]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1901; 40. [in Russian].
16. Obzor "o sostojanii Tavricheskoy gubernii za 1901 god" [Review of the State of Tauris Province for 1901]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1902; 38. [in Russian].
17. Obzor "o sostojanii Tavricheskoy gubernii za 1904 god" [Review of the State of Tauris Province for 1904]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1905; 46. [in Russian].
18. Obzor "o sostojanii Tavricheskoy gubernii za 1905 god" [Review of the State of Tauris Province for 1905]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1906; 40. [in Russian].
19. Obzor "o sostojanii Tavricheskoy gubernii za 1907 god" [Review of the State of Tauris Province for 1907]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1908; 40. [in Russian].
20. Obzor "o sostojanii Tavricheskoy gubernii za 1908 god" [Review of the State of Tauris Province for 1908]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1909; 36. [in Russian].
21. Obzor "o sostojanii Tavricheskoy gubernii za 1909 god" [Review of the State of Tauris Province for 1909]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1910; 36. [in Russian].
22. Obzor "o sostojanii Tavricheskoy gubernii za 1910 god" [Review of the State of Tauris Province for 1910]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1911; 34. [in Russian].
23. Obzor "o sostojanii Tavricheskoy gubernii za 1911 god" [Review of the State of Tauris Province for 1911]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1912; 39. [in Russian].
24. Obzor "o sostojanii Tavricheskoy gubernii za 1912 god" [Review of the State of Tauris Province for 1912]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1913; 53. [in Russian].
25. Obzor "o sostojanii Tavricheskoy gubernii za 1913 god" [Review of the State of Tauris Province for 1913]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1914; 60. [in Russian].
26. Obzor "o sostojanii Tavricheskoy gubernii za 1914 god" [Review of the State of Tauris Province for 1914]. Simferopol: Tavricheskaya Gubernskaya Tipografiya. 1915; 144. [in Russian].
27. Bibikov MV, Egorov VL, Nekrasov AM. Krym: proshloe i nastoiaashchee [Crimea: The Past and the Present]. Agadzhanyov SG, Sakharov AN (Editors). Institute of the USSR History of AS USSR. Moscow: Mysl. 1988; 107. [in Russian].