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# Semyon Falkner and the Modern Monetary Theory: Contributions to the Russian Tradition in the Theory of Money<sup>1,2</sup>

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**Abstract.** This paper investigates the monetary theory of Semyon Falkner (1890–1938), initially recognized in the early Bolshevik era as the Theory of the Emission Economy (Teoriya emissionnogo khozyaystva). Remarkably, Falkner's theory can be viewed as an early precursor to the Modern Monetary Theory (MMT), which gained popularity in recent decades. The paper begins by presenting Falkner's perspectives, delving into the controversies surrounding his theory, including reactions from Lenin, and examining the dynamics of inflation and monetary reform. A comparative analysis of the Theory of Emission Economy and MMT follows, revealing that Falkner articulated the fundamental tenets of MMT a century ago. The paper concludes by addressing the modifications to Falkner's theory during the years of the planned socialist economy, illustrating the prevalence of the nominalist tradition in the Russian theory of money.

Keywords: monetary theory, MMT, theory of emission economy, S. Falkner

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<sup>&</sup>lt;sup>2</sup> These findings were presented in previously published materials: Nenovsky, N. (2020). The Theory of the Emission Economy Bolshevik roots of "Modern Monetary Theory". *MPRA Paper*, 113048. Неновски, Н. (2020). Теорията за емисионното стопанство Болшевишките корени на "модерната парична теория". *БНБ Дискусионни Материали*, 116/2020, 42.

#### ИССЛЕДОВАТЕЛЬСКАЯ СТАТЬЯ

# Семён Фалькнер и современная денежная теория: вклад в российскую традицию теории денег

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Аннотация. Данная статья посвящена денежной теории Семена Анисимовича Фалькнера (1890–1938), в ранний советский период известной как теория эмиссионного хозяйства. Теорию Фалькнера можно рассматривать как предшественницу современной денежной теории (СДТ), ставшей популярной в последние десятилетия. В первой части статьи изложены взгляды С.А. Фалькнера, а также противоречия, связанные с его теорией, включая реакцию на нее Ленина. Также рассмотрены вопросы по динамике инфляции и денежной реформе. Далее следует сравнительный анализ теории эмиссионного хозяйства и СДТ, показывающий, что С.А. Фалькнер сформулировал фундаментальные принципы СДТ еще столетие назад. В заключительной части статьи освещены модификации теории С.А. Фалькнера, возникшие в период плановой социалистической экономики и иллюстрирующие преобладание номиналистической традиции в российской теории денег.

Ключевые слова: денежная теория, СДТ, теория эмиссионного хозяйства, С. А. Фалькнер

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### 1. Introduction. On the Russian tradition in monetary theory

The exchange of expertise, ideas, and theories between the West and Russia is integral to the general development of economic thought. There is a growing body of research dedicated to studying this interaction, exemplified by the recent publication Russian and Western Economic Thought. Mutual Influences and Transfer of Ideas, edited by H. Hagemann and V. Avtonomov (2022)<sup>2</sup>.

This study discusses the monetary theory of Semyon Falkner (1890–1938)3, which was known in the early Bolshevik period under the name Theory of the Emission Economy (TEE). In my view, the TEE was a precursor to Modern Monetary Theory (MMT), which gained popularity in the past two decades (Wray, 2015). Both theories align with the nominalism stream of monetary theory, sharing similar theoretical postulates, and their practical application yields comparable results<sup>4</sup>.

Nominalism is a distinctive feature of the Russian tradition of theorizing about money. Before exploring Falkner's theory and the related discussions, some initial observations

 $<sup>^{1}</sup>$  Результаты данного исследования были представлены частично в ранее опубликованных материалах: Nenovsky, N. (2020). The Theory of the Emission Economy Bolshevik roots of "Modern Monetary Theory". MPRA Paper, 113048. Неновски, Н. (2020). Теорията за емисионното стопанство Болшевишките корени на "модерната парична теория". БНБ Дискусионни Материали, 116/2020, 42.

<sup>&</sup>lt;sup>2</sup> Contemporary research also examines the channels of Russian influence on economic thought in other regions (e.g. for the Balkan countries Nenovsky and Penchev, 2017, and for China — Borokh and Lomanov, 2021).

<sup>&</sup>lt;sup>3</sup> Semyon Anisimovich Falkner (Solomon Nusimovich Falkner), 1890–1938.

<sup>&</sup>lt;sup>4</sup> Inflation is the most visible consequence.

should be presented. The claim is made for the existence of certain elements in Russian monetary thought, specifically Russian nominalism, as exemplified by Falkner's theory outlined below. These assertions are based on prior observations and insights from publications on the history of Russian monetary thought, and they are presented as preliminary points open to discussion.

The history of theories of money reflects the dualistic nature characteristic of almost all social institutions. In the case of monetary theory this dualism is known as the dichotomy — Substantialism — Nominalism¹. This dichotomy, recognized as early as Aristotle, found significant development in the works of the Russian scholar Petr Struve (1913/1916, 1921a, 1921b, 1925). Analysis of Russian monetary history and theories of money in Russia supports the assertion that within this dichotomy, the dominant aspect of the Russian tradition is nominalism. This nominalism is closely associated with the nature of the Russian economy, power structures, geography, Christian orthodoxy, and other relevant factors.² This fact was repeatedly pointed out by P. Struve (1913/1916, 1952), B. Stein (1948), and A. Eidelnant (1948/1929).

Within Russian nominalism, four distinct trends can be identified.

First, the function of measuring, of accounting through money, dominates the function of money as a means of payment and of exchange<sup>3</sup>. This can be attributed to the hierarchical and pyramidal power structure of Russian society. In such a society, there is a need for systematization, control, bureaucratic record-keeping, and similar functions. The role of money as a means of measurement and calculation is considered ideal, akin to other units of measurement and language.

Secondly, the dominant function is payment, which encompasses the function of exchange. (The payment function also extends to non-market transactions, whereas the medium of exchange primarily serves market relations)<sup>4</sup>. This aligns with the observations of numerous Russian economists and sociologists, reflected in various theoretical concepts (such as "power-ownership" by R. Nureev, "economics of distribution (razdatok)" by O. Bessonova, "institutional matrices" by S. Kirdina, "property rights" by R. Pipes, etc.<sup>5</sup>).

Thirdly, the prevalence of the fiat, fiduciary form of the medium of payment and exchange takes precedence over the substance (commodity) form. This is substantiated by Russian monetary history, marked by the centuries-long and nearly continuous use of fiat currency, including assignats, credit rubles, and later the Soviet ruble<sup>6</sup>.

Fourthly, the national currency, typically in fiat form, is distinctly separated from international currency, which serves the purpose of connecting Russia to the foreign sector on a commercial basis. This separation was recognized by Ivan Pososhkov during Peter the Great's monetary reform. A similar system persisted during the USSR years, and there was an interesting attempt to incorporate the fiat money system into the Comecon clearings through the introduction of a clearing, and later, transferable ruble (which was neither backed nor convertible).

<sup>&</sup>lt;sup>1</sup> With certain stipulations.

<sup>&</sup>lt;sup>2</sup> On the historical development of the Russian economy over the centuries, see Ellman (2023a, b).

<sup>&</sup>lt;sup>3</sup> The mean of exchange in the works of the Physiocrats and Marx is called the mean of circulation.

<sup>&</sup>lt;sup>4</sup> See the fundamental studies of Testart (2001) on the relation of mean of payment and mean of exchange, and of Thierry (2001) on the nature of Chinese currency.

<sup>&</sup>lt;sup>5</sup> See e.g. Nureev and Latov (2016), Kirdina (2001), Bessonova (2023) and Pipes (1999).

<sup>&</sup>lt;sup>6</sup> It is often argued that fur rubles (меховые деньги), were also a form of fiat money.

It should be noted that the prevalence of nominalism in Russia has coexisted with ideas and initiatives advocating a return to sound metallic currency. Monetary history reveals that the dominance of fiat, paper currency in Russia has seen intermittent and generally successful periods of substantial, material currency. These periods usually followed crises or were undertaken to integrate into the world economy and secure external loans. Notable instances include the silver-based "metallic" reforms of Kankrin (1839–1854), the later gold-based reforms of Witte (1897–1914), and finally, the introduction of the gold and foreign currency-backed chervonets (1922/1924–1928), assuming the latter represents some form of substance money.

In his highly original but unfortunately rarely cited work, Essays on the Development of Russian Public and Political Thought of the XIX-XX Centuries (1948), V. Stein notes the relationship between book money and absolute power (through the prism of the affairs between Speransky and Karamzin): "The return to the metallic circulation and to the conversion in silver is one of the main foundations of Speransky's reform [...] The main rule for him is to make the silver ruble a 'real unit of currency'. The temporary retreat was conditioned by "military necessity". Speransky had always stood both theoretically and practically for a metallic circulation combined with exchangeable credit money and had striven to realise this ideal of his with extreme insistence [...] Karamzin deliberately rejected the very foundations of the financial plan of 1809. All his reflections take on the direct tinge of an apologetic of the existing economic orders. Karamzin is sceptical of the economic theories of his time. According to him, 'let ministers be sincere in the face of the monarch, and not in the face of the people; God forbid if they follow another rule: to lie to the master and tell the whole truth to the people. In this connection, Karamzin was particularly indignant at the declaration of the assignats as a state debt. [...] Karamzin strongly protested against the mass seizure of assignats from circulation. [...] if two hundred million assignats were taken out of circulation, there would be a terrible shortage of money. [...] Silver, remains in our country (Russia) a commodity, not money. The fall in assignats in respect of silver is partly due to the fact that silver has risen in value as a commodity" (Stein, 1948, pp. 52–56).

Stein summarizes: "The preceding exposition has sufficiently shown the clash of the two world views: whereas Speransky appeals to the confidence of the people to support the currency, Karamzin admits an appeal only to the master, the monarch. Speransky wants to liquidate the paper currency while Karamzin guarantees its continued existence. Speransky seeks to expel from the national economy the spirit of instability caused by feudal ways of conducting the financial economy, while Karamzin is apprehensive about any form of change. Speransky carefully undermines the serfdom orders, for Karamzin they are a necessary basis for the tranquillity and well-being of the state. In short, the title of Karamzin's notes ("On Ancient and Modern Russia"), best represents the essence of the conflict that was tearing apart social and economic thought: it was a clash of ancient and new Russia!" (Stein, 1948, p. 57).

During the Soviet period, nominalism in Russia was perceived, under the influence of Marxist doctrine, as a reactionary trend that mirrored the group interests of the nobility, landlords, exporters, debtors, etc. (see Kozlov, 1946 (ch. 3), and A. Eidelnant (1948/1929))<sup>2</sup>. Interestingly, Falkner's nominalist theory, which is outlined below, was

<sup>&</sup>lt;sup>1</sup> All translations in the article are the author's, and have been verified by William Burrus.

<sup>&</sup>lt;sup>2</sup> The theory of absolute money by Sharapov-Talitsky (1895), specifically the "paper ruble", was the target of intense criticism. This theory, in many aspects, foreshadows the approach of G. Knapp and stands as additional evidence of the pronounced nominalism that emerged in Russia.

embraced by the Bolsheviks despite the accusations against Falkner<sup>1</sup>. The TEE principles persisted until the collapse of the Soviet system.

The article is structured as follows: it begins by presenting Falkner's views, exploring the controversies surrounding his theory, including Lenin's reactions, and examining the dynamics of inflation and monetary reform. Subsequently, a comparison between the TEE and MMT is conducted to show that Falkner articulated the fundamental premises of MMT a century ago. Lastly, the modifications made to this theory during the years of the planned socialist economy are outlined. The biography of Semyon Falknerwill not be extensively covered<sup>2</sup>.

### 2. Semyon Falkner and the Theory of the Emission Economy

### 2.1 Background

The theory of emission economy was born as part of a theoretical debate among Russian economists that gained momentum in the years of the World War I and was related to the clarification of the nature of paper currency. Paper currency was known to dominate Russian history, however, for most Russian economists, the brief period of the gold standard (1897–1914) was extremely successful. After the war, they did not question its restoration (Lomeyer, 1918). Only a few "pre-revolutionary" economists such as M. Tugan-Baranovsky and M. Bernatsky (Nenovsky, 2020) saw a new stage in the development of money and an era of "managed paper currency" detached from its metallic content.

The Bolsheviks' rise to power radically changed the attitude towards money, they believed that money had no place in the new communist society (Yurovsky, 2008/1928/1924). According to prevalent beliefs of that era, money in the transitional period would serve as a tool to dismantle capitalism and exploitation. The expectation was that money would eventually become obsolete, giving way to non-monetary exchanges, such as labor, energy, or in-kind transactions. Similar notions extended to the role of the state, initially conceived solely as an instrument for eradicating class enemies, leading the Bolsheviks to distinguish themselves from anarchists (Preobrazhensky, 1920). The transitional period, including the policy towards money, is discussed in Bukharin and Preobrazhensky's The ABC of Communism (2008/1920).

In the initial years of the Bolshevik regime, monetary income (seigniorage) emerged as virtually the sole means to fund state expenditures (see Table 1). The fiscal foundation was eroded by war and the subsequent nationalization of major industrial enterprises. With a closed economy and no customs revenues, issuing interest-bearing debt securities was deemed impractical. It was during this time that the concept of an "emission economy" began to be discussed (Hensel, 1935).

At this point various projects emerged to limit the role of money not only as a medium of exchange and mean of payments, but also as a unit of account (Bogomazov, 1974; Boettke, 1999/1990; Magnin & Nenovsky, 2021)<sup>3</sup>.

<sup>&</sup>lt;sup>1</sup> Falkner was shot in 1938 after being accused of being "a pest" and a reactionary (Kolman, 1931).

<sup>&</sup>lt;sup>2</sup> Falkner authored several articles and books providing insightful conjunctural overviews of Western Europe. Notably, these writings exhibit a foresight that aligns with many of N. Kondratiev's ideas. Additionally, Falkner's sister, Professor Maria Smith Falkner (1878–1968), who was educated in London, proposed intriguing models for accounting in energy and labor units in the early Soviet years.

<sup>&</sup>lt;sup>3</sup> For theoretical concepts advocating the elimination of money as a unit of measurement and calculation, along with their critiques, refer to Lavoie (2015/1985), De Soto (2010/1992), and Magnin and Nenovsky

Deficit financed Deficit Currency Year Revenue **Expenditures** Deficit as % of by currency emission emission, % expenditure 2961 39.1 68 1914 4859 1898 1283 1915 3001 11562 8561 74.0 2670 31 1916 25 4345 18101 13756 76.0 3480 1917 5039 27607 22 568 81.7 16403 72 1918 15580 46706 31 126 66.6 33 500 100.1 164200 1919 48 959 215402 77.3 166443 98 1920 159604 1215159 1055555 86.9 943600 89 1921 4139900 26076816 21 936 916 84.1 16375300 75

Table 1

Dynamics of Budgeting and Financing through Monetary Emission (Million Roubles)

Sources: Katzenellenbaum (1924, p. 66); Yurovsky (1926, p. 15); Shmelev (1931, p. 126), and the author's own calculations.

Within the framework of the destruction of money as a medium of exchange and payments, two theoretical approaches stand out. The first can be called the "currency nullification approach". The main proponent of this theory was E. Preobrazhensky (1920) in Paper Currency in the Epoch of Proletarian Dictatorship. The nullification is first of all ideologically justified, inflation was a lever for achieving elimination of capitalists. Preobrazhensky himself was eloquent enough in the dedication to his book: "I would like to dedicate this imperfect work to the one who gave occasion to write these pages, the printing press of the People's Commissariat of Finance. [...] In the archives of the great proletarian revolution, alongside the guns, rifles and machine guns of our epoch that struck down the enemies of the proletariat, the printing 'machine gun' of the Narkomfin, which shelled the monetary system of the bourgeois system in the rear, turning the monetary circulation of the bourgeois regime into a means of destroying that regime and into a source of financing the revolution, will stand in a place of honour" (Preobrazhensky, 1920, p. 4).

The second theoretical approach to the function of money as a medium of exchange and payment can be termed the "monetarist approach", emphasizing the controlled "depreciation of money". This approach, essentially the TEE, found its most extensive development in the works of Semyon Falkner summarized in his book Problems and Practice of the Emission Economy (Falkner, 1924), and also in Falkner (1922, 1924a). O. Schmidt attempted a mathematical verification of the TEE in Mathematical Laws of Monetary Emission (1923)¹.

Before presenting the fundamentals of this theory, it should be noted that Falkner initiated his exploration of paper currency as early as 1914 and 1917, conducting an extensive historical study on the emission of paper currency during the French Revolution,

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<sup>(2021).</sup> Comprehensive reviews can be found in works by Pasvolsky (1921), Strumilin (1925) Manevich (1986), Shukhov (1991), Goland (2006), Arnold (1937), Malle (1985), and Nenovsky (2009, pp. 154–183). P. Boettke (1990/1999) provides the most thorough and interesting study of this period from the perspective of the Austrian school.

<sup>&</sup>lt;sup>1</sup> In his examination of the monetary reform during the Hungarian Revolution, E. Varga outlined three monetary strategies: 1) nullification of currency, 2) currency devaluation, and 3) gradual disappearance of currency (Varga, 1922).

particularly focusing on the so-called assignats<sup>1</sup> (1789–1797). Later, he played a key role in the creation of the Supreme Council of National Economy (VSNKh), where the study of paper money became the primary research task of the new institution (National Economy, 1918, p. 45).

### 2.2 Main elements of the TEE

Falkner's TEE puts forth several key propositions, which can be summarized as follows.

Firstly, there are four ideal types of economies that finance the state (state budget): natural tax economy; natural production economy; monetary tax economy; and emission economy (see Table 2). The emission economy, the fourth type, is worthy of special attention. According to Falkner, despite its historical prevalence, this model has rarely been thoroughly analyzed.

The emission economy gives the state unlimited possibilities to finance its spending. Falkner's analytical formulations are the result of observations he had on paper currency during the war years, when convertibility into precious metal (mainly gold) was interrupted. According to Falkner, non-convertible paper money forms the basis of a distinct regime that is not a departure from the norm but, rather, an independent and stable (albeit transitory) system. In 1920, Falkner explained that this regime represents a unique economic category with its own set of mathematical laws, standing in contrast to the tax economy<sup>2</sup>.

"Emission economy, paper currency [...] has the features of a completely peculiar and internally closed financial system that can and should be opposed to other systems. [...] The idea is to oppose the tax system as its antithesis. The state can obtain the funds it needs either by the forced withdrawal from circulation of the currency already circulating (a tax system) or by the forced introduction of new, arbitrarily created currency (an emission system). In the first case, the purchasing power of each monetary unit remains stable, constant. Only the quantity of privately held currency is reduced; in the second case, the quantity of privately held currency is not changed, but its purchasing power is artificially reduced at the expense of the newly created purchasing power, that of the new currency. [...] The emission of paper currency appears to be the strongest and most effective state-financial method of the decentralized commodity-exchange economy" (Falkner, 1919, XIII, pp. 267–268).

Secondly, the emission economy denotes a stable phase in an economy that is temporary and disordered, brought about by wars, social revolutions, and other social disruptions. Falkner posits that post-war Europe is expected to persist in the emission economy state until there is a radical transformation in the financial landscape of Europe (Falkner, 1920, p. 24)<sup>3</sup>. The emission economy has its own laws of development. As

<sup>&</sup>lt;sup>1</sup> Assignats were paper currency introduced in France during the Revolution of 1789 and in Tsarist Russia from 1789 to 1843. For an in-depth exploration of the history of French assignats and the associated economic processes, see Aftalion (2007). Falkner's book on French assignats was recently translated into French as Fal'kner (2021).

<sup>&</sup>lt;sup>2</sup> According to Falkner, the emission system can be approached in three ways: a) as a method of financing, b) as a monetary phenomenon and c) as an organisational form.

<sup>&</sup>lt;sup>3</sup> According to Falkner's calculations, "in 1919, in continental Europe (Russia included), out of a population of 462 million, 340 million were living under conditions of intensive emission economy, and only 122 million, i. e. about 27 %, under conditions of a barely stable monetary circulation" (Falkner, 1920, p. 24).

Table 2

Types of Economy and Government Financing Systems

Funding principles	Seizure from the private	Self-production	
Form of financing	sector (Tax economy)	(Production economy)	
Natural form	Seizure in kind	Production of products	
(Subsistence, natural economy)	(Natural tax economy) (1)	(Subsistence, natural, economy) (3)	
Monetary form	Seizure in currency, money	Production of currency, money	
(Monetary economy)	(Monetary tax economy) (2)	(Emission economy) (4)	

Source: author's adaptation from Falkner (1924, pp. 35–36).

Falkner puts it, "the possibility of an arbitrarily continuous development of the economic system of emission is conditioned by two factors: first, by the absolutely exceptional and incomparable importance of currency circulation (in all its distorted forms) for the exchange economy as a whole; and, secondly, by the adaptability of the exchange economy to every external influence, owing to the mobility of the elements and units of which it is composed" (Falkner, 1924/1920, p. 25).

"It may be argued that just as the criterion of a sound monetary economy is the sustainable value of the monetary unit, so likewise such a criterion of a normal emission economy is the sustainable rate of its depreciation. [...] What is the significance of the commodity depreciation of our currency as a whole? The depreciation of issued money is primarily a form of economic compensation for the emission itself. [...] This reaction (depreciation) is not only inevitable but necessary, because it constitutes a way of maintaining the normal operation of the national economic mechanism" (Falkner, 1924/1919, pp. 45–46).

According to Falkner, the sustainable state of the emission economy is determined by the fact that Soviet power is fully sovereign, the leading industrial sectors are nationalised and domestic savings are negligible. It is only the peasants who have savings and can pay taxes, but doing so is extremely difficult. E. Varga, a Soviet economist and formerly a financial commissar in the Hungarian Bolshevik Republic (1919), noted: "In the beginning the proletarian state economy inevitably runs a large deficit, just as the capitalist economy did after the war. Capitalist states can cover part of their deficit by contracting new loans. The proletarian state cancels old state debts. It understands that it cannot contract new ones, to create new sources of non-labour income. Thus, to cover the deficit, no mean remains other than the emission of new paper money. [...] The function of money as a medium of exchange is preserved. This makes it possible to cover the deficit of the state economy by means of new issues of paper money" (Varga, 1922, p. 121, 123).

Third, Falkner analysed the limits of the emission economy, i. e. the production of currency (type 4 in Table 2).

"The distrust of the possibility of the continued self-preservation of paper-currency finance is the unconscious reason why all theorists of economics and finance have regarded it as an accidental anomaly in the general course of financial development and have predicted its speedy and inevitable collapse" (Falkner, 1919, XIV–XV).

Falkner analyzed historical examples, such as the paper assignats during the French Revolution and the sovereignty of Soviet Russia, which led him to conclude that the emission economy could only collapse in three ways:

"First, in the event of the abandonment of any circulation of which the given currency serves as an instrument; secondly, in the event of a change from a monetary to a natural circulation; and, thirdly, in the event of the exchange of the given currency for

some other circulating medium, i. e., in the event of the economic displacement of the given monetary system by another which has legally or illegally assumed the performance of circulatory functions. [...] Only the third case is real — the case of a complete depreciation of the paper currency mass by virtue of the population's turning to other circulatory means, competing with the paper ones and victoriously pushing them out of circulation. Aside from a shift to more effective methods for facilitating the circulation of commodities, a 'complete collapse' of the paper money system is currently unlikely. This would imply that the population willingly abandons all forms of exchange or transitions exclusively to natural exchange' (Falkner, 1919, XIV–XV).

In line with his theory, three years later, in 1922 (during the discussions related to the New Economic Policy — NEP¹), Falkner resisted the introduction of new "hard" banknotes alongside the devalued Soviet paper currency, known as the sovznak. During a specialist meeting on January 26, 1922, Falkner and Yurovsky opposed the legalization of transactions involving gold, silver, and foreign currency.

Fourth, for effective management and control of the emission economy, it is essential to delve into the intricacies of currency devaluation, which involves determining the optimal emission rate by understanding the underlying laws governing money issuance. In his article Economic Functions of Money Depreciation (1919), Falkner wrote: "The question of the speed, consistency and pace of the decline in the value of the currency is brought to the fore by the overall logic of the emission and serves as crucial material for predicting the future fate of the issued currency. Just as a sudden change and acceleration of depreciation is a signal of distress and an indicator of the emergence of certain new factors making the situation of paper currency dangerous, so the persistence of the rate of depreciation (manifested in a certain numerical coefficient) is an indicator of the credibility of the general emission economy situation. [...] Currency depreciation is a method of counteracting the excessive increase in the purchasing power of certain population groups. By counteracting the overaccumulation of currency, the decrease in the economic importance of the currency becomes a tool for the forced restoration of the country's exchange of goods. Conversely, where the real depreciation of the currency is halted by the slower upward movement of commodity prices due to their settling at the same level for too long, a blockage of commodity circulation immediately occurs. [...] Prices must be periodically revised in accordance with the rate of use of the monetary system for the purpose of financing the state apparatus" (Falkner, 1924/1919, pp. 45–47.)

Various attempts have been made to mathematically model emission forecasts, with contributions from authors like V. Bazarov, E. Preobrazhensky, S. Strumilin, E. Slutsky, and more. The model created by O. Schmidt (1891–1956), a mathematician and geophysicist with influential economic roles in the early years of Soviet power, is particularly intriguing. Schmidt introduces his model in his paper Mathematical Laws of Monetary Emission (1923/1922), presented to the Socialist Academy on 23 November 1922: "The laws of monetary emission are poorly understood. The economic science of the past has been limited to describing the harm resulting from the issue and to mild advice on how to restore a 'normal' monetary system after the emission has ceased.

These studies viewed the emission as a transient and severe disease of the national economy but were not interested in the pathology of this phenomenon.

<sup>&</sup>lt;sup>1</sup> The New Economic Policy (Novaya ekonomicheskaya politika, NEP) was an economic strategy implemented in Bolshevik Russia in 1921. It partially liberalized the post-revolution economy, restoring its dynamism to some extent.

At the same time, large countries have repeatedly had to live under the conditions of an emission. [...] No doubt, during the period of the emission and until the ruble is restored, we should not stop theoretical work. The period of the emission will last a long time, marked by substantial reforms and colossal changes in the national economy. We should not evade the responsibility of studying emission laws, essential for current guidance and a more comprehensive justification of currency stabilization measures" (Schmidt, 1923 /1922, pp. 3–4)¹.

In his paper, Schmidt proposed and empirically verified a mathematical model of the quantity theory of money that practically overlaps with that of Phillip Cagan in 1956 (Cagan, 1956). According to Schmidt, "the size of the emission depends on time" in a geometric progression. He also points out that "the emission reflects the transition from one economic form to another, so that three periods can be clearly distinguished: 1) the transitional period (1918-March 1919), 2) the period of "war communism" (April 1919-June 1921), and 3) the NEP (from July 1921). Within each period — a striking fact! — the emission proceeded as if all other factors had no discernible significance. Emission grows only in relation to time. [...] The magnitude n (the rate of emission — note N.N.) for each of the three periods can be easily calculated. Taking one year as the unit of time, n is approximately equal to 0.81, 1.55 and 5.31 respectively" (Schmidt, 1923/1922, p. 5, 16).

Therefore, "we can posit that the state consistently acquires, through emission per unit of time, a fixed portion of the total market commodities available" (Schmidt, 1923/1922, p. 6).

According to Schmidt, the situation during the NEP period becomes more intricate as currency is withdrawn through revenues and taxes, which leads to a shift in the dynamics of the formula, introducing a factor at which the issuance comes to a halt<sup>2</sup>.

### 3. The Critics of the Theory of the Emission Economy

The TEE's fundamental propositions immediately encountered criticism, with this paper specifically delving into the viewpoints of only two critics, namely V. Novozhilov and B. Livshits. These two were chosen due to their unique attention to the theory and their alignment with distinct monetary theoretical schools — V. Novozhilov representing the Austrian school and B. Livshits adhering to Marxist ideas.

In the 1920s, Novozhilov emerged as a young economist, later evolving into one of the most renowned Soviet economists and a pioneer of the mathematical branch of Soviet economic theory. While recognized as a mathematician-economist, his early years reveal a staunch affiliation with the Austrian school<sup>3</sup> (Kavaliou, 2014 and Kavaliou's paper in this issue).

<sup>&</sup>lt;sup>1</sup> Similar ideas and patterns are presented in Preobrazhensky's book (1920), which draws on early research by Schmidt.

<sup>&</sup>lt;sup>2</sup> In his book, A Tract on Monetary Reform, published in 1923 (Keynes, 2000/1923), Keynes paid special attention to the dynamics of money supply, inflation, real money demand, and the monetary income (seigniorage) derived from currency emission. Several of his analyses parallel those of Russian economists in the discourse on the emission economy. Keynes supports many of his theoretical hypotheses by referencing the behavior of variables in Russia during periods of inflation and monetary stabilization.

<sup>&</sup>lt;sup>3</sup> Novozhilov drew inspiration from the concepts of Mises. He participated in an economic essay contest in the United States (Novozhilov, 1927), and his ideas from this essay were acknowledged by Hayek (2012/1929, pp. 145–146, 153). In my view, Novozhilov was also influenced by all three studies of B. Brutskus, initially published in 1922 (later in an English version in 1935 and edited by F. Hayek).

Livshits, on the other hand, was a strong supporter of the Marxist theory of money; he was very active in methodological debates about the nature of money in the new communist society. He sought to adapt Marx's positions on money to the new Soviet society, affirming Marx's position that money is always based on a particular metal, in this case gold<sup>1</sup>.

### 3.1 Novozhilov's protoaustrian analysis

The criticism of Novozhilov (1892–1970) resembles in many ways today's criticism of MMT. Of particular interest is his article Limits of Inflation (1924)². The author analysed the two cases of inflation — fiscal and banking, i. e., an increase in the volumes of paper currency and bank credit, respectively³. When discussing Falkner's TEE, Novozhilov points out several primary issues, expressing particular concern about its assertion that money printing has no limits, which he considers more perilous than the money-nullification approach.

First, the emission economy cannot be limitless. Inflation has very clear and "natural" internal limits. These limits are linked to the fact that the emission economy deforms and destroys the structure of the economy. The end result is a curtailment of the "productive forces of the country" (Novozhilov, 1924, p. 97). As Novozhilov puts it, "inflation has "natural limits". The collapse does not come in the form of currency turning into simple paper, but otherwise. The national economy as a whole puts an end to inflation. [...] For fiscal inflation there are no limits within the currency circulation. It is not the decomposition of the monetary system, but the decomposition of the national economy, of society and of the state apparatus, that sets limits to the issue. The history of money is the history of inflation, but it knows of no case of a long existence of a pure emission economy. And this is not an accident, but a natural law of economics: "an emission economy as a stand-alone financial system is impossible".

Unlimited fiscal emission may repeat itself in history, but it cannot continue uninterrupted. To regain its status as a profitable instrument for the treasury, the national economy must be revitalized. This is impossible without limiting or temporarily abandoning all fiscal emission. [...] Fiscal inflation causes wasteful consumption and ends in a crisis of overproduction" (Novozhilov, 1924, p. 85, 98, 120).

Novozhilov contends that the emission economy weakened the country's productive forces by altering the structural proportions in the economy. It distorts relative prices, essential signals or "language" for economic agents such as entrepreneurs and consumers. "Economy is impossible without proper accounting of costs and revenues, means and ends. Any error in calculation is inevitably punished; inflation redefines all the basic data for calculation in a monetary economy: prices and incomes. The movement of

<sup>&</sup>lt;sup>1</sup> The controversy over Marx's positions on the question of money continues to this day (for more on this debate, see Nenovsky, 2019).

<sup>&</sup>lt;sup>2</sup> Novozhilov authored another article on the topic titled The Shortage of Goods (1926), where he explores analogous themes by establishing a connection between the scarcity of goods and the scarcity of currency. For example, "it seems to us that it is enough to extend credit to make all the adversities of the crisis pass away, so that the growth of production may continue at the same rate. However, this appearance is false. The scarcity of money capital is itself a symptom of a serious disorder in the whole system of capitalist industry. Inflation can only increase this disorder, can only intensify the main evil of the crisis, make it more difficult to overcome" (Novozhilov, 1926).

<sup>&</sup>lt;sup>3</sup> Inflation is defined as "an excess of money — excess compared to the state of commodity circulation. An external manifestation of inflation is the increase in commodity prices" (Novozhilov, 1924, p. 83.)

prices and incomes performs an economic function of great importance in the exchange economy. What to produce, how much to produce — all this is dictated by the language of prices. [...] Inflation redefines all price ratios, it redefines the only criterion of the correctness of the organisation of the economy. With inflation, language begins to lie" (Novozhilov, 1924, pp. 88–89.)

Further he writes the following: "Fiscal inflation creates a false appearance of abundant resources available to the state. [...]. The emission economy can be seen as a single tax: a tax on money taken per unit time of holding it. [...] The impracticability of a uniform unequal tax is an elementary truth of financial science. It is therefore all the more surprising that the idea of the possibility of a single tax was resurrected a few years ago in the emission economy". (Novozhilov, 1924, p. 98).

Novozhilov critiques the emission economy not just for its overall inaccuracies but also for (a) disregarding inflation expectations, (b) neglecting the "real" demand for money, real incomes, real seigniorage, and the genuine dimensions of variables, and (c) operating within a closed economy framework, where a political monopoly exists<sup>1</sup>.

In reality, for the sake of accuracy, it should be noted that Falkner was aware of the structural and redistributive impacts of his model. However, he either downplays these effects or believes they can be addressed through technical means. By "technical", he implies managing them through planned centralized changes, specifically through the management of relative prices. It is noteworthy that Falkner authored several papers on fixed price matters, and the Committee on Prices at the Supreme Council of National Economy also tackled issues related to fixed prices.

# 3.2 Livshits' Marxist Perspective

While Novozhilov's critique may appear expected from an Austrian school adherent, B. Livshits scrutinized the emission economy through the lens of Marxist methodology in his article Towards a Statement of the Monetary Problem from the Point of View of the Law of Equilibrium (1924). In practice, the author makes the same accusations against the economy of emission model. This article is part of the fundamental debate among Marxists about the nature, value and purchasing power of paper currency (and especially about the theory of R. Hilferding on the independent value of paper currency, independent of gold value.

<sup>&</sup>lt;sup>1</sup> With the emergence of MMT (Lerner's groundbreaking article came out in 1943), the mentor of Novozhilov, Mises, responded to the perceived threat as follows: "They just want to reduce the purchasing power of the currency at an accelerated pace. Such a policy of radical inflationism is, of course, extremely popular. But its popularity is largely due to a misunderstanding of its effects. [...] To the naïve brain there is something miraculous about issuing fiat money. A magic word uttered by the government creates out of nothing something that can be exchanged for any commodity one would like to obtain. How pales the art of magicians, witches, and conjurers before that of the Treasury! The professors tell us that the government "can raise all the money it needs by printing it" (note NN, see Lerner, 1947/1943, pp. 307–308). "The income tax, declared the President of the Federal Reserve Bank of New York, is obsolete". How wonderful! And how malicious and man-hating are those stubborn supporters of outmoded economic orthodoxy who demand that the government balance their budgets by covering all expenditures through tax revenues! [...] If there are unemployed, says the progressive doctrine, the government should increase the amount of money in circulation until full employment is achieved. They say it is a grave mistake to call inflation an increase in the amount of money in circulation made under these conditions. It is simply "a policy of full employment". (Mises, 1980/1952/1953, p. 457, 458, 465).

In the part titled "Prof. S. Falkner's Theory of the 'emission economy', Livshits denied the independent existence of the emission economy and analyses its harmful character. He argues that the emission economy leads to "economic disorganization" (Livshits, 1924, p. 239). He states: "The common way of calculating the value of money by means of an index is theoretically incorrect [...] because the general level of prices is the result of a whole series of complex interrelations of forces acting in the economic organism. [...] The change in the general level of prices cannot serve as a more or less accurate indicator of the qualitative and quantitative changes that have taken place in the social economy. Apart from anything else, this general level does not reflect the relative weights of individual commodities on the market. [...] The same rate of depreciation of paper currency in relation to the general level of commodity prices may not at all correspond to the same qualitative and quantitative change in the distribution of productive forces" (Livshits, 1924, p. 235, 238).

Emission economy borders cannot be controlled and managed, as Falkner and Schmidt suggest<sup>1</sup>. They occur spontaneously and people abandon paper currency. Livshits notes: "We believe that this moment [the limits of for the emission economy — N. N.] can come also purely spontaneously. It is when the reduction in the purchasing power of paper money is subjected to too sharp a deviation from the rate of the preceding depreciation compared to an objective measure of value. And the rate of depreciation is not proportional to the emission. It is then that there is a spontaneous refusal to accept a currency and the introduction into circulation of a stable foreign currency or of other securities which have not been circulating up to that time" (Livshits, 1924, p. 235, 238).

Like Novozhilov, for Livshits the emission model was built on the assumption of a closed economy and does not consider the monetary circulation between countries (exchange rates and balance of payments dynamics). Like Novozhilov, Livshits thought that it is necessary to reason in real rather than nominal terms and analyses the "real" money income generated by the emission.

In the initial years of Soviet rule, economic events unfolded with exceptional dynamism. Despite the theoretical endeavors of Falkner, Schmidt, and others, along with the practical measures taken by the Bolsheviks, the potential of the emission economy was rapidly depleted. Inflation spiraled out of control (refer to Table 1). Faced with this critical situation, Lenin was the first to recognize the constraints of emission and the necessity to transition towards a partial restoration of the private sector and the market. This was achieved through currency stabilization and the reinstatement of taxes, aligning with Falkner's model of the "tax economy".

### 4. Lenin against the TEE, the process of monetary stabilization (1921–1924)

After four years of war communism and the civil war, the economic and financial condition of Bolshevik Russia was catastrophic. In mid-1921 there was a real threat that the Bolsheviks would lose political power. The emission provided almost 100 % of the budget revenue. At the beginning of 1922, budget income came almost entirely from emission. At the same time, the issue brought in less and less real income, i. e., its marginal yield starts to tend towards zero. The issue of treasury paper currency yielded practically nothing (Tables 3 and 4).

<sup>&</sup>lt;sup>1</sup> Livshits also criticizes various approaches to measuring the optimal rate of emission and its "efficiency", including those of Yurovsky, Schmidt, and Bazarov (Livshits, 1924, p. 239).

Table 3

Table 4

## **Dynamics of Currency Emission and Its Revenues**

Year	Currency emission (nominal), in paper roubles	Currency emission (real), in gold rubles (data of N. Krestinsky)	Currency emission (real), in gold rubles (data of E. Preobrazhensky)	Currency emission (real) deflated by the labour index (data by L. Yurovsky)	
1919	168 billion.	300 million.	386 million.	224.6 million.	
1920	955 billion.	200 million.	186 million.	122 million.	
1921	10,000 billion.	200 million.	145.8 million.	149 million.	

Sources: Preobrazhensky (1922, p. 255); Yurovsky (2008/1928, p. 339). There are small discrepancies in the calculations, but overall, the dynamics of real revenues from the currency emission are similar.

Money Circulation in the Period 1918–1921 (RUB in Million, all Data are as of the First Day of the Respective Quarter)

Year, quarter (Q)	Currency in circulation	Emission during the quarter as a share of total currency in circulation, in %	Real value of circulation, in gold rubles	Real value of the new emission, paper ruble index	Price index (1913 = 1)
	(1)	(2)	(3) = (1)/(5)	(4)	(5)
1918 Q1	27650	22.9	1317	(2)	21
Q2	33 975	28.7	790	62	43
Q3	43711	17.9	491	21	89
Q4	51 525	19.0	548	21	94
1919 Q1	61 326	22.6	374	10	164
Q2	75 185	34.4	224	19	336
Q3	101 030	46.7	154	18	656
Q4	148 201	51.8	161	18	923
1920 Q1	225 015	51.4	93	10	2 4 2 0
Q2	340 662	50.2	71	10	4770
Q3	511 816	45.6	63	10	8140
Q4	745 158	56.8	77	10	9620
1921 Q1	1168597	44.3	70	6	16800
Q2	1686684	39.2	47	0	35 700
Q3	2347164	_	29	_	80 700

Source: Davies (1958, p. 31); compiled from the data from various sources.

Upon the initiation of the New Economic Policy (NEP), the first step was to introduce private business and taxes payable in kind, which led to the emergence of speculators, known as *meshotschniki* (bag people), who engaged in trading goods between locations and speculated on the price differences. At the same time, there was an acute scarcity of small change, prompting the spontaneous appearance of means of exchange. Foreign currencies, gold Tsarist rubles, and various types of commodity currency became prevalent during this time. According to Zachary Atlas: "The study of market relations of this

<sup>&</sup>lt;sup>1</sup> After the collapse of Tsarist Russia and during the first two years of Bolshevik rule, between 3,000 and 6,000 types of currency circulated, issued by a variety of institutions, which makes it a particularly interesting period (see Pogrebetsky, 1924; Chuchin, 1927; Nenovsky, 2010; Hodiakov, 2018; for more detail).

period shows that the market, together with the abandonment of sovznaks (*Soviet currency* - N.N.), sought to create commodity-money that was beyond state control and regulation" (Atlas, 1969, p. 165).

Lenin persistently advocated the exploration of models for moneyless exchange, proposing a thorough examination of existing local exchange experiments. At this point, he was not explicitly discussing a "monetary system" and emphasized the importance of studying and making a comprehensive choice based on the known local exchange initiatives. Lenin expected that within a few months, there would be practical results to compare and study" (Atlas, 1969, p. 171).

Only a month later, in August 1921, Lenin noticed that currency was gaining prominence spontaneously, leading him to reconsider his position on the need for a renewed shift towards a "money economy". In a report to the Seventh Moscow Party Conference Lenin said: "It has turned out — now you all know this perfectly well from practice, but it is also evident from all our press — that the exchange of goods has failed: it has failed in the sense that it has become a sale and purchase. And now we are obliged to realise this if we do not want to bury our heads in the sand if we are not afraid to look danger in the face. We have to realise that the retreat has not been enough, that a further retreat is needed, another step backwards, as we move from state capitalism to the creation of state regulation of purchases and sales and of the circulation of money. Nothing happened with commodity exchange; the private market proved stronger than we were, and instead of commodity exchange we got mere buying and selling, trade" (Lenin, 1967, pp. 207–208.)

It was evident that the success of economic reform hinged on introducing and stabilizing the currency, along with restoring the central bank. These were the necessary conditions for stabilizing the budget and implementing taxes payable in money.

Lenin's initial reservations regarding the role of money in communist society are widely known (see Bogomazov, 1974, pp. 37–42). However, by the close of 1921, he strongly endorsed proposals for monetary stabilization, and that on the basis of a gold standard, previously denied by him. Examining the types of financial holdings (presented in Table 2), it can be argued that Lenin recognized not only the inevitability of transitioning from an emission (type 4) to a subsistence economy (type 1) but also the subsequent shift towards a monetary tax economy (type 2). The majority of economists supported the idea of concluding the experiment with the emission economy. Without delving into specifics, the following points are noted.

In the development of monetary reform, the best Russian economists were involved, some of whom had worked in bourgeois Russia and participated in the reform of Witte (for example, N. Kutler). The mobilization of the country's economic elite resulted in one of the most interesting theoretical and applied debates on the paths of currency reform<sup>1</sup>. The discussions are presented in Yuri Goland's book Discussions on Economic Policy in the Years of Monetary Reform 1921–1924 (2006)<sup>2</sup>. The primary points of contention revolve around the starting point for stabilization—whether to begin with the budget and then address the currency, or vice versa, initiating from the currency and

<sup>&</sup>lt;sup>1</sup> This appears as one of the most remarkable theoretical monetary debates in Europe in the twentieth century, notable for its depth, diversity, and paradoxically, for its ideological liberation (see also Trifonov & Shirokorad (1983) and Nenovsky (2010)).

<sup>&</sup>lt;sup>2</sup> The primary references for these debates are the following books: CRBRB (1922), Yurovsky's account (2008), Arnold's work (1937), Sokolnikov (2006), and the recently published contributions by Nikolaev (2018) and Hodiakov (2018). Additional insights can be found in Jaconis (2017).

then addressing the budget. Another debated aspect is whether to stabilize the existing circulating government paper currency (referred to as the "falling currency") or to introduce a new, stable banknote in parallel (referred to as the "new hard currency").

Following the setback of the Genoa Conference in April / May 1922, which relied on a substantial external loan to stabilize public finances, the decision was made to initiate money stabilization. This involved the transition from currency to the budget, accomplished by issuing new gold-fixed banknotes known as chervonets. The restored central bank handled the issuance of chervonets, while the Treasury continued to issue paper currency (sovznaks). Initially, these two types of currency circulated concurrently, with their turnovers deliberately separated. The paper currency catered to the nationalized sector, while the 'hard' banknotes served the emerging private and exporting sector.

Very soon, however, a moment arrived when a shift to a phase of monetary competition occurred, and after a short battle, the "hard" money defeated the "falling currency" (sovznaks). The "agony of the sovznaks" swiftly came to an end. In March-April 1924, several decrees put an end to the "double standard". Sovznaks and all other monetary substitutes were withdrawn from circulation. The ruble was anchored on a chervonets basis, inflation was overcome, and the exchange rate against the dollar and the pound was stabilized.

The Bolsheviks' monetary reform was welcomed by a number of Western economists, including J.-M. Keynes, who wrote a special essay on Russia and several newspaper article: "At about that date I had the opportunity of discussion at Genoa with some of the Soviet financiers. They have always been more self-conscious and deliberate than others in their monetary policy. They maintained at that time that, with the help of legal compulsion to employ paper roubles for certain types of transaction, these roubles could always be maintained in circulation up to a certain minimum real value, however certain the public might be as to their ultimate worthlessness. According to this calculation, it would always be possible to raise (say) £ 3,000,000 to £ 4,000,000 per annum by this method, even though the paper rouble regularly fell in value at the rate of a tenfold or a hundredfold a year (one or more noughts being struck off the monetary unit annually for convenience of calculation). [...] At the same time, in order to furnish a reliable store of value and a basis for foreign trade, the Soviet Government introduced in December 1922 a new currency unit (the tchervonetz, or gold ducat), freely convertible on sterling-exchange standard principles, alongside the paper rouble, which was still indispensable as an instrument of taxation. So far, this new bank note has kept respectable. [...] Russia provides an instructive example (at least for the moment) of a sound money for substantial transactions alongside small change for daily life, the progressive depreciation on which merely represents a quite supportable rate of turn-over tax" (Keynes, 2000/1923, pp. 56-58).

At the same time, the Bolshevik government issued domestic interest-bearing loans, and the payment of taxes in money (especially agrarian taxes) was restored (Arnold, 1937, p. 242). The failed emission economy was replaced by a normal tax economy.

Remarkably, in the parallel launch of the new "hard" banknote, Falkner, the main "ideologue" of the emission economy, actively reiterated his theoretical arguments (as outlined in the preceding paragraphs). According to him, the emergence of alternatives to paper "hard money" would be the sole cause of its failure, akin to past experiences (as exemplified by the French assignats).

### 4.1 Kuzovkov's position on the dual circulation

Dimitri Kuzovkov (1885–1961), working independently, came to the conclusion that the parallel currency system could serve as an independent and effective monetary model for the long-term needs of a mixed economy.

According to Kuzovkov, the intentional or unintentional dismantling of the dual-paper system, the imposition of the chervonets as a medium of exchange in 1923, and ultimately the 1924 reform were mistakes with serious consequences. The depreciation of the sovznaks resulted from mismanagement in the emission of the two currencies and their circulation areas. In his view, the two paper currencies, the robust (chervonets) and the weaker (sovznaks), could have remained complementary, serving the mixed economy for an extended period. In essence, Kuzovkov argued that the "two-member paper currency system" of monetary pluralism, if skilfully managed, was institutionally stable and efficient in the long run.

In fact, D. Kuzovkov describes the laws governing the operation of the two-member paper system as a reflection of the evolution of the emission economy, a focal point in the practical and theoretical debates of that era. According to him, any emission-based economy undergoes three phases, dictated by internal logic rather than ideological impulses. These phases include the following: (I) an emission economy under price fixing (1914–1921); (II) an emission economy under two types of paper currency and two types of price levels (1923–1924). This latter form is especially fascinating due to its stability, a rarity in history, with a few instances dating back to the French Revolution.

In the final phase, Kuzovkov argues, a critical error occurred around mid-1923 when the chervonets became the unit of account, resulting in a shift from complementarity to competition, essentially moving towards a fixed exchange rate between the two currencies.

According to Kuzovkov, the economic spaces for the two currencies, the hard and the falling, are determined by distinct zones. For the hard currency (the chervonets), these include payments above 5 rubles, primarily in export and industrial trade. In contrast, for the falling currency (the ruble sovznaks), these encompass small payments up to 5 rubles, such as small-scale trade and transactions within the rural population. The author calculates the ratio between the two currencies as 60 % to 40 %. In his words, "The two-member (bi-member) paper currency system thus acquires great advantages over both gold and the single paper currency and gold circulation, since budgetary fluctuations in a two-member system can only affect the stability of one of its elements and cannot shake the stability of another. [...] Possessing constant and variable elements, the binomial system under the new conditions can perform the function of a reserve which does not possess a single paper currency" (Kuzovkov, 1925, pp. 480–481).

The falling currency, often referred to as the "rising pile of rubles", provides support to the hard ruble, establishing a connection to the commodity world. When it transforms into a unit of account and directly corresponds to goods and services, acquiring purchasing power expressed in commodities, the sovznak collapses. This marks the missed opportunity for the complementarity of the two currencies, leading to their transition into a competitive relationship (Kuzovkov, 1925, pp. 57–58).

At this juncture, Kuzovkov notes, "With the changeover to the calculation in chervonets, the chervonets becomes an independent currency, while at the same time the old currency, which also retains its independence, continues to exist". Two curren-

cies emerge, not in parallel but as complementary entities, each governed by its own distinct laws of value. The coexistence of a stable paper currency with a less stable one, subject to fluctuations in the economic situation, transforms the monetary system into a resilient structure with an elastic shell guarding against shocks and damage (Kuzovkov, 1925).

Expanding on this, Kuzovkov highlights, "The violation by the regulating authorities of those laws that govern the movement of the exchange rate of the ruble, the attempts to lower the exchange rate against the general level of prices (in rubles) leads to distortion and violation of all market relations. This lowering puts the whole commodity-money circulation in a deadlock" (Kuzovkov, 1925, p. 77).

In his book, Kuzovkov delved into the supply and demand dynamics of the two currency types: the robust, acting as the core, and the weaker, serving as the buffer. In conclusion, he stated, "This coexistence of two paper currencies was an unprecedented phenomenon in the history of money; it represents one of the most interesting theoretical experiences that occurred in the process of disintegration and reconstruction of the European monetary system in the decade 1914–1924" (Kuzovkov, 1925, p. 89).

## 5. Comparing the Theory of Emission Economy with Modern Monetary Theory

Recently, Sebastian Edwards conducted a comparative analysis of Latin American populism and the fundamental tenets of Modern Monetary Theory (MMT) to illustrate that the latter is not a new concept (Edwards, 2019). In a similar vein, I will undertake a comparison between the TEE and MMT.

In essence, I view MMT as nothing more than a complex and generally disguised form of the TEE. The TEE, in its most primal and pure form, aligns closely with MMT. Let's examine the core statements of MMT one by one and assess how well they align with the statements of the TEE.

Firstly, the fundamental tenet at the heart of MMT can be articulated as follows: a sovereign state faces no constraints in financing its expenditures to achieve full employment. This is possible through either indirect or direct financing via the issuance of money (Tymoigne & Wray, 2013, pp. 2, 40)¹. This can be done (a) indirectly, when the government's debt is bought by the central bank in exchange for money, or (b) directly, when the government receives the money directly from the central bank.

"Deficit" and "debt" constraints are nonexistent for a country that can autonomously print "its own money. In other words, as emphasized by Mitchell et al. (2019, p. 13), the primary conclusion of MMT is that the issuer of the money faces no financial constraints. To put it simply, a country that issues its own money cannot run out of money and cannot become insolvent in its own currency. It has the capability to fulfil all payments as they become due.

"In countries with their own money, the government does not face tight budget constraints; the government can always print extra money to pay for higher spending" (Edwards, 2019, p. 530).

As Abba Lerner, who is considered one of the "fathers" of MMT, says, it is a process "similar to moving money from one pocket to another". TEE and Falkner argue the same thing — the state (the government) can always finance itself by issuing money, and that is what an emission economy is. There is indeed no domestic debt within the TEE, but

<sup>&</sup>lt;sup>1</sup> In a pedagogical format, the key points of Modern Monetary Theory (MMT) are presented in the macroeconomics textbook published in 2019 (Mitchell et al., 2019).

that is irrelevant — monetizing debt is just one additional, roundabout cycle in money issuance. And as we know, money is interest-free and highly liquid debt.

Hence, the second aspect comes to the fore. MMT adopts the 'consolidation postulate', conceptualizing the central bank and the treasury as analytically unified (Tymoigne & Wray, 2013, p. 2). This idealized hypothesis in MMT was subject to criticism, even from sympathetic post-Keynesian scholars like Marc Lavoie (2013). In the TEE, consolidation isn't merely a postulate but an inherent reality. During that period in Russia, the central bank and the treasury operated as a single entity, with the government issuing paper currency directly to finance spending.

Within the theoretical framework of MMT, monetary and fiscal policies exchange roles — currency is employed to manage employment, and fiscal policy is used to control inflation through tax policies (wherein increased taxes lead to a reduction in the money supply), essentially merging them in practice. The TEE follows a similar path, where money issuance functions to mobilize natural and financial resources. In both theories, money originates distinctly from fiscal activities and holds a fiscal and state-public nature. Neither model accommodates bank and private money.

Thirdly, MMT presupposes a sovereign, virtually closed state with control over capital movements and active exchange rate regulation. It views a fixed exchange rate (tied to an anchor such as gold, foreign currency, or secure assets) and the convertibility of national currency as potentially hazardous — the fundamental principles that the TEE shares. In the historical context, what could be more sovereign than the USSR during those years? There was complete detachment of Russian currency from foreign money, and the Russian economy operated in total isolation.

MMT takes a stance against liberalization and globalization, sentiments echoed in the TEE. When referencing the monetization of debt, the focus is solely on foreign debt. As articulated by the "father" of MMT and "functional finance", Abba Lerner, "only foreign debt, like individual debt, can lead to the impoverishment of the nation" (Lerner, 1947 / 1943, p. 305).

Fourthly, akin to the TEE, MMT in veiled and milder forms suggests price and wage controls, along with centralized intervention in market mechanisms and the implementation of macroeconomic planning, all aimed at achieving full employment and optimal resource utilization. The TEE transparently embraces these goals, with such processes being integral to the economic landscape of Russia during that era. Notably, entities like the Committee on Prices, the State Planning Committee (Gosplan), and scientific institutes actively contributed to the development of planning methodology and theory.

Finally, as a fifth point, the criticisms directed at both theories exhibit striking similarities, differing only in the participants involved in the debate. Over the almost century-long interval between the TEE and contemporary MMT, MMT's principles have played a role in Western economic literature (e. g., Lerner) and the political economy of socialism (Seurot, 1983; Kotsev, 1989). Criticisms of the TEE by Novozhilov (representative of the Austrian school), Livshits (Marxist), and Kutler (a "bourgeois" monetarist) essentially align with contemporary criticisms of MMT voiced by W. Coats and S. Edwards (Coats, 2019; Edwards, 2019).

Both the TEE and MMT were accused of jeopardizing the economic structure (productive forces), emphasizing that the end of experimentation occurs before people run out of money, and overall disorder in the economy sets limits. The primary shared flaw is the complete disregard for the structural effects of money issuance and financing.

Additionally, a significant problem is the exclusive focus of both theories on the nominal expression of concepts (monetary illusion, lack of inflationary expectations, etc.), neglecting the dynamics of the demand for money in real terms— a critique echoed by the representative of the modern mainstream, Greg Mankiw (2020).

In MMT, detailed considerations of inflation control seem to be lacking, almost as if the assumption is that it will not happen. Typically, inflation is envisioned to be managed through fiscal policy, wherein the money supply contracts via increased taxes (conceptually, money in MMT is seen as a function of taxes). MMT proposes two phases: phase 1 involves injecting money to finance spending and achieve full employment, while phase 2 focuses on withdrawing money to curb inflation. Yet, the Bolshevik experience during the 1920–1922 period highlights the impracticality of implementing phase 2. If it does happen, it occurs after inflation, hyperinflation, and results in a complete economic catastrophe. Subsequently, the introduction of new stable money becomes imperative to facilitate a transition to phase 2, i. e., the potential for monetary taxes and the emergence of a tax economy. In the case of Bolshevik Russia, as observed, this transition was realized through the introduction of the chervonetz, following a period of devaluation of fiscal paper currency (sovznaks).

It should be made clear that both theories (MMT and TEE) assume state-centralised and, to varying degrees, planned management of economic processes<sup>1</sup>. Both theories share a foundation in monetary nominalism. While the TEE explicitly states this, the tendencies are not explicitly outlined in the MMT corpus. Yet, emphasizing money and striving for artificial full employment inevitably leads to some form of administrative and planned economy, as seen in the history of socialist countries.

This brings us to the topic of the relevance of the TEE for the socialist monetary system (in all CMEA<sup>2</sup> countries) and the possibilities of mobilizing some theoretical concepts from the socialist era in order to analyse the dynamics of today's monetary processes.

### 6. Theory of Emission Economy and its projections

The NEP halted the development of the TEE, but this was only temporary. Lenin died in 1924 and very soon, towards the end of 1927, the new leadership of the USSR, led by Stalin, set out to change the economic course. The principles of the gold and gold exchange backed chervonets were broken, and the rate of monetary emission accelerated. The TEE quickly returned and became the basis of the Soviet Union's socialist monetary system. Post-World War II, the TEE also influenced the monetary systems of newly established socialist countries, which emulated the USSR. Although the initial clarity and explicitness of the TEE, as articulated by S. Falkner, were not replicated, partly due to Soviet pragmatism, the TEE continued to be a cornerstone in the political economy of socialism. Subsequently, in the 1970s-1980s, Western scholars launched a debate about the "theory of suppressed (repressed) inflation" in planned economies. As a matter of fact, this theory is nothing but another name for the TEE, rediscovered and reintroduced under a different label.

In fact, after the publications of S. Falkner, two Soviet authors contributed to the theoretical development of the TEE. In 1926, starting from quantitative theory (it is considered Marxist because Marx was a continuator of Ricardo's work), S. Strumilin

<sup>&</sup>lt;sup>1</sup> Another unrealistic assumption is the notion of an almost completely closed economy.

<sup>&</sup>lt;sup>2</sup> Council for Mutual Economic Assistance (CMEA, or COMECON), an economic union of former socialist countries that existed between 1949 and 1991.

put forward the hypothesis that under a regime of controlled prices and an over-emission of uncovered paper money, equilibration within the quantitative equation takes place not through an increase in the price level but through a reduction in the velocity of money. It was through the rate of decline in the velocity of money that one can judge the "potential" inflation in the system.

In the same years (1924 and 1926), V. Novozhilov theoretically deduced the scarcity of goods as a function of the excess of money. These two theoretical dependencies were "rediscovered" in the 1970s-80s by some Polish and Hungarian economists. In their most developed form, they were formulated by János Kornai in his "shortage theory" and on "suppressed inflation" within his "Disequilibrium Model of Planned Economy" (Kornai, 1980).

Stalin embraced certain ideas from Strumilin, incorporating them into his new economic strategy. This initiative commenced with the financial and monetary reform of 1930–1931, introducing the Monobank model. Under this system, all enterprises, organizations, and institutions held accounts with Gosbank (Monobank). Transactions between enterprises occurred in cashless form through clearing, operating within the credit and money plan, which marked the inception of the first cashless money circulation.

The second sector, known as cash turnover, pertains to the circulation of physical currency. This sector primarily caters to households and the consumer segment. In terms of volume, this sector is notably smaller than the first sector, encompassing enterprises and establishments. The consumer segment maintains market relations ('commodity-money relations') within certain boundaries. Alongside the population, cooperatives, and other individual economic entities are active participants in this sector. Households have access to specific consumer goods and services (notably cars and housing) that are purchased with physical currency, representing the wages received within the first segment of the plan. The 'balance of income and expenditure of the population' is established and overseen by the Monobank. Prices in the consumer market are regulated and generally kept low because stable and low prices are considered achievements of real socialism. Financial markets and assets are non-existent, as they are deemed capitalist phenomena.

The connection between the two money turnovers, or sectors, was carefully orchestrated, with a particular focus on the flow of funds from the non-cash to the cash sector in the form of wages and the reverse flow from the cash to the non-cash sector for the payment of taxes and fees. The Monobank exerted control over cash through the 'cash plan', which outlined the issuance of physical currency. It is the net result (balance)<sup>2</sup> of the implementation of the plan for the "money income and expenditure of the population" and of the available transactions under the cooperative sector and payments with foreign countries.<sup>3</sup>

Due to the inherent constraints of planning ("soft budget constraints") and the impact of the "law of anticipatory development of the production of means of production

<sup>&</sup>lt;sup>1</sup> In reality, Kornai's non-equilibrium analysis of the planned economy, where 'excess demand' prevails in the goods market, aligns with non-equilibrium Keynesian approaches in Western economic thought (as seen in the work of E. Malinvaud), where "excess supply" dominates. Interestingly, the potential connection between MMT and non-equilibrium models is acknowledged by Mankiw (2020).

<sup>&</sup>lt;sup>2</sup> Under the cash plan, if receipts exceed payments, the emission outcome signifies a reduction in the money supply in circulation. Conversely, when receipts are less than payments according to the cash plan, the net result is an injection of additional cash (Kotsey, 1989, pp. 45–46).

<sup>&</sup>lt;sup>3</sup> Garvy (1977) provides a clear and comprehensive explanation of the principles governing money flows under socialism.

over the production of objects of consumption", the available money supply inevitably outpaces the growth of the consumer market. This happens as wages surpass labor productivity, leading to the emergence of budget deficits. Kornai termed the outflow of purchasing power from the non-cash sector (enterprises and state departments) to the cash sector as the "siphoning effect". Numerous attempts have been made to empirically measure this phenomenon (Kim, 2002).

The interplay of "overhang money supply" and "suppressed inflation" culminated in a structural deficit in the consumer market, which resulted in tangible issues such as queues, lower product quality, the replacement of desired goods with inferior alternatives, and the forced bundling of both desirable and undesirable goods', privilege (specialty shops) and the black market, pointless investment projects, artificial employment, masked unemployment, and above all the considerable forced savings of the population. The latter primarily exist in the form of deposits in the savings bank, with occasional hoarding of cash. These savings result from the absence of available goods for purchase, indicating solvent demand without a corresponding supply. Savings, in this context, function as a form of monetary sterilization.

The velocity of available money was slowing, and this trend was clearly reflected by the statistics of socialist countries (see tables in Nuti, 1986, p. 56), and by empirical evidence (Birman, 1980a, 1980b)². Moreover, this system lead to the favouritism of communist elites. According to D.M. Nuti: "The persistence of excessive demand, indeed the elevation of scarcity to a systemic characteristic, leads to the suspicion that it is maintained mainly because it hides the privileges of the elite through privileged access to luxury goods and possessions at unusually low prices. In fact, equilibrium market prices would reveal and quantify this privilege, since its maintenance would require dramatically more unequal income and wealth" (Nuti, 1986, p. 76).

In order to maintain the equilibrium of the system and to avoid social tensions (due to deficits) or outright inflation, apart from several attempts at structural reforms (aimed at self-sufficiency of enterprises and greater productivity), mostly monetary measures were used. These consisted of one-off periods of price increases, a reduction in the money supply (deflation) or monetary reform (exchange the old currency with the new one). Through currency exchange (currency reform), the accumulated sums of money were devalued (e. g. the Soviet reform of 1947, the Bulgarian reforms of 1947, 1952 and 1962, etc.)<sup>3</sup>). All these palliative measures ended in 1989, when the planned system exhausted its partial counterbalancing possibilities and potential hidden inflation became apparent. This was the apogee of the TEE.

Lastly, the manifestations of the TEE and MMT within the European Union and the Eurozone are extensively explored by Magnin and Nenovsky (2021).

### 6.1 Concluding remarks, and future topics on the Russian monetary tradition

In the article, Semyon Falkner's original monetary theory, called the Theory of Emission Economy, is presented as a vivid illustration of the nominalist tradition in Russian economic thought. The basic ideas of this theory can be found not only in mo-

<sup>&</sup>lt;sup>1</sup> During times of scarcity in the USSR, a prevalent practice involved selling high-demand goods bundled with obsolete ones, commonly referred to as a "load". For instance, a bottle of vodka would be sold together with shoes, irrespective of whether they matched the buyer's size.

<sup>&</sup>lt;sup>2</sup> See Willes (1962), Seurot (1983), Nuti (1986), Dembinski (1988), and Kim (2002) for more information.

<sup>&</sup>lt;sup>3</sup> See, for example, Chudnov (2018), Velyov (1952), and Tsarevsky (1975, pp. 45–46).

dern Western monetary theory, such as MMT, but also in monetary policy over the years, both in socialist countries and in the West.

This exploration opens up new avenues for analysis, particularly in the theorization of national money traditions. The focus shifts to the Russian money tradition, prompting a logical progression towards comparative examinations of various monetary traditions. Examples include the Arab and Turkish traditions, generally characterized by metallism, and the Chinese tradition, bearing striking similarities to the Russian tradition. There are efforts in this direction, and the importance of studying national monetary traditions has been noted by such scholars as Schumpeter (2008/1970) <sup>1</sup> and Struve (1952)<sup>2</sup>, which can only motivate us for future research.

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<sup>&</sup>lt;sup>1</sup> In fact, Schumpeter's book on money was published posthumously, in 1970 in German and translated in 2008 into English. It was written in the 1920s and announced for publication in 1929 (Schumpeter did not publish the book).

<sup>&</sup>lt;sup>2</sup> Struve's book is also published after his death.

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