Administrative control of prices in the automotive fuel market

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Abstract. The modern Russian economy is a market economy. Of course, it is arguable what kind of capitalism has been formed in Russia. But there is no doubt that most industries are determined by factors coming from a competitive market mechanism. Having replaced directive pricing by market price formation, the reform of 1992 made it possible to balance the consumer goods market and eliminate the total deficit. The disappearance of the deficit was an excellent compensation for the decline in the standard of living of the population; thus, it helped to avoid the most radical forms of social protest. Since then, Russia has gone through hard times causing various deviations from the classical model of the capitalist economy. Until recently, the country's authorities, who were in charge of the national economic policy, adamantly refused to return to directive pricing model, believing that this step would lead to a significant reduction in economic efficiency. However, in autumn of 2018, the government agreed to the introduction of maximum prices. An extensive industry, commonly referred to as "socially significant", has seen those regulations. It is the market of automotive fuel. This decision means that in the near future we will witness quite a rare economic experiment of the present time. It will allow researchers to test the universality of economic laws, as well as to examine the specific
modes and mechanisms by means of which these laws influences our life.

1. Introduction

Controlled price is an ancient economic practice. Fixed prices were common in Medieval Europe when the economy was static. Competition was not welcomed, neither by the authorities nor by the sellers. Fixed prices were an expression of a commonly accepted belief that there were some "fair prices", the rejection of which indicates the seller's bad faith [1]. As soon as "capitalist" relations began to spread in Europe, the idea of fixed prices disappeared. The possibility of making significant profits by reducing costs and prices became the driving force of the Industrial Revolution in England at the beginning of the 19th century [2]. On the contrary, the possibility of price manipulation remained a reliable tool for maximizing profits in the hands of a monopolist [3, 4]. The practice of setting and maintaining fixed prices is incompatible with the existence of a capitalist economy in which prices simultaneously perform informational, incentive and distributive functions [5]. It might seem that the era of directive prices is a thing of the past. However, in the twentieth century, this practice was revived on an unusually large scale. The beginning was in Soviet Russia, where the party armed with a radical economic program came to power. According to this economic doctrine, conscious efforts can easily overcome the shortcomings inherent in the capitalist mode of production. First of all, these negative realities of the capitalist economy include recurrent economic crises and considerable differentiation of income and wealth of the population. The first attempts to build an alternative economic formation encountered obstacles coming from the market itself. The market offered higher remuneration (prices), and therefore, it pumped resources out of the public sector. The solution to this problem was "maximum" prices. As latent competition for resources continued, government price controls had to be supplemented by a ban on private enterprise. This standard model of "economic control" was subsequently applied in other countries that chose the socialist path of development [6]. Soon, it turned out that directive prices had a devastating effect on the economy [7, 8].

Despite the scientific understanding of the failure of directive pricing [9], it existed unchanged until the end of the socialist economy. With the beginning of economic reforms, the sector of directive pricing policy began to decrease rapidly. Thus, it is more surprising that a quarter of a century
after the start of market reforms, the Russian government decided to resume the practice of setting maximum prices.

2. Materials and methods

The problems that arise when the state tries to take control of market prices frequently occurred in the economic history. The main problem is that the administrative regulation of prices is one of the most destructive forms of government intervention in the economy. By sending the wrong signals to buyers and sellers, it instantly leads to a deficit. The second problem is the expensive and inefficient monitoring of sellers and buyers behaviour, who are required to comply precisely with the rules of a regulatory body. The third problem is that maximum prices are an effective tool of populism. The last factor makes it difficult for the political elite to resist the introduction of maximum prices.

3. Results

The task is to accurately describe the conditions of the forced experiment that is the policy of price regulation (in the form of maximum prices), set by the Government of the Russian Federation in the autumn of 2018. The background of the experiment and the events in its context are studied in detail. The results of the experiment are also well known. Each practical experiment is of theoretical value, because it allows researchers either to verify the relevant economic hypothesis, or to reject it.

The primary aim of this study is to examine the circumstances prior to the decision to introduce "maximum prices". The second objective was to study the features of the state regulation system in the fuel market, as they distinguish this system from the previously used administrative mechanisms. Third, the restrictions imposed on bidders in the automotive fuel market by the "maximum price" system were tested for their rigidity. Finally, the research was to monitor the specific forms in which the "free market" patterns arise in the behaviour of economic agents under administrative control.

4. Discussion
Adam Smith formulated the hypothesis that a competitive market mechanism is a central element ensuring the effectiveness of a decentralized economy [10]. The opposite view is that the possibilities of a competitive market are very limited, and its can be replaced by conscious government intervention in the economy. This hypothesis found the most reasonable form of presentation in the work of J. M. Keynes [11]. The scientific novelty of his theory, as well as the results that initially ensured the practical application of this theory, led to economic liberalism losing its scientific credibility [12]. The situation changed in the 80s of the twentieth century. One of the prerequisites that caused the Renaissance of economic liberalism was the negative experience of using directive prices in the United States in the 70s of the twentieth century. The results of the experiment were under the scientific analysis [13, 14].

According to the publication in "Kommersant", "The oil companies [in Russia] have accepted the necessity to reduce and maintain wholesale fuel prices at this level. The oil companies agreed in principle with this decision at a meeting with Deputy Prime Minister Dmitry Kozak on October 31 2018. The agreement is in force from November 1 to the end of March 2019 and then can be extended... Thus, we can say that Russia introduced direct state regulation of fuel prices in all segments" [15].

The step taken by the government reflects the transition to a policy of broad price regulation. This will put the country in a situation of total deficit, which has not been observed in Russia since 1991. At the same time, the deficit is a trigger of such phenomena as the extensive "black market", long queues and the card system.

The immediate reason for the introduction of maximum prices was the outstripping (in comparison with the rate of inflation) growth of fuel prices in 2018 (10% against 4.5% of the inflation rate). This situation has already occurred in the history of modern Russia. The most impressive jump on record was in the summer of 1999, when within 4-5 months the price of fuel increased from 2.8 rubles to 8-9 rubles. For the second time, the price rally began in 2003 and lasted until the autumn of 2008; during this period, oil price has increased ~ 3-fold from 9 to 28 rubles per liter (the prices are for the brand of gasoline AI95 in Irkutsk Region). Both times the reason for the growth of prices in the Russian economy were the trends in the world oil market. Let us illustrate this point. Figure 1 shows a close correlation of the world oil market and the Russian fuel market. Over the past 20 years, the price of oil has increased from 9 to 75 $/bbl (at the time of writing). The maximum (143 $ / bbl) price of oil occurred in the summer of 2008, and then for a long time it remained at the level above $100/bbl. The price rally in the
oil market at the beginning of the XXI century resulted from the increase in demand for oil bolstered by the leading economies of the world.

Let us consider Figure 1. The increase in oil demand on the world market in the first decade of the XXI century corresponds to the shift of the demand curve (D) to the right on the left graph. As a result, the supply and demand curves intersected at a higher level. The price of oil rose (from $p_{o1}$ to $p_{o2}$), and its production increased (the value of $q_{o1}$ increased from $q_{o1}$ to $q_{o2}$). These events influence the Russian fuel market (see the right graph).

![Figure 1](image1.png)

**Figure 1.** The correlation of the world oil prices and Russian market of fuel.

At the initial moment, the equilibrium was at the point $e_1$. The price of fuel was equal to $p_{f1}$, and the volume of its sales was $q_{f1}$. After the jump in prices on the world oil market, Russian oil companies found that the marginal revenue from the sale of oil on the world market has increased. In a short period (when it is impossible to significantly increase production), they increase oil exports by reducing its sales in the domestic market. In the graph, this solution corresponds to the shift of the supply curve (S) to the left in position $S_2$. Fuel sales on the Russian market reduced ($q_{f2}$), and its price rises ($p_{f2}$). Despite the fact that the rise in prices annoys car owners, they have to put up with it, because the increase in prices on the world oil market, ultimately, provides an inflow of world resources into the Russian economy.

The constant correlation between the world oil market and the domestic fuel market existed until 2014. However, in the autumn of 2014, this correlation disappeared. The reason is that the Russian government, in pursuit of tax revenues, raises excise taxes on gasoline whenever budget revenues are reduced due to lower world prices and export duties. Let us consider how this decision of the government affected oil prices. Figure 2 is
the right side of Figure 1. The only difference is that we consider the Russian fuel market at a time when oil prices on the world market are falling. This encourages Russian oil companies to reduce the volume of oil exports and to allocate the released volumes of oil in the domestic market. The oil supply curve shifts from \( S_1 \) to the right to \( S_2 \) (a heavy line arrow in the graph), and the prices of oil and petroleum products in the Russian market decline to \( p_{f2} \), which encourages command households to consume fuel in large volumes \( (q_{f2}) \). But this is not the end of the market fluctuations, because the government imposes the excise tax on oil sellers in the amount of \( t \) for each ton of fuel sold on the domestic market. In the graph, the introduction of excise tax is equivalent to the shift of the fuel supply curve to the left (shown by the dotted arrow) in the direction opposite to that in which the supply has just changed due to lower prices on the world market. As a result, the fuel supply curve returned to its original position, the price of fuel and the volume of transactions made with it in the domestic market remained unchanged.

\[ \text{Figure 2. The impact of excise tax on the price level. The introduction of excise tax (t) leads to a reduction in supply and an increase in the market price of fuel.} \]

Gasoline buyers do not feel the influence of the world market when the price of oil decreases. But they feel this connection when oil becomes more expensive. This is what has been happening for almost three years, during which the price of oil rose from 30 to 75 $/bbl. Following the growth of prices in the world market, fuel prices in the Russian market are beginning to grow (excise tax still exists). The current rise in oil prices on the world
market was very unfortunate. The resulting increase in fuel prices in Russia is no longer compensated by rising incomes. On the contrary, real incomes of Russians have been declining for five years.

Russians are sensitive to the increase in fuel prices. The government could not pretend that "nothing was happening". It was necessary to take some steps. The government had a wide choice of decisions. First, it was possible to make the Russian fuel market more competitive by dividing state oil corporations into smaller companies and selling them to individuals. But this measure is contrary to the general line of economic management "in manual mode". Secondly, it would be possible to eliminate excise taxes, so it would lead to the immediate fall of prices in the fuel market. But the balanced budget has become idea fixa for the current government. That is why it is unlikely to refuse any tax, even the most insignificant. Thirdly, it was possible to leave the situation unchanged, that is, to give full freedom of action to market forces. But the peculiarity of the situation was that in the summer of 2018, the government made a very unpopular decision, raising the retirement age. In doing so, the government has squandered the "credibility" needed to make radical decisions.

The government chose the fourth option, setting the upper level of fuel prices, the so-called "ceiling" prices. It is assumed that this stone will kill none of the birds. The government will continue to receive income in the form of excise tax, and the population will be free from the threat of "uncontrolled" growth in fuel prices.

The solution looks simple only at first glance. It is not clear how the government is going to control the behaviour of fuel sellers and punish them in case of disobedience? But it's not that important. The consequences of price regulation policy are more relevant. Let us suppose that at the initial moment the domestic fuel market was in equilibrium, with the price of $p_1$ and the volume of transactions is equal to $q_1$ (Fig. 2). If the growth of oil prices in the world market continues, the oil companies will have an incentive to send more raw materials for export. Naturally, the supply of fuel in the domestic market will be reduced (the supply curve will shift from $S_1$ to $S_2$). Following this, fuel prices should rise to the level of $p_2$. Although there are no buyers who would be satisfied with the increase in prices, many of them will buy fuel to meet urgent needs. A completely different picture will appear if the sellers are forbidden to raise the price of fuel. It is possible to impose a ban on price increases, but it is impossible to force the seller to sell the goods at the prices that bring losses. Evidently, this is exactly what will happen if the seller, in the new conditions, sell fuel at the old price $p_1$ and in accordance with the same volume of demand for it (Fig. 2). The seller will certainly not do it. He will put on the market as much fuel as the old price
tells him, namely $q_2$. This is significantly less than the volume that buyers would like to purchase at the fixed price $p_{f1}$.

Consequently, there is a deficit. Now the consent of sellers to pay the established price for fuel does not mean anything, and they have to look for other ways to acquire the benefit. This often requires some time to stand in line. This way is acceptable for pensioners, but it is not suitable for the mobile part of the population, for whom time is the most valuable resource. The second way is to turn to the "black market", where prices are much higher than the equilibrium level, and sellers do not guarantee the quality of the purchased goods. Sometimes the situation becomes so complicated and explosive that the government introduces a card system, that is, it distributes fuel among all applicants in accordance with strictly defined rules.

Thus, setting a price ceiling does not reduce the "degree of social tension". This is what the government thinks about, but it simply gives the problems a "new status". Now buyers face new challenges. To solve this problem, buyers will pay more, and their costs are much higher than those that would entail the purchase of fuel at a higher price.

The establishment of maximum prices is one of the basic tools of populism. If an economy suffers from continuous government intervention, price increases are becoming common. It is clear that this circumstance strongly irritates the population. Then, the government declares that it "freezes" the prices. This decision reassures buyers and adds credibility to the government. But this peaceful period is very short, during which the government is to solve the two problems. Firstly, it is necessary to find a way of taking control over the sellers. Secondly, it is essential to prevent a deficit.

This scenario has occurred in the human history for so many times that it is difficult to find specific examples, as the situation is general and widespread. A relatively recent example is the regulation of gasoline prices by Ukraine's Prime Minister Yulia Tymoshenko in the summer of 2005. Tymoshenko announced a rise in fuel prices by intrigues from Russia and set maximum prices. In response, all oil refineries, specifically, the three companies located in Ukraine stopped the shipment of fuel to consumers, and in the middle of the summer, they stopped operation due to "overhaul". In the midst of the sowing campaign, they left the peasants without any fuel at all. The residents of urban areas experienced the same negative impacts. Thus, the "ceiling" of fuel prices had to be cancelled. A more well-known example took place almost half a century ago in the US fuel market during the "oil crisis". Under the public pressure, President J. Ford decided to introduce maximum prices. As a result, automotive fuel disappeared from
free sale, there were queues and low-quality fuel on the "black market". Soon, the decision to "freeze" fuel prices had to be cancelled.

5. Conclusion

Let us follow the events taking place on the Russian fuel market. There are three problems: full monitoring of retail prices, the threat of shortages and the threat of lower fuel quality. The first report on the reaction of the fuel market to the agreement came from the "monitoring" sector. As soon as the oil companies entered into a contract with the government, they began to secretly raise prices for corporate clients. Before the agreement, corporate customers used fuel discount cards (cancelled in June 2018), now customers have to pay the "service fee" to prolong their privileges. Some companies discuss the need to pay for "processing services". Diesel fuel will now cost cardholders more by 5%. Gasoline buyers will pay 1% more. Thus, we can say that, taking advantage of the inelastic demand for fuel from corporate customers (who cannot purchase fuel for "cash"), sellers have increased the actual prices, leaving their nominal level without changes. These actions are not in the list of the prohibitions that the government established for sellers in October of 2018. It is noteworthy that the largest seller of fuel on the Russian market (Rosneft Corporation) sharply reduced the price of gasoline for retail buyers in early November of 2018, immediately after the agreement on the "freeze" of prices. This step is difficult to explain in terms of maximizing profits. Thus, Rosneft is characterized by extravagant, irrational behaviour. This step turned into incredibly long queues to the gas stations of the company. The intensity of the filling stations was so great that a month later the company had to introduce breaks in their work. By the end of the year, the company abandoned the policy of unusually low fuel prices. However, at the beginning of 2019, it became clear that the decision to establish fixed prices did not fit into the usual scheme. First of all, it turned out that the FAS (Federal Anti-monopoly Service), which was entrusted with the function of monitoring the behaviour of fuel sellers, performs its functions not as zealously as one might expect, examining the harsh restrictions on "freezing" prices. In any event, FAS has not found corpus delicti in the higher prices of gasoline (2-2.5%), which occurred at the beginning of 2019. It could not be otherwise, as from January 1, 2019, the excise taxes on fuel rose again. If the increase in excise taxes had not been supplemented by a permit for an increase in prices, the fuel market would have been in short supply, as shown in Fig. 3. Secondly, as we have already
noted, fuel sellers have tried hidden forms of price increases. However, the stabilization of prices on the world oil market became a real gift to the government, which weakened the incentives to increase oil exports and a corresponding reduction in its supply to the domestic market. The interaction of these three factors made it possible to avoid the worst consequences of price regulation such as shortages, queues and a drop in the quality of fuel. However, all market participants are anxiously waiting for March 31, 2019, when the agreement made five months before this date expires. Monitoring of the fuel market continues. Any options are possible.

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