Price Elasticity of Demand for Socially Significant Goods

Elasticidad precio de la demanda de bienes socialmente significativos

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Abstract

The article considers the price elasticity of demand for three groups of goods with different social significance, according to official statistics of Russia. The estimation is based on an econometric regression model using panel data. The authors have concluded that the price elasticity of demand does not identify socially significant goods for which prices are free market. Without government support measures, such goods have become the main object of speculative market transactions in retail trade. The results obtained confirm the need to further control prices for socially significant goods by the state, including those not included in the official list. In addition, it is necessary to establish a requirement for the mandatory availability of such goods for sale, which will ensure the stability of sales volumes regardless of unfavorable price dynamics. The results can be used in the development of state regulation measures for the consumer market and socially responsible trade organizations when forming an assortment and pricing for socially significant goods.

Keywords: Socially Significant Goods, Basic Goods, Essential Goods, Price Elasticity of Demand, Government Regulation.

Resumen

El artículo considera la elasticidad precio de la demanda de tres grupos de bienes con diferente importancia social, según las estadísticas oficiales de Rusia. La estimación se basa en un modelo de regresión econométrica utilizando datos de panel. Los autores han concluido que la elasticidad precio de la demanda no identifica bienes socialmente significativos cuyos precios sean de libre mercado. Sin medidas de apoyo gubernamental, estos bienes se han convertido en el principal objeto de transacciones especulativas en el mercado minorista. Los resultados obtenidos confirman la necesidad de un mayor control por parte del Estado de los precios de los bienes socialmente significativos, incluidos los que no están incluidos en la lista oficial. Además, es necesario establecer un requisito de disponibilidad obligatoria de dichos bienes para la venta, lo que garantizará la estabilidad de los volúmenes de ventas independientemente de la dinámica de precios desfavorable. Los resultados se pueden utilizar en el desarrollo de medidas de regulación estatal para el mercado de consumo y organizaciones comerciales socialmente responsables al formar un surtido y fijación de precios para bienes socialmente significativos.

Palabras clave: Bienes socialmente significativos, Bienes básicos, Bienes esenciales, Elasticidad precio de la demanda, Regulación gubernamental.
Introduction

In the Russian economy, the availability of essential consumer goods for the population remains relevant. According to the Federal State Statistical Service of Russia, the share of consumer goods accounted for 72.9% of Russian household expenses in 2010 and 71.8% in 2022, respectively. In other words, this indicator has remained virtually unchanged for 12 years. The share of food expenditures increased from 35.7% in 2010 to 37.2% in 2022, reflecting negative consumption patterns (Federal State Statistic Service, 2023c). Over the past 10 years, the real income of the Russian population has decreased by 1.3%.

Currently, the market for socially significant goods is regulated to ensure the availability of these goods for the Russian population. This state regulation consists in limiting the growth of retail prices for socially significant goods (for certain essential food products), according to the approved list of such goods (Resolution of the Government of the Russian Federation No. 530, 2010). In addition, state regulation is applied as a requirement for the mandatory availability of a minimum range of essential medicines in retail trade organizations (Resolution of the Government of the Russian Federation No. 2406-r, 2019). Government regulation also involves establishing mandatory non-food goods that prevent coronavirus infection (Resolution of the Government of the Russian Federation No. 762-r, 2020). Thus, there is a special government policy in relation to socially significant goods, which consists in limiting the growth of retail prices for several food products and ensuring the mandatory availability of certain medicines and non-food products.

However, a study of the current regulatory and legal documents in Russia shows that they do not have clear concepts and criteria for classifying goods as socially significant. There are reasons to believe that the list of socially significant goods is not sufficiently substantiated, and additional research is required to identify the features and indicators of various goods that allow assessing them according to the degree of social significance.
Literature review

The identification of socially significant goods at the legislative level and a special state policy in relation to such goods is a unique phenomenon in the world economy. Some countries have experience in regulating the market through ensuring the availability of socially significant goods. However, most countries do not have such regulation instruments. For this reason, the literature on the issues under consideration is quite limited.

In Russia, there is the largest number of studies on socially significant goods. Sidorchuk et al. (2015a) examine the state monitoring of prices for socially significant food products in Russia. The authors conclude that it is necessary to monitor minimum rather than average prices for such goods since they more objectively reflect price volatility and the actual standard of living of the population. Sidorchuk et al. (2015b) describe some features of establishing prices for socially significant food products directly by trade organizations associated with the concept of social marketing in trade.

India calls socially significant goods essential goods and regulates them in accordance with the Essential Commodities Act (Smirnova, 2023). The state regulation of essential goods in India aims at ensuring the availability of the most necessary goods to consumers and their sale at fair prices. The list of such goods is compiled by the Government of India and includes certain food and non-food products for the population, as well as some industrial goods, including medicines, disinfectants, rice, sugar, salt, oil, milk, potatoes, onions, tomatoes, tea, fertilizers, petroleum products, etc.

A study has also been conducted on socially significant products in Indonesia, which are referred to as essential products (Zahraturrahmi et al., 2021). The authors identify rice, shallots, red chili, and garlic as essential goods. Moreover, the selection of goods is determined by the opinion of scholars about the importance of such goods.
The composition of socially significant goods is also reflected in publications studying the relationship between poverty and food prices. As a rule, socially significant goods are determined at the state level to implement a special state policy improving the standard of living of the population by minimizing the negative consequences of inflation. Zezza et al. (2008) claim that rising food prices have the most aggravated impact on the living standards of those with the lowest incomes. Korale-Gedara et al. (2012) show that rising food prices deepen poverty in developing countries if rapid income growth is not considered, which partially mitigates the negative effect of food inflation. Some scientific works question the need to limit growing prices. Headey and Hirvonen (2023) argue that rising food prices help reduce poverty. The authors refer to an increase in the supply of food products due to their rising prices, which leads to a subsequent increase in demand for unskilled labor and the income of the poorest segments of the population.

We should pay attention to the composition of goods identified in various studies to analyze the impact of rising prices on the standard of living of the population. Thus, Mbegalo and Yu (2016) study the influence of rising food prices on the welfare of households in Tanzania. The authors select the following goods for analysis: rice, maize, cassava, sugar, beans, seeds, vegetables, meat, and oil. Valero-Gil and Valero (2008) examine the impact of rising food prices on poverty in Mexico. The authors identify the main goods consumed by the population, including tortilla, chicken with bone, soft drinks, milk, eggs, tomatoes, beans, beef, pastries, sugar, and vegetable oil.

Many surveys analyze the influence of world prices on domestic prices in different countries. Their authors select the most significant goods, whose price dynamics reveal the economic problems associated with integration into the world market. Minot (2010) studies price dynamics in African countries for such goods as wheat, sorghum, cassava, corn, beans, flour, rice, bananas, and millet. Braha et al. (2019) examine the impact of world prices on prices in Kosovo, including for wheat, barley, corn, and beef.
These studies dwell on goods that play an important role in the consumption of the population in different countries. The inclusion of certain goods in studies is determined by their importance in ensuring the standard of living of the population, food security, and other important characteristics of the economic development of a country.

Formal criteria for classifying goods as socially significant are understudied in the scientific literature and regulatory documents. However, existing research on similar issues shows the low elasticity of demand for such goods, considering their prices (Hsiao, 2007; Sidorchuk et al., 2015a, 2015b). In Russia, socially significant food products included in the official list by the state have restrictions on the increase of their retail prices to ensure the availability of these goods to the population. For such goods, government intervention measures are established aimed at reducing the price elasticity of demand.

Within the framework of this study, we assume that a group of socially significant goods, regardless of government price regulation, should have a low price elasticity of demand. Socially significant goods satisfy the basic needs of the population, and if prices for these goods increase, the demand for them should remain at the same level.

Thus, the study aims to test the hypothesis that socially significant goods have a low price elasticity of demand as an indicator determining whether a product belongs to the socially significant group.

**Materials and methods**

To achieve the objective set, we calculated and assessed the price elasticity of demand for three groups of goods: 1) socially significant goods according to the official list of Russia; 2) goods that are not officially included in the list of socially significant goods but have their characteristics according to the definition of this concept given in this study; 3) goods that are not officially included in the list of
socially significant goods and do not meet their requirements (not socially significant).

The goods under consideration include only those goods for which retail sales volumes can be correlated with the dynamics of consumer prices. It is necessary to clarify that the sales volumes of individual goods and the dynamics of retail prices in Russia assume a different list of goods. For some goods, it was impossible to gather the initial data since the principle of data comparability was violated. This determines the limited number of goods in each group. The selected products for which the necessary data was available and which were studied in this article are presented in Table 1.

**Table 1.** Grouping of goods selected for the research depending on their social significance

<table>
<thead>
<tr>
<th>Socially significant goods according to the official list of Russia</th>
<th>Individual goods that are not socially significant but have their characteristics</th>
<th>Not socially significant goods that do not have their characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Eggs</td>
<td>• Cell phones</td>
<td>• Watches</td>
</tr>
<tr>
<td>• Vegetable oil</td>
<td>• Computers</td>
<td>• Motorcycles</td>
</tr>
<tr>
<td>• Sugar</td>
<td>• Lighting lamps (household)</td>
<td>• Refrigerators and freezers</td>
</tr>
<tr>
<td>• Salt</td>
<td>• Cheese</td>
<td>• Cameras</td>
</tr>
<tr>
<td>• Potatoes</td>
<td>• Games and toys</td>
<td>• Bicycles</td>
</tr>
<tr>
<td>• Milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Tea</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 1, the list of goods includes food and non-food consumer goods.

The group of socially significant goods comprises goods that are included in the official list by Russia. Goods that meet the criteria of socially significant ones but are not included in the official list are an integral part of everyday consumption in Russia.
From the formal perspective, the importance of goods from the viewpoint of satisfying basic human needs, which we propose to consider as a determining factor in the classification of goods due to their social significance, is expressed in the share of their retail turnover in the total retail turnover of the country. A study of the official Russian statistical data shows that the share of goods identified in Table 1 as socially significant (a total of seven goods) ranged from 4 to 4.35% in the total retail turnover from 2017 to 2023 (Federal State Statistic Service, 2023b). The share of goods that meet the criteria of socially significant (a total of five goods) ranges between 3.31 and 4.03% in the total retail turnover (Federal State Statistic Service, 2023a). Mobile phones accounted for 0.96 and 1.42% of the total retail turnover. The share of goods that do not meet the criteria of socially significant (only five goods) ranged from 0.63 to 0.67% in the total retail turnover (Federal State Statistic Service, 2023a).

According to the data above, the share of not socially significant goods in the total turnover is small compared to those goods that either meet the criteria of socially significant or are classified as such in accordance with Russian legislation. The average share of goods that have the characteristics of socially significant goods is significant and generally corresponds to the average share of each product in the officially established list of socially significant goods.

The retail sales of some goods that are proposed to be classified as socially significant have been rapidly growing in recent years. From 2010 to 2023, the index of physical sales volume of mobile phones and computers was 7.5 and 5.1, respectively.

**Data**

The information base of the study consists of statistical data from the Federal State Statistic Service on the volume of retail sales and the dynamics of consumer prices for the goods under study. We used information on the retail turnover of these goods in the period from the first quarter of 2017 to the third quarter of 2023. Consumer price data covered the period from January 2017 to September 2023.
The time series underwent statistical processing. Retail trade turnover for goods in the Federal State Statistic Service databases is presented as an accrued total. To obtain indicators for quarters, the data for each quarter was recalculated separately. The average quarter price was calculated as the arithmetic average of the months in a quarter. Sales data for each product were reduced to a conditional physical equivalent by dividing the value of retail turnover by the average price in the quarter. This eliminates inflation processes from the analysis.

The data have also undergone a seasonal adjustment. The intra-annual fluctuations in consumption volumes and prices that are typical of many goods, especially non-food products, can lead to an overestimation of elasticity. A seasonal adjustment was conducted using the TRAMO/SEATS method in accordance with the automatic settings of the Eviews 10 program.

The scientific literature reveals both the disadvantages and advantages of this seasonal adjustment method. When comparing the X-12-ARIMA and TRAMO/SEATS methods, Hood (2003) claims that the latter induces residual seasonality into the seasonal adjusted series. As exemplified by the Bundesbank data, Kaiser and Maravall (2000) prove that the TRAMO/SEATS method solves such problems as heteroscedasticity in the seasonal component and instability of the trend (cycle at the end of the series). One way or another, the chosen method is used in relation to real statistics, for example, by the Bank of Spain.

The suitability of the TRAMO/SEATS method for a seasonal adjustment of data is established by Maravall (2002) who is one of the founders of this method.

Econometric framework

In modern scientific works, the price elasticity of demand is calculated using various methods.

The classic Marshall formula involves economic and statistical calculation. Today the formula for calculating elasticity proposed by Alfred Marshall back in the 19th century is widely used in various studies. For example, Guo (2020) uses the Marshall formula
in theoretical discussions. In some works, the classical concept of elasticity of demand was further developed. For instance, Dalton (2014) develops a method for estimating the elasticity of demand for non-linear pricing.

However, the most common econometric measurement of elasticity is built over regression models which are the basis for this study. These models were evaluated using the Eviews 10 program based on built-in algorithms.

To assess the price elasticity of demand for the product groups studied in the article, we used the method of panel data analysis.

First, the initial data that had undergone statistical processing were logarithmized. Sui et al. (2019) emphasize that including variables in the logarithm allows interpreting the regression results in terms of elasticity.

Unit root tests were conducted for each variable within the product groups under study. According to Barreira and Rodrigues (2005), the non-stationarity of these variables can result in spurious regression in panel data analysis, just as in traditional regression models.

There are many unit root tests reviewed by Barbieri (2006). Then we selected the most frequently used ones based on panel data analysis. Thus, Rezitis (2015) classifies the following tests: Levin, Lin, and Chu; Im, Pesaran, and Shin; Harris and Tzavalis (HT test). Kilavuz and Topcu (2012) apply the following tests: Levin, Lin, and Chu; Im, Pesaran, and Shin; ADF test; PP Fisher, Chi.

For each group of products, three models were assessed: a pooled regression model, fixed effects model and random effects model. These models are as follows:

\[ \Delta \ln dem_{it} = \alpha + \beta \cdot \Delta \ln p_{it} + \varepsilon_{it} \]

\[ FE: \Delta \ln dem_{it} = \alpha_i + \beta \cdot \Delta \ln p_{it} + \varepsilon_{it}, E(\varepsilon_{it}|\alpha_i) \neq 0 \]

\[ RE: \Delta \ln dem_{it} = \alpha + \beta \cdot \Delta \ln p_{it} + \varepsilon_{it} + u_{it}, E(\varepsilon_{it}|u_{it}) = 0 \]
where $\Delta \ln dem_{it}$ are the first differences of the logarithm of the natural volume of consumption of the $i$ product in the $t$ period; $\Delta \ln p_{it}$ are the first differences of the logarithm of the price for the $i$ product in the $t$ period; $\varepsilon_{it}$ is a random error; $u_{it}$ is an individual indicator for estimating random effects of the model; $\alpha$, $\beta$ are estimated parameters.

The $\beta$ coefficient represents the degree of sensitivity of changes in demand under the influence of price dynamics, i.e., it is the desired indicator of price elasticity of demand.

**Results**

For each of the three samples of goods from Table 1, unit root tests were performed. Testing covered different levels and the first differences of two studied variables: demand and price. The results are presented below (Table 2).

**Table 2. Unit root testing of panel data**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unit root test</th>
<th>Levin, Lin, and Chut</th>
<th>Im, Pesaran, and Shin, W stat</th>
<th>ADF Fisher Chi-square</th>
<th>PP Fisher Chi-square</th>
<th>Levin, Lin, and Shin W stat</th>
<th>ADF Fisher Chi-square</th>
<th>PP Fisher Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>[0.8494] [0.8022]</td>
<td>[2.6052] [0.9954]</td>
<td>[2.7053] [0.9995]</td>
<td>[2.6904] [0.9995]</td>
<td>[0.2846] [0.3880]</td>
<td>[0.5179] [0.3023]</td>
<td>[13.4453] [0.4918]</td>
</tr>
<tr>
<td>ln dem</td>
<td>Constant and trend</td>
<td>[1.3335] [0.9088]</td>
<td>[-1.0044] [0.1576]</td>
<td>[17.5522] [0.2279]</td>
<td>[46.9171] [0.9891]</td>
<td>[2.2935] [0.9891]</td>
<td>[-1.1357] [0.1280]</td>
<td>[18.4889] [0.1854]</td>
</tr>
<tr>
<td>∆ ln p</td>
<td></td>
<td>[-2.1870] [0.0144]</td>
<td>[-3.7601] [0.0010]</td>
<td>[38.1569] [0.0050]</td>
<td>[65.6932] [0.2687]</td>
<td>[-0.6167] [0.0156]</td>
<td>[-1.9400] [0.0589]</td>
<td>[23.0819] [0.0000]</td>
</tr>
<tr>
<td>∆ ln dem</td>
<td></td>
<td>[1.2416] [0.8928]</td>
<td>[-7.0068] [0.0000]</td>
<td>[73.0980] [0.0000]</td>
<td>[172.907] [0.0000]</td>
<td>[4.2163] [0.0000]</td>
<td>[-5.0126] [0.0000]</td>
<td>[52.6130] [0.0000]</td>
</tr>
</tbody>
</table>

Individual goods that are not socially significant but have their characteristics:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unit root test</th>
<th>Levin, Lin, and Chut</th>
<th>Im, Pesaran, and Shin, W stat</th>
<th>ADF Fisher Chi-square</th>
<th>PP Fisher Chi-square</th>
<th>Levin, Lin, and Shin W stat</th>
<th>ADF Fisher Chi-square</th>
<th>PP Fisher Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln p</td>
<td></td>
<td>[3.8854] [0.9999]</td>
<td>[5.7520] [1.0000]</td>
<td>[0.2799] [0.0000]</td>
<td>[0.1078] [0.0000]</td>
<td>[1.0701] [0.8577]</td>
<td>[2.3284] [0.9901]</td>
<td>[3.4490] [0.9688]</td>
</tr>
<tr>
<td>ln dem</td>
<td></td>
<td>[-0.4583] [0.3234]</td>
<td>[-0.3072] [0.3794]</td>
<td>[10.7069] [0.3808]</td>
<td>[14.7529] [0.1413]</td>
<td>[0.9420] [0.8269]</td>
<td>[0.5484] [0.7083]</td>
<td>[8.8069] [0.5505]</td>
</tr>
<tr>
<td>∆ ln p</td>
<td></td>
<td>[-2.1695] [0.0150]</td>
<td>[-1.7582] [0.0394]</td>
<td>[20.3687] [0.0260]</td>
<td>[35.2733] [0.0001]</td>
<td>[-3.3736] [0.0004]</td>
<td>[-2.0752] [0.0190]</td>
<td>[19.0133] [0.0401]</td>
</tr>
<tr>
<td>∆ ln dem</td>
<td></td>
<td>[-4.7760] [0.0000]</td>
<td>[-5.3404] [0.0000]</td>
<td>[47.1505] [0.0000]</td>
<td>[106.932] [0.0000]</td>
<td>[-4.5611] [0.0000]</td>
<td>[-4.3629] [0.0000]</td>
<td>[36.357] [0.0001]</td>
</tr>
</tbody>
</table>

Not socially significant goods that do not have their characteristics:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unit root test</th>
<th>Levin, Lin, and Chut</th>
<th>Im, Pesaran, and Shin, W stat</th>
<th>ADF Fisher Chi-square</th>
<th>PP Fisher Chi-square</th>
<th>Levin, Lin, and Shin W stat</th>
<th>ADF Fisher Chi-square</th>
<th>PP Fisher Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln p</td>
<td></td>
<td>[2.6198] [0.8494]</td>
<td>[4.2154] [2.6052]</td>
<td>[0.6458] [2.7053]</td>
<td>[0.3645] [2.6904]</td>
<td>[1.7249] [0.2846]</td>
<td>[1.4188] [0.5179]</td>
<td>[5.4108] [0.5179]</td>
</tr>
</tbody>
</table>
As follows from Table 2, it is justified to include the first differences in the model. When assessing models by statistical significance levels, there is a problem of a unit root. The first differences of the analyzed time series are stationary according to most tests.

The tests performed indicated a unit root at the series level in the analyzed data and its absence when using the first differences. Therefore, the first differences between the logarithms of prices and demand were included in the model.

Next, panel data regression models were assessed. The results are presented in Table 3.

**Table 3. POLS, FE, and RE model estimation results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model</th>
<th>Pooled regression (POLS)</th>
<th>Fixed effects (FE)</th>
<th>Random effects (RE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socially significant goods included in the official list</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$c$</td>
<td>0.005129 (0.003452)</td>
<td>0.005131 (0.003508)</td>
<td>0.005129 (0.003508)</td>
<td></td>
</tr>
<tr>
<td>$\Delta \ln p$</td>
<td>-0.444209** (0.047645)</td>
<td>-0.444316** (0.048473)</td>
<td>-0.444209** (0.048416)</td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.321902</td>
<td>0.299792</td>
<td>0.321902</td>
<td></td>
</tr>
<tr>
<td>F – statistics</td>
<td>86.92303***</td>
<td>12.07066***</td>
<td>86.92303***</td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>182</td>
<td>182</td>
<td>182</td>
<td></td>
</tr>
<tr>
<td>Individual goods that are not socially significant but have their characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$c$</td>
<td>0.018235** (0.008291)</td>
<td>0.018292** (0.008430)</td>
<td>0.018235** (0.008387)</td>
<td></td>
</tr>
<tr>
<td>$\Delta \ln p$</td>
<td>-1.063668** (0.268376)</td>
<td>-1.066889** (0.275643)</td>
<td>-1.063668** (0.271417)</td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.102347</td>
<td>0.081585</td>
<td>0.102347</td>
<td></td>
</tr>
<tr>
<td>F – statistics</td>
<td>15.70811***</td>
<td>3.288826***</td>
<td>15.70811***</td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Not socially significant goods that do not have their characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$c$</td>
<td>0.018242 (0.018242)</td>
<td>0.014952 (0.014952)</td>
<td>0.015123 (0.018516)</td>
<td></td>
</tr>
</tbody>
</table>

*the level of significance (p-value) is indicated in square brackets
Considering the results obtained, we can draw the following conclusions. There are all types of regressions, except for the fixed effects model for not socially important goods. This is evidenced by the significance of the F-statistic.

The coefficient of determination has small values, especially for goods that are not socially significant. This result is not critical from the viewpoint of interpretation since the dynamics of consumption in the short and medium term are influenced by a large number of factors. The analysis did not aim at the most accurate and complete modeling of demand volumes but should assess the relationship between demand and prices in dynamics, which is crucial for determining the price elasticity of demand.

Parameters for different prices in the logarithm are significant in all regressions. In addition, all coefficients are negative, which corresponds to economic logic. Typically, an increase in price leads to a decrease in demand, except for the Veblen and Giffen goods.

The absolute coefficient for the difference in the logarithm of prices is of great research interest. This indicator characterizes the degree of sensitivity of demand volumes to price dynamics. For the group of socially significant goods officially recognized in Russia, the coefficient value was approximately 0.44, which indicates inelastic price demand. This result is expected since the official lists of socially significant goods prepared by the Russian Government include mainly essential goods that are purchased in the required volumes at any price.
The absolute coefficient for the difference in the logarithm of prices for the other two groups of goods turned out to be close to the first one. This result reflects a high price elasticity of demand. The goods that we consider necessary to include in the official list of socially significant goods demonstrate the highest sensitivity of demand volumes to price dynamics. Their absolute coefficient is greater than its value for goods that are not related to and do not correspond to the characteristics of socially significant ones. This means that the price elasticity of demand cannot be an indicator of social importance for goods that have the corresponding characteristics but are not included in the official lists of socially significant goods. The decisive factor should be another indicator establishing their belonging to the group of socially significant goods.

Based on the study results, we confirmed the hypothesis that the legally established list of socially significant goods includes goods that have a low price elasticity of demand. However, other products that play a significant role in the life of a modern consumer in terms of satisfying the demand for essential products are characterized by the highest price elasticity of demand. Consequently, the formation of a list of socially significant goods based on the low price elasticity of demand narrows the possibilities of identifying goods that are of real value to the population. The price elasticity of demand cannot be the only basis for determining the composition of such goods.

**Discussion**

The empirical results we obtained should be compared with the results of previously conducted studies.

Andreyeva et al. (2010) assess the price elasticity of demand for some consumer goods. The authors identify low price elasticity for certain goods: the indicators for milk and eggs are 0.59 and 0.27, respectively. Since socially significant goods included in the official list in Russia (including milk and eggs) also have a low price elasticity of demand, we can conclude that the existing studies based on data from other countries correspond to the results of our study.
Green et al. (2013) examine the price elasticity of certain food products in countries with different levels of consumer income. The authors obtain an estimate of the elasticity of demand for eggs, ranging from 0.36 to 0.54 depending on the income level of the country's population. This study also confirms the low price elasticity of demand for this socially significant product in various countries which was also included in the group with low price elasticity.

Huang and Lin (2000) study the price elasticity of demand for individual food products. Among the estimates calculated by the authors, one can highlight the elasticity of demand for eggs ranging from 0.58 to 0.68 depending on the income level of the population group within the country. This study also confirms the conclusions obtained in our work.

Yu and Shimokawa (2016) study the impact of price increases on food sales in six African countries. One of the results is estimates of price elasticity of demand for several product groups. According to the authors’ calculations, the price elasticity of demand ranges from 0.12 to 0.32 for fats and oils, from 0.21 to 0.257 for fruits and vegetables depending on the country under study, rural and urban populations. The goods under study are characterized by inelastic demand, which corresponds to the estimates for the group of socially significant goods we obtained in our article.

Bergtold et al. (2004) assess the price elasticity of unconditional demand for a wide range of goods. Among other things, the authors calculate the corresponding indicator for the goods we studied in our paper. The absolute value of the price elasticity of demand is 1.07-1.08 for tea, 0.7-0.86 for milk, and 0.7 for cheese depending on the segmentation of consumer groups by income. The authors obtain results that do not correspond to our research. The discrepancy can be explained by the different importance of the same goods in different countries in accordance with their consumption traditions.

In addition, Torres (2015) calculates the price elasticity of demand for food products by groups of households with different incomes. The scholar assesses the price elasticity of demand for vegetable oil, whose absolute values range from 0.648 to
0.804 for various groups of households. This indicator for sugar and confectionery (desserts) is 0.976. The price elasticity of demand for butter is close to the results of our study, and different indicators for sugar and confectionery products are explained by differences in the composition of product groups (in our study only sugar was studied).

Thus, existing publications estimate the price elasticity of demand for some goods included in our analysis. Consequently, we can compare the results. The indicators of price elasticity of demand for socially significant goods in Russia basically correspond to the data we obtained. Differences are explained by the different importance of certain goods for consumers in different countries.

**Conclusion**

Based on the study results, we drew the following conclusions.

This article substantiates that socially significant goods should be defined with due regard to the share of product sales in the total retail turnover. A socially significant product must have the necessary characteristics of the corresponding group, as well as ensure healthy and complete consumption. In addition to essential goods, socially significant goods should comprise those goods that play a significant role in the consumption of people in a particular country.

In the course of this study, we determined three groups of goods depending on their belonging to socially significant goods, including socially significant goods according to the official state list; goods that meet socially significant characteristics but are not included in the official list; and goods that are not socially significant.

We also analyzed the price elasticity of demand for the three specified groups of goods to show the dependence between their sales and price dynamics.

Comparing the results obtained with the objective set, we confirmed the hypothesis about the low price elasticity of demand for socially significant goods only in relation to the group of goods included in the official list by the state (essential goods). For
the two other groups of goods, the hypothesis was not confirmed, including for goods that have the necessary characteristics but are not included in the official list (their price elasticity of demand was the highest). For non-essential groups of goods, the price elasticity of demand cannot be the basis for identifying their social significance. For such products, further research is required to determine indicators that significantly affect their sales volume.

Thus, it is advisable to tighten government restrictions on the prices of socially significant goods, and such a measure should be applied to all such goods, whose list must be supplemented with healthy consumption goods that are highly demanded by the country’s population. In relation to all socially significant goods, a requirement should be established for the mandatory availability of such goods for sale, which will ensure their stable consumption during periods of rising prices.

From the practical perspective, the study results can help develop the necessary measures for regulating markets for socially significant goods, as well as for application in trade organizations when forming an assortment of socially significant goods and setting prices for them with due regard to the importance of such goods for consumers.

We associate the prospects for further research with modeling the relationships between sales of socially significant goods not included in the official list by the state and the significant factors influencing them to determine the key conditions for the development of sales and consumption of these goods.

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