ANALYZING REGIONAL DIFFERENCES IN THE CONDITION AND DEVELOPMENT OF TRADE IN RUSSIA

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Received 13 May 2018; accepted 25 November 2018; published 30 December 2018

Abstract. Taking into account the importance of trade in general, determined by its functions, and the important role of trade in the Russian economy, the urgent task is to ensure the sustainable development of trade in Russia, given the peculiarities and needs of each region. As such, the study is devoted to the analysis of regional differences in the condition and development of trade in Russia. The goal of the study is to group Russian regions based on the results of estimating the condition and development of trade, and to identify the regions that need state support for trade most, as well as those that can serve as examples of the best practices in the trade industry development. The method of the study is based on a combination of indicators of condition and changes in trade, which are found taking into account nine statistical indicators that comprehensively describe different aspects of the trade industry. The outcomes confirm the existence of regional differences in the Russian trade and indicate that most of the Russian regions are described by a low level of trade development against its growth, while only a few regions demonstrate intensive development of trade, which continues to grow. State support for trade is fundamental for the Republic of Sakha (Yakutia), the Republic of Dagestan, the Chukotka Autonomous Region, the Jewish Autonomous Region, and the Republic of Ingushetia. The highest level of trade development and growth is characteristic of Moscow, the Moscow region, and the Novosibirsk region. The latter is recognized as the region with the best practices of trade development, which other regions can adopt. The results can be used by the statistics bodies and state authorities to monitor the condition and development of trade in Russian regions and will contribute to better accuracy and feasibility of managerial decisions in trade.

Keywords: trade; Russian regions; regional differences


JEL Classifications: F10, P25, O10
1. Introduction

Trade is important in the socioeconomic development of states and regions. As a form of the commodity circulation, trade allows to reimburse the production costs and obtain a surplus product, as well as create the conditions for new reproduction cycles. As a branch of the economy, trade delivers goods to consumers or provides access of the population to material goods produced by numerous industrial and agricultural enterprises in different territories and at different times.

Trade enterprises interact with other sectors of the economy (industry, agriculture, transport, construction, communications, utilities, etc.) in the course of their economic activity and influence their development. Given that the population spends most of their incomes on purchasing consumer goods, trade is inextricably linked with the financial stability of the state. Being a major borrower, trade closely interacts with the state lending system (Bragin, Ivanov & Stukalova, 2009). Trade is also an important budget revenue generating industry and provides employment for the population (Ivanov, Mayorova & Nikishin, 2016, Malgas, Khatle & Mason, 2017).

Trade creates 15.9% of the gross domestic product and 11.1% of the revenues of tax payments and fees to the budget system in the modern Russia, provides jobs for 18.9% of the employed population, and is a type of activity of 33.3% of organizations and 36.7% of private entrepreneurs (Rosstat, 2017). Trade outstrips most other types of economic activity by these indicators, in some cases trailing only mining, processing industries and operations with real estate.

At the same time, the regional trade is described by significant regional differences, which are manifested in the level of consumer prices, provision of the population with trade facilities and retail space, development of network and distance trade, development of small enterprises and private entrepreneurship in trade, condition of the logistics and transport infrastructure, etc. (Perevyshin, Sinelnikov-Murylev & Trunin, 2017; Kuznetsova, 2015; Ivanov, Mayorova & Nikishin, 2016; Strategy for trade development in the Russian Federation for 2015-2016 and the period until 2020, 2014). Taking into account the importance of trade in general, determined by its functions, and the important role of trade in the Russian economy, the urgent task is to ensure the sustainable development of trade in the territory of Russia, given the peculiarities and needs of each region. As such, the study is devoted to the analysis of regional differences in the condition and development of trade in Russia.

The goal of the study is to group Russian regions based on the results of estimating the condition and development of trade, and to identify the regions that need state support for trade most, as well as those that can serve as examples of the best practices in the trade industry development.

2. Literature review

Transformation of the state-planned economy into a market economy, which began in Russia in the 1990s, had different impact on the development of its regions. Some regions have successfully adapted to the new conditions, while others have faced economic decline or stagnation. Multiple studies that analyzed differences in the value of the gross regional product, production and consumption volumes, income and expenditures of the population in the regions (Lavrovsky, 1999, Mikheeva, 1999, Hanson, 2001, Fedorov, 2002, Bradshaw & Vartapetov, 2003) indicate that the economic inequality among the Russian regions has increased after the collapse of the Soviet Union. As a result, the Russian economy is currently described by high spatial differentiation and regional inequality (Mirolubova & Biryukov, 2015).
Regional differences in trade are manifested in various aspects. The Strategy for the trade development in Russia (2014) notes the heterogeneity of the trade formats development across the state territory. The share of Moscow and St. Petersburg accounts for about 50% of retail space of modern formats, the share of other cities with a million-plus population accounts for another 30%. As such, the remaining residents, accounting for 75% of the population, have only 20% of supermarkets and hypermarkets. At the same time, remote and hard-to-reach territories often experience a shortage of retail properties or even their absence.

Kuznetsova (2015) proves the existence of regional differences in Russian chain retailing and identifies the factors that influence their establishment, such as remoteness from the European part of the state and low transport accessibility, nature of foreign economic relations with neighboring countries, sociopolitical situation, features of the administrative territorial division, natural and climatic conditions and lifestyle of the population.

The results of the evaluation of the social efficiency of trade based on indicators describing its impact on consumers, employees and the state allowed to distinguish four groups of Russian regions with the level of social trade efficiency from "below average" to "high" (Ivanov, Mayorova & Nikishin, 2016).

Based on the official statistics, Perevyshin, Sinelnikov-Murylev & Trunin (2017) argues that the cost of the consumer goods basket in different Russian regions can differ more than twofold. At the same time, the differentiation of prices among some Russian regions exceeds the price differences among the US states, as well as among the countries of the Eurozone.

The detailed studies of trade in some Russian regions are also very important. They include works devoted to the evaluation of the resource potential of retail trade in the regions of the Far Eastern Federal District (Noskova, 2016), the development of retail trade as a competitive factor in the Voronezh region (Chudakova, 2015), the trade condition and development trends in the Central Black Earth region (Agaeva & Vasilchenko, 2014), the Trans-Baikal region (Shnorr, 2014), the Republic of Crimea (Komissarova, Mayorova & Mayorova, 2018), the Novosibirsk region (Petrochenko, 2015), the Ivanovo region (Vasilchuk, 2017), the Kirov region (Cheglakova, 2017), and the Leningrad region (Nikonorov, 2017). Despite the different scale of studies, their results indicate the peculiarities of trade development in some Russian regions and confirm the presence of strong regional differences.

Given the outcomes of earlier studies, the approach to analyzing regional differences in Russian trade is modified in the following aspects in this study: firstly, it is based on a set of indicators that comprehensively describe various aspects of trading activity; secondly, it ensures the comparability of data across regions, which enables a systemic analysis; thirdly, both the current condition of trade in the regions and its changes are assessed.

3. Methods

When analyzing regional differences in Russian trade, it is proposed to apply a combination of the factors related to the condition and change found using the following indicators:

x1 - Turnover of retail trade per capita, rub.;

x2 - Index of physical volume of retail turnover, % to the previous year;

x3 - Share of retail trade networks in the formation of goods turnover, %;

x4 - Sale of goods in retail markets and fairs, mln rub. ;

x5 - Number of trade enterprises and organizations, pcs.;

x6 - Number of small trade enterprises, pcs.;

x7 - Investments in trade fixed assets, mln rub.;
x8 - Retail area of modern formats per 1,000 people, sq.m.;
x9 - Share of online sales, %.

The selected indicators must be reduced to a single measurement scale to find the regional trade condition factor, i.e. their normalized values must be found (1):

\[ N_i = \frac{x_i - \min x_i}{\max x_i - \min x_i} \] (1)

where \( N_i \) is the normalized value of the i-th indicator;
\( X_i \) is the value of the i-th indicator.

The normalized indicators are comparable and allow to find the coefficient of the regional trade condition using the following formula (2):

\[ S = \sqrt{\frac{\sum_{i=1}^{n} N_i^2}{n}} \] (2)

where \( S \) is the coefficient of the regional trade condition;
\( N_i \) is the normalized value of the i-th indicator;
\( n \) is the number of indicators.

The coefficient of the trade condition describes the level of its development in the period under review. In general, the condition coefficient above 0.5 indicates a high level of trade development in the region, while the condition coefficient below 0.5 indicates a low level of trade development.

Intermediate coefficients for each selected indicator must be found to determine the coefficient of trade change in the region (3):

\[ K_j = \frac{x_j \times (m - 1)}{\sum_{j=1}^{m-1} x_j} \] (3)

where \( K_j \) is the coefficient of the indicator change in the j-th period;
\( X_j \) is the indicator value in the j-th period;
\( m \) is the number of periods under review.

The coefficient of change in the regional trade in a particular period can be found, based on the intermediate coefficients for each indicator (4):

\[ D = \sqrt{\frac{\sum_{i=1}^{n} K_i^2}{n}} \] (4)

where \( D \) is the coefficient of trade change in the region in the period under review;
\( K_{ij} \) is the coefficient of change of the i-th indicator in the period under review;
n is the number of indicators.

The coefficient of change describes the dynamics and indicates either the development of trade in the region (if the value is more than 1) or its decline (the value is less than 1).

The initial data for the analysis of regional differences in the trade condition and development in Russian regions were the materials of the Federal State Statistics Service of Russia (Federal State Statistics Service, n. d.) presented in the statistical yearbooks "Regions of Russia. Socioeconomic indicators" 2014-2017, "Trade in Russia" 2014-2017, as well as in the section "Technological Development of the Economy Branches". As of May 2018, the most recent data were for 2016. This is why the coefficient of the trade condition in the regions was calculated based on data for 2016, and indicators for 2013-2016 were used in the calculation of the coefficient of change in regional trade.

4. Results

The highest level of trade development is typical for Moscow. Aside from Moscow, regions with a high level of trade development in Russia include the Moscow region, the Novosibirsk region and Saint Petersburg. Most regions (94%) demonstrate a trade condition coefficient of 0.1 to 0.5. The lowest level of trade development in 2016 was recorded in the Republic of Ingushetia, where the value of the corresponding coefficient was 0.01.

Trade in the Republic of Crimea shows the highest development paces in the Russian Federation. The trade sector is developing in most regions (93%), as evidenced by the coefficient of its change exceeding 1. Trade declines in 5 Russian regions: the Jewish Autonomous Region, the Republic of Sakha (Yakutia), the Republic of Dagestan, the Chukotka Autonomous Region, and Saint Petersburg (Table 1).

Table 1. Grouping of Russian regions based on the coefficients of the trade condition and change, 2016 (Federal State Statistics Service, n. d., authors' calculations)

<table>
<thead>
<tr>
<th>Region</th>
<th>S*</th>
<th>D**</th>
<th>Region</th>
<th>S*</th>
<th>D**</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&gt;0.5, D&gt;1</td>
<td></td>
<td></td>
<td>S&gt;0.5, D&lt;1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moscow</td>
<td>0.89</td>
<td>1.19</td>
<td>Republic of Mordovia</td>
<td>0.29</td>
<td>1.18</td>
</tr>
<tr>
<td>Moscow region</td>
<td>0.59</td>
<td>1.37</td>
<td>Ulyanovsk region</td>
<td>0.28</td>
<td>1.06</td>
</tr>
<tr>
<td>Novosibirsk region</td>
<td>0.52</td>
<td>1.06</td>
<td>Republic of Buryatia</td>
<td>0.28</td>
<td>1.01</td>
</tr>
<tr>
<td>S&gt;0.5, D&lt;1</td>
<td></td>
<td></td>
<td>Saratov region</td>
<td>0.28</td>
<td>1.09</td>
</tr>
<tr>
<td>Saint Petersburg</td>
<td>0.53</td>
<td>0.96</td>
<td>Volgograd region</td>
<td>0.28</td>
<td>1.58</td>
</tr>
<tr>
<td>S&lt;0.5, D&gt;1</td>
<td></td>
<td></td>
<td>Kurgan region</td>
<td>0.28</td>
<td>1.01</td>
</tr>
<tr>
<td>Tomsk region</td>
<td>0.47</td>
<td>1.31</td>
<td>Kirov region</td>
<td>0.26</td>
<td>1.76</td>
</tr>
<tr>
<td>Nizhny Novgorod region</td>
<td>0.45</td>
<td>1.15</td>
<td>Mari El Republic</td>
<td>0.26</td>
<td>1.27</td>
</tr>
<tr>
<td>Chelyabinsk region</td>
<td>0.45</td>
<td>1.31</td>
<td>Ivanovo region</td>
<td>0.26</td>
<td>1.40</td>
</tr>
<tr>
<td>Republic of Tatarstan</td>
<td>0.44</td>
<td>1.14</td>
<td>Kursk region</td>
<td>0.25</td>
<td>1.37</td>
</tr>
<tr>
<td>Kemerovo region</td>
<td>0.42</td>
<td>1.04</td>
<td>Belgorod region</td>
<td>0.25</td>
<td>1.39</td>
</tr>
<tr>
<td>Leningrad region</td>
<td>0.41</td>
<td>1.24</td>
<td>Komi Republic</td>
<td>0.25</td>
<td>1.88</td>
</tr>
<tr>
<td>Arkhangel'sk region</td>
<td>0.41</td>
<td>1.86</td>
<td>Republic of Bashkortostan</td>
<td>0.24</td>
<td>1.05</td>
</tr>
<tr>
<td>Perm region</td>
<td>0.39</td>
<td>1.21</td>
<td>Smolensk region</td>
<td>0.24</td>
<td>1.64</td>
</tr>
<tr>
<td>Kaliningrad region</td>
<td>0.38</td>
<td>1.76</td>
<td>Udmurt Republic</td>
<td>0.24</td>
<td>1.08</td>
</tr>
<tr>
<td>Kostroma region</td>
<td>0.37</td>
<td>1.89</td>
<td>Chuvash Republic</td>
<td>0.24</td>
<td>1.61</td>
</tr>
<tr>
<td>Sverdlovsk region</td>
<td>0.37</td>
<td>1.15</td>
<td>Tambov region</td>
<td>0.23</td>
<td>1.02</td>
</tr>
<tr>
<td>Tyumen region</td>
<td>0.37</td>
<td>1.04</td>
<td>Amur region</td>
<td>0.23</td>
<td>1.17</td>
</tr>
</tbody>
</table>
As such, there are only three regions in the group of regions where trade has a high level of development and at the same time continues to grow: the Moscow and Novosibirsk regions and Moscow.

The only region of Russia where trade shows a high level of development while declining is Saint Petersburg. The Jewish Autonomous Region, the Republic of Sakha (Yakutia), the Republic of Dagestan and the Republic of Ingushetia are the most problematic regions, where trade has a low level of development and continues to decline.

Most Russian regions are described by the low level of trade development with its growth to a different extent. The latter include the Republic of Ingushetia, where trade currently has the lowest level of development but shows significant growth, and the Republic of Crimea – a region with the highest paces of trade development (Figure 1).
As such, the most of the Russia’s territory is described by a low level of trade development, which still demonstrates growth. At the same time, two problematic regions (the Republic of Sakha (Yakutia) and the Chukotka Autonomous Region), where trade declines at the low level of development, are large regions occupying a significant area of the state. At the same time, positive results are shown by cities with federal status: Moscow and St. Petersburg, as well as the Moscow region, which is inferior in size to most regions (Figure 2). As such, regional differences in Russian trade are exacerbated in the territorial context.
5. Discussion

The conducted analysis confirmed the existence of regional inequality in Russian trade, which Perevyshin, Sinelnikov-Murylev & Trunin (2017) and Kuznetsova (2015) noted, for example. Given that Russia occupies one eighth of the Earth's area and includes poorly populated territories, the presence of regional differences is expected (Bradshaw & Vartapetov, 2003). The fact that most regions demonstrate a low level of trade development to a varying degree correlates with the conclusions of Miroliubova & Biryukov (2015), according to which most of the Russian regions are unattractive for business and only a few are attractive. Territorial differences are also explained by different density of population. As of the end of 2016, the population of the city of Moscow was 12.9 times that of the population of the Republic of Sakha (Yakutia), or 247.6 times that of the population of the Chukotka Autonomous Region (Federal State Statistics Service, n. d.). In a similar way, the size and density of the population in the Moscow region and Saint Petersburg significantly exceed the population of regions that are problematic in terms of the trade condition and development.

In contrast to Moscow, Saint Petersburg, and the Moscow region, the Novosibirsk region can be considered a more typical region of the Russian Federation. At the same time, as it was said earlier, the Novosibirsk region is described by a high level of trade development and its further growth. In this regard, the Novosibirsk region should be seen as an example of the best practices, which should guide the regional authorities in determining the priority tasks of trade development and the way of their solution. Petrochenko (2015) notes that the main task of the Novosibirsk region in the consumer market is to create an efficient commodity distribution system that meets the modern requirements for the development of the regional economy and the demand of population for consumer goods and services at affordable (moderate) prices within the territorial proximity.
In accordance with the above task, the main areas of trade development in the Novosibirsk region are: development of competition in the regional food market, increasing the availability of goods, improving the quality of trade services and providing consumers with safe goods of high quality, creating conditions for encouraging trade in small and remote settlements, shaping a developed system of commodity distribution that would create favorable opportunities for local producers and small businesses, and constant monitoring of food quality and food safety (Petrochenko, 2015).

The Republic of Crimea is another interesting region in terms of trade development. After the 2014 political events, significant changes occurred in the social and economic situation in the region, which influenced the trade sector: the commodity distribution system was destabilized, the retail trade turnover in comparable prices declined, the prices of consumer goods and the cost of a minimum food basket increased, the share of profitable trade organizations in their total number decreased (Komissarova, Mayorova & Mayorova, 2018). The change in the status of Crimea in 2014 influenced the corporate social responsibility of trade enterprises, as its level in the Ukraine's trade is generally higher than that in the Russia's trade (Kornilova & Karashchuk, 2017). At the same time, positive trends were observed in the Crimea trade in the following years. The change coefficient of 2.14 is the highest among the Russian regions and indicates the most intensive trade development. In this regard, the measures taken by federal and regional authorities regarding the trade in the Republic of Crimea in a difficult socioeconomic situation are efficient and can be seen by other regions as an example of the best practices.

Conclusions

Analysis of regional differences in the trade condition and development in Russia has led to the following scientific results.

1. A method of evaluating the condition and development of regional trade has been developed. The method combines coefficients of the trade condition and change calculated on the basis of 9 statistical indicators that comprehensively describe different aspects of the trade sector. The suggested method ensures comparability of results across regions and considers for both the current condition and the ongoing changes. The method can be used by the statistics and state authorities to conduct regular monitoring of the trade condition and development in Russian regions.
2. The existence of regional differences in Russian trade has been confirmed. Russian regions are grouped on the basis of indicators of the condition and changes in the trade sector. It has been found that most of the Russian regions are described by a low level of trade development at its growth. At the same time, only a few regions demonstrate a high level of trade development, which continues to grow. This fact justifies the need to strengthen the state regulation in the field of regional trade in Russia.
3. Problematic regions have been identified, where trade has a low level of development and declines. They include the Republic of Sakha (Yakutia), the Republic of Dagestan, the Chukotka Autonomous Region, and the Jewish Autonomous Region. These regions need state support for the trade sector most. Special attention at the federal level should also be paid to the Republic of Ingushetia, where the level of trade development is the lowest in Russia.
4. Regions demonstrating a high level of development and continuing growth of trade have been identified. They include Moscow, the Moscow region and the Novosibirsk region. Given the differences in the socioeconomic development of Russian regions in general, the Novosibirsk region can be regarded as the main example of the best practices in regional trade. The Republic of Crimea is another positive example, the experience of which in restoring the trade sector can be applied to other regions.

The presented results will improve the accuracy and feasibility of managerial decisions in the field of trade adopted by the state authorities at different levels. In turn, given the great socioeconomic importance of trade, its development in the regions will contribute to the socioeconomic stability of the entire state.
References


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