

Non-stationary trade objects: new network types of territorial development

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Abstract. The aim of the study is to develop a conceptual project for the course of non-stationary trade in the city area. Theoretical researches were carried out using methods of analysis and synthesis of existing scientific developments in the field of territorial organization of a consumer market at the municipal level. In practice the observation method and the methods of static analysis were used to determine the retail floorspace capacity level as well as the walkability level of retail facilities in an urban environment. On the basis of the study the following results were obtained: the role of non-stationary trade objects as a factor in the integration of formats of the distribution chain and territorial consolidation, as well as the need for providing a legislative framework for the list of specific types of non-stationary trade objects in the municipal territory, is proved; the effectiveness of building-up a three-level network of non-stationary trade objects on the walkability principles in urban areas to maximize the proximity of trade services to the population, to meet the demand of low-income citizens, to support local commodity producers, is justified; the idea of developing a mobile application for all operating systems based on a municipal mapping system with functions of selecting a route and a suitable shopping facility in terms of range of products, was proposed.

1 Introduction

The territorial development of trade in the context of the economic crisis is of particular importance. As opposed to the sectoral approach, which prioritizes the increase in return of an industry and commercial enterprises, the territorial concept is based on the socio-economic development of a territory in terms of meeting the needs of the population in trade services with minimal costs.

The subject of the study is the development of non-traditional formats of trade services in a city.

The study showed the complexity and heterogeneity of the theoretical framework, the lack of terminological certainty in the legislation, the lack of an effective economic mechanism for the integration of non-stationary trade objects in the urban environment.

The listed reasons with reference to the subject of the study necessitated the development of a three-level network of non-stationary trade objects based on the principle of pedestrian shed.

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2 Methods and materials

The study was conducted using methods of analysis, synthesis, based on integration theories and concepts, scientific developments on the problems of territorial organization of the consumer market, network forms of business organization in a city.

The fundamental concept for our study is “service” as it is. Numerous articles are devoted to the study of the core service. In fact, scientists have come to a consensus: a service as a type of activity is related to meeting human needs, and the process of providing a service is called service.

If we consider retail services, then the activity is defined as the economic one on selling consumer goods. Therefore it is necessary to carry out a set of measures such as purchase, storage, delivery and preparation of goods for market.

Here it is necessary to mention the total product concept of T. Levitt, who justified the formation of the product value for a consumer from the mandatory and additional attributes. The value is not only the product but the service, which includes the availability, atmosphere of a service, customer communication with service personnel, interaction with other customers.

The complexity of a trade service is reflected in GOST R (Russian National Standard) 51304-2009 “Trade services. General requirements”: “...a retail service includes: the sale of goods; assisting the buyer in making a purchase and while using the product; information and consulting services; creating comfort for customers”.

The study affirmed the opinion that the provision of trade services is associated with the process and with the result. In the process of creating a service all actors of a supply chain, including buyers themselves, take part. The result is the formation of satisfaction of a particular client, making a profit by a trade company and consolidation of its market position. P. Drucker generally considers the satisfaction of needs of a buyer the only justified goal of the business.

3 Research results

3.1 Legal foundations for the functioning of non-stationary trade objects in the Russian Federation

Trade services provided in a non-standard format have features defined by the law. In accordance with the law, Article 2 of the Federal Law of December 28, 2009 No 381-FZ (as amended on December 25, 2018) “On the Principles of State Regulation of Trade Activities in the Russian Federation”, a non-stationary trade object is “a shopping facility, which is a temporary building or a temporary construction, without a strong connection to the ground, regardless of the presence or absence of connection (technological connection) to the utility networks, including a mobile structure”.

We found out that the law does not contain a specific list of such objects, but the classification is in the state standard “GOST R 51303-2013. Trade. Terms and definitions”: auto shop (commercial van, sales van), commercial (vending) machine, tank truck, retail pavilion, kiosk, concession stand, melon or Christmas tree stall, mobile concession stand, retail gallery.

As distinguishing features of non-stationary trade objects we shall single out the limited life time, non-permanent type of these structures, absence of a strong connection to the ground. Therefore, these objects do not require a construction permit in accordance with Article 51 of the Town Planning Code of the Russian Federation, as well as placement can

be carried out without providing a land plot (Articles 39.33, 39.36 of the Land Code of the Russian Federation).

Article 10 of the law “On the Principles of State Regulation of Trade Activities in the Russian Federation” states that non-stationary trade objects may be located on land plots and in buildings and structures that can be publicly, municipally and privately owned. In the first and second cases the legal basis is the allocation scheme. The rules of including objects in the scheme when using public property were approved by Decree of the Government of the Russian Federation of September 29, 2010 No. 772 and determine the need to obtain the consent of state government body. At the regional level a statutory act of a constituent entity of the Russian Federation establishes the procedure and conditions for the allocation of a non-stationary trade object, and hereon, the authorized local government develops an allocation scheme.

This leads to the association with the peddling trade, which should not be equated with non-stationary trade objects. So, the Constitutional Court of the Russian Federation in its determination of January 16, 2018 No. 10-O pointed out the inadmissibility of the enforcement of standards and rules for including objects in the above scheme to the peddling trade.

3.2 Non-stationary trade objects (NTOs) as a factor in the integration of the formats of distribution chain and territorial consolidation

Despite the rapid growth of hypermarket and supermarket chains, the problem of walkability remains half-solved. It is non-stationary trade objects that provide the living space with the necessary trade formats to supply the population with a wide variety of goods and food products at competitive prices.

NTOs determine the need to consider a territorial development of trade. This raises the question of strengthening integration in the distribution chain.

As the most in-depth study of the problem we consider the work of J.P. Schnorr “The state and development of the territory trade under globalization: theory, methodology, practice”. The author made a deep study of the problem of economic integration and gives the most fair, in our opinion as well, the definition of E.A. Kolodina, work “Inter-regional economic integration: the experience of system analysis”, “...economic integration means the interweaving, interpenetration and fusion of the reproduction processes of various business entities, separated in space, turning them into a holistic, internally merged economic mechanism... The unifying efforts of business structures help to keep the economic system, reduce the level of risks and dependence on the adverse impacts of environmental factors, and maintain development stability”.

For the purposes of our study we concretize the territorial location as an internal municipal consumer market, that better reflects the modern integration of business structures based on a non-standard network approach using non-stationary trade objects.

We agree with J.P. Schnorr, that “the domestic consumer market is a market for consumer goods, that provides essential services for the population of a designated area”.

For the purposes of our study, in the context of strengthening integration processes in territorial consumer markets, it is important to determine the new nature of the network approach to trade development. The novelty of understanding lies in the territorial development of this field based on the logistization principles and on mobile technologies.

The format of trade shall be understood as “...a shopping facility formed as a result of the industrialization of trade, in the conditions of modern information, logistics and trade technologies that provide high quality of commercial services and the effect of the scale of activity”. It enabled us to single out the network format of non-stationary retail.

Special attention should be made of the concept of logistics integration at the territorial level in retail trade and public catering, proposed by U.G. Kuzmenko and several other authors, work “Methodology for the logistic integration of trade services from the perspective of a tiered systems approach” [1-7]. The core element of the concept is the idea of a “logistics mix”, which provides the right product in the right quantity and quality at the right place at the right time for as many consumers as possible at the lowest costs. Constantly changing demands of the population on the product range and quality of service facilitate the consolidation of the industry, on the one hand, and, on the other, intensify competition between companies of different trade formats.

As part of the study we identified the main trend: non-stationary trade objects are placed directly in locations of consumers, in contrast to hypermarkets and supermarkets, which can be far away, but offer such an assortment and prices that customers can go regardless of distance. Thus, provision of infrastructure for a territory in the context of a trade format comes to the fore.

3.3 Project of the non-stationary trade development in the urban area

The study allowed us to develop a conceptual framework for the development of non-stationary trade on the territory of the city Rostov-on-Don.

Low level of basic wellbeing of the population with a trade area of 0.521 square meter per 1 resident of Russia on average. In Rostov-on-Don - 0.542 square meter per 1 resident. According to the municipal program Management of the property and land complex of the urban district “City of Rostov-on-Don” it is only by 2025 planned to reach the indicator of 1,072 square meter per 1 resident. In Canada 3.1 square meters of retail space per resident, in Finland it is 1.5 square meters, in European countries this index does not fall below 1 square meter .

Determination of the actual needs of the population in non-stationary trade objects should be based on walking distance, including for families with children of preschool age, as well as the midlife and older people, taking into account the weight of purchases.

The potential of non-stationary trade objects lies in the possibility of bringing trade services closer to the population, meeting seasonal demand of the population for certain goods, satisfying the demand of low-income citizens, and supporting local commodity producers.

Project implementation based on a three-level network:

1. The network of block pavilions has a significant impact on the prices of shops and markets in the direction of their decline, and also partially solves the problem of food supply for the population and the support of local commodity producers.

2. Mobile commerce is primarily street food using food trucks. A mobile cafe does not require a monthly rental fee and can reach more customers. This is the most important development factor in the tourism industry in the region.

3. Vending network (vending machines) has its own position formats (waiting rooms, study places, SECs (Shopping and Entertainment Centres), etc.). There are about 4.5 million vending machines in Europe, about 6 million in Japan, and about 7 million in the USA. But in terms of per capita, there are the most of them in Japan — one per 23 people. According to American statistics every 15 minutes more than 3.5 million coins are dropped into vending machines located in the United States [8-9].

Development of a mobile application for all operating systems based on a municipal mapping system with functions of selecting a route, a suitable trade object in terms of assortment, with push notifications.

4 Discussion

Let us prove the viability of the proposed network format for non-stationary trade. First, we evaluate consumer preferences and expectations that are typical for today's struggling economy:

- the share of costs for food and utilities and communal payments in the structure of household budgets is growing;
- additional income is directed not to consumption, but to saving;
- the share of families saving on food is increasing;
- price becomes more important than quality;
- consumers switch to cheaper outlets.

Let us list the logistic principles of the functioning of a non-stationary trade objects network:

- the principle of walkability and saving time for visiting a trade object;
- the proximity of non-stationary trade objects to the intersections of pedestrian flows within urban areas;
- specialized placement of such objects in order to optimize the socio-economic development of the territory and the best satisfaction of the needs of various customer segments.

Let us briefly describe the institutional structure of the retail trade turnover of the Rostov Region in 2019: the share of small businesses outside the market is 47%, large trade organizations - 42.4%, the rest is in retail markets and fairs. Local businesses have the potential to saturate the local retail chain with food.

At the same time fierce competition from manufacturers from other regions of Russia, that supply their products to stores of large international and federal chains, does not allow to radically change the situation and significantly increase the share of sales through these channels. This fact stimulates the development of another network format, which is presented in our proposed concept.

Let us consider the first and second levels of the network, which are represented by block pavilions and by mobile objects in the form of food trucks. In most countries these facilities are subjects to unified statutory documents.

The term mobile trade object is often used and is understood as trading activity not in an ordinary store, but in tents, pavilions, sale from cars. Let us turn to the analytical materials of OECD (Organisation of Economic Cooperation and Development), which explore the global expertise in this matter (see table 1).

Table 1. The global experience in the mobile commerce regulation [10, 11]

Country	Government regulations of street trading
Thailand	Encouraging of self-employment under conditions of economic crisis by subsidizing low-income entrepreneurs. Charges have been imposed to ensure public hygiene and street maintenance. One day a week street trading is prohibited for cleaning.
Greece	The qualified products list is reflected in the Presidential Decree; a special license for street trading is required
Northern Ireland	A special law has been adopted, a license is required from a district council, which is issued only to individuals for a period of up to three years. The municipality determines the list of streets where peddling is allowed. In case of contravention of trade rules (time, location, product), the license is revoked and a fine is imposed.
Canada	Special legislation and licensing. The license validity period is one year. If several applications are submitted for one location, then a lottery is held to issue a license. Regulations are established for the storage of commodity supplies (including food) and garbage collection.

Germany	Special legislation and licensing. Additional permit to use public roads. Trade prohibition in precious metal wares, lottery tickets, securities.
Russia	Special legislation. Location in accordance with the layout of such facilities, taking into account the need to ensure sustainable development of territories and to achieve minimum standards for the provision of population with retail facilities. At least 60% of the facilities must belong to small and medium enterprises.

It should be noted that in Russia there is a fairly general legal regulation of non-stationary trade objects. On the one hand, special layouts for non-stationary street trading are the same as in other countries. On the other hand, there is no detailed regulation of the activities of sellers and there is as good as no financial support from the state in the form of concessionary fares and subsidies. For instance, there is no list of market-cleared goods, the rules for cleaning days have not been developed. Unlike foreign experience the final decision to issue a permit in Russia is made not by local self-government bodies, but by executive authorities of a constituent entity of the Russian Federation.

All countries seek to unify the appearance of stationary and non-stationary street trade objects. Let us present some observations in this area (see table 2).

Table 2. Characteristics of street trading in different countries [12]

Country/ city	Appearance	Assortment	Location	Opening hours	Organizer
Greece/ Athens	A tilt-roof serves as a limiter for the trade area of a trade object. All refrigeration and other equipment can be added only within this zone.	chips, snacks, cold drinks, cigarettes, magazines	determined by special list	24-hours	build upon an initiative of the state, which gives kiosks and stalls to entrepreneurs
USA/ New York	Kiosks always have the same shape, but sizes and colours in silver-black array can vary.	chilled drinks, newspapers, chewing gums, chocolates, phone cards, lip balm, cigarettes, lottery tickets. Goods in the foreground have a price of one dollar.	sidewalks and metro	from 8 to 20 o'clock	municipal authority
Great Britain/ London	Dome kiosks with shutters circle-wise are made of aluminium with wood imitation.	newspapers, drinks, chewing gums	at the exits from the main metro stations	from 6 to 22 o'clock	Kensington and Chelsea London Borough Council
Germany / Munich	The K67 kiosk model is a masterpiece of industrial design in the mid-20th century. Included in the collection of the Museum of Modern Art in New York, "Design of the 20th Century".	A wide assortment, including a variety of food, parking tickets	sidewalks and metro	at different times	Project Odeon-K67 (urban platform in the architecture, design and art)

We shall also mention such an object of non-stationary trade as a food truck: this is a mobile catering system, which is a special car for the autonomous catering provision. In the second half of the twentieth century in the USA, this retail format was so competitive for cafes and restaurants that it was forbidden for mobile concession stands to be located closer than 200 meters from a stationary restaurant and stay in one place for more than two hours. Currently the catering provision by organization of trade through food trucks in the USA

reached 37% of the total volume of the products sold in catering. In Los Angeles alone there are about 6 thousand food tracks [13].

In Russia the entrepreneurs' interest in the topic renewed about three years ago. At the same time, it must be acknowledged that this idea is currently attracting fewer investors because of the unregulated location issue of non-stationary trade objects of this type. A new mobile commerce law is urgently needed.

It should be noted that food trucks provide inexpensive dishes of fairly high-quality prepared right before client's eyes at the time of ordering. We believe that a trend reversal towards a healthy diet should be expected here.

Mobile commerce as a network format is in demand in places where there are not enough catering and trade enterprises: areas of new buildings, university campuses, adjacent territories of office centres, hospitals and boarding houses, recreation areas and stadiums.

For small businesses mobile commerce provides the development of an independent channel for selling their own products. The volume of necessary investments starts from 1-3.5 million roubles with a payback period of one to two years with a guarantee that the equipment itself will remain in ownership. The format has an acceptable energy intensity, can take part in various city events and provides a new niche in the labour market (worldwide, street food alone employs 2.5 billion people) [13].

Let us note an interesting point: large restaurant holding companies became interested in food trucks and street trading. The first food trucks in Russia got "Chaykhona No. 1", "Noah's Ark" Group and Ginza Project. Mobile catering or street food trade is also a factor in the development of tourism, which determines the importance of regional and municipal authorities in promoting development of this trade format.

The study showed that there is no concept of mobile commerce in the Russian legislation, so all licensing procedures for stationary objects are extrapolated to non-stationary trade objects. This contradicts the core of a mobile trade object that does not require a permanent land plot. Back in 2014, the Ministry of Industry and Trade calculated that the adoption of a law on mobile trade could provide demand for at least 48 thousand trucks for food vans and mobile shops and investments for the Russian automobile industry worth more than 33 billion roubles. For society this would translate into creating about 108 thousand new jobs in the trade sector and 30 thousand jobs in the service infrastructure [13].

The third level of the network includes vending machines. According to some reports, the annual growth rate of the trade turnover of vending devices is approximately 72% (by comparison, this index for E-commerce is about 19% per year). Rudetskaya A.V. singles out the following main characteristics of vending:

- petty retail sales;
- sales staff is not involved in sales;
- around-the-clock operation;
- the sale of goods only in standard dimensions corresponding to a particular vending device;
- customers are provided with product samples, and the purchase is made entirely on the basis of self-service [14].

Traditionally, a vending machine as a non-stationary object is an information technology complex for the sale of goods, food, services for cash or bank transfer.

Coffee machines account for 39%, service machines occupy 20% of the market, and snack machines account for 18%. Even under conditions of the economic crisis profits from coffee equipment increase by 15-20% annually. [14, 15].

As a part of the study we identified the most important factors in the development of a vending network in an intra-city area:

- location as close to the customer as possible;
- time savings for customers;
- using the trend of a healthy lifestyle;
- the possibility of selling associated goods and services;
- speed and hygiene of sales;
- device branding opportunity;
- the use of energy-saving technologies, solar panels;
- cost reduction due to no-staffing and short payback period;
- application of modern technologies of control, accounting and monitoring.

In Russia there are about 217 thousand vending machines. A survey of Moscow residents showed that 47.5% of them are ready to buy goods and products, provided they are located in convenient places. In Russia there are 1,500 buyers per device, in Norway - 60, in the USA - 40, in Japan - 20 buyers. In Turkey alone, the shortage of vending capacities exceeds the figure of Russia - 1920 buyers per machine [14, 15].

It should be noted that in Russia every fourth machine operating on the market is assembled domestically and its price ranges from 90 to 180 thousand roubles, in contrast to imported devices with a price of 500-600 thousand roubles.

In addition, the format of the industry is changing: vending points are being enlarged, vending cafes and vending self-service stores appear. For example, in London, vending cafes of healthy food under the brand name "Honest Café", in Moscow, a vending cafe "Healthy Food" of the "Territory of a healthy lifestyle Group". Thus, the potential of the vending market was and remains significant.

5 Conclusion

Based on the results of the study the following measures are proposed to address the identified issues and problems:

1. It is necessary to keep track of needs of the population in non-stationary trade objects, that determines the importance of using a marketing concept to identify the most promising places for placement of non-stationary trade network objects.
2. It is worthwhile to divide all the objects of the non-stationary trade network into several classes (categories) according to the rental price depending on location and pedestrian traffic, social significance of the activity type of a potential tenant.
3. To separate objects that carry out trade activities on mobile devices (mobile coffee houses, food trucks) in a category of their own and determine the order of their functioning.
4. To use a single stylistic and visual design of non-stationary trade network objects, developed with taking into account the selected class (category) and location to maintain uniformity.
5. To create a unified information base of non-stationary trade objects network to ensure transparency of the mechanism for obtaining the right to lease them.
6. To develop a mechanism for providing non-stationary trade objects for producers of the Rostov region who want to sell their products directly to the population.
7. To develop a mechanism for identifying potential demand of the population as a response to the installation of new non-stationary trade objects.

The proposed project for the development of a three-level urban network of non-stationary trade objects will support small and microbusinesses, ensure competitive pricing and lower prices for end consumers, increase the occupational level and, respectively, increase the money demand for goods, food and services in the region.

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