
Marketing Management in Urban Passenger Transportation Innovations

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Abstract:

Purpose: This main aim of the article is to explore possible approaches to innovation marketing management by the example of urban passenger transportation.

Design/Methodology/Approach: In modern conditions with the digitalization of the economy enterprises that provide transportation services are aimed at managing through artificial intelligence. Modern transport depends on the preferences of the population, based on philosophy of automation, intellectualization while at the same time is focused on the quality of transportation, elimination of losses and cost reduction. The specifics of marketing activities in the urban passenger transportation market is of particular importance in this study, taking into account the formation of the marketing innovation toolkit in the urban passenger transportation market under these specifics.

Findings: A model for innovational marketing management in the urban passenger transportation sector was developed and justified, which includes six key innovation management blocks based on marketing functions: research, forecasting, information, organizational, advertising and practice.

Practical implications: In practice, it is about creating a concept necessary for the provision of transport services for passengers transportation, based on the use of innovational marketing. The basic directions for the introduction of innovations at the enterprises of urban passenger transport are proposed.

Originality/value: In the field of urban passenger transportation in the digital economy, new opportunities are opening up for development by applying innovational marketing, the practical implementation of which ensures increased efficiency and increases the demand for public transport services.

Keywords: Innovational marketing, urban passenger transportation, digital economy, information environment, transport services.

JEL Codes: M30,R51, O35.

Paper type: Research article: Marketing Management in Transportation.

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1. Introduction

The spiral development of mankind intensively revolutionizes the development of scientific, technical, intellectual, economic and information spheres. Each subsequent step of the economic era is determined by high-tech aspects, progress moves along the path of dualism, changes in the consciousness of the population occur along with technological innovations. The new 21st century is conditioned by the digitalization of the real sector of the economy, which aims to manage the economy by means of artificial intelligence. Modern 21st century transport depends on the preferences of the population, is based on the philosophy of automation, intellectualization, and is focused on the quality of transportation, eliminating losses and reducing costs. The proposed concept in the framework of the program “Digital Economy” (regulated by the Decree of the Government of the Russian Federation of July 28, 2017 No. 1632) of the implemented project “Digital Transport and Logistics” is based on existing knowledge, experience, technologies and competencies obtained as a result of interaction between the government, the private sector and citizens.

Taking into account the vector of development of the transport complex in Russia aimed at creating a unified information environment by means of technology and based on the fact that innovation contributes to the formation of new competitive advantages, and marketing allows determining the market need for innovation in the study, the following point of view is presented in this research. It refers to the fact that to solve the problem of transport “digitalization”, and in particular digitalization of urban passenger transportation, it is necessary to use technology such as marketing innovation (Concept-2020).

2. Literature and Methods

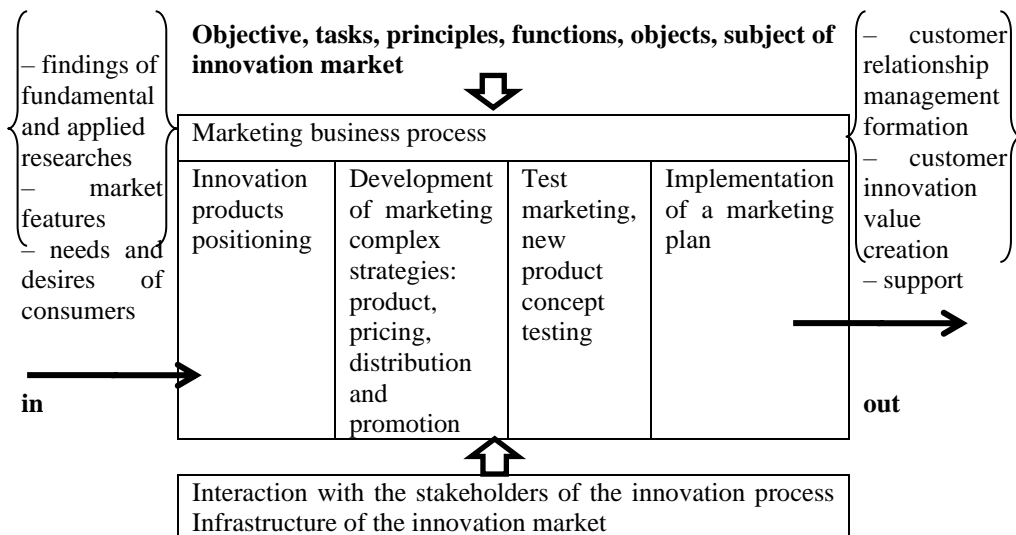
Theoretical and methodological prerequisites for the study of this article were considered in the works of well-known domestic and foreign experts on innovational marketing (Kotler, 2006; Brutyan, 2016; Sterkhova, 2010; Kalieva, 2012; Gollay, 2016). Innovation marketing is understood as targeted activities to identify unmet needs of consumers, explore the possibilities of developing and commercializing competitive innovations and promoting them in the market to obtain economic benefits (Kupec, 2018; Akopova *et al.*, 2017; Bogdanova *et al.*, 2016). The economic content of marketing innovation consists in making decisions on the implementation of the innovation policy of enterprises, which in turn is associated with huge risks. The processes of creating, manufacturing and promoting an innovative product require careful marketing support based on new conceptual solutions and adjusting the corresponding creative positions. The use of marketing tools will substantiate innovative solutions, minimize losses, and thereby maximize profits.

The current stage is such that the main competitive advantage of the organization is a quick response to changing needs and the introduction of new products and

services. Organizations actively introducing innovations in their activities become successful. Success in the competition is achieved mainly by those organizations that use innovation marketing technologies to timely identify unmet needs or undeveloped market niches, as well as promote innovation in the market for its conversion into a well-known product or service.

The introduced modelled concept of innovation, Figure 1, includes the objective, tasks, principles, functions, objects, subjects and a toolkit. It is worth describing the presented elements of the concept of marketing innovation. Given the goal-setting of marketing innovation aimed at implementing the developed strategy for promoting innovation, the following tasks have been set: to form an idea of innovations typology; to adapt the manifested innovations to the existing processes of making managerial decisions; to elaborate and develop skills for the commercialization of ideas and innovations; to highlight the features of modern consumers behavior to simulate the decision-making process by the consumer when buying a new product or service (Brutyán, 2016).

Figure 1. Innovation marketing modelled concept (elaborated by the author)



The proposed modified concept of innovation marketing is based on the principles of innovation marketing (oriented according to the goal related to: consumer behavior, taking into account consumers characteristics, adaptability, effectiveness), allowing organizations not only to form a system of relationships with consumers, but also to be competitive in the market.

The functions of innovation marketing stem from the basic functions of classical marketing (Sterkhova, 2010): analytical (research, forecasting, informational or strategic marketing function), production (organizational), marketing (advertising,

promotional or operational marketing function), management and control (coordinating or controlling). The objects of innovation marketing are new products, technologies, materials, components, means of labor, intellectual property. The subject of innovation marketing is considered to be the conformity of a new product with market demands (Kalieva and Frolova, 2012).

The proposed innovation marketing modelled concept implementing the introduction and development of marketing and innovation will allow solving the problems facing domestic enterprises, such as: introducing new technologies into production; improving product quality, constant adaptation (change) of products to the dynamic requirements of consumers; entering new domestic markets; entering the international market. The inclusion of innovation marketing in the basis of managing domestic enterprises will make it possible to predict the reactions of market segments, plan consumer properties of innovations, and optimize the cost and distribution channels.

3. Findings

The introduced innovation marketing modelled concept is universal and applicable in various sectors of the economy. The specifics of marketing activities in the urban passenger transportation market is of particular importance for this research, which is taken into account when the marketing innovation toolkit is formed in the urban passenger transportation market. Urban passenger transport is an essential element of the transport system, which provides daily transport mobility for two-thirds of Russia's population.

The functioning of urban passenger transport is associated with activities aimed at transporting the population with as little time and money as possible, with comfort, safety, speed and cost of transport minimized (Fedorov, 2014).

It should be added that urban passenger transport is aimed at the provision of services, which as a category is included in the All-Russian classifier of products by type of economic activity (Kotler, 2006), and taken into account that the definition of services given by Kotler (Budrina and Rubtsova, 2015) defines services as any activity one side can offer to the other, as an intangible action that does not lead to possession of something and bears five main characteristics in itself that distinguish it from material products such as: intangibility, inseparability from the producer or from the consumer of services, inconsistency of quality, unsustainability, lack of ownership of the result.

The complexity in the process of promoting the market of urban passenger transport services, which has its own distinctive capabilities, is reflected in Table 1.

Table 1. Description of the distinctive features of urban passenger transport services from other types of services (compiled by the authors)

Distinctive features	Characteristics
Massive demand for services	Ability to provide services on a public offer
Strictly fixed schemes and schedules of vehicles	Inability to customize services
The unity of the process of production and consumption of services	Lack of pre- and after-sales service
Diversity of similar services	Potential consumer opportunity to use the services of various carriers: municipal, private, taxi, personal vehicle
The non-material nature of the service	It is impossible to save the service for future use, separate it from the passenger's transportation object
The increased role of personnel in obtaining a beneficial effect by the consumer	Dependence of customer satisfaction not only on speed, safety and accuracy of movement, but also on driving style and politeness of the driver
A large number of enterprises and individual entrepreneurs producing services	Building control systems by type
Different types of costs for consumers of services	The consumer bears financial (travel), time (waiting for transport and travel time), emotional (the need to interact with strangers during the trip, worries about travel safety), information and communication (choosing an optimized route, knowledge of stops) costs
The specifics of the content of the service life cycle	The lack of a culture of using transportation services and other reasons for sharp market fluctuations in demand for transportation services
Provision of services outside the territory of the carrier	Attachment to places of departure and arrival
Difficulties in improving the quality of service delivery	A specific type of vehicle (bus, trolleybus, tram, metro) has a specific level of comfort that is difficult to improve during vehicle operation
Availability of a range of tariffs for interchangeable types of vehicles	Inability to fully replace the service with similar vehicles

The difference in the urban transport industry lies in the specifics of the provision of the services provided, namely in the length of the process of preparation for the direct implementation of transportation services.

The main priority goals of introducing innovations at enterprises of urban passenger transport are to minimize travel time and costs, and of course comfort. The above listed elements of the urban passenger transport system and transportation stages are the scope of innovation.

To clarify, from the perspective of the modern digital economy it is advisable to define marketing of innovations in the field of urban passenger transportation as an activity aimed at developing and promoting innovations in the field of urban public transport services that have competitive advantages in the passenger transportation market to achieve satisfaction and economic benefit for all participants of urban traffic. New products, technologies, and ways to promote services in the field of urban public transport are determined as an object of marketing innovations in urban passenger transportation.

The conformity of new products and technologies to the demands of the passenger transportation market is the subject. To implement the concept of marketing innovation in urban passenger transport, it is necessary to use the marketing functions of innovation adapted for the use in urban passenger transport:

1. Research – studying the needs, expectations, perceptions of the target audience of urban passenger traffic, the search for innovation.
2. Prognostic – studying and predicting possible reactions of the target audience from the introduction of promising innovations in the near future.
3. Information – collecting information about innovative products and technologies, taking into account their relevance from the target audience, carriers, higher organizations and investors.
4. Organizational – a combination of managerial, legislative, economic, production and other aspects for the implementation of innovative projects in urban passenger traffic.
5. Advertising – developing an integrated system for promoting innovation in the field of urban passenger transportation.
6. Practical – ensuring the effective implementation of innovative projects in the field of urban passenger transportation.

The introduced conceptual model of innovation marketing management in the field of urban passenger transportation, Table 2, includes six key innovation management blocks based on marketing functions: research, prognostic, information, organizational, advertising and practice. Each function is implemented using certain methods, should there are barriers, to obtain a specific result. Based on stakeholders in the process of transportation of the population, the main tasks of innovation in urban passenger transportation are:

- for local authorities – the development and implementation of a strategy to increase the share of urban passenger traffic;
- for investors – the development of transport infrastructure for the development of the transport system;
- for industry – the creation of advanced and effective products and technologies.

The following main areas of innovation implementation at the enterprises of urban passenger transport can be identified (Table 3).

Table 2. *Urban passenger transportation innovation marketing management model (developed by the authors)*

Functions	Research	Prognostic	Information	Organizational	Advertising	Practice
Methods	cooperation with higher educational institutions - R&D - methods for finding new ideas - consumer attraction	- methods of marketing researches - expert opinions - crowdsourcing - alpha test of innovative products	- PEST-analysis - SWOT-analysis - value chain - benchmarking	- consumer segmentation - innovation positioning - framing a matrix of rights and responsibilities distribution	- branding - advertising campaign development - work with opinion leaders	- risk management - funnel system
Barriers	- finance - mentality - initial business conditions	- effective demand - type of consumers	Features of a marketing information system	- decision-making process on the purchase of innovation - type of organizational structure	- advertising clutter - rejection of novelty	- poor infrastructure - lack of service
Outcome	Choosing an innovation to implement	Innovation demand forecast	Feasibility study on innovation	Test marketing	Formation of demand for innovation	Innovation diffusion, ensuring the necessary quality

Table 3. *The main directions of innovation implementation at the enterprises of urban passenger transport*

Areas of innovation	Features of innovation areas	Innovation types
Technological	Improving the technological process for the provision of passenger transportation services or the technical characteristics of infrastructure facilities	Changing the road infrastructure and surrounding areas
		Rolling stock upgrading
		Implementing new technologies for dispatching and monitoring routes, traffic navigation
Legislative	Improving norms and standards, changing requirements for the implementation of urban passenger transport	Intelligent control systems for new modes of transport
		Changing traffic regulations to prioritize public transport
Marketing	Using marketing mix tools	Implementing sanctions for violators for misuse of road infrastructure
		Creating routes and schedules in accordance

		with the wishes of passengers
		Introducing new types of services
		Informing passengers about the movement of rolling stock and waiting times using information and communication technologies
		Introducing mobile applications
		Conducting online studies of passenger satisfaction with technology and quality of service in public transport
		Promoting passenger services and the formation of the image of the passenger transport enterprise
		Advertising of goods and services
Economic	Creating a favorable investment regime, changing tariff policies	Investment, introduction of methods and ways to attract investors
		Introducing new fare payment systems
		Options for regulating passenger fares
		Changing tariff setting methods
Organizational and management	Improving the process of passenger transportation management both at a specific enterprise and throughout the city passenger transport system	Staff recruitment and training
		Motivation and incentive for customer focus
		Improving the quality of service

It is of note that the marketing area of innovation in urban passenger transport is important along with technological, legislative, economic and organizational and managerial innovations. First of all, the transport service provider needs both prompt and regular information about what is happening on the road, the state of rolling stock and drivers, and the state of road infrastructure. This is necessary both in terms of security and for a more constructive framing of management activities.

4. Discussion

In our opinion, to solve these problems, the leadership of domestic enterprises needs to actively introduce and develop marketing and innovative activities. When innovation marketing is included in the basis of management of domestic enterprises, market segment reactions will be forecasted, consumer properties of innovations will be planned, cost and distribution channels will be optimized.

Innovations, on the one hand, are determined by the composition and structure of social needs, serve the goals of their greater satisfaction, and on the other hand, in modern conditions they directly depend on the state and development of science and its transformation into an immediate productive force, growth in the volume and quality of scientific knowledge, scientific information. Innovation marketing has its own characteristics when applied in various sectors of the economy, the study of approaches to the formation of innovation marketing tools in the urban passenger transportation market is of particular importance for the objectives of this study,

which initially requires the identification of the specifics of marketing activities in this market.

5. Conclusion

Thus, transportation services of urban passenger transport include not only high-quality services aimed at satisfying the needs of consumers in moving, but also pre-training for a transport service system, which is represented through the construction of transport infrastructure facilities, road safety system service, services of enterprises and organizations that monitor and regulate traffic in the city, services in organization and management of urban passenger transport system functioning. Moreover, the activities of all participants in the transport services market are aimed at finding mutual interest between the interests of the passenger and the carrier.

Urban passenger transport definitely has a strategic role in the normal development of cities. However, the growth of the urban population, along with economic instability, has a negative impact on the transport system, since an increase in the population's need for movement along with a low level of investment in the transport system does not provide the required level of quality of transport services.

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