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"Global Challenges and Prospects of the Modern Economic Development"**VIRTUAL MERCHANDISING AS A PROGRESSIVE DRIVER OF
RETAIL IN DIGITAL ECONOMIC CONDITIONS**

D. Ralyk (a)*, N. Ivanova (b), T. Gorgodze (c)

*Corresponding author

(a) Samara State University of Economics, 443090, Soviet Army Str., 141, Samara, Russia, dinarar@inbox.ru

(b) Samara State University of Economics, 443090, Soviet Army Str., 141, Samara, Russia,
nataliaivanova86@yandex.ru

(c) Samara State University of Economics, 443090, Soviet Army Str., 141, Samara, Russia, gorgodze_t@mail.ru

Abstract

Global economy digitalization has a significant effect on the Russian economy, and its leading sector – retail trade particularly. To better business adaptation to the new consumption market conditions, it was necessary to understand a virtual environment building principles, where sales and purchase transactions are usually made. People of Russia show a greater willingness to make purchases via the Internet and mobile applications yearly. An attempt to converge the material merchandising rules and the electronic trading space organization is made in this study. The low level of online store merchandising problem's studying in the world scientific community where the emphasis is more shifted towards innovative digital technologies opportunities and prospects in retail trade is confirmed. The article substantiates applicability of the term "virtual" to merchandising in e-Commerce, its legality along with the "online" and "Internet" merchandising terms. The basic concepts, principles, main goals and additional targets, the field of action and procedures are correlated. Transformation of the trade marketing complex realized in physical space has a different meaning in the online marketing. Three groups of merchandising rules, traditionally considered in the offline self-service stores are valid for the electronic environment, where it is also necessary to ensure the optimal inventory size, distribute information resources in the online store rationally, effective goods presentation and POS-materials placement. Among the difficulties of merchandising transition to the digital area, there is the sensory impact on the consumer's behavior restrictions, but visual merchandising is more developed and maximum usability of the trading Internet resource is ensured.

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Keywords: Virtual merchandising, e-commerce, retail, digital economy, point of sale.

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1. Introduction

The irreversible process of the world economy digital transformation has largely affected its key segment – retail trade. The gradual transfer of purchasing to the electronic environment did not eliminate the need to follow the General principles of merchandising, which has traditionally been considered as a means of organizing the physical environment of offline stores. The virtual retail space also needs a competent construction, because here, the consumer makes the final buying decision as well as in a regular store. The relevance of the research topic is also due to the repeatedly increased competition between retailers, which previously could be geographically distant from each other, have different opening hours, the ability to display goods, limited by the physical volume of the sales area. In the modern electronic environment, the buyer, being outside the concepts of space and time, changes radically the list of criteria for choosing a particular place to make a purchase. It is important to identify and systematize critical parameters of the goods presentation in the electronic catalog, which would provide the retailer with the same effect as the usual merchandising in an offline store. One of the reasons for that people to refuse e-commerce services is the certain perceptions of consumers prefer to get acquainted with the product personally test it in real mode, before purchase. The virtual merchandising complexity also lies in the complete independence of consumer decisions, the impossibility of psycho-emotional impact of the seller due to his physical absence in the immediate vicinity of the potential customer. In the electronic space at the moment it is impossible to use sensory elements of the trading floor atmosphere, such as the use of taste buds during tasting, temperature and humidity variation, aroma marketing. In our opinion, the situation is often exacerbated by the incomplete and poor quality of information about the goods merits, including its presentation and promotion.

In this study, we do not separate the terms of Internet merchandising, online merchandising and virtual merchandising. All these terms we consider synonymous, meaning compliance with the system of principles and rules of the goods offer on the store web-site or mobile application. In other words, virtual merchandising makes the very environment of its application, the electronic shopping environment.

2. Problem Statement

The world scientific community is currently actively discussing the features of online purchasing. The digitalization of the retail sector of the economy is often revealed through the description of the possibilities of using technical devices, including mobile devices, the consequences of their integration into purchasing (Fuentes, Bäckström, & Svingstedt, 2017).

The difference in the consumers motivation in showrooming and webrooming is determined (Flavián, Gurrea, & Orús, 2020; Schneider & Zielke, 2020). Efficiency of transition from multichannel to omnichannel retail trade is proved (Shi, Wang, Chen, & Zhang, 2020). The characteristics of Generation Y in online shopping are revealed (Ladhari, Gonthier, & Lajante, 2019). Interesting from the point of the psycho-emotional state in the process of online shopping is the study of impulse purchases of fashion, the authors of this study point to the lack of knowledge of online merchandising possibilities (Sundström, Hjelm-Lidholm, & Radon, 2019).

A limited amount of Internet merchandising empirical researches has necessitated the content analysis of visual merchandising industry practices that affect the formation of customer loyalty (Khakimjanova & Park, 2005). The term "virtual" in retail sales is usually associated with augmented reality technologies that help the buyer to make a choice and make a final decision about the purchase (Meißner, Pfeiffer, Pfeiffer, & Oppewal, 2019).

Researches of problems and prospects of merchandising development in online trade in Russia are also insufficiently widespread at present. However, it is worth noting the number of Russian scientist's contribution in the field of virtual merchandising theoretical basis formation. Thus, the possibilities of interaction in automated retail, audit, and changes in terms of retail sales of goods thanks to the digital technologies are studied. Digital technologies implementation in merchandising can be considered in three main directions: attracting attention (electronic signboards, screens, smart shelves), assist in purchasing decisions making (smart-helpers) and cost optimization of the trade (interactive displays and POS-materials, electronic shelf labels) (Rudskaia & Desyatnichenko, 2017).

As part of the prospects for the use of neuro technologies in visual merchandising research, 3D holograms of augmented reality are presented, providing a qualitatively new level of impact on consumer behavior, since they simplify the processes of designing planograms, advertising materials and price tags placing (Panasenکو & Ramazanov, 2018).

To the question of a more appropriate merchandising characterization in online shopping, we accept the possible objections to the incorrect use of the related term "virtual", which can be understood as something imaginary that does not exist in reality. However, let us keep in mind that of the many meanings of "virtual" for merchandising in an electronic environment, it is quite consistent with the representation of the entire variety of assortment, an imaginary trading hall built using a computer. In any case, regardless of the most correct description of merchandising in the online store choice, the problem of determining its effectiveness criteria, the features of the transformation of retail trade in the digital economy remains unresolved.

3. Research Questions

The following tasks are required to achieve the study goal:

- 1) the multidimensional organization of transactions in e-Commerce in the consumer market analysis;
- 2) the transformation merchandising role in the electronic environment of the online store confirmation;
- 3) the importance and criteria for the effective organization of the virtual trading space determination.

4. Purpose of the Study

The study purpose is to determine the principles and criteria for the effective organization of the virtual trading space, built on the principles of traditional merchandising, and taking into account the new requirements of consumers in the digital economy conditions.

5. Research Methods

The virtual retail space organization problem in the digital economy study based on the following methods: general scientific method, system method, structural-analytical method, empirical method, allowing to identify the basic principles of online store merchandising.

6. Findings

From the point of view of the retail space organization, merchandising, as a tool of marketing and logistics in retail trade, contributes to the rational organization of the physical and information space of the store, taking into account the psychological characteristics of the buyer's behavior. The virtual environment of the retailer brings to the fore the information space, broadcasting to the buyer all real arguments.

In the context of the hybrid trade forms combining online and offline channels development, merchandising has retained its relevance and importance, despite the acquisition of the epithet "virtual" (Kisteneva, Ralyk, Loginova, & Gorgodze, 2020). The consistency, visibility, structure and visual appeal of the products presented on the website of the store, as well as in the case of stationary stores in the complex ensure the ability of goods to be sold without the participation of the seller.

Before proceeding to identify the fundamental continuity of the transition from merchandising in offline format, it is necessary to determine the understanding of the essence of these terms in the context of trading space materialization (virtualization), table 01.

Table 01. Similarity and differences of merchandising in physical and electronic environment

Basic terms and parameters	Retail space	
	Offline	Online
Merchandising interpretation	The tool of marketing and logistics in retail trade, promotes the rational organization of physical and information trade space on the basis of the buyer psychology awareness	The marketing tool in electronic retail trade, promotes the rational organization of information trading space, buyers cognitive and time resources taking into account consumer psychology knowledge
Action area	Points of sale	Web-site, mobile applications
Procedures	Layout of the trading floor, display of goods, placement of POS-materials, creating a favorable atmosphere of the trading floor	Store website design, information support, providing real time service support
Groups of tasks	Product range management, rational use of retail space, advertising and sales promotion, customer behavior management, ensuring high quality and culture of retail trade service	
The main purpose	Sales and profits increasing with the maximum customer satisfaction	
Additional targets	Improving the retailer competitiveness	
	Improving the specific product brands competitiveness	
	Effective goods presentation in the retail space, formation of a favorable impression of their quality, prestige, justification of price positioning of these goods	
	Simplification and acceleration of the buyer's decision to purchase the relevant information software	
	Buyers flows intensity management in the trading floor, stimulating the purchase of impulsive and passive demand goods, as well as more purchases than budgeted	Impulsive and passive purchases management by contextual advertising, smart-consultant, cross-merchandising technology, clustering and customization of the offer

Traditionally, merchandising is considered as a marketing tool in retail, which tasks are grouped in the context to the marketing mix elements ("4 p") with the main goal of the buyer psychology knowledge. However, studying the technology of merchandising implementation in the retail space organization, no less doubts arise in its effectiveness as a way of building internal logistics, since the buyer is essentially provided with the right goods of the right quantity and quality in a right time in the right place with the optimal level of costs. Given that the marketing mix has specifics in trade, it is also being transformed into an online environment (Fig.01).

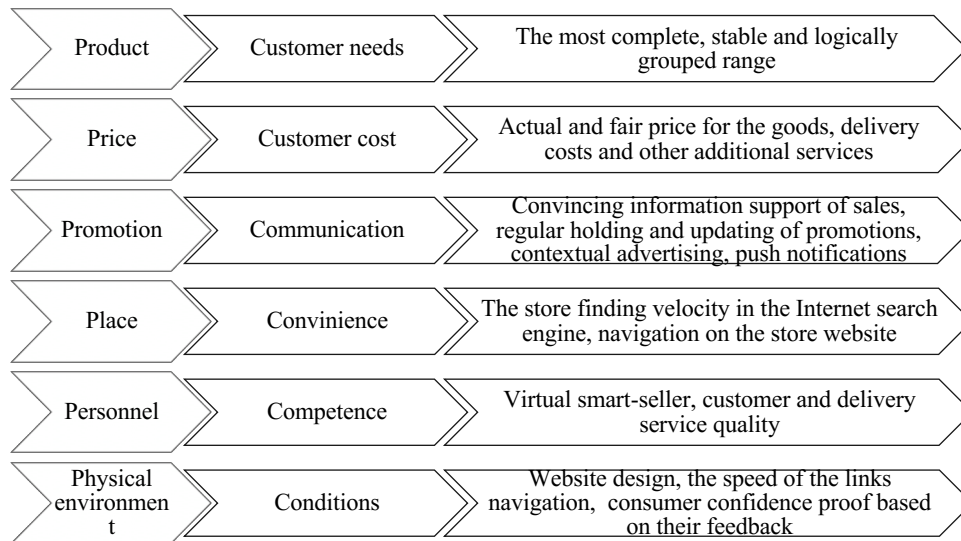


Figure 01. The trade marketing complex transformation in the electronic environment

Russian scientists consider the principles of physical space merchandising of its implementation in four main directions in the retail space: goods display, impact on the buyer, presentation of prices and convenience (Muradova, Lyamin, & Dudakov, 2018). Convenience provided by offline merchandising can also be defined as established communications, and the achievement of harmony between the visitor and the point of sale, which provides convenience and comfort of being within the store. Indeed, the favorable atmosphere of the trading floor helps to increase sales, but merchandising uses other tools and technologies for this purpose. The situation is a little more complicated in the Internet environment. In the online store there is also could be: the convenience of the menu and product categories location, colors, even fonts types, matching the online store design and its type (according to the main category of its users). If the online store operates on the international market, the quality translation into several languages makes sense. Convenience can also be expressed in a variety of payment methods and delivery, the possibility of fitting, return, etc. Annoying factor for customers-congestion pop-UPS, "assistants" that can not be removed, etc.

The Effective stock rule in the traditional merchandising finds its application in electronic Commerce certainly. In addition, consumers should always be able to focus on the level of available inventory listed on the site. Just like in an offline store, the volume of inventory should ensure uninterrupted sales of the entire range of products. The rules of effective goods placement in the retail space differ in the electronic catalog submission. However, it is also necessary to set up usable and full-

fledged search filters that will help to set the order, the logic that provides merchandising in an offline store. It should be remembered about the techniques of cross-merchandising, which are used more freely and quickly in the online store, when viewing the main product, which is more necessary for the buyer, he is invited to familiarize himself with other products that could be interesting for him.

The rules of effective presentation of goods in the electronic space includes all the same principles of visual merchandising, creating an undeniable attractiveness of goods and a strong intention to purchase them. Appropriate use of electronic POS-materials includes placement of banners, interactive links, animation elements and other design effects, which the principle of optimality also applies for (placement for no more than 20% of goods). That also means general completeness of information about the goods, its sizes, materials of origin, quality and quantity of photos of goods especially clothes or interior item, a photo of the outfit and an interior is needed.

It is believed that in relation to the online stores, the term "merchandising" should be replaced by "usability" (Tverdokhlebova, 2019). Given that usability is commonly understood as the degree of efficiency and satisfaction, which specified users achieve specified goals in particular environments (ISO 9241-11:2018, 2019), one can partly agree on some identity of the two concepts. Usability, as a wider category, affects more aspects of the web resources, is evaluated not in online trading only, but also for sites and applications of any direction, including non-commercial. It could also be noted that in traditional stores there are a lot of annoying factors, such as obsessive consultants, and online, that's quite easy to overdo it with various elements of promotion and then the advantage is transformed into a disadvantage.

7. Conclusion

Consumer goods market competition has reached a qualitatively new level, when, with equal importance for the people of assortment and price offers of various retail trade enterprises, preference is given to the one who will create the most favorable conditions for the shopping process implementation.

The importance of virtual merchandising is due not only to the rationalization of the business process in digital retail, but also to ensuring the necessary customer loyalty. The loss of the importance of such differentiating competitive positions of retailers parameters as the physical location of the store and the time of its operation, imposes new requirements for the organization of electronic retail space.

Digitalization of the place of purchasing excludes the direct influence of a real seller on the buying decision, and therefore, it is important to competently organize the online shopping space in accordance with the principles of merchandising, which, despite the transformation in the digital environment, is as much relevant as in an offline store. Merchandising enhances the value of the online merchant offer, making the necessary convenience and favorable for shopping psycho-emotional consumer state.

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