



PRODUCTS CRITICAL FOR CONSUMER CHOICE FORMATION IN E-COMMERCE IN CONDITIONS OF GLOBAL ECONOMY

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ABSTRACT

Background: Currently, an increasing number of goods are purchased using e-commerce technologies. The efficiency of distance selling is largely determined by the number of buyers who have visited the website of the online store. Thus, the task of converting site visitors into buyers appears relevant. **Aim:** The aim of the presented study was to determine the impact of the presence of a critical product on the behavior of an online store visitor. **Results:** The author shows that at present the growth of the turnover at an online store is based primarily on the number of orders rather than the average purchase amount. **Conclusion:** Based on the assumption that the buyer seeks to purchase all goods in one place, the author examines the significance of commodity items, which do not play an important role directly in the formation of turnover but contribute to solving the problem of increasing the conversion of visitors into buyers.

Keywords: E-commerce; Distance selling; Conversion of visitors into customers; Product range; Promotion; Critical products.

PRODUTOS CRÍTICOS PARA FORMAÇÃO DE ESCOLHA DO CONSUMIDOR EM E-COMMERCE EM CONDIÇÕES DE ECONOMIA GLOBAL

RESUMO

Antecedentes: Atualmente, um número crescente de bens é adquirido por meio de tecnologias de comércio eletrônico. A eficiência da venda à distância é em grande parte determinada pelo número de compradores que visitaram o site da loja online. Assim, a tarefa de converter visitantes do site em compradores parece relevante. **Objetivo:** O objetivo do estudo apresentado foi determinar o impacto da presença de um produto crítico no comportamento de um visitante de uma loja online. **Resultados:** O autor mostra que, atualmente, o crescimento do volume de negócios de uma loja online se baseia principalmente no número de pedidos e não no valor médio das compras. **Conclusão:** Partindo do pressuposto de que o comprador busca adquirir todos os bens em um só lugar, o autor analisa o significado dos itens commodities, que não desempenham um papel importante diretamente na formação do faturamento, mas contribuem para solucionar o problema do aumento da conversão de visitantes em compradores.

Palavras-chave: Comércio eletrônico; Venda à distância; Conversão de visitantes em clientes; Gama de Produtos; Promoção; Produtos críticos.



1. INTRODUCTION

Currently, distance selling is one of the important components of the daily life of the population. The use of this sales channel, unlike the traditional type of trade, covers a larger number of potential buyers and does not require large financial investments to maintain a retail outlet. It is safe to say that distance selling is a booming segment of the retail market, which in the future will continue its development both in the world and within the Russian Federation.

The COVID-19 pandemic has brought about significant changes to the structure and content of distance selling. Several authors (Chang & Meyerhoefer, 2021; Dannenberg et al., 2020) noted that the events taking place in the world in recent years have led to even more rapid development of the already stable growth of the e-commerce market. Buyers quickly adapted to remote shopping, and this was the initiation of a new persistent shopping habit – buying goods on the Internet (Ianencko et al., 2019).

Electronic channels of purchases and sales have become the only possible ones in the context when most regions are in isolation. At the end of 2021, the Russian company RBC (RosBiznesConsulting (the RBC Group), n.d.) stated that the percentage of the working-age population making purchases via the Internet exceeded 50%, and their number increased by 8.3% over 2021.

Even though online shoppers are much more mobile and easily change the place of purchase, at present, a lot of consumers who actively store online have already decided "where?" (in which stores/marketplaces) and "what?" (what goods) they would be purchasing regularly.

In view of this, an important task, along with attracting visitors to an online store, is the conversion into buyers. The main criterion for the buyer's choice of a particular store is primarily the price of goods and the convenience of delivery, however, in the context of the development of digital technologies in modern trade, the potential for improving the consumer properties of the price offer is low (Krymov & Kolgan, 2019). Moreover, when filling the shopping cart, the buyer does not compare price alternatives for all goods. Currently, buyers tend to form a basket in a minimum number of stores. This is due both to the convenience for customers, reducing the time to process and receive orders and cutting the delivery cost. This is especially true when using customer pickup when each receipt of an order requires the buyer to spend some time. Hence the recent popularity of marketplaces (Popenkova & Nikishin, 2020).



For buyers, the marketplace is a trading platform, in most cases, with positive consumer confidence, the chance to find a variety of product offers while comparing prices and reviews from other buyers. All these factors help to provide convenient conditions for shopping, optimize the process of interaction with customers, and facilitate the delivery of goods to customers, which has a positive effect on sales growth and helps increase profits.

The importance of optimizing the delivery of goods is analyzed in the article by L.A. Bragin (2020). The author noted the factors that were significant for the choice of online stores by buyers. Thus, in the segment of online commerce, the main reasons for refusal to purchase were difficulties with the return of goods purchased online, and with solving issues that arose during the purchase and delivery of the order.

The article by Q. Ding (2021) describes a method for managing the costs of e-commerce logistics and proves that for e-commerce enterprises, the cost of logistics is an important factor that affects the efficiency of work and the quality of customer service.

Studies of the impact of e-commerce and modern logistics on the network regional economy are considered in the article by X. Tang (2020).

The importance of studying the consumer behavior of potential buyers and their preferences was noted in the study by O. Bartók (2021). The authors pay particular attention to the development of e-commerce during the spread of coronavirus. According to the results of the study, the author concluded that there was a relationship between the age of customers and their behavior when filling an online shopping cart. Online grocery shoppers are still reluctant to buy perishable goods (meat, baked goods) and prefer items that are packaged directly by the manufacturer.

For example, E.A. Mayorova (2018) analyzes the relationship between range and pricing policies in an unstable geopolitical environment in a case study of the dairy market.

As the reaction of Russian consumers to price fluctuations in the context of consumer traditions and consumer expectations in the context of globalization of markets has not been sufficiently studied, I.A. Ramazanov (2018) analyzes the Russian consumers' attitudes towards price fluctuations for certain groups and types of goods in a global market. The authors have developed an approach that allows one to determine the reaction of consumers and consumer expectations to price fluctuations.

The article by T.A. Levchenko (2021) deals with the analysis of opportunities and the level of digitalization of Russian business, the factors that hinder digital transformation, and the trends of digital transformation of Russian companies in 2021-2022.



At present, especially given the situation with the COVID-19 pandemic, consumer behavior is actively influenced by new digital technologies.

The impact of the COVID-19 pandemic on online shopping behavior is covered in articles such as C. Guthrie (2021) and J. Moon (2021). The works by M.J. Ferreira (2020) and D.K. Popenkova (2020) deal with the development trends of distance selling in the current digital era and the analysis of digital technologies in retail trade. Namely, the work by E. Nurhayaty (2021) contains the factors that affect online food sales through mobile applications. One of the main problems that arise when using mobile applications for shopping is inconvenient navigation and information inaccuracy. Thus, online stores need to enable the user to easily utilize the application when making purchases (Mladenow et al., 2018).

The theory that the use of mobile applications and social networks for online purchases has changed the retail business model and consumer behavior is presented in an article by H. Susanto (2019).

Thus, the main hypothesis of the study is the thesis that an important aspect of e-commerce is highlighting some commodity items, which do not play an important role directly in the formation of turnover but contribute to solving the problem of increasing the conversion of visitors into buyers. The purpose of the study was to determine the impact of the presence of a critical product on the behavior of an online store visitor.

2. METHODS

The information framework of the study includes the development of e-commerce on the example of the Russian Federation. As a source of statistical information, we used the data of the Federal State Statistics Service of the Russian Federation and the analytical agency "Data Insight" (Data Insight research agency, n.d.; Federal State Statistics Service, n.d.; RosBiznesConsulting (the RBC Group), n.d.).

First, an analysis of the leading stores was carried out based on the TOP-100, TOP-300, TOP-1,000, and TOP-3,000 ratings of the Data Insight analytical agency (Data Insight research agency, n.d.) in the context of product categories. During the study, we used general scientific methods of analysis, synthesis, comparison, economic and mathematical methods, and models.



3. RESULTS

Currently, most goods can be purchased using e-commerce technologies. Moreover, unlike traditional trade, the shopping choice is not limited by the geographic location of the store, and the process is obviously less time-consuming.

Based on the data provided by the research agency Data Insight, one can conclude about the integration processes taking place in modern e-commerce. Namely, if for small online stores the conversion rate is still at the level of two percent, then for the stores included in the TOP-100, this coefficient exceeds ten percent (Data Insight research agency, n.d.). This is confirmed by the concept of moderate consumer choice, which limits the set of visible alternatives, and corresponds to the hypothesis that among all purchased goods, one can single out a critical product, which forms a direct consumer choice. As part of the proposed hypothesis, it is assumed that at present the main task of an online store is the task of converting a visitor into a buyer. In particular, at present, there is a higher dependence of the turnover of the online store on the number of orders than on the prices of goods (Table 1).

Table 1. Relationship between turnover and an average purchase amount and the number of orders

	Coefficient of variation of the turnover	Correlation coefficient	
		Relationship between turnover and average purchase amount	Relationship between turnover and number of orders
Cosmetics	38.4	-0.96	0.99
Car accessories	58.5	0.54	-0.08
Office and business	58.8	-0.59	1.00
FMCG	58.9	-0.03	0.60
Home improvement	89.1	-0.11	0.32
Electronics and appliances	96.3	-0.18	0.99
General stores	99.8	0.06	0.89
Clothing, footwear and accessories	133.8	-0.19	0.99
Health	153.7	-0.06	1.00

As can be seen from Table 1, only for a few product groups, namely, car accessories, the store turnover depends on the average purchase amount, while for the vast majority of stores, the turnover growth potential is characterized by the number of orders. The average purchase amount itself also has a high impact on the number of orders. Table 2 shows the dependence of the number of orders on the value of the average purchase amount.

Table 2. The relationship between the number of orders and the average purchase amount

	Coefficient of variation of orders	Correlation coefficient
Cosmetics	64.4	-0.91
Car accessories	77.4	-0.76
General stores	83.8	-0.81
Office and business	89.6	-0.64
FMCG	100.1	-0.81
Home improvement	116.4	-0.81
Electronics and appliances	157.0	-0.34
Health	163.7	-0.15
Clothing, footwear, and accessories	166.8	-0.30

It is evident from Table 2 that the number of orders directly depends on the average purchase amount in product groups where there are less pronounced trends in the variability of the total number of orders among the market leaders.

As shown earlier, one of the important factors that determine the consumer choice of a particular online store is the formation of a complete set of goods. Thus, according to the surveys that we conducted, for the same type of product, buyers are even willing to pay a little more while minimizing the total number of placed Internet orders. In this regard, online stores should have a fairly wide selection of related products that can be purchased by the buyer.

As an analysis example, the photographic equipment market in the online stores of the city of Moscow was chosen. Either the camera itself or the lens can be considered the most expensive product. However, often the purchase is accompanied by the purchase of additional accessories, among which the mass user tends to choose memory cards, and spare batteries. The key results obtained from the analysis are shown in Table 3.

Table 3. Forming a product set in the photographic equipment market

Indicator name	Camera	Memory card		Spare battery	
Relation to the price of the main product		The cheapest	Well-known brand	Off-brand	Branded
Minimal	-	0.8	1.0	2	4
Maximal	-	4.2	4.9	15	31
Average	-	2.1	2.5	5	12
Share of product offers	94	100	100	73	80
Coefficient of variation of the price	6.1	39	36	29	4.3

As can be seen from the table, the main product is available in almost all stores and has a relatively low price variation. In this regard, the buyer does not search for the main

product, its availability is assumed by default. Such an addition as a memory card is also available in all stores. This is because this complementary product is suitable for many product categories.

However, for memory cards, the coefficient of variation in the price offer is the highest. With a reasonable buying choice, this factor should not have a serious impact since the price of a memory card is often much lower than the price of the main product.

An example of a specific complementary item would be a spare battery. This product is suitable only for specific trade names, the depth of the range for it should be correlated with the price of the main product.

When purchasing such goods, the buyer can purchase both branded and off-brand goods. A branded battery has higher performance characteristics, and the price range is narrow.

An off-brand battery is available only in 73 stores, characterized by a wider price range. At the same time, there were hardly any off-brand batteries from various manufacturers, and sometimes the manufacturer was not even indicated.

4. DISCUSSION

Our findings in the case study of e-commerce in the Russian Federation are directly related to the findings of various researchers in the world. Thus, in the work by R. Chan (2020), the author proposed a problem statement of optimizing the range of goods without strict distribution, in which the range and stock levels can be optimized together. It was also noted that the range optimization process is one of the most important decisions that retailers face. Numerical studies have shown that it is possible to avoid the compromise that retailers face between offering more products but fewer stocks of each product and offering fewer varieties with more stocks of each product.

It is important to note that in some regions of Russia there is a shortage of retail supply for the population, which requires state support for the development of the retail network. In view of this, the article by O.S. Karashchuk (2019) contains the substantiation of proposals for improving the state regulation of the retail network in Russia, and the investment potential of trade was expounded by E.A. Krasilnikova (2017), V.V. Latysheva (2018), and other authors.

H. Corsten (2018) confirms that the successful trading activities of a trading company and profit maximization are directly affected by the correct planning of the range of goods.



The authors confirm the theory that range optimization is one of the main competitive advantages. The paper also presents a model that is applicable both for optimizing the entire trading range and for a separate category of range.

The study by T. Wieland (2021) is dedicated to the analysis of consumer behavior and is aimed at identifying the main factors that influence the choice of a store in the presence of alternatives: both a traditional store and online shopping.

It is also worth mentioning the problem of counterfeiting since in recent years the phenomenon has reached an incredible scale, which is the subject of the work by M.E. Seifullaeva (2017).

Research by S.V. Panasenko (2020) is aimed at providing an up-to-date description of the intangible assets of the largest online stores in Russia. According to the authors, the current competitiveness and financial performance of enterprises are greatly influenced by intangible assets.

The article by E. Argentesi (2021) deals with the importance of considering non-price-related factors that influence the decision of buyers when placing orders in an online store. The specific factors that determine the attitude of consumers when making online purchases are presented in the article by M. Sansone (2021); the authors separately present the factors influencing the purchase of store-brand food. The data presented in the article was collected during an online survey by measuring the importance of 14 variables. The results showed that consumers' choice of store-brand food depends on a group of variables that are related to their perception of products, satisfaction after consumption, the role of the store, and the trust that retailers gain over time.

The article by E.G. Cordero (2021) also describes the features of working with store brands. The main purpose of the article is to analyze regional consumer behavior when making online purchases of goods that are produced under store brands. One of the main conclusions of this article is that the attitude of consumers to store brands varies depending on the region where potential buyers live.

Research conducted in the article by I.P. Komissarova (2017) shows that, except for individual products, in general, consumers still prefer national brands over private labels.

The difficulties that arise when planning a range that includes seasonal products are described by A.C. Sodero (2021). The authors confirm the theory that the main requirement for the sale of seasonal goods is the availability of this type of product at the very peak of its sales, otherwise, it will be difficult to satisfy the increased demand for the product.



5. CONCLUSION

The study confirms the hypothesis that in modern e-commerce, an important task is not only the attraction of visitors but also their conversion into buyers. In view of this, some key products play a significant role. These goods do not have to be expensive and their sale is not necessarily economically important for the store. However, the presence of such goods in the range solves the important problem of converting buyers into visitors.

As for related products, their presence on the online platforms also determines whether the buyer abandons the cart or not. At the same time, the price factor here has already been significantly reduced. That is, critical products are considered more carefully in terms of prices on other websites. Related products should simply be available. Many online stores offer a discount on related products when buying the main product. The main rule is that the client must understand: if the client buys everything from the store at once, then it will be cheaper and more convenient and there will be no need to look for related products at a regular price in the future.

All this once again confirms the theory that buyers prefer to order as many products as possible in one place.

Retailers need to constantly monitor and study not only the situation on the market but also the behavior of their potential customers to form a set of measures to attract and retain them at different stages of the purchase.

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