



METHODOLOGY FOR ELECTRONIC COMMERCE EFFECTIVENESS ASSESSMENT OF SMALL BUSINESS

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Electronic commerce (e-commerce) has revolutionized how businesses operate, interact with customers, and deliver value. For small businesses, e-commerce offers avenues for market expansion, operational efficiency, and competitive positioning. However, assessing the actual impact of e-commerce initiatives remains a complex task, particularly in the case of small enterprises with limited resources and analytical capabilities. The objective of this study is to develop a methodological approach tailored for evaluating e-commerce performance and effectiveness specifically in small business settings.

The government acts as a guarantor, ensuring through the development of an appropriate legal framework the legality of transactions in the electronic commerce system.

The second group of elements of the e-commerce system that characterize the variety of organizational forms that can be used include: electronic store; electronic department store; electronic kiosk; electronic auction; electronic storefront; electronic store of settlements; electronic market of third countries; virtual community (<community); consulting firm; brokerage information office or a separate broker; research service providers.[1]

An electronic store is a kind of shop window providing a user-friendly interface, a web server offering goods or services for sale. The main criterion for the effectiveness or successful functioning of such a store is the real volume of satisfied demand for goods or services.

Issues of e-commerce performance indicators, e-business and e-commerce management were studied by Nazarova I. B., Dianova T. V [4], Manyika J. M., Roberts R. P., Sprague K.L. [5], Vershinina S.V. [6], Zueva O.N., Donskova L.A.[7] and others.

An electronic department store functions similarly to a traditional department store, where multiple businesses offer a variety of products. The primary indicator of its effectiveness is often the strength and recognition of the product brand or its overall image.

An electronic kiosk, also known as an interactive kiosk, refers to an internet-connected hardware-software system that grants users interactive access to various services and information. Typically, such kiosks include a computer with





a hard drive, keyboard, CD-ROM, and a monitor equipped with audio and video cards. Users can interact with the system through multiple input methods—keyboards, microphones, cameras, or magnetic card readers—either individually or in combination. These kiosks enable full Internet functionality, including browsing websites, using search engines and databases, sending and receiving emails, and completing online forms.

According to a study by Frost & Sullivan, electronic kiosk revenue reached \$369.7 million in 1996 and was projected to grow to \$2.94 billion by 2003.

An electronic auction is the digital counterpart of a traditional auction, leveraging internet technologies. This format predominantly aligns with the Customer-to-Customer (C2C) e-commerce model, although Business-to-Business (B2B) versions also exist. Examples include commodity exchanges and energy auctions, especially prevalent in the United States and Western Europe. These platforms often create online communities of users with shared interests—such as collectors of rare books or niche products. Transaction values at Western e-auctions typically range from \$35 to \$80. In the Russian-speaking digital space, platforms like Molotok.ru enable users to buy and sell a wide range of products. However, such auctions face legal limitations, including the absence of electronic signature legislation in Russia and limited usage of bank cards for secure identification of participants—unlike Western auctions, where card verification is mandatory.

Electronic auctions rely heavily on multimedia interfaces and internet access, as visual presentation of goods is essential. Auctions function as competitive marketplaces, with sellers aiming for the highest price and buyers seeking the lowest. These can be categorized based on bid direction—ascending from a minimum to a winning maximum, or descending from a set maximum to a minimum bid.[8]

Products best suited for auction-based sales include computers, high-tech goods, discounted or surplus inventory, previous bestsellers, and collectibles. A key motivation for the growth of electronic auctions is their ability to reflect true market prices.

Compared to traditional formats, electronic auctions offer several advantages: broader product and buyer availability, real-time interaction between participants, diverse auction formats, 24/7 accessibility, global reach, detailed product descriptions and images, and improved customer service.

An electronic storefront is a specialized software solution designed to create and manage web pages showcasing goods and services.





An electronic billing shop is software that integrates an e-storefront with a specific payment processing system.

The electronic marketplace of third-party countries consists of service providers offering tools for building and managing online stores, technical support, and hosting services—typically facilitated by intermediaries who manage server space and ensure integration with payment gateways.

A virtual community refers to networks of specialized e-commerce platforms (such as Geocities, Amazon, or Ozon), where users are grouped based on shared interests. The effectiveness of such communities lies in audience segmentation, which often leads to reduced marketing expenses. These communities frequently evolve from pre-existing social groups like fan clubs or associations.

Consulting firms specialize in offering guidance on setting up and managing online stores, conducting market research, and assisting with staffing needs.

A brokerage information office, or individual brokers, serve to provide detailed and necessary market information to prospective buyers.

Research service providers are entities that perform various forms of internet and e-commerce-related studies and data analysis.

Managers can communicate with the first company using some interface (for example, a browser). Managers can receive (for example, by e-mail or through a browser) the necessary information from the first company, and then enter data into their management system and carry out their business process. Managers of the second company act as consumers of the first company. The features of the second model of e-commerce organization - business consumer - are as follows.

1. The seller (firm 1) does not trade using an automated trading system integrated with the Internet interface, but "manually" through his managers.
2. There is no full integration between the business process of the trading company and the external interface of the online store.

Through the Internet, you can successfully sell any goods or provide certain types of services. It has been established that the business-to-business market does not depend on the name and range of goods and services sold through the Internet. Meanwhile, for the business consumer market, there are such types of goods and services that do not bring sufficient economic benefits.

The third type of e-commerce model - business administration - includes all types of transactions between firms and government organizations. For example, in the United States, information regarding government planned purchases is published on the Internet. All companies can send their offers electronically. In addition to procurement announcements, administrative authorities may also



offer the possibility of electronic exchange in operations such as, for example, a refund of value added tax. This model of organizing an e-commerce system is at the initial stage of development.

The fourth model for organizing the functioning of the e-commerce system - consumer-administration - is currently under development. Its implementation will expand electronic interaction in areas such as, for example, social security.

An additional model - Consumer-To-Consumer (C2C) - is a sector in which consumers communicate with each other, united by visiting one web site. It is believed that any electronic store can be attributed to this area of electronic commerce. A certain web site forms a certain community of people united by the same interests. An example of a more or less stable community is electronic auctions. They become an excellent advertising platform on which the quantitative and qualitative composition of the audience is known in advance. Moreover, all visitors are usually divided into fairly clear subgroups of "interests": someone more often attends car auctions, someone book. According to experts in the field of e-commerce, the effectiveness of advertising on sites that have united around themselves a certain and constant community of potential buyers is relatively higher.

Evaluating e-commerce effectiveness in small business settings requires a context-specific, scalable approach. The framework proposed in this paper integrates critical digital performance dimensions while accommodating the resource limitations of small enterprises. Future research may extend this model to cross-border e-commerce or integrate AI-driven predictive tools for better forecasting.

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