

Platformance-Based Cross-Border Import Retail E-Commerce Service Quality Evaluation Using an Artificial Neural Network Analysis

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ABSTRACT

The transaction scale of cross-border import e-commerce has grown rapidly around the world. Platform-style cross-border e-commerce does not control the quality, source, and transaction process of goods strictly and comprehensively. In terms of customer service quality, the seller's customer service often ignores the customer's problems, and some customer service solutions cannot solve the customer's problems. Serving customers through the network has changed the traditional offline service form without distance, and the service process has a time and space distance. This paper constructs an evaluation index system based on the development of cross-border e-commerce. Through questionnaires, relevant data were obtained and analyzed. The authors analyze the results based on the collected data on the factors that affect the quality of cross-border import e-commerce services. Responsiveness is the most important factor found by artificial neural networks. The descending order of importance of other factors is fulfillment, diversity, privacy, reliability, compensation, and ease of use.

KEYWORDS

Artificial Neural Network, Cross-Border E-Commerce, Imported Retail E-Commerce, Platform-Based Cross-Border, Service Quality Evaluation

INTRODUCTION

Many e-commerce-related companies have been exploring and innovating in recent years, and some of these industries have converged into an emerging industry – cross-border import e-commerce companies. The development of cross-border e-commerce promotes the flow of global consumption, thereby driving the continuous transformation of the offline industry. At the same time, competition among e-commerce companies is in full swing.

China's cross-border e-commerce platform has ushered in a period of rapid development. For example, Tmall Global has opened 1,500 direct routes from more than 40 overseas countries and

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regions to China, and has deployed 1.7 million square meters of bonded warehouses(China Economic Net,2021). Today, the cross-border e-commerce market has become a blue ocean market with unlimited dividends. According to customs statistics, in the past five years, the development scale of China's cross-border e-commerce has increased by 10 times, and the scale of market procurement trade has expanded by five times. In 2021 alone, the scale of cross-border e-commerce imports and exports will reach 1.98 trillion yuan, and the export volume will continue to increase. Reaching a record high, relevant platforms and companies have established overseas warehouses(China News Network,2022).

In recent years, small and medium-sized enterprises have carried out production and sales through the field of e-commerce, and the operation of enterprises has become inseparable from e-commerce. By introducing and participating in e-commerce, the various expenses of enterprises are reduced, the sales network is more developed, and the economic benefits are gradually reflected. Under the "new normal" economic situation, affected by the continued downturn of the global economy, the export pressure of traditional foreign trade manufacturing enterprises has increased sharply. Some enterprises are in danger of survival and urgently need new competitive advantages. Mobile "Internet +" continues to deepen, and the new model of cross-border e-commerce has become an important channel to develop international markets (Xiaoqing, L., 2018). Cross-border e-commerce involves information technology, payment, security, and other issues. However, due to the lack of clarity on the evolving role of information technology, understanding of why and how international consumers develop informativeness in cross-border e-commerce has yet to be identified (Han & Kim, 2019). In the face of a cross-border e-commerce market where opportunities and challenges coexist, Cross-border e-commerce sellers are the core members of the cross-border market, and their production status will directly affect the overall operation of the cross-border e-commerce market (Liu, X et al., 2022; Zhang Xinying, 2021). This paper establishes a scientific and reasonable cross-border import e-commerce service quality evaluation index system and studies the impact of these indicators on service satisfaction in order to better provide suggestions for cross-border platforms, promote platform influence, and help platforms improve their service quality and service form.

BACKGROUND

Cross-Border E-Commerce

Zhao Yang (2016) believed that on cross-border e-commerce platforms, users mainly focus on website design. Liljander and Roos (2002) found that platforms' performance, reliability, responsiveness, user-friendliness and other characteristics will have an impact on customer retention rates. Zeithaml et al. (2002) proposed that high-quality platform service quality is a distinguishing point from other platforms. Parasuraman et al. (2005) found that the confidentiality of customer information, website service efficiency, transaction security, information reliability, and other factors have a significant positive correlation with online shoppers' behavioral motivation. Sung (2006) found that Korean e-commerce companies pay more attention to order responsiveness and logistics speed, while American e-commerce companies focus on transaction security and privacy protection, order responsiveness, and customer service. Ha and Stoel (2009) believed that payment security is also related to consumers' willingness to shop online. Zhang Jinfang (2020) pointed out that compared with traditional European and American markets with high market saturation, the cross-border business opportunities contained in emerging markets along the "Belt and Road" have attracted the attention of a large number of Chinese enterprises. The security of capital flow in the process of cross-border transactions is directly related to the normal operation of the cross-border e-commerce ecosystem, and even determines the success or failure of the cross-border e-commerce model (Yan Mengna, 2019). In terms of information flow, Yang Jianzheng and Liu Han (2014) found that by comparing cross-border enterprises of different scales, the ability to collect and process information and data has become a new issue that cannot

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