

# Research on the Influence of Consumer Psychology on Economic Growth under the Background of e-Commerce Economy

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**Abstract:** As a new way of trade, e-commerce reduces the distance between production and consumption with the help of the real-time interaction of the Internet, and connects enterprises and consumers closely. With the gradual development of the Internet and the improvement of e-commerce environment and the huge advantages of e-commerce, e-commerce is developing at an alarming speed, and gradually penetrated into all areas of social life. With the change of seller's market to buyer's market, the main driving force of economic growth has changed from supply driven to consumption driven. Due to the development of high-tech in the network era, e-commerce has formed a strong impact on the traditional economic and trade mode, and has strong vitality, which is the future development direction of marketing. This paper analyzes the changing trend and characteristics of consumer psychology in e-commerce and the factors that restrict the development of e-commerce at present, and discusses the influence of consumer psychology on economic growth, so as to construct a new operating mechanism suitable for e-commerce.

## 1. Introduction

The term economic growth is undoubtedly not unfamiliar to everyone. It reflects the growth rate and development speed of each country's economy compared with the previous year, and every country uses it to measure the overall economic development strength of a country. [1]. As a brand-new way of trade, e-commerce uses the instant interaction of the Internet to narrow the distance between production and consumption, and closely link enterprises and consumers [2]. The characteristics of the buyer's market in the Chinese economy have become increasingly obvious, especially in recent years, and even deflation has appeared. The mode of China's economic growth has changed from supply-constrained to demand-constrained. With the transition from a seller's market to a buyer's market, the main driving force of economic growth has shifted from supply-driven to consumption-driven [3]. E-commerce refers to the use of simple, fast, and low-cost electronic communication methods, where buyers and sellers conduct various business activities without meeting each other. As the inevitable development of high-tech in the Internet age, e-commerce has formed a powerful impact on traditional economic and trade methods, has strong vitality, and is the future development direction of marketing [4]. Faced with the special consumption form of e-commerce, consumers' consumption psychology and consumption behavior are more complicated and subtle, which directly affects the operation effect and development space of e-commerce.

With the development of the Internet, e-commerce has formed a powerful impact on traditional trade methods, has strong vitality, and is the direction of future development of marketing. Resident consumption is a purely personal behavior, which not only depends on the residents' income, but also is affected by many factors such as residents' consumption habits, expectations, the economic environment, consumption policies, and institutional cognitive analysis capabilities [5]. Due to the characteristics of e-commerce itself, the consumer psychology and behavior in it have a different performance compared with traditional economic trade. Reflected from the economic development status of various countries in the world in recent years, economic growth cannot be separated from consumer demand, and the important role of consumer demand in promoting economic growth is irreplaceable [6]. Whether it is from various macroeconomic theories or the current economic situation of various countries, there must be a certain connection between consumption demand

determined by income and economic growth. In-depth study of consumer psychology and consumer behavior is of great significance for further expanding e-commerce [7]. This article analyzes the changing trends and characteristics of consumer psychology in e-commerce and the consumer psychology factors that restrict the development of e-commerce at this stage, discusses the influence of consumer psychology on economic growth, and builds a new operating mechanism suitable for e-commerce.

## **2. The Change of Consumer Psychology in e-Commerce**

### **2.1 Pursue Individuality**

With the development of the consumer market today, consumer products are extremely abundant, and consumers can choose goods or services based on their personal needs. What consumers choose is no longer just the practical value of the commodity, but also a distinctive one, fully reflecting the individual's own value. As my country's economy shifts from a seller's market to a buyer's market, or from a shortage economy to a surplus economy, the main contradiction of economic operation has also changed from insufficient supply to insufficient effective demand. E-commerce has caused changes in consumer behavior. Only when companies understand these changes can they formulate correct marketing strategies and gain advantages in market competition. Modern consumers are often full of imagination, eager to change, like innovation, and have a strong curiosity, and put forward higher requirements for personalized consumption [8]. A reasonable household consumption rate is not only conducive to the improvement of household consumption levels and the optimization and upgrading of consumption structure, but also conducive to the virtuous circle of the national economy. From the perspective of household consumption, the final consumption rate of Chinese residents is much lower than that of other countries and regions in the world. The consumption and investment preferences of each consumer class are different, and there is a large gap, so they are acknowledging the differences and understanding the different consumption composition, consumer demand, consumption preferences and investment orientation, so as to correctly grasp the consumption changes of different consumer classes.

### **2.2 Pursuing Independence and Independence**

Browsing and shopping in virtual shops on the Internet can also replace some interpersonal interactions and reduce loneliness. The new status quo of consumer demand in China is largely determined by the income distribution mechanism with Chinese characteristics. Consumers actively obtain information related to commodities through various channels, and make analysis and comparison. They get psychological balance from it, so as to reduce the sense of risk and enhance their trust in products and psychological satisfaction. When the government raises interest rate, whether it will increase consumption or restrain consumption depends on the substitution effect and income effect of interest rate on savings in macroeconomics, and also on people's income. The scope of network marketing has greatly broken through the sales scope of original commodities and the scope of consumer groups. New things are emerging in modern society, the psychological stability of consumption is reduced, the psychological transformation is synchronized with the society, and the consumption behavior is characterized by the need to know and buy the latest goods in time, which makes the product life cycle shorten continuously [9]. With the continuous improvement of people's quality of life, people spend their income on daily recreational activities, which is a part of service consumption expenditure, and there are many influencing factors.

## **3. Analysis on the Influence of Residents' Consumption Psychology on Economic Growth**

With the transformation of China's economy from seller's market to buyer's market, or from shortage economy to surplus economy, the main contradiction of economic operation has changed from insufficient supply to insufficient effective demand, and the global economic situation has

deteriorated, so stimulating consumption and expanding domestic demand have become the long-term strategic policy of China's economic development. Under the traditional marketing mode, enterprises usually use newspapers, magazines, radio, television and other media to disseminate information to consumers. This kind of information dissemination has certain limitations in real-time and dissemination scope, and one-way communication leads to consumers not really understanding the product quality, function and service, and enterprises do not really understand the consumer demand [10]. Consumer psychology is not only directly influenced by technological progress, popularization of electronic network and digital change, but also deeply influenced by the changes of people's ideas and thinking patterns. Unique shopping environment and different purchasing methods from traditional transaction process will cause consumers' curiosity, detachment and personal emotional changes. In this way, consumers can challenge merchants according to their own wishes, take themselves as the center, act according to their own ideas, and fully express themselves in consumption. In order to find the products they need, consumers have to search in many stores, which consumes both physical strength and time. The huge information processing ability of e-commerce system provides consumers with a means of choice. Consumers only need to sit at home, search and view on the Internet, and they can directly face the goods provided by all the merchants on the Internet, and make a comprehensive comparison and selection [11]. From the law of diminishing marginal propensity to consume of marginal income, we can know that the propensity to consume of high-income groups is very low compared with that of low-income groups.

The process of customizing recommendation system in e-commerce is a regular process, which should be updated regularly. However, if the data in the data is deformed to some extent, it is necessary to update not only the database, but also the data warehouse or data model to improve the accuracy of the proposal. The architecture of the recommendation system is shown in Figure 1.

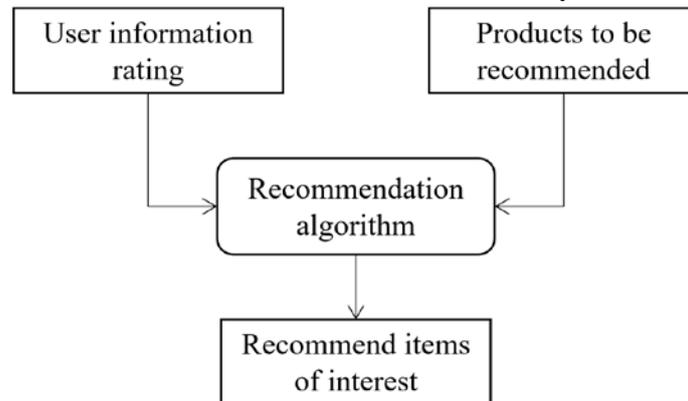


Fig.1 E-Commerce Recommendation System Architecture

The database of the e-commerce system records the transaction data of each customer. Each transaction data records the products purchased by the customer, and each product has a category attribute. Therefore, based on the data and user evaluation information, user preferences for each product category can be calculated. The calculation process is as follows:

$$PC_{u,j} = \frac{\sum_{i \in I_u} PI_{u,i} \times \mu_j(x_i)}{\sum_{i \in I_u} \mu_j(x_i)} \quad j = 1, 2, 3, \dots (1)$$

In the formula:  $PC_{u,j}$  represents user u's preference value for category,  $PI_{u,i}$  represents user u's scoring value for product i,  $I_u$  represents the product set that user u has evaluated, and  $\mu_j(x_i)$  represents the degree of membership of product i to category j.

At present, the phenomenon of excessive income gap in China is not only between urban and rural areas, but also between regions and industries, which will inevitably lead to the decline of social consumption tendency. With the integration of more and more families and information technology, consumers' new choices are increasing, and individual consumers will become more

individual. At the same time that new consumers have changed their ideas and behaviors, e-commerce caters to the needs of these changes and provides consumers with more effective choice tools. As far as China's economic development is concerned, enterprises have less risks in industrial investment, and achieve the goal of making profits through simple expansion. If investment fails, the degree of risk loss they bear is also smaller. Under the environment of e-commerce, consumers no longer passively accept the goods provided by merchants or manufacturers, but can directly express their unique requirements to enterprises, and even participate in the development and research of new products, so that the individualized needs of consumers can be met.

#### **4. Conclusions**

Due to the existence of the law of diminishing marginal propensity to consume, household consumption has a ratchet effect on economic growth, that is, when the economy is overheating, the growth rate of household consumption is not as fast as that of economy, and generally speaking, household consumption is in a downward trend. E-commerce is the change of human economic activities, which changes the behavior of consumers, improves customer satisfaction and realizes the individuation of customer consumption. The development of e-commerce will provide a good network environment for transaction management and various application service systems. Browsing and shopping in virtual shops on the Internet can also replace some interpersonal interactions and reduce loneliness. Unique shopping environment and different purchasing methods from traditional transaction process will cause consumers' curiosity, detachment and personal emotional changes. Under the environment of e-commerce, consumers no longer passively accept the goods provided by merchants or manufacturers, but can directly express their unique requirements to enterprises, and even participate in the development and research of new products, so that the individualized needs of consumers can be met. Pay enough attention to the consumer psychology and behavior in e-commerce, so as to ensure the wider application of e-commerce.

#### **References**

- [1] Dennis A R, Yuan L I, Feng X, et al. Digital Nudging: Numeric and Semantic Priming in E-Commerce. *Journal of Management Information Systems*, vol. 37, no. 1, pp. 39-65, 2020.
- [2] Hallikainen H, Laukkanen T. National culture and consumer trust in e-commerce. *International Journal of Information Management*, vol. 38, no. 1, pp. 97-106, 2018.
- [3] Luo Hongmei. Online consumer psychology behavior changes and marketing strategy analysis. *E-commerce*, vol. 237, no. 9, pp. 43-44, 2019.
- [4] Wu Yi. Research on Consumer Behavior in the Background of E-commerce. *Knowledge Economy*, 472, no. 16, pp. 75-75, 2018.
- [5] Robles V D. Caveat Emptor: How Lay Technical and Professional Communicators Sell Technical Products in C2C E-Commerce. *IEEE Transactions on Professional Communication*, vol. 62, no. 4, pp. 364-384, 2019.
- [6] Oliveira T, Alinho M, Rita P, et al. Modelling and testing consumer trust dimensions in e-commerce. *Computers in Human Behavior*, vol. 71, no. 6, pp. 153-164, 2017.
- [7] Suo Jiaoli, Zhao Dongmei. The relationship model between online consumer psychological distance and decision-making behavior. *Management Science and Engineering*, vol. 7, no. 4, pp. 233-243, 2018.
- [8] Yu Chen, Fan Jingying, Xu Hui. Analysis of the influence of consumer psychology on e-commerce brand marketing. *Shanxi Agricultural Economics*, vol. 26, no. 20, pp. 23-24, 2017.
- [9] Chen Bensong. The impact of consumer psychology changes on the marketing strategies of e-

commerce companies. *Modern Marketing (Business Edition)*, vol. 322, no. 10, pp. 112-113, 2019.

[10] Zhao Genliang. Traditional retail enterprise marketing strategies based on consumers' mobile Internet consumption psychology. *Economic Research Guide*, vol. 290, no. 9, pp. 51-52, 2016.

[11] Zheng Jiaoming, Zeng Xiangyu, Yang Yumeng, et al. Research on Consumer Behavior and Internet Marketing Strategies in E-commerce. *Modern Industrial Economy and Information Technology*, vol. 5, no. 10, pp. 84-85, 2015.