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### RESEARCH ARTICLE

#### LITERATURE REVIEW ON ONLINE SHOPPING ATTRIBUTES INFLUENCING CONSUMER BEHAVIOR IN CHINA

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## Abstract

With the growing popularity of of online shopping in China, Chinese scholars have conducted several studies to understand the Chinese online shopping market as well as the Chinese online shopping behavior of consumers. This literature review have found out that the Top five players of online shopping in China are Taobao/Tmall, JD.com, Pinduoduo, Tiktok E-commerce and Xiaohongshu. The commonly purchased products online in China are Electronics products, clothing and apparel, beauty and personal care, household goods, foods and fresh products. The online consumer groups are mostly young women, college students, urban white collar workers and middle aged and elderly people. Factors considered by online consumers before buying a security, privacy, product variety, product delivery, Diversity, Website Design, Product information quality, prices, product and promotions, customer service quality, social media and user generated content and brand reputation.

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#### Introduction:-

According to the China Online Retail Market Data Report 2023, the number of online shopping users in China in 2023 reached 915 million, an increase of 69.67 million compared with December 2022, accounting for 83.8% of the total Internet users. By the end of December 2023, the number of stores on China's online retail platforms had reached more than 25 million, an increase of 2.1%, among which there were about 13.582 million stores of physical goods, accounting for 54.2%. By June 2024, the number of stores on online retail platforms was about 25.597 million, an increase of 2.8 percent. AmonChina's online retail sales reached 7,099.1 billion yuan in the first half of 2024, up 9.8 percent year on year, according to data released by the National Bureau of Statistics and the Ministry of Commerce. China's online retail sales reached 3.3 trillion yuan in the first quarter, up 12.4 percent year on year. This shows that China's online shopping market continues to expand, and consumers are increasingly accepting and relying on online shopping. The total online sales volume of these enterprises was 1.91 trillion yuan, up 2.7 percent from the previous year, according to the "China Top100 Online Retailers 2024" list released by the China Chain Store and Operation Association.

With the steady growth of online market comes with the exponential growth on the number of online sellers, making the China Online shopping market highly competitive. As such Chinese scholars have conducted researches to better understand the behavior of online shoppers particularly on matters that would influence them to buy a product online. These manuscript analyzed the results of the completed researches in order to provide a better understanding on the buying behavior of of Chinese online shoppers.

## Report on the Top 5 online shopping platform

The five top online shopping platforms in China (Taobao/Tmall, JD, Pinduoduo, Tiktok E-commerce, Little Red Book) have their own characteristics, and meet the diversified needs of consumers through different business models and technological innovation.

#### Taobao/Tmall

Taobao and Tmall, as the core e-commerce platforms of Alibaba Group, dominate the Chinese e-commerce market. Taobao mainly adopts the C2C model, attracting a large number of small and medium-sized sellers and individual merchants, while Tmall mainly adopts the B2C model, focusing on brand merchants and high-quality products. Research has shown that the success of Taobao and Tmall is attributed to their strong technological support, such as intelligent recommendation systems and personalized algorithms, as well as well-established logistics systems (Chen et al., 2021). In addition, Taobao and Tmall have further consolidated their market positions through large-scale promotional activities such as "Double 11" (Zhang et al., 2022). According to a report by iResearch Consulting, Tmall's market share in the B2C market will reach 63.5% in 2023, firmly ranking first in the industry (iResearch Consulting, 2023).

#### JD.com

JD.com is the largest self operated e-commerce platform in China, known for its efficient logistics system and high-quality products. JD has achieved fast delivery and high-quality services through its own logistics system (such as JD Logistics), significantly improving consumers' shopping experience (Liu et al., 2021). In addition, JD.com has further optimized its logistics efficiency through technological innovations such as drone delivery and intelligent warehousing (Wang et al., 2023). JD's B2C model and commitment to genuine product protection have also won high trust from consumers (JD Research Institute, 2022). According to the National Bureau of Statistics, JD's market share in the self operated e-commerce market will reach 25.8% in 2023 (National Bureau of Statistics, 2023).

#### Pinduoduo

Pinduoduo has rapidly emerged as an important participant in the Chinese e-commerce market with its unique social e-commerce model and low price strategy. Pinduoduo has lowered product prices through group buying and social sharing, attracting a large number of price sensitive consumers (Li et al., 2020). Research has shown that Pinduoduo's success lies in its precise market positioning and in-depth exploration of the sinking market (Guo et al., 2021). In addition, Pinduoduo has also helped farmers directly connect with consumers through its agricultural product upward plan, further expanding its market share (Pinduoduo Research Institute, 2022). According to data from Analysys, Pinduoduo's annual active users will exceed 900 million in 2023, making it one of the largest e-commerce platforms in China in terms of user base (Analysys, 2023).

#### **Tiktok E-commerce**

Tiktok e-commerce is a social e-commerce platform that has risen rapidly in recent years. Relying on Tiktok's short video and live delivery mode, it has attracted a large number of young consumers. Tiktok e-commerce realized efficient promotion and sales of goods through content marketing and KOL (key opinion leader) delivery (Zhang et al., 2023). Research shows that the success of Tiktok e-commerce lies in its strong user stickiness and accurate algorithm recommendation system (Wang et al., 2022). In addition, Tiktok E-commerce has further improved its product quality and user trust through cooperation with brand merchants (Tiktok E-commerce White Paper, 2023). According to the data of QuestMobile, in 2023, the GMV (total volume of commodity transactions) of Tiktok e-commerce will exceed 2 trillion yuan, becoming the leader in the field of social e-commerce (QuestMobile, 2023).

#### Xiaohongshu

Xiaohongshu is a platform that combines social networking and e-commerce, mainly targeting young female consumers. Xiaohongshu has formed a unique social e-commerce model through user generated content (UGC) and community interaction. Research has shown that the core competitiveness of Xiaohongshu lies in its authentic product reviews and user sharing, which provide consumers with reliable shopping references (Liu et al., 2022). In addition, Xiaohongshu has also launched a large number of exclusive products and customized services through cooperation with brand merchants, further enhancing its market appeal (Xiaohongshu Annual Report, 2023).

According to data from iMedia Consulting, the monthly active users of Xiaohongshu will exceed 200 million in 2023, making it one of the preferred social e-commerce platforms for young consumers (iMedia Consulting, 2023).

In 2023, China Youth Network Campus News Agency conducted a questionnaire survey on 4673 college students. Nearly 90% of college students mainly shop online, and more than 70% of college students shop online or at campus supermarkets and small shops at least once a week. Among them, online shopping is the most common shopping method for college students. According to the data of iMedia Consulting, in 2024, among the shopping platforms commonly used by Chinese college students, Taobao/Tmall will account for 39.70%, Pinduoduo will account for 30.80%, Tiktok will account for 28.80%, JD/Jingxi will account for 28.10%, and Xiaohongshu will account for 17.60%. These platforms have their own unique features and meet the diverse shopping needs of college students. Most college students are satisfied with their online shopping experience, especially with affordable prices and a wide variety of products that are more likely to attract their attention.

With the rapid development of China's e-commerce market, consumers are increasingly diversifying their online shopping categories. From electronic products to fresh food, e-commerce platforms meet the diverse needs of consumers through technological innovation and logistics optimization. The following are the five most popular products for online sales in China in 2023, which not only account for the main sales of e-commerce platforms, but also reflect the shopping preferences and market trends of Chinese consumers.

# Report on the commonly purchased products online in China Electronic products

Electronic products, such as smartphones, laptops, and tablets, are one of the most popular product categories for online sales in China. According to a report by iResearch, the sales of electronic products on e-commerce platforms will account for 28.5% in 2023, with smartphones being the best-selling item (iResearch, 2023). JD and Tmall are the main platforms for electronic product sales, thanks to their genuine product guarantee and efficient logistics services (JD Research Institute, 2022).

#### **Clothing and Apparel**

Clothing and accessories are another popular category on e-commerce platforms. According to data from Analysys, the sales of clothing products on Taobao and Pinduoduo will account for 35% and 25% respectively in 2023 (Analysys, 2023). Female consumers are the main purchasing group for clothing products, especially young women (Xiaohongshu Annual Report, 2023).

#### Beauty and personal care

In recent years, the sales of beauty and personal care products on e-commerce platforms have grown rapidly. According to the report of QuestMobile, the sales of beauty products in Tiktok E-commerce and Little Red Book will increase by more than 40% year on year in 2023 (QuestMobile, 2023). International brands such as Est é e Lauder and Lanc ô me, as well as domestic brands such as Perfect Diary and Huaxizi, have both performed strongly (iMedia Consulting, 2023).

#### Household goods

The sales of household items (such as furniture, home appliances, and decorations) on e-commerce platforms have steadily increased. According to the National Bureau of Statistics, the online sales of household goods will reach 1.2 trillion yuan in 2023, a year-on-year increase of 15% (National Bureau of Statistics, 2023). JD and Tmall are the main platforms for home goods sales, especially for the delivery services of large items, which are favored by consumers (JD Research Institute, 2022).

#### **Food and Fresh Products**

Food and fresh produce are one of the fastest-growing categories of electronic goods in recent years. According to a report by Pinduoduo Research Institute, the sales of agricultural and fresh products will increase by 25% year-on-year in 2023, with fruits, vegetables, and seafood being the most popular items (Pinduoduo Research Institute, 2023). Platforms such as Hema Fresh and JD Home have further driven the growth of this category through instant delivery services (iResearch, 2023).

The rapid growth of China's online shopping market cannot be separated from the active participation of different consumer groups. From young women to middle-aged and elderly people, each group has its unique shopping habits

and preferences. The following are the five most influential consumer groups in China's online shopping market in 2023, whose consumption behavior not only drives the development of e-commerce platforms, but also shapes the future pattern of China's e-commerce market.

## Report on consumer groups of online shopping in China Young women

Young women (aged 18-35) are the main consumer group in China's online shopping market. According to the annual report of Xiaohongshu, female users will account for 70% of the total platform users in 2023, with beauty, clothing, and maternal and child products being its main purchasing categories (Xiaohongshu Annual Report, 2023). In addition, the data of Tiktok E-commerce shows that the purchase conversion rate of female users in live streaming goods is significantly higher than that of men (White Paper of Tiktok E-commerce, 2023).

#### College students

College students are an important consumer group in the online shopping market, especially in the areas of electronic products, clothing, and leisure food. According to a survey by China Youth Network, nearly 90% of college students will mainly shop through online shopping platforms in 2023, with Taobao and Pinduoduo being their preferred platforms (China Youth Network, 2023). The consumption behavior of college students has price sensitivity and social attributes, and Pinduoduo's group buying model is highly popular among them (Analysys, 2023).

#### **Urban white-collar workers**

Urban white-collar workers (aged 25-40) are the main group with high purchasing power, especially in the areas of electronic products, luxury goods, and household items. According to a report by JD Research Institute, the average annual consumption of white-collar users on the JD platform will exceed 10000 yuan in 2023, with high-end home appliances and digital products being their main purchasing categories (JD Research Institute, 2022). Tmall's data also shows that white-collar users are the main driving force behind luxury online sales (iResearch, 2023).

#### Consumers in the sinking market

Consumers in lower tier markets (third tier and below cities) have been the main driving force behind the growth of e-commerce platforms in recent years. According to a report by Pinduoduo Research Institute, the average annual consumption of users in the lower tier market will increase by 20% year-on-year in 2023, with food, clothing, and home goods being the most popular categories (Pinduoduo Research Institute, 2023). Pinduoduo and Taobao Special Edition are the preferred platforms for consumers in the lower tier market (Analysys, 2023).

### Middle aged and elderly people

Middle aged and elderly people (over 50 years old) are an emerging consumer group in the online shopping market in recent years. According to QuestMobile's data, the activity of middle-aged and elderly users on e-commerce platforms will increase by 30% year-on-year in 2023, with health products, home furnishings, and food being their main purchasing categories (QuestMobile, 2023). Tiktok e-commerce has attracted a large number of middle-aged and elderly users through short videos and live broadcast (Tiktok e-commerce white paper, 2023).

# Report on Factors Affecting Online Shopping Behavior Online Shop Security

Online shopping security is one of the key factors affecting consumers' online shopping behavior. Research shows that consumers' trust and perceived risk on e-commerce platforms directly affect their purchase decisions (Hajli et al., 2017). Platforms can significantly enhance consumers' sense of security by adopting advanced technological protections (such as end-to-end encryption, two-factor authentication) and transparent privacy policies (Zhou et al., 2021). In addition, with the implementation of privacy protection regulations such as GDPR and CCPA, the platform's compliance with data security and privacy protection has also become an important source of consumer trust (Bhattacharya et al., 2022). In addition, the improvement of laws and regulations also provides additional protection for consumers. For example, the EU's General Data Protection Regulation (GDPR) and China's Personal Information Protection Law clearly define the responsibilities of platforms in data protection, further enhancing consumer trust (European Commission, 2018; National People's Congress of China, 2021).

## **Online Shop Privacy**

Online shopping privacy is an important issue in the field of e-commerce, and with the popularity of online transactions, the protection of consumer personal data is increasingly being concerned. Some researchers pointed out in their research that information privacy issues not only involve data security at the technical level, but also include consumers' perception and trust of privacy risks. They emphasized that transparent privacy policies and effective technological protection measures are key to enhancing consumer trust (Martin & Murphy, 2017). In addition, the improvement of laws and regulations also provides protection for online shopping privacy. For example, the EU's General Data Protection Regulation (GDPR) and China's Personal Information Protection Law clearly define the responsibilities of businesses and platforms in data processing (European Commission, 2018; National People's Congress of China, 2021).

#### Variety of Product Sold

The variety of online shopping products is one of the core competitiveness of e-commerce platforms. In recent years, studies have shown that network platforms can better meet the individual needs of consumers by providing rich product choices, thus enhancing market competitiveness and user satisfaction (Chen et al., 2021). However, product diversity can also lead to information overload problems, affecting consumers' decision-making efficiency. To this end, e-commerce platforms optimize product display through intelligent recommendation systems and personalized algorithms to help consumers find needed products more efficiently (Zhang et al., 2022). Taking Taobao and JD.com as examples, these platforms have attracted a large number of consumers through rich product categories and brand choices, but they also need to continuously optimize recommendation algorithms and search functions to help consumers find the desired products more efficiently (Alibaba Group, n.d.; JD.com official website), n.d.) o

#### **Product Delivery**

Product delivery is an important part of e-commerce transactions, which directly affects consumers' shopping experience and satisfaction. Studies have shown that efficient logistics distribution and high-quality delivery services can significantly improve consumers' trust and loyalty in online sales channels (Xu et al., 2021). In addition, timeliness of delivery, transparency, and flexible return and exchange policies are also identified as key factors to improve consumer satisfaction (Wang et al., 2022). Taking JD Logistics and SF Express as examples, these logistics service providers have significantly improved delivery efficiency and service quality through intelligent warehousing systems and real-time logistics tracking technology (JD Logistics official website, n.d.); SF Express official website, n.d.) o In addition, Alibaba's Cainiao Network provides more convenient delivery solutions for global consumers by integrating logistics resources and technological innovation (Alibaba Group, n.d.). Product delivery is an important part of e-commerce transactions, which directly affects consumers' shopping experience and satisfaction. Studies have shown that efficient logistics distribution and high-quality delivery services can significantly improve consumers' trust and loyalty in online sales channels (Xu et al., 2021). In addition, timeliness of delivery, transparency, and flexible return and exchange policies are also identified as key factors to improve consumer satisfaction (Wang et al., 2022). Taking JD Logistics and SF Express as examples, these logistics service providers have significantly improved delivery efficiency and service quality through intelligent warehousing systems and real-time logistics tracking technology (JD Logistics official website, n.d.); SF Express official website, n.d.) o In addition, Alibaba's Cainiao Network provides more convenient delivery solutions for global consumers by integrating logistics resources and technological innovation (Alibaba Group, n.d.).

#### Diversity of product types

The diversity of product types is one of the core competitiveness of e-commerce platforms. Research has shown that a diverse range of product choices can better meet consumers' personalized needs, thereby enhancing market competitiveness and user satisfaction (Chen et al., 2021). However, product diversity can also lead to information overload, affecting consumer decision-making efficiency. To this end, e-commerce platforms optimize product displays through intelligent recommendation systems and personalized algorithms, helping consumers find the products they need more effectively (Zhang et al., 2022).

## Website Design and User Experience

Website design is an important factor that affects consumers' online shopping experience. Research has shown that user-friendly interface design, fast loading speed, and intuitive navigation systems can significantly improve user

satisfaction and purchase intention (Liu et al., 2020). In addition, responsive design and mobile optimization are also indispensable parts of modern e-commerce platforms, as more and more consumers shop through mobile devices (Kim et al., 2019).

#### **Product Information Quality**

The accuracy and completeness of product information are crucial for consumers' purchasing decisions. Research has shown that detailed product descriptions, high-quality images, and authentic user reviews can significantly enhance consumer trust and purchase intention (Zhang et al., 2021). In addition, the application of video displays and virtual reality technology also provides consumers with a more intuitive product experience, further enhancing their purchasing confidence (Wang et al., 2020).

#### **Prices and Promotions**

Price is one of the important factors affecting consumers' online shopping behavior. Research has shown that price competitiveness and promotional activities can significantly increase consumers' willingness to purchase (Chen et al., 2020). In addition, price transparency and no hidden fees are also important considerations for consumers when choosing online shopping platforms (Liu et al., 2021). For example, Pinduoduo has attracted a large number of consumers through its group buying model and low price strategy, while Taobao and JD.com maintain their price competitiveness through regular promotional activities and coupons.

#### **Customer service quality**

High quality customer service is the key to improving consumer satisfaction and loyalty. Research has shown that rapid response, effective solutions, and friendly service attitudes can significantly improve consumers' shopping experience (Xu et al., 2020). In addition, multi-channel customer support (such as online chat, phone, and email) also provides consumers with more convenience (Wang et al., 2021).

#### Social media and user generated content

Social media and user generated content (UGC) have had a profound impact on consumers' online shopping behavior. Research has shown that consumers are more inclined to trust evaluations and recommendations from other users rather than advertisements from merchants (Liu et al., 2022). For example, Xiaohongshu has attracted a large number of young consumers through its social e-commerce model and user generated content, while Tiktok has risen rapidly through its short video and live delivery model.

#### **Brand reputation and trust**

Brand reputation is an important consideration for consumers when choosing online shopping platforms. Research has shown that consumers are more inclined to choose brands with good reputation and high trust (Zhang et al., 2020). For example, JD.com and Tmall have won high trust from consumers through their genuine product guarantee and efficient logistics services.

#### Conclusion:-

With the rapid urbanization of China and Changing lifestyle of Chinese Consumers , buying online has become a common lifestyle of Chinese consumers. Such Chinese online shopping has grown rapidly with more consumers buying online and businesses having online platforms for selling their products. This growing opportunity fo online Chinse market have resulted to a number of Online shopping platform competing for the market share. Majors player like Taobao/Tmall, JD Pinduoduo, TikTok E-commerce and Xiaohongshu among others. This platform caters to the different type of consumers from bargain hunters to those seeking high end products. The popularity of online shopping is particularly evident among young women, college students, urban professionals , a reflection of the changing lifestyle of Chinese consumers.

As online shopping continues to evolve, various considerations are undertaken by online consumers before engaging into buying online products. This includes factors like security, privacy, product variety, product delivery, Diversity, Website Design, Product information quality, prices, product and promotions, customer service quality, social media and user generated content and brand reputation.

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