



**THE INFLUENCING FACTORS OF ONLINE CONSUMPTION
BEHAVIOR OF RESIDENTS IN QINGDAO, CHINA**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
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This Independent Study has been Approved as a Partial Fulfillment of the Requirement
of International Master of Business Administration

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ABSTRACT

With the rising of information technology, the rapid expansion of the online retail market, and the speedy popularity of online shopping options, online retailing, a new business model, is restructuring people's consumption behavior, while influencing urban retail commerce and even the whole urban economy. Research on the characteristics and influencing factors of online consumption behavior will help the long-term development of electronic commerce.

The objectives of the study were:1) To explore factors influencing the online consumption behavior of Qingdao residents; and 2) To verify that gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping have a positive effect on the online consumption behavior of Qingdao residents.

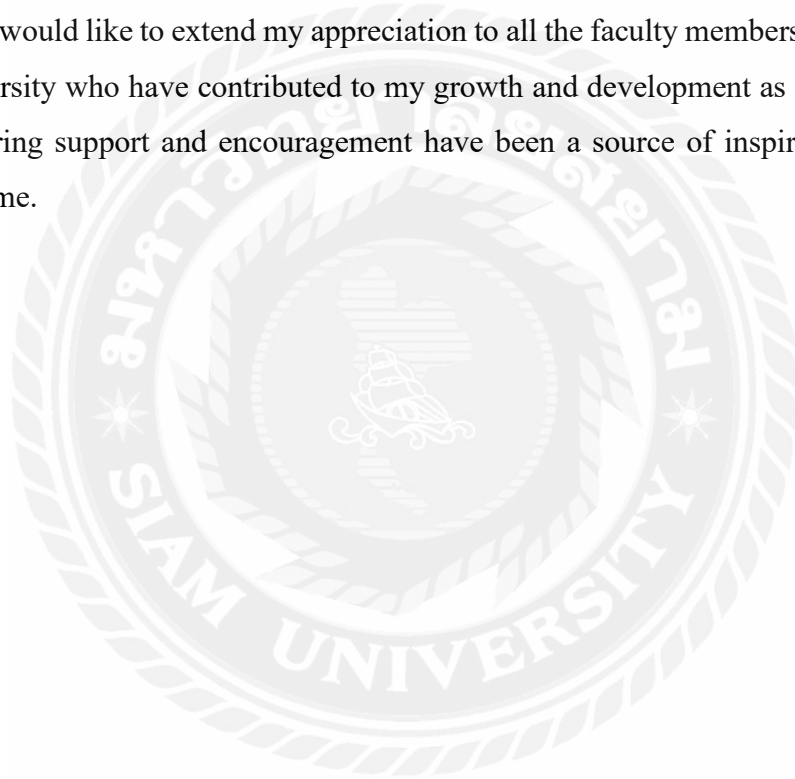
This study adopted the quantitative research method. There were 650 questionnaires distributed, 648 questionnaires were collected, 621 questionnaires were valid, and the effective rate was 95.5%. Based on the theory of consumption behavior, this paper found that: 1) The factors influencing residents' online consumption behavior include: income level, education level, ease of use of online shopping, usefulness of online shopping;2) Gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping have a positive effect on residents' online consumption behavior. For recommendations, marketing strategies should focus on the following aspects:1) Breaking down online purchasing metropolitan commercial barriers; 2) Improving the consumer experience while reducing the risks associated with space development; 3) Adopting e-commerce businesses mix online and physical stores to handle product experience.

Keywords: online consumption behavior, consumption characteristics, influencing factors

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DECLARATION

I, Chen Binglin, hereby certify that the work embodied in this independent study entitled “The influencing factors of online consumption behavior of residents in Qing Dao, China” is result of original research and has not been submitted for a higher degree to any other university or institution.

Chen Binglin

Chen Binglin

Dec 1, 2023



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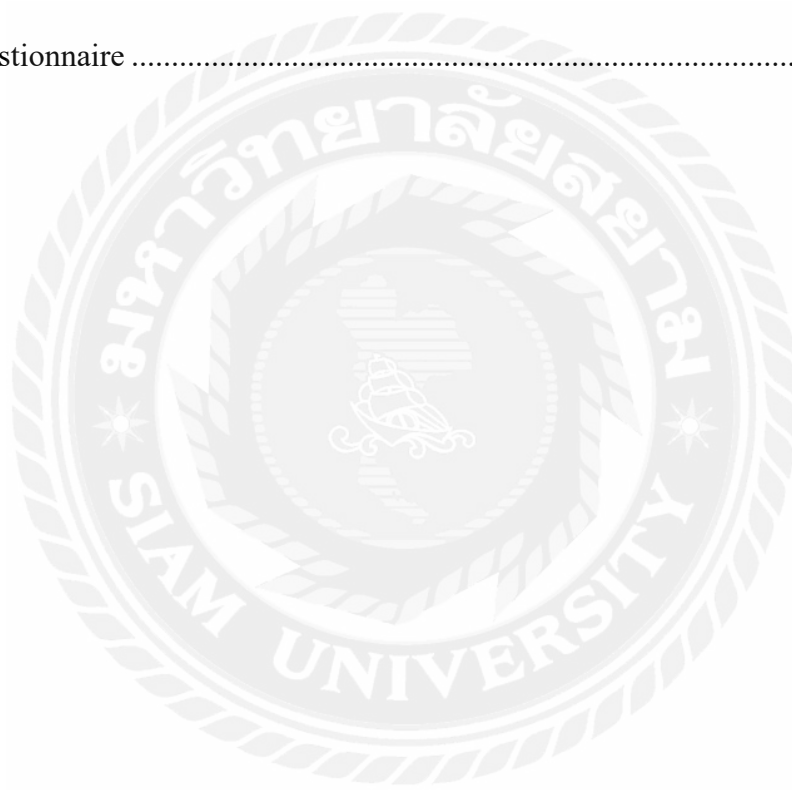


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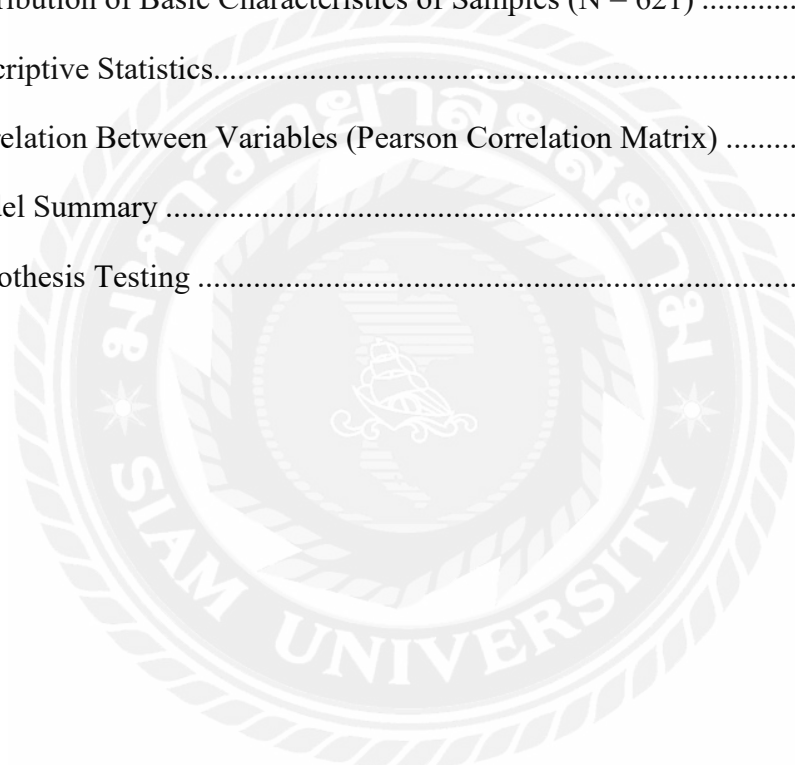


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Chapter 1 Introduction

1.1 Research Background

With the rapid development of Internet technology, online retailing has developed into an emerging retail business model and is gradually becoming a new economic growth point. Although online shopping began in the United States, China's online retail development has surpassed that of the United States, ranking first in the world. With the development of mobile payment and modern logistics, people are shifting their consumption from "offline" to "online". Online shopping has gradually become popular and pervasive in the daily life of residents. Online shopping saves time, transportation, and energy costs to the greatest extent, improves the efficiency of the entire shopping process, and enables consumers to extend their daily life and consumption space (Han & Tan, 2020). The diversified, fragmented, and fast consumption method brings consumers a new consumption experience, leading them to find their belonging and identity in the virtual space, and influencing their actual lives. Online shopping may exist as a supplement and derivative of physical shopping. On the one hand, in the process of competing with virtual electronic commerce, urban physical commerce promotes the renewal and transformation of its commercial business mix, optimizes the spatial structure of urban commerce, further accelerates its scale effect, and thus develops (Hua & Chiu, 2022). On the other hand, the explosive development of the logistics industry brought about by online consumption has led to the continuous extension and expansion of logistics space, a process that has a certain impact on urban commercial space.

Qingdao is a famous seaside city in China. In recent years, online shopping has developed rapidly, and online shopping has become an essential part of Qingdao residents' daily life. In 2022, the scale of online retail sales in Qingdao reached 214.48 billion yuan, up 22.5% year-on-year, with growth rates of 0.7 and 18.3 percentage points higher than China's average crystal (Varela et al., 2022), and the total volume ranked first in Shandong Province. The expanding scale of online consumption by Qingdao residents is accompanied by various problems. The increase in online consumption behavior has a huge impact on urban commercial entities, and online consumption complaints are increasing, etc. Therefore, it is important to study the influencing factors of Qingdao residents' online consumption behavior for regional economic development, to improve residents' consumption experience and to realize the long-term development of e-commerce.

1.2 Research Significance

Studying the influencing factors of online consumption behavior of Qingdao residents in China has important practical and academic significance, and has a positive impact and promotion effect on enterprises, government, consumers, and academia.

Studying the influencing factors of the online consumption behavior of Qingdao residents can help enterprises and market practitioners understand consumers' needs and behavior patterns. By gaining a deeper understanding of consumers' preferences, purchase motives, and shopping behaviors, companies can better develop market strategies, product positioning, and promotional activities, improve market insights and enhance competitiveness (Hamari et al., 2016). By studying the factors influencing consumers' online consumption behavior, we can reveal the problems and challenges consumers face in the process of online consumption, such as information asymmetry and false propaganda, provide relevant education and training for consumers, improve consumers' online literacy and consumption ability, and promote consumer protection and the realization of consumer rights.

Studying the influencing factors of the online consumption behavior of Qingdao residents can provide academics with research results about Internet consumption behavior and e-commerce. These research results can enrich consumer behavior theories, expand academic research fields, and provide references for further research in related fields. Understanding consumers' online consumption behavior and influencing factors can provide a basis for decision-making by the government and related institutions (Pavlou et al., 2007). Based on the research results, the government can formulate relevant policies and regulatory measures to promote the development of the Internet economy, protect consumers' rights and interests, and promote the healthy development of e-commerce.

1.3 Research Questions

With the rapid development of information technology, it makes online retailing lead a new round of consumption revolution. And the interaction between the consumption behavior in virtual space and the physical retail commercial space in the city needs to be studied in depth. Starting from a survey on the online consumption behavior of Qingdao citizens, this paper studies the general characteristics of residents' online shopping behavior and the factors affecting online consumption behavior, and finally analyzes the impact of online shopping behavior on residents' physical shopping behavior and urban commercial organization and proposes corresponding strategies. Therefore, with the increasing prevalence of online consumption, the study of the online shopping consumption environment, behavioral characteristics of physical shopping influence mechanism and influence factors, and other issues can help grasp the future development direction of the urban retail industry and urban change trend in the information age, which is of important practical significance for the development of cities.

1. What are the factors influencing residents' online consumption behavior in Qing Dao?

2. Do gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping affect the residents' online consumption behavior in Qing Dao?

1.4 Research Objectives

The level of e-commerce development is related to the economic development of cities, the income level of residents, and the size of cities, so the characteristics of e-commerce development and residents' online shopping behaviors vary greatly from city to city. Therefore, this study will collect data and analyze the influencing factors of urban residents' online consumption using a questionnaire. Ultimately, the consumption level and consumption satisfaction of consumers will be improved to achieve the sustainable development of the e-commerce industry. Therefore, combined with the above analysis the purpose of this study is:

1. To explore the factors influencing the online consumption behavior of Qingdao residents.

2. To verify that gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping have a positive effect on the online consumption behavior of Qingdao residents.

1.5 Research Scope

This study investigates the online consumption behavior of Qingdao residents during the period of September 1, 2023 to December 30, 2023. The target population of this study will be Qingdao residents who participate in online consumption during this period. The study will focus on analyzing their online consumption habits, preferences and patterns. In addition, the study is based on the theory of consumer behavior to provide a theoretical framework for the analysis.

1.6 Conceptual and Operational Definition

Consumer Behavior: Through questionnaires or in-depth interviews, we collect data on Qingdao residents' online consumption behavior, including information on their purchase frequency, purchase preferences, and consumption habits.

Ease of Online Consumption: Evaluate Qingdao residents' ease of use of various online shopping platforms, including the interface design of the website or mobile application, the simplicity of the shopping process, and other aspects.

Usefulness of Online Consumption: To investigate Qingdao residents' actual benefits or satisfaction from online shopping, including evaluations of the quality of goods purchased, price reasonableness, and customer service.

Income Level: investigate the income level, which can be categorized according to individual or household income, in order to understand the impact of different income levels on online consumption behavior.

Education Level: Investigate the education level, including information on the highest level of education or educational attainment, in order to explore the relationship between education level and online consumption behavior.



Chapter 2 Literature Review

2.1 Introduction

The literature review of this study is based on the theory of consumer behavior to analyze the factors affecting online consumption of Qingdao residents. Through the literature review, the influencing factors of Qingdao residents' online consumption are clarified. On the basis of analyzing and summarizing related studies, the conceptual model of this study was constructed to determine the gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping on online consumption behavior of Qingdao residents.

2.2 Literature Review

2.2.1 Theory of Consumption Behavior

(1) The concept of consumption behavior

Consumption refers to the use of goods and various services by people in the process of satisfying their needs, while consumption behavior refers to the specific practices exhibited by consumers in this process. Consumption behavior can be specifically divided into three stages, the information-gathering stage before acquiring the desired goods or services, the purchase stage, and the use stage after acquiring the goods. Consumer behavior has been studied independently since the 1960s and has gradually become a very active research field in the West (Taherdoost, 2018). Broadly speaking, consumer behavior studies analyze human consumption behavior from the perspective of environmental resources.

In general, consumers choose to buy products online because of the greater utility of online shopping than other purchasing methods. Later on, some scholars put forward the income determination theory system, including the absolute income hypothesis, relative income hypothesis, and persistent income hypothesis, which mainly study the quantitative relationship between consumption and income. And the narrow sense of consumer behavior is to analyze consumer behavior from the perspective of marketing. Scholars mostly study and explain the characteristics and influencing factors of consumer behavior based on theories such as the Theory of Rational Behavior (TRA) (McAllister, 1990), Theory of Planned Behavior (TPB) (Ajzen, 1991), and Technology Acceptance Model (TAM), to guide enterprises and businesses in formulating marketing strategies. The study of online consumer behavior is based on consumer behavior theory on the process of residents' online transaction activities (Taherdoost, 2018). With the arrival of the Internet, Internet consumption with information technology as the core has gradually emerged. As a form of consumption, online consumption presents many new features at the behavioral level: the combination of consumption and production, unmediated, incremental utility, borderless consumption, etc.

(2) Gender and age of residents

In studying the impact of gender and age on residents' online shopping, the impact of gender on online shopping, purchase preferences. Investigate the purchase preferences of residents of different genders when shopping online, e.g., males are more inclined to purchase technology products, females prefer to purchase clothing and accessories, etc. Purchase frequency (Rehman et al., 2019). Compare the frequency of online shopping among residents of different genders to understand the differences in shopping behavior between males and females, e.g., whether there are significant shopping peaks. Shopping Motivation. Explore the motives of residents of different genders for online shopping, e.g. whether they are influenced by advertising campaigns, whether they pay more attention to product quality or price concessions, etc.

Impact of age on online shopping. Shopping Habits: To study the online shopping habits of residents of different age groups, including differences in browsing time, purchase type preference, etc. For example, young people are more inclined to buy trendy new products, and the elderly pay more attention to the practicality of goods. Shopping Methods: To analyze the shopping methods of residents of different age groups, including the use of different shopping platforms, reference shopping information sources, etc. For example, young people are more inclined to use shopping links on social media to make purchases. Purchasing power: (Fu et al., 2020) To understand the level of purchasing power of residents of different age groups, including the size of spending amount, shopping frequency, etc., as well as the consumption preference of different age groups in different product categories. Through detailed research and analysis of the impact of gender and age on residents' online shopping behavior, we can more accurately understand the differences and characteristics of different groups in their online consumption behavior, and provide useful reference and guidance for the formulation of relevant marketing strategies (Mallapragada et al., 2016).

(3) Income level and education level of residents

In examining the effect of income level and education on residents' online shopping. The impact of income level on online shopping. Consumption ability: to investigate the consumption ability of residents with different income levels when shopping online, including the differences in average consumption amount, purchase frequency, etc. For example, high-income groups may be more inclined to buy high-end brands or luxury goods (Fu et al., 2020). Purchase willingness: analyze the purchase willingness of residents of different income levels when shopping online, for example, low-income groups may pay more attention to price discounts and preferential activities, while high-income groups may pay more attention to product quality and service experience. Purchase categories: To understand the categories of goods preferred by residents of different income levels when shopping online, for example, low-income groups may pay more attention to daily necessities and practical goods, while high-income groups may be more inclined to buy luxury goods or high-tech products (Rehman et al., 2019).

The Impact of Education Level on Online Shopping. Consumption Decision Making:

To study the consumption decision-making process of residents with different education levels when making online purchases, including differences in access to information and the basis of product selection, e.g., residents with higher education may be more inclined to make purchasing decisions through professional evaluations or reviews. Shopping Behavior: Analyze the behavioral characteristics of residents with different levels of education when shopping online, for example, whether they pay more attention to the quality and functionality of the goods, and whether they pay more attention to the experience and service quality during the shopping process. Online shopping skills: To understand the differences in online shopping skills among residents with different levels of education, such as proficiency in operating websites or applications, as well as awareness and practice of online shopping security and privacy protection (Mallapragada et al., 2016).

By conducting a detailed study and analysis of the impact of income level and education level on residents' online shopping, we can gain a deeper understanding of the differences and characteristics of online consumption behaviors of different groups, and provide useful reference and guidance for the formulation of related marketing strategies (Cohen & Levinthal, 2018).

(4) Ease of use of online shopping

The impact of online shopping ease of use on residents shopping online. The impact of interface design on residents' online shopping. User experience: To assess the impact of the interface design of online shopping platforms on residents' user experience, including factors such as page layout, icon design, and color matching. Navigation and browsing: Analyze the degree of convenience of the interface design on residents' navigation and browsing of products, e.g., whether clear menu navigation, product categorization, etc. are easy to understand and use (Taherdoost, 2018).

The impact of shopping process simplicity on residents' online shopping. Shopping process: To study the impact of the simplicity of the shopping process on residents' online shopping behavior, including the smoothness of the steps of searching for products, adding to the shopping cart, and checking out and paying. Convenience of operation: Analyzing the convenience of each step in the shopping process, such as whether multiple clicks are needed to complete the purchase, and whether it is easy to choose payment methods. Impact of search and filtering functions on residents' online shopping. Search accuracy: Assess the accuracy of the search function provided by the online shopping platform, including the degree of matching of search results and the quality of search suggestions. Filtering conditions: To analyze the impact of the filtering functions provided by online shopping platforms on residents' shopping behavior, such as the diversity and effectiveness of filtering conditions for price, brand, and size (Taherdoost, 2018).

By conducting a detailed study and analysis of the impact of online shopping ease of use on residents' online shopping behavior, we can better understand the importance of shopping platform design, and provide useful references and guidance for enhancing user

experience and promoting the development of the online shopping market.

(5) Usefulness of online shopping

The impact of the quality of purchased goods on residents' online shopping. Satisfaction and trust: To investigate residents' satisfaction and trust in the quality of goods purchased, including whether they receive goods that match the descriptions on the website and whether the quality of goods meets expectations (Rehman et al., 2019). Return and exchange policy: Analyze the impact of the online shopping platform's return and exchange policy on residents' online shopping decisions if they encounter quality problems after purchasing goods, including whether it will affect residents' choice of the platform for shopping again.

The impact of price reasonableness on residents' online shopping. Consumer value perception: to study residents' perception of the price of goods offered by online shopping platforms, including whether they think the price is reasonable and whether they think there are preferential activities (Dingemanse et al., 2004). Purchase Decision: To analyze the impact of price reasonableness on residents' purchase decisions when shopping online, for example, whether they are more inclined to buy because of reasonable prices, whether they give up buying because of high prices, etc. Impact of delivery service on residents' online shopping. Delivery speed and accuracy: To assess the impact of online shopping platforms' delivery services on residents' online shopping experience, including whether the delivery speed meets expectations and the accuracy of delivery. After-sales service: To study the impact of after-sales service provided by online shopping platforms on residents' shopping experience after they receive the goods, such as whether they can solve the problem in time, whether they provide professional after-sales support, and so on (Cohen & Levinthal, 2018).

By conducting a detailed study and analysis of the impact of online shopping utility on residents' online shopping behavior, we can gain a more comprehensive understanding of the impact of utility factors on residents' online shopping behavior, and provide useful references and guidance for improving the utility and user experience of shopping platforms.

2.2.2 Concept of Online Consumption

For the definition of the concept of online consumption, first of all, it is necessary to understand the connotation of e-commerce. E-commerce in a broad sense is from the perspective of overall business operation, mainly referring to the commodity trading process including production, product testing, advertising, trading, and the overall business electronically. E-commerce in a narrow sense refers to the use of the Internet and other tools in the global scope of commodity trading activities, that is, the process of commodity trading electronically. There are three main models of e-commerce (Chan et al., 1999), the first is business-to-business (B2B); the second is business-to-consumer (B2C); and the third is consumer-to-consumer e-commerce (C2C). For consumers, conducting commerce directly with businesses and merchants greatly improves transaction efficiency and saves valuable time. Online consumption or online retailing is also referred to as electronic commerce. Online consumption can be simply defined as the retrieval or purchase of consumer goods and services via the Internet (Chan et al., 1999). This study considers that consumers can be defined as online consumer behavior as long as they use the Internet in the process of information collection, purchase, and payment that they experience during their consumer activities.

In studying the concept of online consumption, the definition of online consumption is defined to clarify what purchasing behaviors are included, such as shopping websites, in-app purchases of mobile applications, etc. At the same time, the scope of online consumption is defined, including the types of goods and services, and the behavioral patterns of consumers. Analyze the factors affecting online consumption, such as consumers' personal characteristics (age, gender, income, etc.), technological factors (Internet connection, mobile device penetration, etc.), and environmental factors (socio-cultural background, laws and regulations, etc.) (Chan et al., 1999). To study the purchasing behavior patterns of different consumers in the online environment, including the behavioral characteristics and patterns of browsing products, comparing prices, placing orders for purchases, and evaluating feedback. Consumers' user experience when making online purchases, including the impact of the interface design of the website or application, the smoothness of the shopping process, and the convenience of payment methods on consumer satisfaction and loyalty. Through in-depth analysis of these related studies, the concept of online consumption and its related characteristics can be more comprehensively understood, providing a basis and reference for further research (Chan et al., 1999).

2.3 Related Research

Many scholars have studied online consumption behavior, and different scholars have studied online consumption behavior from different perspectives. These include spatial perspective, consumer perspective, and commodity perspective.

(1) Related research based on spatial perspective

Cohen & Levinthal (2018) investigated the effect of store accessibility on residents' online shopping behavior by investigating the residents who lived at different distances from bookstores and clothing stores in metropolitan areas in the United States (Cohen & Levinthal, 2018). The study found that the popularity of online shopping tended to be higher in urban centers than in peripheral areas. The scholars used multiple linear regression models to study the influence of residents living in different urban spaces on online shopping behavior, and the results showed that online shopping showed some spatial differences among residents in different spaces (Dingemanse et al., 2004). Although there are obvious differences in the results of many studies, it is undeniable that spatial factors affect residents' online consumption behavior.

(2) Related research based on consumer perspective

Hennig et al. (2004) pointed out that in the virtual online shopping environment, people's shopping motivation contains both utilitarian and hedonic components. For online consumption and traditional consumption, the importance of utilitarian and hedonic psychology is different (Hennig et al., 2004). Consumers' perceived risk characteristics have a significant impact on online purchase decisions. Many scholars believe that perceived risk

is one of the very important reasons that influence consumers' online shopping engagement. Some scholars in a research study on online shoppers' behavior using online transactions point out that the lower the online users perceive low security in online transactions, the lower their tendency in transactions will be (Mallapragada et al., 2016).

(3) Related research based on perspective of commodity characteristics

In terms of commodity category factors, Fu et al. (2020) argue that intangible, low-cost, frequently purchased, and highly differentiated products are more likely to be purchased online. Rehman et al. (2019) study shows that consumers are significantly more willing to purchase intangible products (e.g., tickets) than tangible products (e.g., furniture or clothes) (Rehman et al., 2019). The fact that each product category has its corresponding attributes and that there are differences in consumers' assessment of the attributes of goods suggests that consumers' online shopping behavior changes with the category of goods (Fu et al., 2020).

2.4 Conceptual Framework

This paper examines the relevant research literature and combines consumer behavior theories to claim that among the elements impacting online customer behavior, population qualities are the most studied and unclear. People with diverse features have varying consuming habits, preferences, and so on. At the same time, residents will have more accessible and consistent access to online consumption, increasing their likelihood of accepting various online advertising efforts as well as their acceptance of online consumption itself. On the other hand, economic factors directly reflect residents' living standards, which has a significant impact on consumer behavior. Therefore, this paper puts forward the following hypotheses, as shown in Fig2.1.

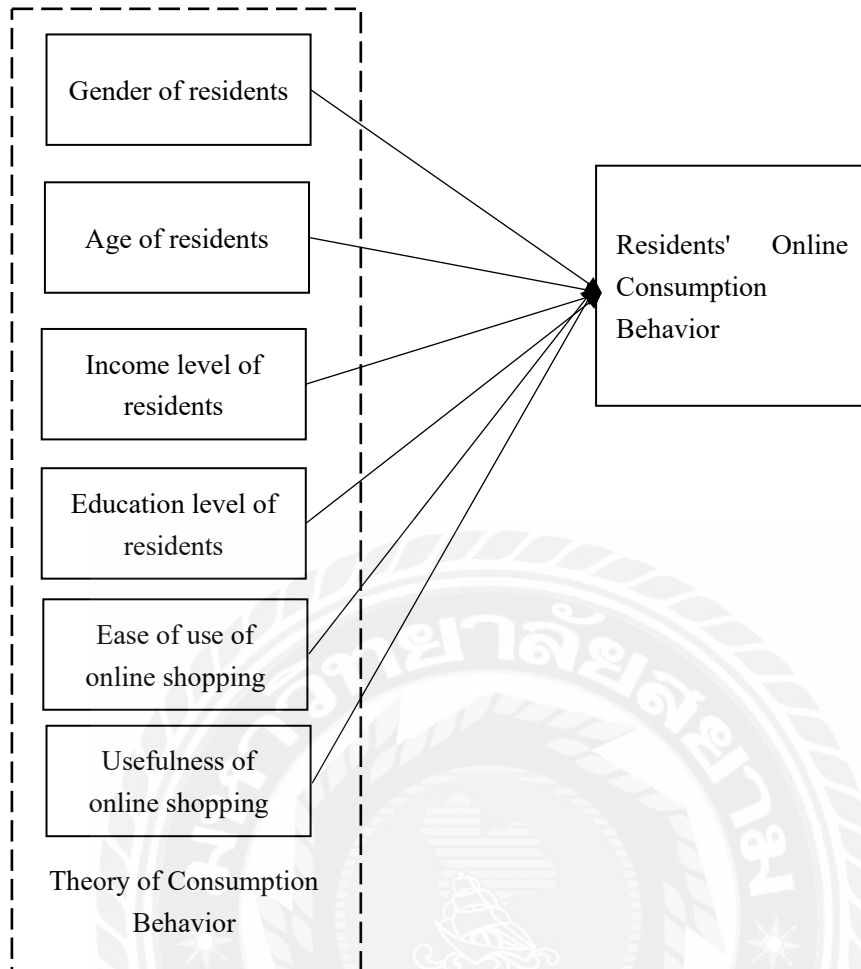


Figure 2.1 Conceptual Framework

Chapter 3 Research Methodology

3.1 Introduction

This study adopted the quantitative research method. The quantitative research uses a questionnaire and SPSS to analyze the reliability and validity of the questionnaire, and multiple regression analysis is used to determine the influencing factors of Qingdao residents' online consumption behavior after determining that the reliability and validity meet the standards. This paper selects a suitable and mature scale as a reference to provide a certain basis for the questionnaire design. In this study, the questionnaire is divided into two parts, one is about the basic information of the survey sample, including the gender, age, monthly income, and education level of the respondents, and the second part is about the basic survey dimensions of the research hypothesis. The questionnaire for this study was based on a seven-level Likert scale.

3.2 Population and Sampling

This paper took Qingdao residents as the research population. The target population must meet the requirements of consumers who have lived in Qingdao for at least three years and have experience in online shopping and online consumption. The survey included personal information, online consumption, economic attributes, and the ease of use and usefulness of online shopping. During the survey, 650 questionnaires were distributed, 648 questionnaires were collected, 621 questionnaires were valid, and the effective rate was 95.5%.

Calculated by the sample formula, collect data values for the quartile of the standard normal distribution, for the confidence level generally take the value of 95%. ρ is the sample standard deviation, the sample standard deviation of the estimated value of the standard deviation of the sample is generally used 0.01, to determine the margin of error β (i.e., the maximum permissible value of the difference between the sample mean and the overall mean), $\beta = 0.01$. The formula gives a sample size of 649.22, so the sample size is at least 650. For the random sampling method, an online survey will be conducted using Questionnaire Star for questionnaire distribution, and the sample will be drawn randomly from the overall population.

3.3 Research Design

This study adopted the quantitative research method. The online consumption behavior of Qingdao residents was taken as the research subject. According to the theory of consumer behavior, important factors affecting online consumption behavior include the gender, the age, the income level, the education level, the ease of use of Qingdao residents' online shopping, the practicality of Qingdao residents' online shopping, the income level, the education level, the ease of use of Qingdao residents' online shopping behavior, and the practicality of Qingdao residents' online shopping behavior. Therefore, this study takes the gender, the age, the income level, the education level, the ease of use of Qingdao residents' online shopping behavior, and the practicality of Qingdao residents' online

shopping behavior as the objects of the study, therefore, this study takes the gender, the age, the income level, the education level, and the ease of use of online shopping behavior as the objects of the study. Therefore, the gender, the age, the income level, the education level, the ease of use of online shopping, and the practicality of online shopping are taken as model variables in this study.

In the questionnaire, gender, age, income level, education level have one question each. ease of use of online shopping, usefulness of online shopping. There are 7 questions of online shopping, 6 questions of usefulness of online shopping, and 6 questions of consumer behavior, totaling 23 questions. The questionnaire on the current situation of online shopping consumer behavior in Qingdao is mainly composed of two parts. The first part is a survey of the respondents' basic personal information, such as gender, education, monthly income, etc.; the second part is a survey of the details of various aspects of Qingdao consumers' online consumption. A five-point Likert scale was used, with scores ranging from 1-5, representing strongly disagree, disagree, generally agree, agree, and strongly agree. Generally, agree, agree, and strongly agree, with higher scores representing greater agreement with the item. The corresponding question items were The corresponding question items were designed for each variable and the items were coded as shown in Table 3.1.

Table 3.1 The Marketing Strategy Measurement Item

Variable	Measurement item	NO.
Gender of Residents	Gender	Q1
Age of Residents	Ager	Q2
Income Level of residents	Income	Q3
Education Level of Residents	Education	Q4
Ease of Use of Online Shopping	1.Do you think Qingdao's online shopping platform is easy to use in terms of interface design?	Q5
	2.When shopping online, do you think the search and filtering functions of Qingdao's online shopping platform can help you find the products you need quickly?	Q6
	3.How easy is the shopping process on Qingdao's online shopping platform?	Q7
	4.When you use Qingdao's online shopping platform to make purchases, do you think the page loading speed and response speed of the website or application are fast enough?	Q8
	5.With regard to the payment process of Qingdao's online shopping platform, do you find it easy to use?	Q9
	6.It is easy for you to find and learn about product details, prices and promotions on Qingdao's online shopping platform?	Q10

	7. When you used Qingdao's online shopping platform, did you find the ease of use provided by the platform in terms of customer service and after-sales support good enough?	Q11
Usefulness of Online Shopping	1. When you shop online, do you think the quality of the products offered by Qingdao's online shopping platforms matches the descriptions?	Q12
	2. The return and exchange policy of Qingdao's online shopping platform meets your needs?	Q13
	3. Do you think the price of the products offered by Qingdao's online shopping platform is reasonable?	Q14
	4. After you have received the goods, do you find the delivery speed and accuracy of Qingdao's online shopping platform satisfactory?	Q15
	5. When you use Qingdao's online shopping platform, you can easily access the product details, size and color options?	Q16
	6. Do you think Qingdao's online shopping platform provides various payment methods that are safe and reliable?	Q17
Residents' Online Consumption Behavior	1. When you do online shopping, do you prefer to use your cell phone?	Q18
	2. When choosing a shopping platform, product variety, favorable price and after-sale service are the most important.	Q19
	3. You usually check product reviews, compare prices of different platforms, and search for promotional information before making shopping decisions. 4. you pay more attention to product reviews, prices, and after-sales service when shopping online?	Q20
	4. You pay more attention to the quality and brand of products when shopping online. 5. you pay more attention to the quality and brand of products when shopping online.	Q21
	5. When you are shopping online, advertisements, recommendations or promotions influence your shopping decisions.	Q22
	6. You are highly concerned about the security of online payment.	Q23

3.4 Hypothesis

This study explored the influence of people's attributes on online consumer behavior,

highlighting the ambiguous nature of these factors. See figure3.1.

H1: Gender has a significant positive influence on the residents' online consumption behavior.

H2: Age has a significant positive influence on the residents' online consumption behavior.

H3: Income level has a significant positive influence on the residents' online consumption behavior.

H4: Education level has a significant positive influence on the residents' online consumption behavior.

H5: Ease of use of online shopping has a significant positive influence on the residents' online consumption behavior.

H6: Usefulness of online shopping has a significant positive influence on the residents' online consumption behavior.

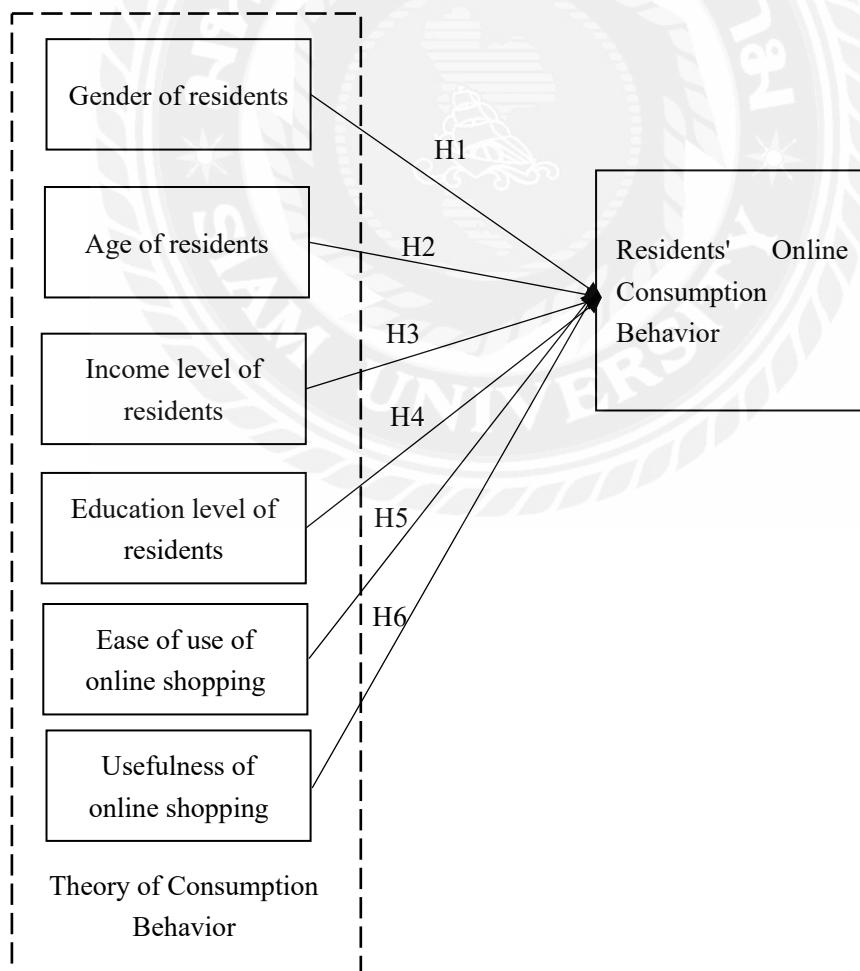


Figure 3.1 Hypotheses

3.5 Data Collection

The data collection for this study was mainly conducted through the online shop. The mainly responsible for docking business, including the construction of Alibaba station platform, business promotion, market analysis and other business-related work. The questionnaires were distributed by e-mail through the customer information. From September 1, 2023 to December 30, 2023 ended. During the survey, 650 questionnaires were distributed, 648 questionnaires were collected, 621 questionnaires were valid, and the effective rate was 95.5%.

3.6 Data Analysis

3.6.1 Reliability

The reliability of a questionnaire refers to the degree of reliability and trustworthiness of the questionnaire. Before data analysis of the questionnaire, the reliability test the questionnaire is an important method to ensure high-quality survey data. The reliability test is an important test to examine the reliability, stability, and consistency of the test variables of the questionnaire, and the Alpha coefficient is usually used to measure questionnaire reliability. The reliability test was conducted on the scale, and the Alpha coefficient of Cronbach was 0.864, which is greater than 0.8, indicating that the scale has high stability and consistency. This indicates that the reliability of the questionnaire of this survey study is very good, as shown in Table 3.2.

Table 3.2 Variate reliability test

Cronbach's α	Item
0.864	23

3.6.2 Validity

The data collected from the questionnaire needs to have reliability in addition to validity. In this study, the standard was met after the reliability analysis and then the questionnaire validity was analyzed. The validity analysis is usually based on the obtained KMO value and Bartlett's Sphericity Test to confirm whether the validity is feasible or not. If the KMO value obtained is greater than 0.8, this indicates that the questionnaire is well suited for the research data. If the KMO value obtained is between 0.6 and 0.8, this indicates that the research data

of the questionnaire is generally suitable. If the KMO value obtained is less than 0.6, this indicates that the research data of the questionnaire is not suitable. For Bartlett's spherical test, if it is less than 0.05, the sig is significant, indicating a strong correlation.

The KMO test and Bartlett's spherical test were used to measure the validity of the questionnaire data. the KMO value was 0.934 and the significance was 0.000, which was less than 0.05 and reached a significant level, indicating that factor analysis could be conducted. The results of factor analysis showed that the cumulative interpretation rate was 62.309%, and the rotated component matrix was divided into four dimensions, each of which was independent. It indicates that the overall validity of the questionnaire is good.

Table 3.3 KMO and Bartlett's Test

KMO & Bartlett's test		
	KMO	.934
Bartlett's test	Approximate Chi-square	6041.135
	df	171
	Sig	.000

The ability of a public factor to explain the total variance of all the original variables, the larger the value, the higher the significance of the factor, is a measure of the importance of the public factor. In factor analysis, each extracted factor has a variance contribution rate (i.e., variance explained), which indicates the extent to which the factor extracts information from all the original variables, i.e., its explanatory power. The total variance contribution rate, on the other hand, is the sum of the amount of information extracted from the original variables by all extracted factors. Table 3.4 shows the number of factors extracted from the analysis and the total variance contribution of the extracted factors to all the original variables (i.e., cumulative variance contribution). In general, a total variance contribution rate greater than 60% indicates that the factor has an acceptable ability to explain the original variables; greater than 80% indicates that the factor has a good ability to explain the variables. The results of factor analysis of each variable show that gender, age, income level, education level, ease of use of online shopping, and usefulness of online shopping is 62.309%, which is greater than 0.5. This indicates that the overall validity of the questionnaire is good.

Table 3.4 Total Variance Explained

Total Variance Explained			
Comp	Initial Eigenvalues	Extraction Sums of Squared Loadings	Rotation Sums of Squared Loadings

on ent	% of Varianc e	Cumula tive %	Total	% of Varianc e	Cumulat ive %	Total	% of Varianc e	Cumulativ e %
1	24.099	24.09	4.82	24.099	24.099	2.866	14.329	14.329
2	14.342	38.44	2.868	14.342	38.441	2.769	13.847	28.176
3	9.935	48.37	1.987	9.935	48.376	2.715	13.574	41.75
4	9.073	57.44	1.815	9.073	57.449	2.395	11.974	53.724
5	7.512	64.96	1.502	7.512	64.961	2.247	11.237	62.309
6	3.878	68.83						
7	3.291	72.13						
8	3.055	75.18						
9	2.845	78.02						
10	2.683	80.71						
11	2.52	83.23						
12	2.412	85.64						
13	2.389	88.03						
14	2.157	90.19						
15	1.898	92.08						
16	1.861	93.94						
17	1.654	95.60						
18	1.557	97.16						
19	1.445	98.60						
20	1.395	100						

The results of factor analysis need to be meaningful for each factor. Rotating the factor loading matrices allows the relationship between the original variables and the factors to be more salient, i.e., each variable has a larger loading on only one of the common factors and a smaller loading on the other common factors. In addition, the factors were rotated to better categorize each of the original variables. The rotated formation matrix was analyzed using the maximum variance method to verify that there was no covariance in the problem items measured by each variable and based on the maximum eigenvalue. A total of six factors were extracted from the study, and each variable had large loadings on only one common factor and smaller loadings on the other common factors, which suggests that each variable has good validity but with variability.

Chapter 4 Findings

4.1 Introduction

Through the questionnaire survey, 497 questionnaires were collected from Qingdao City, and the reliability and validity tests of the questionnaires revealed that the data collection had good reliability and validity. The data collected were analyzed by descriptive statistics through SPSS software to illustrate the basic situation of the survey samples, including the gender distribution, age distribution and income status of the survey samples. We analyzed the gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping and so on. shopping, usefulness of online shopping and other variables were analyzed for correlation to understand the correlation between the variables and to determine that there is no covariance between the variables. After collecting the data through correlation analysis it was learned that regression of the data was required to determine whether the hypothesis between the respective variables and the dependent variable was valid, to verify the hypothesis and finally to draw conclusions.

4.2 Description of Statistical Variables

In the survey, 621 valid questionnaires were collected. By organizing and analyzing the data of the study, for the gender aspect of the survey, it was obtained that the sample of the study was 332 males, accounting for 53.5%, and 289 females, accounting for 46.5%. The survey on age shows that 18-25years is 69, accounting for 11.1%, 26-35years is 153, accounting for 24.6%, 36-45years is 94, accounting for 15.1%, 46-55years is 63, accounting for 10.1%, and more than 53 is 8.5%, accounting 189 for 30.4%. For the survey samples of the educational aspect of the survey shows that Junior high school for 266, accounting for 42.8%, Senior high school for 120, accounting for 19.3%, Undergraduate for 173, accounting for 27.9%, Master's degree for 36, accounting for 5.8%, Others for 26, accounting for 4.2%. For the analysis of the income of the survey sample, 3000 and below is 233 (37.5%), 3001-5000 is 102(16.4%), 5001-8000 is 158 (25.4%), 8001-15000 is 48 (7.7%), 15001-20,000 is 80(12.9%), 20,001 and 20000 is 40 (8.0%). As shown in Table 4.1, the sample as a whole met the statistical requirements.

Table 4.1 Distribution of Basic Characteristics of Samples (N = 621)

Item	Options	Frequency	Percent
GEN	Male	332	53.5
	Female	289	46.5
AGE	18-25years	266	42.8
	26-35years	120	19.3
	36-45years	173	27.9
	46-55years	36	5.8
	more than 55	26	4.2
EDU	Junior high school	233	37.5

	Senior high school	102	16.4
	Undergraduate	158	25.4
	Master's degree	48	7.7
	Others	80	12.9
INCOME	3000 and below	69	11.1
	3001-5000	153	24.6
	5001-8000	94	15.1
	8001-15000	63	10.1
	15001-20000	53	8.5
	20001 and above	189	30.4
Total		621	100.0

Descriptive statistics are based on the analysis of survey data. Descriptive statistical analysis is the process of summarizing, organizing, and visualizing data to better understand its characteristics and distribution. The first task of descriptive statistical analysis is to understand the overall nature of the data set. This includes the size of the data set (number of observations), the number of variables, and the context and purpose of the data collection. Descriptive statistical analysis helps to better understand the data, detect outliers, explore the characteristics of the data, and prepare for further statistical inference and modeling. It is the first step in data analysis and is usually performed immediately after data collection to ensure the quality and credibility of the data. Descriptive statistical analyses are the foundation of data analysis, providing a holistic view of the data set and providing the basis for subsequent inferential statistical analyses. These analyses allow for a better understanding of the data and the selection of appropriate statistical methods to address the research questions. Skewness is used to measure whether the data distribution is symmetrical. A normal distribution has a skewness of 0; if skewness > 0 , it is positively skewed with the long tail on the right side; if skewness < 0 , it is negatively skewed with the long tail on the left side. Kurtosis represents how densely the data lies on the mean and is used to describe how sharp or flat the data distribution is. A kurtosis > 0 is a high kurtosis, indicating a steeper, more pointed peak shape than a normal distribution, and vice versa. According to the results of the analysis, the descriptive statistics results, Mean Statistic meets the requirements, Skewness Statistic, Kurtosis Statistic meets the requirements, see Table 4.2. The research data meets the normal distribution and is suitable for correlation and regression analysis.

Table 4.2 Descriptive Statistics

	Minimum	Maximum	Mean	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic
Q5	1	7	4.44	-0.221	-0.215
Q6	1	7	4.38	-0.279	-0.365
Q7	1	7	4.36	-0.116	0.077
Q8	1	7	4.03	0.034	-0.441

Q9	1	7	4.08	-0.171	-0.488
Q10	1	7	5.49	-0.559	0.633
Q11	1	7	5.36	-0.322	0.211
Q12	1	7	5.38	-0.172	0.506
Q13	1	7	5.52	0.056	-0.708
Q14	1	7	5.47	-0.272	-0.284
Q15	1	7	5.73	-0.407	-0.220
Q16	1	7	5.15	-0.322	0.346
Q17	1	7	5.00	-0.440	0.484
Q18	1	7	4.81	-0.578	0.117
Q19	1	7	4.08	-0.282	-0.493
Q20	1	7	4.59	-0.571	0.575
Q21	1	7	5.56	-0.899	1.052
Q22	1	7	4.84	-0.157	-0.020
Q23	1	7	5.01	-0.128	-0.045

4.3 Results of the Study

4.3.1 Correlation Analysis

Correlation analysis is a method of analysis that examines the relationship between different variables to measure how closely two variables are related. A distinctive feature of correlation analysis is that the variables are independent of each other, but it is only suitable for variables with binary normal distribution. Both variables are ending variables, co-varying and interdependent. The correlation coefficient ranges from -1 to 1, with 1 representing a perfect positive correlation and -1 representing a perfect negative correlation, and the correlation coefficient is likewise subject to hypothesis testing. The correlation coefficient is usually used in the study to indicate r . When the correlation is less than $r \leq 0.3$, it means that there is no linear correlation between the two variables; when the correlation coefficient is $0.3 < r \leq 0.5$, it means that there is a low linear correlation between the variables; when $0.5 < r \leq 0.8$, it means that there is a significant correlation between the two variables; when $0.8 < r$, it means that there is a high degree of linear correlation between the two variables.

To verify the relationship between the variables through correlation analysis, the data need to be put into the model as the independent variable before building the multiple regression model. The most conventional way is to calculate the correlation coefficients of all the fields with the dependent variable first, and put the ones with higher correlation coefficients into the model. Then the correlation coefficients between the independent variables are calculated. If the correlation coefficients between the independent variables are high, it means that there is multicollinearity and needs to be censored, which can be done by using linear or nonlinear downscaling methods.

Table 4.3 Correlation Between Variables (Pearson Correlation Matrix)

Variables	Gender	Age	Income level	Education level	Ease of use of online shopping	Usefulness of online shopping	Residents' Online Consumption Behavior
Gender	1						
Age	.595**	1					
Income	.515**	.658**	1				
Education level	.506**	.518**	.601**	1			
Ease of use of online shopping	.604**	.684**	.566**		1		
Usefulness of online shopping	.516**	.418**	.406**	.545**		1	
Residents' Online Consumption Behavior	.116**	.118**	.506**	.345**	.316**	.438**	1

NOTE: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

According to the correlation analysis, the correlation coefficients between the online consumption behavior of Qingdao residents and the gender, age, income level, education level, ease of use of online shopping, usefulness of online shopping correlation coefficients are between 0.1 and 0.7, indicating that there is a significant correlation between both variables. This indicates that the correlation between each two variables is significant, while $P < 0.01$ indicates that the correlation terms are positively correlated, see Table 4.3. It is also evident that age and gender have a low correlation with online shopping behavior.

The Pearson correlation coefficient between residents' gender and online consumption behavior is 0.116, and $P < 0.01$, indicating that there is a correlation between residents' gender and online consumption behavior, and it is a general correlation.

The Pearson correlation coefficient between residents' age and online consumption behavior is 0.118, and $P < 0.01$, indicating that there is a correlation between residents' age and online consumption behavior, and it is a general correlation.

The Pearson correlation coefficient between residents' income level and online consumption behavior is 0.506, and $P < 0.01$, indicating that there is a correlation between residents' income level and online consumption behavior, and it is a general correlation.

The Pearson correlation coefficient between residents' education level and online

consumption behavior is 0.345, and $P < 0.01$, indicating that there is a correlation between residents' education level of residents and online consumption behavior, and it is a general correlation.

The Pearson correlation coefficient between ease of use of online shopping and online consumption behavior is 0.316, and $P < 0.01$, indicating that there is a correlation between ease of use of online shopping and online consumption behavior, and it is a general correlation.

The Pearson correlation coefficient between usefulness of online shopping and online consumption behavior is 0.438, and $P < 0.01$, indicating that there is a correlation between usefulness of online shopping and online consumption behavior, and it is a general correlation.

4.3.2 Multiple Regression Analysis

The results of the multiple regression analysis were used and are shown in Table 3. The regression equation was significant, $F = 24.885$, $p < 0.001$. the Durbin-Watson test value was 1.874, between 1.8 and 2.2. the data were independent and compounded the linear regression requirement. In the covariance diagnosis results, VIF is close to 1, which meets the requirements, indicating that there is no covariance in the data. There is no correlation between the online consumption behavior of Qingdao residents and their age and gender, $p > 0.05$, which is not significant. Gender ($\beta = 0.348$, $P < 0.05$), Age ($\beta = 0.341$, $P < 0.05$), income level ($\beta = 0.045$, $P < 0.05$) and education level ($\beta = 0.076$, $P < 0.05$) positively affect the online consumption behavior of residents. Ease of online shopping ($\beta = 0.358$, $p < 0.05$) and usefulness ($\beta = 0.139$, $p < 0.05$) significantly and positively affect residents' online consumption behavior. The variables together explain 55.3% of the proportion of residents' online consumption behavior, which is in line with the requirement.

According to the results of the analysis, we can obtain the multiple regression formula for the factors influencing the online consumption behavior of Qingdao residents:

$$ICB = 2.229 + 0.348 \text{ GEN} + 0.341 \text{ AGE} + 0.045 \text{ INC} + 0.076 \text{ EDU} + 0.358 \text{ EU} + 0.139 \text{ UF}$$

Table 4.4 Model Summary

Item	B	Beta	t	Sig.	VIF	F	Durbin-Watson
C	2.229	-	7.309	0		24.885***	1.874
GEN	0.348	0.299	3.664	0.007	1.002		
INC	0.045	0.082	2.271	0.023	1.003		
AGE	0.341	0.301	5.204	0.000	1.154		
EDU	0.076	0.106	2.728	0.007	1.157		
EU	0.358	0.369	9.518	0.000	1.149		
UF	0.139	0.109	2.797	0.005	1.149		
R Square	0.564						
Adjusted R Square	0.553						

NOTE: *P<0.05, **P<0.01, ***P<0.001

Therefore, according to the results of data analysis, Gender has a significant positive influence on the residents' online consumption behavior, and H1 is valid. Age have a significant positive influence on the residents' online consumption behavior, and H2 holds. Income level has a significant positive influence on the residents' online consumption behavior, and H3 holds. Education level has a significant positive influence on the residents' online consumption behavior, and H4 holds. Ease of use of online shopping has a significant positive influence on the residents' online consumption behavior, and H5 holds. Usefulness of online shopping has a significant positive influence on the residents' online consumption behavior, and H6 holds.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

Based on the theory of consumer behavior, this paper investigates the influencing factors of Qingdao consumers' online consumption behavior. A total of 650 questionnaires were distributed and 621 valid questionnaires were returned. Through SPSS analysis, the influencing factors of Qingdao consumers' online consumption behavior and the relationship between the factors were found.

5.1.1 Factors Influencing Online Consumption Behavior of Residents in Qing Dao

Through regression analysis and correlation analysis, it is concluded that the influencing factors of on residents' online consumption behavior include income level, education level, ease of use of online shopping, usefulness of online shopping.

In the study, the collected data were analyzed for reliability and validity to meet the requirements. The Pearson correlation coefficient between Income level of residents and Residents' Online Consumption Behavior is 0.506, and $P < 0.01$, indicating that there is a correlation between income level of residents and Residents' Online Consumption Behavior, and it is a general correlation. The Pearson correlation coefficient between Education level of residents and Residents' Online Consumption Behavior is 0.345, and $P < 0.01$, indicating that there is a correlation between Education level of residents and Residents' Online Consumption Behavior, and it is a general correlation. The Pearson correlation coefficient between Ease of use of online shopping and Residents' Online Consumption Behavior is 0.316, and $P < 0.01$, indicating that there is a correlation between Ease of use of online shopping and Residents' Online Consumption Behavior, and it is a general correlation. The Pearson correlation coefficient between Usefulness of online shopping and Residents' Online Consumption Behavior is 0.438, and $P < 0.01$, indicating that there is a correlation between Usefulness of online shopping and Residents' Online Consumption Behavior, and it is a general correlation.

From the analysis, it can be learned that household income level and residents' education level are important influencing factors in the online consumption behavior of Qingdao residents. The influence of age and gender on online consumption behavior is not significant. The ease of use and usefulness of online shopping has a significant influence on the online consumption behavior of Qingdao residents. Household income level is directly related to residents' consumption level, when residents' income is high, consumption ability is enhanced,

and consumption level decreases with low income. With the development of mobile internet, the convenience of residents' internet use increases, which enhances the possibility of consumers' online consumption. Meanwhile, the high efficiency and price transparency of online shopping enhance consumers' willingness to consume, and consumers shift their consumption behavior from offline to online.

5.1.2 Gender, age, income Level, Education Level, Ease of Use of Online Shopping, Usefulness of Online Shopping have a Positive Effect on Residents' Online Consumption Behavior

The regression equation was significant, $F=24.885$, $p<0.001$. the Durbin-Watson test value was 1.874, between 1.8 and 2.2. the data were independent and compounded the linear regression requirement. In the covariance diagnosis results, VIF is close to 1, which meets the requirements, indicating that there is no covariance in the data. There is no correlation between the online consumption behavior of Qingdao residents and their age and gender, $p>0.05$, which is not significant. Gender ($\beta=0.348$, $P<0.05$), Age ($\beta=0.341$, $P<0.05$), income level ($\beta=0.045$, $P<0.05$) and education level ($\beta=0.076$, $P<0.05$) positively affect the online consumption behavior of residents. Ease of online shopping ($\beta=0.358$, $p<0.05$) and usefulness ($\beta=0.139$, $p<0.05$) significantly and positively affect residents' online consumption behavior. The variables together explain 55.3% of the proportion of residents' online consumption behavior, which is in line with the requirement.

Table 5.1 Hypothesis Testing

NO.	Hypothesis	Result
H1	Gender has a significant positive influence on the residents' online consumption behavior.	Supported
H2	Age has a significant positive influence on the residents' online consumption behavior.	Supported
H3	Income level has a significant positive influence on the residents' online consumption behavior.	Supported
H4	Education level has a significant positive influence on the residents' online consumption behavior.	Supported
H5	Ease of use of online shopping has a significant positive influence on the residents' online consumption behavior.	Supported
H6	Usefulness of online shopping has a significant positive influence on the residents' online consumption behavior.	Supported

5.2 Recommendation

With the continuous development of information technology, online shopping has led to a new round of consumer revolution, while breaking the geographical boundaries of traditional urban commercial space and overturning the laws of traditional urban commercial layout. Therefore, studying the impact of online shopping on traditional shopping behavior can help clarify the mechanism of the role of online shopping, while contributing to the healthy and sustainable development of electronic commerce.

Traditional retail enterprises expand their online retail business and take advantage of the advanced information technology of e-tailing to provide consumers with product information and services through the Internet platform. At the same time, enterprises use the resources of traditional retail businesses such as location and channels to deliver goods to consumers or the nearest physical stores according to consumers' needs, enhancing the sense of consumer experience. Through the network information to shorten the distance between time and space, and to maximize the use of the advantages of all parties, greatly reducing the space expansion may bring business risks.

The combination of online e-commerce enterprises and physical stores makes up for their product experience and after-sales service problems. This type of business generally still focuses on online retail and expands the market through the development of physical stores. For example, Jindong Mall, etc. Such e-commerce enterprises usually combine with community businesses, which are closely connected with consumers, to realize the sinking of sales channels and provide consumers with online goods and offline service guarantees.

The current consumption pattern has changed from the traditional single-purpose consumption mode to a multi-purpose and diversified consumption mode. To respond to the development trend of consumption, traditional brick-and-mortar businesses can play to their strengths by adjusting the organizational structure of commercial formats, emphasizing the experience services that cannot be provided by online consumption, and improving the integration and diversification of commercial formats to stimulate consumers' shopping needs, thus forming a competitive model that is differentiated from online shopping. At the level of commercial business organization optimization, we should consider the compound development between different business types, improve the diversity and compatibility of business types, and make the combination form and structure of commercial business always in a reasonable state of dynamic development, to adapt to the needs of consumers and the market.

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Appendix Questionnaire

Questionnaire on influence on residents' online consumption behavior

Dear Ms./Mr.

Hello, in order to better understand the status of influence on residents' online consumption behavior, according to the development of this questionnaire, thank you for taking the time to fill out this questionnaire, this questionnaire is carried out in an anonymous manner, the entire confidentiality, only for the study of this paper, not for other commercial purposes. This questionnaire data for our research is very important, please fill in according to their own actual situation, thank you again for your support!

Part I. Basic Information

1. Gender? Male Female

2. Age? 18-25years 26-35years 36-45years 46-55years more than 55

3. Highest level of education
 Junior high school Senior high school Undergraduate Master's degree Others

4. Your monthly income
 3000 and below 3001-5000 5001-8000 8001-15000 15001-20000 20001 and above

Part II. Marketing Strategy

Please indicate your agreement with each of the following descriptions based on your actual. Please put a tick on the corresponding number representing your level of agreement, with "1" indicating total disagreement, "5" indicating total agreement, and the specific meaning of each number indicating your level of agreement.

The specific meaning of each number is shown in the table below:

Totally Disagree	Disagree	General	Agree	Agree completely
1	2	3	4	5

Measuring item	1	2	3	4	5
Ease of use of online shopping					
1. Do you think Qingdao's online shopping platform is easy to use in terms of interface design?					
2. When shopping online, do you think the search and filtering functions of Qingdao's online shopping platform can help you find the products you need quickly?					
3. How easy is the shopping process on Qingdao's online shopping platform?					
4. When you use Qingdao's online shopping platform to make purchases, do you think the page loading speed and response speed of the website or application are fast enough?					
5. With regard to the payment process of Qingdao's online shopping platform, do you find it easy to use?					
6. It is easy for you to find and learn about product details, prices and promotions on Qingdao's online shopping platform?					
7. When you used Qingdao's online shopping platform, did you find the ease of use provided by the platform in terms of customer service and after-sales support good enough?					
Usefulness of online shopping					
1. When you shop online, do you think the quality of the products offered by Qingdao's online shopping platforms matches the descriptions?					
2. The return and exchange policy of Qingdao's online shopping platform meets your needs?					
3. Do you think the price of the products offered by Qingdao's online shopping platform is reasonable?					
4. After you have received the goods, do you find the delivery speed and accuracy of Qingdao's online shopping platform satisfactory?					
5. When you use Qingdao's online shopping platform, you can easily access the product details, size and color options?					
6. Do you think Qingdao's online shopping platform provides various payment methods that are safe and reliable?					
Residents' Online Consumption Behavior					
1. When you do online shopping, do you prefer to use your cell phone?					
2. When choosing a shopping platform, product variety, favorable price and after-sale service are the most important.					
3. You usually check product reviews, compare prices of different platforms, and search for promotional information					

before making shopping decisions. 4. you pay more attention to product reviews, prices, and after-sales service when shopping online?					
4. you pay more attention to the quality and brand of products when shopping online. 5. you pay more attention to the quality and brand of products when shopping online.					
5. when you are shopping online, advertisements, recommendations or promotions influence your shopping decisions.					
6. you are highly concerned about the security of online payment.					

