pISSN: 1906 - 3296 © 2020 AU-GSB e-Journal.
eISSN: 2773 – 868x © 2021 AU-GSB e-Journal.
http://www.assumptionjournal.au.edu/index.php/AU-GSB/index

# Factors Influencing Consumer Satisfaction and Use Intention of B2C E-Commerce Platforms on Chengdu, China

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**Received: January 28, 2023. Revised: May 22, 2023. Accepted: May 29, 2023.**

## Abstract

**Purpose:** This paper aimed to explore the factors influencing the satisfaction and use intention of B2C e-commerce platforms among residents in Chengdu. **Research design, data, and methodology:** The researcher used a quantitative survey method to conduct the study. The conceptual framework was based on the Technology Acceptance Model (TAM). The key variables included service quality, information quality, system quality, perceived ease of use, perceived usefulness, use intention, and satisfaction. The validity of the research instrument was assessed by The index of item-objective congruence (IOC), and a pilot test by Cronbach alpha coefficient reliability test. A questionnaire survey was conducted among 500 permanent residents in Chengdu. Additionally, confirmatory factor analysis and structural equation modeling were used as statistical analysis tools to evaluate the data. **Results:** The analysis revealed that service quality, system quality, and perceived ease of use significantly impacted use intention and satisfaction. System quality and information quality significantly affected perceived usefulness. Satisfaction had a significant effect on the use intention. On the contrary, information quality and perceived usefulness had no significant impact on use intention. **Conclusions:** The government and companies should facilitate users to use the platform and thus create a good experience so that they would want to use the B2C e-commerce platform for shopping.

**Keywords:** Perceived Ease of Use, Perceived Usefulness, Intention to Use, Satisfaction, E-Commerce

**JEL Classification Code:** E44, F31, F37, G15



## 1. Introduction

With the rapid popularity of the Internet, online shopping has gradually become an indispensable part of people's lives, and people's resistance to new things has gradually changed to reliance on this new form of shopping that was different from traditional shopping (Li & Xia, 2014). Due to the great popularity of COVID-19, people are increasingly relying on online shopping. As an important part of online shopping, B2C e-commerce platforms have received more and more attention from scholars. How to keep the B2C online shopping platform with high customer intention to use and satisfaction to increase purchase volume and corporate profits gradually became a common concern in the business field and academia.

The above studies provided some basis for analyzing

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customer satisfaction and the use intention of B2C e-commerce platforms. However, the influencing factors of customer satisfaction and use intention were various and should be analyzed comprehensively. As the capital city of Sichuan Province and a new first-tier city, Chengdu played an extremely important role in developing the Chengdu Chongqing Economic Zone and even in China. Therefore, it was very important to systematically study the factors that affect the satisfaction and use intention of the Chengdu B2C e-commerce platform.

For customers, the higher the satisfaction and use intention of the company, the better the products and services, and the easier it is for customers to buy desirable goods. It can help customers make successful shopping decisions and improve their quality of life. This study selects a representative area from the high-tech zone, the old city, and the relatively underdeveloped area of Chengdu to conduct the study, which can fully grasp customers' needs at different levels. This paper aimed to explore the factors influencing the satisfaction and use intention of B2C e-commerce platforms among residents in Chengdu. The key variables included service quality, information quality, system quality, perceived ease of use, perceived usefulness, use intention, and satisfaction.

## 2. Literature Review

### 2.1 Service Quality

DeLone and McLean (2003) defined service quality as the overall support provided by the service provider. Service quality was defined as the user's subjective evaluation that the service they received from the portal was the service they expected (Ahn et al., 2004). Bharati and Berg (2003) defined service quality as the difference between the customer's normative expectations of the service and the customer's perceived service performance. Service quality can only be described by the consumer and occurs when the service association provides benefits that satisfy the consumer's needs (Metters et al., 2003). Rasheed et al. (2015) defined service quality as the relationship between customer desires and performance. Service quality is the effectiveness of the service provided by the service provider (Saeed et al., 2003). Service quality significantly impacts use intention and satisfaction (Metters et al., 2003; Rasheed et al., 2015). Accordingly, this study proposed hypotheses:

**H1:** Service quality has a significant impact on use intention.
**H2:** Service quality has a significant impact on satisfaction.

### 2.2 System Quality

DeLone and McLean (2003) defined system quality as an individual's perception of the overall performance of a system. Davis (1989) considered system quality as the degree to which a system was "user-friendly" and free from any particular trouble. Subsequently, this definition was accepted by (Al-Samarraie et al., 2018). System quality measures the technical soundness of the system (Gorla et al., 2010). Seddon (1997) added that system quality was concerned with the absence of errors in the system, consistency of the user interface, usability, quality of documentation, and sometimes the quality and maintainability of the program code. Cheng (2012) believed that system quality includes system function, interaction, reaction, user interface design, and other factors. According to Al-Samarraie et al. (2018), system quality has a significant impact on use intention, satisfaction and perceived usefulness. Based on above discussions, hypotheses are demonstrated:

**H3:** System quality has a significant impact on use intention.
**H4:** System quality has a significant impact on satisfaction.
**H7:** System quality has a significant impact on perceived usefulness.

### 2.3 Information Quality

According to Teo et al. (2009), information quality was each citizen's assessment of the information's accuracy, validity, and timeliness on an e-participation site. According to DeLone and McLean (1992), information quality refers to the quality of the output produced by an information system, whether in the form of reports or online screens. Information quality refers to information's accuracy, relevance, adequacy, timeliness, and moneyness (DeLone & McLean, 2003). Negash et al. (2003) defined information quality as "the value of the system output as perceived by the respective users of the system." Information quality was defined as compliance with requirements/specifications and quality greater than end users' expectations (Reeves & Bednar, 1994). Information quality was defined as the transactional character of the system output and the reported output that satisfies the end user's needs (Gorla et al., 2010). Information quality was found to have an impact on use intention, satisfaction, and perceived usefulness (DeLone & McLean, 2003). Hence, below hypotheses are suggested:

**H5:** Information quality has a significant impact on use intention.
**H6:** Information quality has a significant impact on satisfaction.
**H8:** Information quality has a significant impact on perceived usefulness.

### 2.4 Satisfaction

Satisfaction is defined as a pleasant or unpleasant user feeling related to the benefits people hope to gain by interacting with an information system (Al-Samarraie et al., 2018). Doll and Torkzadeh (1988) defined user satisfaction as the feeling users have when using certain computer applications. Customer satisfaction was described as the overall evaluation of the customer on the product's performance so far (Johnson & Fornell, 1991). Although consumer satisfaction could be expressed in different ways, the widely accepted expression of satisfaction was the customer's evaluation of a service or product after purchase (Cronin & Taylor, 1992; Westbrook & Oliver, 1991). Satisfaction could also be expressed as a general assessment of a customer's negative or positive service (Woodruff, 1997). Hok et al. (2021) confirmed the positive relationship between customer satisfaction and use intention. Therefore, this study can hypothesize that:

**H9:** Satisfaction has a significant impact on use intention.

### 2.5 Perceived Ease of Use

Perceived ease of use was defined as the degree to which users were expected to be effortless with a goal (Davis, 1989). Perceived ease of use meant they were confident that the application and system were user-friendly (Al-Rahmi et al., 2015). Perceived ease of use refers to how easy consumers perceive it is to use mobile payments for transactions (Chen & Wu, 2017). Perceived ease of use refers to how easy it is to understand and operate (Lin, 2007). Mahmood et al. (2000) argued that if users perceive the system as easy to use, they will require less effort and would have more time to spend on other activities, contributing to overall performance. Bashir and Madhavaiah (2015) argued that perceived ease of use was the extent to which the sample perceives that the services of the target system would be more effective. In technology acceptance model, many scholars have proven that perceived ease of use has a significant impact on use intention and satisfaction. Thus, proposed hypotheses are indicated:

**H10:** Perceived ease of use has a significant impact on use intention.

**H11:** Perceived ease of use has a significant impact on satisfaction.

### 2.6 Perceived Usefulness

Perceived usefulness in a work environment was a personal belief that using information and communication technologies (ICTs) would help improve one's job performance (Bhattacherjee & Premkumar, 2004). Perceived usefulness is the subjective probability that users expect that the use of a particular application in an organizational setting will improve their performance (Davis, 1989). Perceived usefulness implies that users believe that the application would improve their performance (Al-Rahmi et al., 2015). According to Palvia (1996), perceived usefulness was the strongest motivation for system acceptance. Perceived usefulness was defined as a process based on how an information system (IS) supports users' decisions (Mahmood et al., 2000). Consequently, perceived usefulness is an influential factor of use intention and satisfaction. Following this, two hypotheses are derived:

**H12:** Perceived usefulness has a significant impact on use intention.

**H13:** Perceived usefulness has a significant impact on satisfaction.

### 2.7 Use Intention

According to Mardiana et al. (2015), behavioral intention was represented by the construct "intention to use" and was a prelude. Intention to use was an important construct that suggested that if a student had no prior intention to use the system, he/she would not use it psychologically (Mardiana et al., 2015). According to Aldholay et al. (2018), intention to use refers to the extent to which citizens intend to use the e-government system, including its dependency, frequency of use, and trends in future use and timing. BI was considered a measure of a person's willingness to perform a specific action (Fishbein & Ajzen, 1977). Intention to use refers to a person's tendency to perform a specific behavior (Belanche et al., 2012). This variable greatly influences a person's expected behavior (Fokides, 2017).

## 3. Research Methods and Materials

### 3.1 Research Framework

The conceptual framework of this paper was based on previous research. In recent years, four representative articles from the field were selected for this study. Nripendra et al. (2013) assessed the intention to use and satisfaction of OPGRS users in India by examining the relationship between perceived usefulness, system quality, information quality, intention to use, and satisfaction. This study built on Delone, McLean, and Seddon's information system success model to test the success of OPGRS. There were five independent variables. The first independent variable was service quality, the second was system quality, the third was information quality, the forth was perceived ease of use and the fifth was perceived usefulness. Two dependent variables were intention to use, and user satisfaction. The conceptual framework of this study is shown in Figure 1.

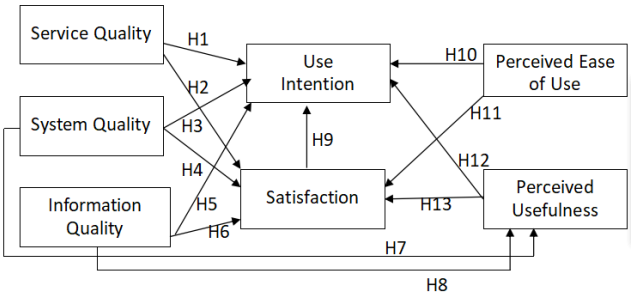


**Figure 1:** Conceptual Framework

**H1:** Service quality has a significant impact on use intention.
**H2:** Service quality has a significant impact on satisfaction.
**H3:** System quality has a significant impact on use intention.
**H4:** System quality has a significant impact on satisfaction.
**H5:** Information quality has a significant impact on use intention.
**H6:** Information quality has a significant impact on satisfaction.
**H7:** System quality has a significant impact on perceived usefulness.
**H8:** Information quality has a significant impact on perceived usefulness.
**H9:** Satisfaction has a significant impact on use intention.
**H10:** Perceived ease of use has a significant impact on use intention.
**H11:** Perceived ease of use has a significant impact on satisfaction.
**H12:** Perceived usefulness has a significant impact on use intention.
**H13:** Perceived usefulness has a significant impact on satisfaction.

## 3.2 Research Methodology

Using quantitative methods was a good choice when researchers wanted to collect standardized measurements, which could be achieved by surveying respondents with the same questions. According to the purpose of the study, quantitative research was used. Quantitative research is a process that proficiently expresses problems and phenomena and then analyzes, tests, and interprets the findings (Rossman & Wilson., 1984). It was non-participatory and required control requirements and design aids (Malina et al., 2007). According to Polit and Beck (2014), quantitative research involves building hypotheses, which could be considered the expected results and relationships of the research questions. The research methodology used in this study consisted of three steps.

The first step was data collection. According to Rutberg and Bouikidis (2018), researchers used standardized questionnaires to collect data in quantitative studies. By conducting the entire study in a more structured environment, researchers could better manage the study variables, questions, and settings. In the study, a questionnaire was designed to measure factors related to the intention to use and satisfaction with the B2C eCommerce platform. To assess the validity and reliability of the questionnaire, an objective consistency item (IOC) was used to evaluate the questionnaire.

The second step was data processing. The collected data were manually entered, reviewed, exported in Excel format, and coded for 39 users. Jamovi 1.6.23 statistical software was used to test the validity and reliability of the sample. According to the test results, all measures were greater than 0.7, indicating that the questionnaire was scientifically sound and could be used for a large-scale survey. The data collection was made between July to September 2022. The third step was to analyze further and validate the model. In this study, the hypotheses were tested by structural equation modeling (SEM), and a relationship factor analysis (CFA) was performed on the model structure.

## 3.3 Population and Sample Size

The target population of this study was those who had used B2C commerce platforms in Chengdu. Chengdu was the central city of the Chengdu-Chongqing Economic Circle, which was important to the development of the Chengdu-Chongqing Economic Circle and China. Data from the Sichuan E-Commerce Data Center. Using the sample size calculator, the recommended minimum sample size was 425. Therefore, the researchers selected 500 people with experience using B2C e-commerce platforms in Chengdu as a sample.

## 3.4 Sampling Technique

The researcher used the nonprobability and probability sampling method. First, judgmental sampling was used to select B2C e-commerce customers from various counties (cities and districts) in Chengdu. The selection criterion was to ensure that the sample was representative of the whole of Chengdu. Second, proportional stratified random sampling respondents were from Chengdu. To distribute the 500 samples across the three cities. The researcher collected the total number of customers using B2C e-commerce platforms in these districts in February 2022. As shown in Table 1, the 500 samples in Chengdu were divided into 207, 118, and 175 units distributed in Gaoxin District, Jinjiang District, and Jinyang City, respectively. Third, convenience sampling was used to collect the data by questionnaire distribution.

**Table 1:** Sample Units and Sample Size

| Area | County (City, District) | Population Size | Proportional Sample Size |
|---|---|---|---|
| Chengdu | Gaoxin District | 691648 | 207 |
| | Jinjiang District | 393965 | 118 |
| | Jianyang City | 588500 | 175 |
| **Total** | | **1674113** | **500** |

## 4. Results and Discussion

### 4.1 Demographic Information

The questionnaire was distributed to 500 people in three selected regions who had experience using B2C e-commerce. Among the respondents, 299 were female, and 201 were male, accounting for 59.8% and 40.2%, respectively. There were 157 people under the age of 30, 125 people aged 31-40, 138 people aged 41-50, 57 people aged 51-60, and 28 people aged 60 or older, accounting for 31.4%, 25.0%, 27.6%, 10.4%, and 5.6% of the total, respectively. There were 40 persons with elementary school education or below, 101 persons with Junior middle school, 146 persons with Senior middle school, 114 persons with Bachelor, and 99 persons with Bachelor's or above, accounting for 8.0%, 20.2%, 29.2%, 22.8%, and 19.8% of the total, respectively.

**Table 2:** Demographic Profile

| Demographic and General Data (N=500) | | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 201 | 40.2% |
| | Female | 299 | 59.8% |
| Age | 30 years old or below | 157 | 31.4% |
| | 31-40 years old | 125 | 25.0% |
| | 41-50 years old | 138 | 27.6% |
| | 51-60 years old | 57 | 10.4% |
| | 61 years old or over | 28 | 5.6% |
| Education Level | Primary school or below | 40 | 8.0% |
| | Junior middle school | 101 | 20.2% |
| | Senior middle school | 146 | 29.2% |
| | Bachelor | 114 | 22.8% |
| | Bachelor above | 99 | 19.8% |

### 4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was used in this study. All items in each variable were significant and represented factor loads to test for differential validity. The higher the value of factor loadings, the higher the reliability of the items (Hair et al., 2010). An acceptable factor loading threshold was 0.5 or higher (Hair et al., 2006). In this study, the factor loadings for all individual items were greater than 0.50, indicating that the factor loadings for this study were at an ideal level. According to Fornell and Larcker (1981), CR and AVE values of 0.7 or more and 0.4 or more were considered acceptable. This study's CR results, and AVE values were above the threshold values. From the perspective of composite reliability, the structure with the highest internal consistency was the attitude toward use.

**Table 3:** Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

| Variables | Source of Questionnaire (Measurement Indicator) | No. of Item | Cronbach's Alpha | Factors Loading | CR | AVE |
|---|---|---|---|---|---|---|
| Service Quality (SEQ) | (Hassan & Abu-Shanab, 2020) | 4 | 0.867 | 0.702-0.861 | 0.870 | 0.627 |
| System Quality (SYQ) | (Nripendra et al., 2013) | 3 | 0.758 | 0.687-0.752 | 0.760 | 0.514 |
| Information Quality (IQ) | (Nripendra et al., 2013) | 4 | 0.833 | 0.665-0.810 | 0.833 | 0.556 |
| Perceived Usefulness (PU) | (Kesharwani et al., 2021) | 3 | 0.792 | 0.616-0.865 | 0.803 | 0.581 |
| Perceived Ease of Use (PEOU) | (Hammouri & Abu-Shanab, 2018) | 3 | 0.838 | 0.742-0.845 | 0.839 | 0.635 |
| Use Intention (UI) | (Hassan & Abu-Shanab, 2020) | 4 | 0.877 | 0.778-0.831 | 0.878 | 0.643 |
| Satisfaction (US) | (Lee & Chung, 2009) | 5 | 0.856 | 0.653-0.788 | 0.858 | 0.548 |

The model fit was represented by the acceptable value of fit indices (as shown in 4 in the table). The statistical values of each index were compared with the acceptance criteria. CMIN/DF=2.697, GFI= 0.898, AGFI = 0.871, NFI=0.894, CFI=0.930, TLI =0.918, RMSEA = 0.058. It was unnecessary to modify the measurement model in this study because the original model already exhibited model fit.

**Table 4:** Goodness of Fit for Measurement Model

| Fit Index | Acceptable Criteria | Statistical Values After Adjustment |
|---|---|---|
| **CMIN/df** | < 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012) | 2.697 |
| **GFI** | ≥ 0.85 (Sica & Ghisi, 2007) | 0.898 |
| **AGFI** | ≥ 0.80 (Sica & Ghisi, 2007) | 0.871 |
| **NFI** | ≥ 0.80 (Wu & Wang, 2006) | 0.894 |
| **CFI** | ≥ 0.80 (Bentler, 1990) | 0.930 |
| **TLI** | ≥ 0.80 (Sharma et al., 2005) | 0.918 |
| **RMSEA** | < 0.08 (Pedroso et al., 2016) | 0.058 |
| **Model Summary** | | **Acceptable Model Fit** |

**Remark:** CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation,
**Source:** Created by the author.

As shown in Table 5, the square root of AVE of all structures on the diagonal was 0.792, 0.717, 0.746, 0.762, 0.797, 0.802, and 0.740, respectively, which were all greater than the inter-scale correlations. Therefore, discriminant validity was ensured.

**Table 5:** Discriminant Validity

| | SEQ | SYQ | IQ | PU | PEOU | ITU | US |
|---|---|---|---|---|---|---|---|
| SEQ | **0.792** | | | | | | |
| SYQ | 0.410 | **0.717** | | | | | |
| IQ | 0.362 | 0.387 | **0.746** | | | | |
| PU | 0.441 | 0.426 | 0.378 | **0.762** | | | |
| PEOU | 0.390 | 0.346 | 0.315 | 0.396 | **0.797** | | |
| UI | 0.501 | 0.512 | 0.425 | 0.414 | 0.448 | **0.802** | |
| US | 0.508 | 0.524 | 0.464 | 0.496 | 0.420 | 0.593 | **0.740** |

**Note:** The diagonally listed value is the AVE square roots of the variables
**Source:** Created by the author.

## 4.3 Structural Equation Model (SEM)

The structural equation model determines the linkages and roles between the endogenous and exogenous latent variables. Structural equation modeling (SEM) is a mathematical approach that uses confirmatory factor analysis to evaluate the steps that influence the integration strategies of a concept. The theory was often interconnected with causal mechanisms leading to the analysis of various variables (Newcomb & Bentler, 1988). Shelley (2006) and Boslaugh (2008) argued that it assessed linear causality between variables while compensating for misspecification, which was comparable to, but possibly more influential than, regression assessment. The structural model was modified according to the modified indices, as shown in Table 6. The goodness-of-fit indices were recalculated based on the modified structural model. The statistical results were CMIN/DF =3.780, GFI = 0.852, AGFI = 0.818, NFI=0.848, CFI = 0.883, TLI = 0.866, RMSEA = 0.075. The adjusted model has good goodness of fit.

**Table 6:** Goodness of Fit for Structural Model

| Index | Acceptable | Statistical Values Before Adjustment | Statistical Values After Adjustment |
|---|---|---|---|
| **CMIN/DF** | < 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012) | 3.925 | 3.780 |
| **GFI** | ≥ 0.85 (Sica & Ghisi, 2007) | 0.848 | 0.852 |
| **AGFI** | ≥ 0.80 (Sica & Ghisi, 2007) | 0.813 | 0.818 |
| **NFI** | ≥ 0.80 (Wu & Wang, 2006) | 0.842 | 0.848 |
| **CFI** | ≥ 0.80 (Bentler, 1990) | 0.876 | 0.883 |
| **TLI** | ≥ 0.80 (Sharma et al., 2005) | 0.859 | 0.866 |
| **RMSEA** | < 0.08 (Pedroso et al., 2016) | 0.077 | 0.075 |
| **Model summary** | | **Unacceptable Model Fit** | **Acceptable Model Fit** |

**Remark:** CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index, and RMSEA = Root mean square error of approximation
**Source:** Constructed by author

## 4.4 Research Hypothesis Testing Result

In this study, regression coefficients or standardized path coefficients were used to measure the correlation between the independent and dependent variables proposed in the hypotheses, and 11 of the 13 hypotheses proposed were supported (as shown in Table 7).

**Table 7:** Hypothesis Results of the Structural Equation Modeling

| Hypothesis | (β) | t-Value | Result |
|---|---|---|---|
| H1: SEQ→ UI | 0.205 | 4.306*** | Supported |
| H2: SEQ → US | 0.263 | 5.769*** | Supported |
| H3: SYQ → UI | 0.260 | 4.084*** | Supported |
| H4: SYQ → US | 0.364 | 6.028*** | Supported |
| H5: IQ → UI | 0.137 | 2.637 | Not Supported |
| H6: IQ → US | 0.265 | 5.232*** | Supported |
| H7: SYQ → PU | 0.430 | 6.904*** | Supported |
| H8: IQ → PU | 0.288 | 5.414*** | Supported |
| H9: US → UI | 0.313 | 4.553*** | Supported |
| H10: PEOU → UI | 0.230 | 4.850*** | Supported |
| H11: PEOU → US | 0.179 | 3.895*** | Supported |
| H12: PU → UI | -0.033 | -0.591 | Not Supported |
| H13: PU→ US | 0.198 | 3.377*** | Supported |

**Note:** *** p<0.001
**Source:** Created by the author

The results in Table 7 are refined as follows:

**H1** was 0.205, and the t-value was 4.306. This study's results are consistent with previous studies on service quality and intention to use (Masrek, 2007). In **H2** was 0.263, and the t-value was 5.769. This result supported previous studies (Lwoga, 2013). **H3** was 0.260, and the t-value was 4.084. This result supported previous studies by Cheng (2014). **H4** was 0.364, and the t-value was 6.028. This result supported previous studies by (Abdurrahaman et al., 2019) and Nripendra et al., 2013). When the standardized path coefficient was 0.137 and the t-value was 2.637, the influence of Information quality on use intention

was not found, so **H5** is not supported. This finding contradicted previous research (DeLone & McLean, 2003). **H6** was 0.265, and the t-value was 5.232. This result supported previous studies (DeLone & McLean, 2004). **H7** was 0.430 with a t-value of 6.904. This result supported previous studies (Seddon & Kiew, 1996). **H8** was 0.288 with a t-value of 5.414. This result supported previous studies (Al-Ammari & Hamad, 2008). **H9** was 0.313 with a t-value of 4.553. This result supported previous studies (Oliver, 1980). **H10** was 0.230 with a t-value of 4.850. This result supported previous studies (Agarwal & Prasad, 1999; Rajan & Baral, 2015; Venkatesh & Davis, 2000). **H11** was 0.179 with a t-value of 3.895. this result supports previous studies by Mahmood et al., 2000. When the standardized path coefficient was -0.033 and the t-value was -0.591, no effect of perceived usefulness on intention to use was found, so it did not support **H12**. This finding contradicts previous studies by Davis and Cosenza (1993) and Agarwal and Prasad (1999), who claimed that perceived usefulness significantly affects the intention to use. Finally, **H13** was 0.198, and the t-value was 3.377. This result supported previous studies (Franz & Robey, 1986; Rai et al., 2002; Seddon, 1997).

## 5. Conclusion, Recommendation & Limitation

### 5.1 Conclusion and Discussion

This study aimed to investigate the factors influencing satisfaction and intention to use e-commerce platforms in Chengdu. The respondents of this empirical case study were people from three different areas in Chengdu, China, who had experience using e-commerce platforms. Based on previous research, the researcher combined relevant theories and studies with this topic to form the conceptual framework of this study. The three core theories, based on the Technology Acceptance Model (TAM) designed by Davis (1989), Rouibah et al. (2009) model, and the updated D&MIS Success Model developed by DeLone and McLean (2003), determine the potential determinants of satisfaction and intention to use an e-commerce platform. TAM describes an individual's acceptance and adoption process. The variables used in the conceptual model were perceived usefulness, perceived ease of use, and behavioral intention.

In developing the conceptual framework for the study, the problem statement and research objectives were also identified. This study used a quantitative study to collect data from people with experience using e-commerce platforms in 3 selected regions. The collected data were analyzed through confirmatory factor analysis (CFA) and structural equation modeling (SEM) for factor analysis and correlation regression analysis. The results confirmed the relationship between satisfaction and use intention and the influencing factors. Perceived usefulness came mainly from information quality and system quality. Information quality refers to information availability, timeliness, accuracy, and relevance. System quality refers to controllability and flexibility. Satisfaction was directly influenced by service quality, system quality, information quality, perceived usefulness, and perceived ease of use and indirectly influenced by system quality and information quality. System quality had the greatest impact on satisfaction. Use intention was directly influenced by service quality, system quality, information quality, perceived usefulness, perceived ease of use, and satisfaction and indirectly influenced by service quality, system quality, information quality, perceived usefulness, and perceived ease of use. System quality had the greatest impact on use intention. If users perceive e-commerce platforms to have better system quality, they will have better satisfaction and intention to use them.

### 5.2 Recommendation

These key factors needed to be developed and promoted to achieve satisfaction and intention to use e-commerce platforms. In this study, system quality was the strongest predictor of satisfaction and intention to use e-commerce platforms. Therefore, it was important to focus on promoting the system quality of e-commerce platforms. If users perceive system quality to be high, they will be satisfied and inclined to use the e-business platform. Both governments and enterprises should ensure this attribute. At the same time, governments and companies should improve the service quality and ease of use of e-commerce platforms and help users sort out useful concepts of e-commerce platforms to increase their satisfaction and intention to use them. In summary, this study explained the factors that affected users' satisfaction and intention to use. It provided the government and e-commerce platform companies to identify the variables that affected satisfaction and use intention of e-commerce platforms and could be applied to the operation and management of e-commerce platforms.

Therefore, the recommendations for these two main findings were to ensure and promote the advantages or benefits of B2C e-commerce business platforms. The government and companies should pay great attention to service quality, information quality, and system quality to facilitate users to use the platform and thus create a good experience so that they would want to use the B2C e-commerce platform for shopping.

### 5.3 Limitation and Further Study

The limitations of this study were that the scope of the target population was focused on three regions in Chengdu, and the type of e-commerce platform was only B2C. Exploring different types of e-commerce platforms in different regions might produce different findings and recommendations. In addition, the research methodology could consider incorporating qualitative methods into the data collection and analysis. Future studies could include e-commerce platforms such as C2C to understand the influencing factors of different e-commerce platforms. In future studies, researchers could use experimental methods to control other variables that may confuse causalities, such as defining a specific quality factor and observing the effect of this independent variable on dependent variable satisfaction and behavioral intention.

## References


Abdurrahaman, D. T., Owusu, A., & Soladoye, A. B. (2019). Evaluating Factors Affecting User Satisfaction in University Enterprise Content Management (ECM) Systems. *The Electronic Journal of Information Systems Evaluation, 23*(1), 1-16.

Agarwal, R., & Prasad, J. (1999). Are Individual Differences Germane to the Acceptance of New Information Technologies?. *Decision Sciences, 30,* 361-391.

Ahn, T., Ryu, S., & Han, I. (2004). The impact of the online and offline features on the user acceptance of Internet shopping malls. *Electronic Commerce Research and Applications, 3*(4), 405-420. https://doi.org/10.1016/j.elerap.2004.05.001

Al-Ammari, J., & Hamad, S. (2008). Factors influencing the adoption of e-learning at UOB. *In Proceedings of the 9th International Arab Conference on Information Technology,* 1-10.

Aldholay, A. H., Isaac, O., Abdullah, Z., & Ramayah, T. (2018). The role of transformational leadership as a mediating variable in DeLone and McLean information system success model: The context of online learning usage in Yemen. *Telematics and Informatics, 35*(5), 1421-1437. https://doi.org/10.1016/j.tele.2018.03.012

Al-Mamary, Y. H., & Shamsuddin, A. (2015). Testing of the technology acceptance model in context of yemen. *Mediterranean Journal of Social Sciences, 6*(4), 268-273.

Al-Rahmi, W. M., Othman, M. S., & Mi Yusuf, L. (2015). Exploring the Factors that Affect Student Satisfaction through Using E-Learning in Malaysian Higher Education Institutions. *Mediterranean Journal of Social Sciences, 6*(4), 299-310. https://doi.org/10.5901/mjss.2015.v6n4s1p299

Al-Samarraie, H., Teng, B. K., Alzahrani, A. I., & Alalwan, N. (2018). E-learning continuance satisfaction in higher education: a unified perspective from instructors and students. *Studies in Higher Education, 43*(11), 2003-2019. https://doi.org/10.1080/03075079.2017.1298088

Awang, Z. (2012). *Structural equation modeling using AMOS graphic* (1st ed.). Penerbit University Teknologi MARA.

Bashir, I., & Madhavaiah, C. (2015). Consumer attitude and behavioural intention towards Internet banking adoption in India. *Journal of Indian Business Research, 7*(1), 67-102. https://doi.org/10.1108/jibr-02-2014-0013

Belanche, D., Casaló, L. V., & Guinalíu, M. (2012). Website usability, consumer satisfaction and the intention to use a website: The moderating effect of perceived risk. *Journal of Retailing and Consumer Services, 19*(1), 124-132. https://doi.org/10.1016/j.jretconser.2011.11.001

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238

Bharati, P., & Berg, D. (2003). Managing information systems for service quality: a study from the other side. *Information Technology & People, 16*(2), 183-202. https://doi.org/10.1108/09593840310478685

Bhattacherjee, A., & Premkumar, G. (2004). Understanding Changes in Belief and Attitude toward Information Technology Usage: A Theoretical Model and Longitudinal Test. *MIS Quarterly, 28*(2), 229. https://doi.org/10.2307/25148634

Boslaugh, S. (2008). *Structural Equation Modeling. Encyclopedia of Epidemiology* (1st ed.). SAGE. http://doi.org/10.4135/9781412953948.n443.

Chen, L. Y., & Wu, W. N. (2017). An Exploration of the Factors Affecting Users' Satisfaction with Mobile Payments. *International Journal of Computer Science & Information Technology (IJCSIT), 9*(3), 97-105. https://doi.org/10.5121/ijcsit.2017.9308

Cheng, Y.-M. (2012). Effects of quality antecedents on e-learning acceptance. *Internet Research, 22*(3), 361-390. https://doi.org/10.1108/10662241211235699

Cheng, Y.-M. (2014). Extending the expectation-confirmation model with quality and flow to explore nurses' continued blended e-learning intention. *Information Technology & People, 27*(3), 230-258. https://doi.org/10.1108/itp-01-2013-0024

Cronin, J. J., & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing, 56*(3), 55. https://doi.org/10.2307/1252296

Davis, D., & Cosenza, R. M. (1993). *Business Research for Decision-Making* (3rd ed.). Wadsworth.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13*(3), 319. https://doi.org/10.2307/249008

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information system success: a ten-year update. *Journal of Management Information Systems, 19*(4), 9-30.

DeLone, W. H., & McLean, E. R. (2004). Measuring e-commerce success: Applying the DeLone & McLean information systems success model. *International Journal of electronic commerce, 9*(1), 31-47.

DeLone, W. H., & McLean, E. R. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research, 3*(1), 60-95. https://doi.org/10.1287/isre.3.1.60

Doll, W. J., & Torkzadeh, G. (1988). The measurement of end-user computing satisfaction. *MIS quarterly, 12*(2), 259-274.

Fishbein, M., & Ajzen, I. (1977). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. *Philosophy and Rhetoric, 10*(2), 130-132.

Fokides, E. (2017). Greek Pre-service Teachers' Intentions to Use Computers as In-service Teachers. *Contemporary Educational Technology, 8*(1), 56-75.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Franz, C. R., & Robey, D. (1986). Organisational context, user involvement and the usefulness of information systems. *Decision Sciences, 17*(3), 329-356.

Gorla, N., Somers, T. M., & Wong, B. (2010). Organizational impact of system quality, information quality, and service quality. *The Journal of Strategic Information Systems, 19*(3), 207-228. https://doi.org/10.1016/j.jsis.2010.05.001

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2010). *Multivariate data analysis* (7th ed.). Prentice Hall.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.

Hammouri, Q., & Abu-Shanab, E. (2018). Exploring Factors Affecting Users' Satisfaction Toward E-Learning Systems. *International Journal of Information and Communication Technology Education, 14*(1), 44-57. https://doi.org/10.4018/ijicte.2018010104

Hassan, A., & Abu-Shanab, E. A. (2020). Exploring the Factors Affecting User Satisfaction with Metrash2 System. *International Journal of Electronic Government Research, 16*(1), 18-39. https://doi.org/10.4018/ijegr.2020010102

Hok, T., Daengdej, J., & Vongurai, R. (2021). Determinants of Student Satisfaction on Continuing Education Intention: A Case Study of Private University in Cambodia. *AU-GSB E-JOURNAL, 14*(2), 40-50. https://doi.org/10.14456/augsbejr.2021.13

Johnson, M. D., & Fornell, C. (1991). A framework for comparing customer satisfaction across individuals and product categories. *Journal of Economic Psychology, 12*(2), 267-286. https://doi.org/10.1016/0167-4870(91)90016-m

Kesharwani, S., Obichukwu, P. U., & Eze, N. (2021). Perceived Usefulness, Perceived Ease of Use in ICT Support and Use for Teachers. *IETE Journal of Education, 62*(1), 1-9.

Lee, K. C., & Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective. *Interacting with Computers, 21*(5-6), 385-392. https://doi.org/10.1016/j.intcom.2009.06.004

Li, Y. L., & Xia, H. (2014). Study on cooperative information decision-making behavior of college students in Online shopping. *Library Science Study, 21*, 12-16.

Lin, H.-F. (2007). Measuring Online Learning Systems Success: Applying the Updated DeLone and McLean Model. *CyberPsychology & Behavior, 10*(6), 817-820. https://doi.org/10.1089/cpb.2007.9948

Lwoga, E. (2013). Measuring the success of library 2.0 technologies in the African context. *Campus-Wide Information Systems, 30*(4), 288-307.

Mahmood, M. A., Janice, M., & Leopoldo, A. (2000). Variables affecting information technology end-user satisfaction: a meta-analysis of the empirical literature. *International Journal of Human-Computer Studies, 52*(4), 751-771.

Malina, M., Nørreklit, H., & Selto, F. (2007). Relations among Measures, Climate of Control, and Performance Measurement Models. *Contemporary Accounting Research, 24*(3), 935-982. https://doi.org/10.1506/car.24.3.10

Mardiana, S., Tjakraatmadja, J. H., & Aprianingsih, A. (2015). DeLone-McLean Information System Success Model Revisited: The Separation of Intention to Use-Use and the Integration of Technology Acceptance Models. *International Journal of Economics and Financial Issues, 5*(5), 172-182.

Masrek, M. N. (2007). Measuring campus portal effectiveness and the contributing factors. *Campus - Wide Information Systems, 24*(5), 342-354. https://doi.org/10.1108/10650740710835760

Metters, R., King-Metters, K., & Pullman, M. (2003). Successful Service Operations Management. *Thomson South-Western. 9*(2), 2013.

Negash, S., Ryan, T., & Igbaria, M. (2003). Quality and effectiveness in Web-based customer support systems. *Information & Management, 40*(8), 757-768. https://doi.org/10.1016/s0378-7206(02)00101-5

Newcomb, M. D., & Bentler, P. M. (1988). Impact of Adolescent Drug Use and Social Support on Problems of Young Adults: A longitudinal study. *Journal of Abnormal Psychology, 97*(1), 64-75. https://doi.org/10.1037/0021-843X.97.1.64.

Nripendra, P. R., Yogesh, K. D., & Michael, D. W. (2013). Examining the Factors Affecting Intention to Use of, and User Satisfaction with Online Public Grievance Redressal System (OPGRS) in India. *Grand Successes and Failures in IT Public and Private Sectors, 402*, 240-260.

Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research, 17*(4), 460-469. https://doi.org/10.1177/002224378001700405

Palvia, P. C. (1996). A model and instrument for measuring small business user satisfaction with information technology. *Information & Management, 31*(3), 151-163.

Pedroso, C. B., da Silva, A. L., & Tate, W. L. (2016). Sales and Operations Planning (S&OP): Insights from a multi-case study of Brazilian Organizations. *International Journal of Production Economics, 182*, 213-229. https://doi.org/10.1016/j.ijpe.2016.08.035

Polit, D., & Beck, C. (2014). *Essentials of nursing research: Appraising evidence for nursing practice* (8th ed.). Wolters Kluwer.

Rai, A., Lang, S. S., & Welker, R. B. (2002). Assessing the Validity of IS Success Models: An Empirical Test and Theoretical Analysis. *Information Systems Research, 13*(1), 50-69. https://doi.org/10.1287/isre.13.1.50.96

Rajan, C. A., & Baral, R. (2015). Adoption of ERP system: An empirical study of factors influencing the usage of ERP and its impact on end user. *IIMB Management Review, 27*(2), 105-117. https://doi.org/10.1016/j.iimb.2015.04.008

Rasheed, H. M. W., Khalid, J., Khizar, H. M. U., Sajid, M., Shahid, M. N., Ahmad, M., & Khan, W. A. (2015). Factors affecting Customer Loyalty in Banking Sector: A study on Banks in Bahawalpur (Pakistan). *International Journal of Accounting and Financial Reporting, 1*(1), 239. https://doi.org/10.5296/ijafr.v5i1.7726

Reeves, C. A., & Bednar, D. A. (1994). DEFINING QUALITY: ALTERNATIVES AND IMPLICATIONS. *Academy of Management Review, 19*(3), 419-445. https://doi.org/10.5465/amr.1994.9412271805

Rossman, G. B., & Wilson, B. L. (1984). Numbers and words: combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation Review, 9*(5), 627-643.

Rouibah, K., Hamdy, H. I., & Al-Enezi, M. Z. (2009). Effect of management support, training, and user involvement on system usage and satisfaction in Kuwait. *Industrial Management & Data Systems, 109*(3), 338-356. https://doi.org/10.1108/02635570910939371

Rutberg, S., & Bouikidis, C. (2018). Exploring the Evidence: Quantitative and Qualitative Research. *Nephrology Nursing Journal, 45*(2), 24.

Saeed, K. A., Hwang, Y., & Yi, M. Y. (2003). Toward an integrative framework for online consumer behavior research: A meta-analysis approach. *Journal of Organizational and End User Computing, 15*(4), 1-26.

Seddon, P. B. (1997). A Respecification and Extension of the DeLone and McLean Model of IS Success. *Information Systems Research, 8*(3), 240-253. https://doi.org/10.1287/isre.8.3.240

Seddon, P., & Kiew, M.-Y. (1996). A Partial Test and Development of Delone and Mclean's Model of IS Success. *Australasian Journal of Information Systems, 4*(1), 90-109. https://doi.org/10.3127/ajis.v4i1.379

Sharma, G. P., Verma, R. C., & Pathare, P. (2005). Mathematical modeling of infrared radiation thin layer drying of onion slices. *Journal of Food Engineering, 71*(3), 282-286. https://doi.org/10.1016/j.jfoodeng.2005.02.010

Shelley, M. C. (2006). Structural Equation Modeling. In F. W. English (Ed.), *Encyclopedia of Educational Leadership and Administration.* Sage Knowledge. http://doi.org/10.4135/9781412939584.n544

Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M.A. Lange (Ed.), *Leading - Edge psychological tests and testing research* (pp. 27-50). Nova.

Teo, T. S. H., Srivastava, S. C., & Jiang, L. (2009). Trust and Electronic Government Success: An Empirical Study. *Journal of Management Information Systems, 25*(3), 99-132. https://doi.org/10.2753/mis0742-1222250303

Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science, 46*(2), 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

Westbrook, R. A., & Oliver, R. L. (1991). The Dimensionality of Consumption Emotion Patterns and Consumer Satisfaction. *Journal of Consumer Research, 18*(1), 84. https://doi.org/10.1086/209243

Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Journal of the Academy of Marketing Science, 25*(2), 139-153. https://doi.org/10.1007/bf02894350

Wu, J.-H., & Wang, Y.-M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information & Management, 43*(6), 728-739. https://doi.org/10.1016/j.im.2006.05.002