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Araştırma Makalesi/ Research Article

Impact of Gender on the Online Purchasing Frequency: Insights from Tizi-Ouzou in Algeria

Cinsiyetin Çevrimiçi Satın Alma Sıklığı Üzerindeki Etkisi: Cezayir'deki Tizi-Ouzou'dan Bilgiler

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ABSTRACT

This paper attempts to highlight the effect of gender of e-shoppers on their purchase frequency in Tizi-Ouzou city (Algeria). This study was conducted on a sample composed of 155 participants through an online survey between July 20th, 2023 and January 25th, 2024, Independent samples t test and Matt Whitney U test were used through SPSS V26 software.

The results demonstrated that the assumption of homogeneity of variances isn't met (LEVENE's test: 0.011). Therefore, it was needed to explore Matt Whitney U which indicated that significant differences are found between men and women regarding this issue (Sig: 0.019).

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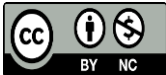
Anahtar Kelimeler: Online alışveriş, Tizi-Ouzou, Cezayir, Matt Whitney U testi, SPSS

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ÖZ

Bu makale, Tizi-Ouzou şehrinde (Cezayir) e-alışveriş yapanların cinsiyetinin satın alma sıklıkları üzerindeki etkisini vurgulamaya çalışmaktadır. 20 Temmuz 2023 - 25 Ocak 2024 tarihleri arasında çevrimiçi anket yoluyla 155 katılımcıdan oluşan bir örneklem üzerinde gerçekleştirilen bu çalışmada, SPSS V26 yazılımı üzerinden Independents sample t testi ve Matt Whitney U testi kullanılmıştır.

Sonuçlar, varyansların homojenliği varsayımının karşılanmadığını göstermiştir (LEVENE testi: 0,011). Bu nedenle kadın ve erkekler arasında bu konuda önemli farklılıklar bulunduğunu belirten Matt Whitney U'nun araştırılmasına ihtiyaç duyulmuştur (Sig: 0,019).



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Introduction

Since the appearance of digitalization, consumers have benefited from a variety of products, access to online stores, and saving time. At the beginning of the twenty-first century, there were significant changes in attitudes toward the value of information. (Souki & Asmani, 2023). Specifically, in recent years, the economy has perceived the development of information and communication technologies (ICT) as a key driver of economic growth (Bouberka et al, 2023). As a result, all relevant data is readily and quickly received via the internet (Al-Khayyal et al, 2020). The internet has grown since its initial comprehensive installation in the late 1989s. In fact, by 2023, it will be used by about 64.4% of the global population. Information technology (IT) has an impact on the shopping process, as it does in many other sectors. Nevertheless, Van der Heijden et al. (2003) discovered that perceived risk in online purchases has a detrimental impact on e-commerce acceptance. Moreover, in recent years, several research have focused on e-consumer behavior. Little work has been devoted to evaluate consumers and validate a research design that examines the differences in characteristics that influence online purchasing behavior across age groups (Kim & Ammeter, 2018).

As the internet continues to make its presence known among individuals and businesses around the world, the benefits for store owners grow (Deborah et al., 2013). However, this idea has received less attention in developing countries. As a result, ICT allows consumers from all over the world to leave comments that other internet users can use to effectively gather information about products and services (Huete-Alcocer, 2017). Online shopping, often known as e-commerce, has grown in popularity and importance in the digital economy (Trong et al., 2014; Hostler et al., 2012; Boboc, 2020; Kráč Š. et al., 2022).

Besides, e-commerce allows users to shop at any time and from any location (Shahriari, Shahriari, and Gheiji, 2015). On the other side, the internet allows customers to purchase from home, with more options available at any time.

The primary goal of research is to uncover hidden truths that have yet to be revealed (Kothary, 2004). As a result, the current study's aims are to investigate the impact of gender on the frequency of purchases made through an online service.

1. Literature Review

Evidently, numerous forms of study are conducted in the subject of electronic commerce, with a emphasis on unique characteristics in different nations (Gummerus et al, 2004; Hanjun et al., 2004; Teng 2005; Gallego, Bueno and Terreño, 2016; Irateni et al, 2022; Moulay & Khedim, 2020; Deng and Ritchie, 2018; Boukhedimi, 2025). Thus, we give a comparative study of differents academic research:

1.1. Definition of E-commerce

This section focuses on several definitions of e-commerce presented by researchers in order to comprehend what the term e-commerce refers to. Numerous studies have been performed to better comprehend the notion of e-commerce, which refers to all transactions including the purchase and selling of goods and services conducted over networks using specially created equipment.

The World Trade Organization (2017) defines online commerce as an integrated system of producing, distributing, promoting, and purchasing goods via electronic platforms. Electronic commerce drives company growth and consumer acquisition (Gallego, Bueno & Terreño, 2016). As a result, these definitions continue to claim that electronic commerce is the execution of everything related to the transaction of purchasing and selling things and services via the internet. Furthermore, in qualitative research Moulay & Khedim (2020) conducted a comparative analysis between Algeria and European legislations in terms of consumer protection in e-commerce, where they established that the Algerian legislator follows the same principal legislation existed in Great Britain (GB), France, and the United States of America, by setting packets of tariffs in order to safeguard consumers, and approving civil penalties (compensation) to redress the damage that happened to the consumer, due to its defective commodity or service. In this regard, it should be noted that the procedure is protected by two laws: the first, Law No. 09-30 on consumer protection and fraud, and the second, Law No. 18-05 on internet commerce.

1.2. Perceived Risk

According to Shaikh et al (2022), the word "risk" is derived from the early Italian word "ricercare," which means "to dare." As argued by Deng and Ritchie (2018). There are two types of risks: absolute risk and perceived danger. Absolute risk is assessed by business owners and individuals who use security precautions to reduce risk and improve safety (Deng & Ritchie, 2018). Furthermore, perceived risk refers to the unfavorable repercussions of purchasing a product or service (Dowling and Staelin, 1994). Consequently, perceived risk refers to uncertainty about the potential negative repercussions of using a product or service. It is a combination

of ambiguity and the prospect of serious consequences (Bauer, 1967; Hanjun et al., 2004). Thus, perceived risk is defined as a consumer's sense of the uncertainty and negative repercussions of participating in an activity (Teng, 2005).

Though, Forsythe and Shi (2003) defined perceived risk related with Internet purchases as "the anticipation of loss subjectively evaluated by year Internet specific customer in contemplating a purchase online." Furthermore, in the context of online buying, the concept of risk is a multidimensional construct that may be divided into two categories: product-level risk and financial risk (Ram & Ravindran, 2016). Furthermore, Jarvenpaa, Tractinsky, and Vitale (1999) documented a paper titled "Consumer trust in an Internet business," in which they reported that consumers' willingness to acquire items via the Internet was negatively influenced by their perceptions of risk toward a retail store, in a study conducted on 66 women and 118 men (n=184).

Thus, Hanjun et al. (2004) evaluated the perceived risk that influences purchase decisions during online buying among Korean and American consumers. This analysis includes both online and offline shoppers. Furthermore, the sample included 155 Korean college students and 192 students from a prominent southeastern institution in the United States. The data indicate that non-Internet purchasers perceive a significantly higher level of risk than regular online shopping.

Furthermore, Korean and American Internet users had the same aggregate rate of perceived risk associated with online purchasing, despite large comparative divergences in specific risk categories (such as social, financial, performance, time, psychological, and physical danger), indicating the existence of cultural differences in responding to specific risk variables. Deborah and Almousa (2015) conducted a similar study, however their analysis focused on customers in the United States (n=245) and Saudi Arabia (n=300). As a result, the study found significant disparities in e-shopping intention, attitude, perceived usefulness, and perceived ease of use among respondents from different nations.

Irateni et al (2022) conducted an thorough investigation into the elements that influence Algerian consumers' online buying behavior toward Jumia Corporation. Indeed, they conducted an online survey of 250 online customers and non-buyers from around Algeria, focusing on four primary characteristics (trust, contentment, perceived utility, and perceived ease). As a consequence, it was discovered that respondents are pleased with the quality of the products sold, the time saved, and the delivery service. However, there is no consensus on Jumia's genuineness regarding product pricing. Furthermore, Carvache-Franco et al (2022) did a study named "The risks perceived by the consumer in the adoption of electronic commerce:

A study of Bolivia, which evaluated the technology acceptance model (TAM) by evaluating information misuse risk, failure to receive product advantages risk, and functionality inefficiency risk on the acceptability of electronic commerce among 232 Bolivian surveyors. The results reveal that the previously identified hazards are unrelated to customer adoption of electronic commerce. Other Omani and Indonesian studies, however, have revealed a favorable relationship between perceived utility and e-commerce adoption (Alraja & Aref, 2015); Nasution & Azmin, 2018). According to Bashar & Wasiq (2013), perceived risks when shopping online influence both consumer e-satisfaction and e-loyalty. As a result, it is clear that the country of online customers is the most important element influencing their acceptance of technology.

1.3. E-service Quality

A high-quality product is an essential source and determinant of gaining a competitive edge in the digital marketplace (Ali Khan, Sohaib Zubair, and Malik, 2019). Furthermore, e-service quality is seen as a significant aspect in e-commerce success (Ladybird, Quiachon, & Maybelle, 2023). Shankar & Datta (2020) define this term as an electronic service's ability to effectively and efficiently meet the needs of its clients. Furthermore, Rowley (2006) defined e-service as the delivery of actions or performances using information technology. Indeed, a lot of studies have found that e-service quality in e-shopping is positively related to e-customer satisfaction (Ali Khan et al. 2019). In addition, Zeithmal et al. (2002) established four essential characteristics of electronic service quality (E-SQ) through exploratory factor analysis: efficiency, system availability, fulfillment, and privacy. Furthermore, Al-dweeri et al. (2017) found that customers' opinions of the quality of online shopping services influence their loyalty, both behaviorally and attitudinally.

Raza et al. (2020) discovered a favorable influence of e-customer satisfaction on e-loyalty in a study that measures e-banking service quality in Pakistan. Thus, enhancing service quality is critical for customer happiness and loyalty (Simanjuntak & Mayasari, 2022).

1.4. Electronic Word-Of- Mouth (E-WOM)

Electronic word-of-mouth (eWOM) first appeared in the mid-1990s, as the Internet altered consumer relationships (Chu, 2021). Indeed, various academics discussed the topic of e-WOM. (Cheung and Thadani, 2012; Yang, 2017; Verma & Yadav, 2021). One of the key goals of marketing communication is to persuade or convince clients to make a purchase. In addition, Yang, Zhang, and Wu (2010) stated that word-of-mouth (WOM) is the communication mechanism by which e-retailers and e-consumers share information about acquiring items or services. Thus, Hennig-Thurau et al. (2004) defined electronic word-of-mouth as any positive or negative message made by a client about a product or company and published online. On the one hand, East et al. (2017) presented a study research on positive and negative word of mouth (PWOM, NWOM), to ensure that these phrases are related to the receiver's intention to purchase or not purchase products. On the one hand, PWOM has two effects: the first is customer acquisition, and the second is seen in customer retention. NWOM, on the other hand, is more than four times more successful at deterring new client acquisition than customer retention.

1.5. E-Satisfaction

Offline satisfaction in traditional retailing reflects individuals' feelings about a store's features, but its image is influenced by consumer assessment (Hou & Xu, 2010). Several research found substantial positive relationships between service quality, customer happiness, and loyalty (Hsu. J. & Hsu. C, 2008; Shahabuddin, 2014). As a result, MenWei et al. (2023) wrote a paper titled "Enhancing Customer Satisfaction in E-commerce: A Survey among Generation Z in Malaysia," in which they concentrated on the topic of improving customer satisfaction in e-commerce platforms among 384 Malaysians from generation Z by incorporating price, security, product quality, and delivery service in their research. The findings indicate that pricing, security, quality, and delivery service on an e-commerce platform all contribute favorably to generation Z satisfaction.

1.6. E-trust

According to (Mayer, Davis, and Schoorman, 1995), trust is a customer's level of confidence in the exchange options. Furthermore, Ghane et al. (2011) stated that e-trust relates to customers' confidence in online transactions. Furthermore, Al-dwairi, Mumtaz, and Kamala (2009) identified integrity, capacity, and service quality as e-vendor characteristics that influence consumer trust. As a result, e-service quality features are projected to have a direct impact on e-trust by communicating the trustworthiness of the site and system to customers (Ghane et al, 2011). Moreover, Prahawan et al. (2021) shown that e-trust influences e-word of mouth, implying that the e-trust perceived by online consumers influences their e-word of mouth toward the e-commerce online shop. Furthermore, Al-dweeri (2017) contends that e-trust comes before e-satisfaction; consumers are satisfied when a website promotes trust. According to the author, there are considerable positive correlations between e-satisfaction and e-trust, as well as e-trust and e-loyalty. Overall, -trust, e-satisfaction, and e-loyalty can be considered sequentially (Sirdeshmukh et al, 2002; Gummerus et al, 2004).

1.7. E-loyalty

E-loyalty expands traditional loyalty to encompass online consumer behavior (Ghane et al. 2011). In their paper "e-loyalty in marketing: Implications for e-customer focus," Abu Hamideh et al (2018) stated that the value of loyalty stems from the generating results during or after the buying process. Furthermore, e-loyalty is the intention to return to a website or do future transactions (Cyr, Hassanein, Head, and Ivanov, 2007). As a result, people choose to buy from the same website rather than switching to another (Flavián, Guinaliu, and Gurrea, 2006). Furthermore, it is defined as the customer's overall pleasure and chance of returning (Al-khateeb et al., 2023). Srinivasan, Anderson, and Ponnayolu (2002) define e-loyalty as a customer's commitment and favorable attitude toward an online shop, as seen by repeat transactions. Loyalty also leads consumers to reject brand changes, especially when faced with purchase and consuming obstacles (Oliver, 1997).

2. Methodology

In order to react to study issue, this paper took a variety of steps that included qualitative and quantitative methodologies. The qualitative method was utilized to highlight prior research that primarily focused on e-shopping, as demonstrated by the literature review. several articles from Google Scholar, Science Direct, and Research Gate were reviewed and consulted. In this regard, particular keywords were used to highlight the objectives of this research, namely: e-consumer, e-commerce, e-satisfaction, e-word of mouth, e-trust, and e-loyalty. However, the quantitative technique is used to investigate previously identified hypotheses through the application of statistical tests and procedures such as descriptive statistics and the Pearson correlation test.

2.1 Sampling

The study population of this research is the Algerian e-shoppers. Although their total Number of users of e-commerce in Algeria is 14.05 million in 2022 (Saifaddin, 2023), the sample size (n=155) is representative according to central limit theorem (CLT) as it was discussed by (Chang et al, 2006; Polya, 1920; Johnson, 2004; Urdan, 2005; Berenson et al, 2012 ; Naval, 2013; Elsherif, 2021; Nair, Wierman & Zwart, 2022; Boukhedimi, 2023; Sriram, 2023), where they stated that With a sufficiently large sample size (e.g., n = 30), distribution of the mean will be normally distributed.

2.2 Data collection

A questionnaire has been carefully selected as a data gathering tool, in which the respondents are asked questions on their online purchase experiences and satisfaction. The online poll ran from July 20th, 2023 to January 25th, 2024, and the sampling method was complete probability (random mode). The gathered data were then entered into the SPSS program version 26.

3. Results & Discussion

3.1 Disruptive Statistis

3.1.1 Soiodemographic Statistics

It should be noted that in economic research, it is appropriate to use the term "man" or "woman" to replace the term "male" or "female" because the last one is appropriate to biological and physical aspects. On the count of gender, women were 56.1%, and men represented 43.9 % of the sample surveyed. However, looking at the count by age category, respondents are mostly from Generation Y (76.8%), followed by 20.6 % of generation Z and only 2.6 % from Generation X.

Furthermore, 69 % of respondents had income inferior to 22000 DZD, followed by 10.3 % and 9 % of persons who earn [30.001-50.000] DZD and [22.001-30.000] DZD respectively. While, it has been found 4.5 % of participants who gain a salary of [50.001-70 k] DZD. Additionally, 2.6 % are from [70.001-100 k] DZD salary category, and 4.5 % who earns more than 100.000 DZD. On the other side, the majority of online shoppers (90.3%) in our sample are graduates (i.e., bachelor, master and PhD degrees). However, 9.7 % are undergraduate. Overall, both graduated and undergraduate shoppers are qualified to purchase online. Additionally, the last demographic variable to be studied in the descriptive statistics part is marital status. In this sense, 92.3 % of the sample study isn't married, and 2.6 % are married with children. However, there are only 5.2 % of respondents who have not children.

3.1.2. Reliability test

The first element of the study's findings relates to its reliability. In this regard Wahyudi (2016) indicated that when the value of Cronbach alpha should be between 0.6 and 0.8, to be considered reliable. However, a value a number higher than 0.5 is likewise acceptable (Zaigham, 2021). The Cronbach alpha value achieved in this study is 0.59, indicating that the survey is reliable.

3.1.3. t test's Result

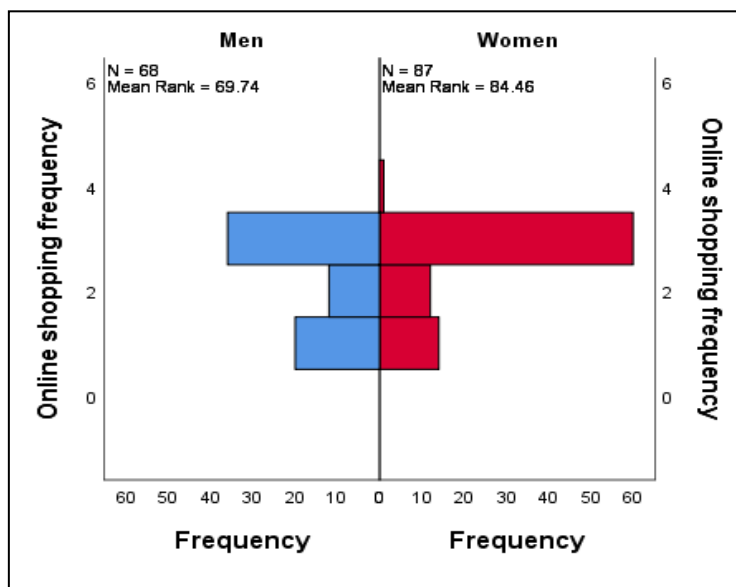
Independent samples t test should be the main statistical test to be used if the assumption of normality distribution of the dependent variable is achieved. Also, homogeneity of variances related to samples is required. As the samples are superior to 30 for each sample in this study (Men=68; Women=87), the assumption of normality distribution is not needed, and this is based on the central limit theorem (CLT). However, the findings revealed that the variances aren't homogenous (LEVENE's test $0.011 < 0.05$). Therefore, a non-parametric test called Matt Whitney U test was explored. Consequently, the finding showed significant differences between men and women regarding the frequency of online shopping (Sig: 0.019).

Table 1: Frequency of Online Shopping Per Gender

	1 time	2 times	3 times and above	Total
Men	20	12	36	68
Women	14	12	61	87
Total	34	24	97	155

Source: Survey data

Figure 1: Frequency of Online Shopping Per Gender



Source: Survey data

As reflected in the table 1 above, most of the women usually bought through networks (n=61; 70.11%) compared to men (n=36; 52.94%). Thus, women have more trust on the online shopping than men. Other reason could be suggested, is that the purchased products might be used by women only (beauty products). Moreover, online purchasing is an advantageous opportunity to avoid moving to physical stores. Furthermore, the majority of Tizi-Ouzou province is rural, which doesn't enhance consumers to visit physical markets.

4. Conclusion

Using the independent samples t test and Matt Whitney U test, this paper provides a pertinent analysis that generates insights into e-consumers purchase frequency, including the gender variable in Tizi-Ouzou (Algeria). The results suggested that women were more purchasing compared to men. However, it is welcomed to future research to investigate about the type of purchased products, and including other demographic variables (Age, Educational degree, city...).

AUTHOR STATEMENT

Research and Publication Ethics Statement: This study was prepared in accordance with the rules of scientific research and publication ethics.

Ethics Committee Approval: This study requires ethics committee approval as it includes analyses that require ethics committee approval.

Author Contributions: author contributed 100%.

Conflict of Interest: There is no conflict of interest for the author or third parties arising from the study.

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