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Determination of factors influencing online satisfaction in Tizi-Ouzou, Algeria

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Abstract

Using the Chi-square test, this study attempts to examine the influence of socioeconomic and demographic characteristics on the online satisfaction among 155 participants from Tizi-Ouzou in Algeria. An online survey was conducted from July 20th, 2023 until January 25th, 2024. Moreover, gender, age range, academic level, and marital status, are the examined factors that could influence the satisfaction of electronic commerce users. The results unveil that these factors are independent of e-shopping satisfaction. In other words, the differences found are not significant

The current study proposes paying greater attention to the less common characteristics (i.e., men, generations X and Z, married e-shoppers, and college students). Furthermore, it is encouraged to conduct a qualitative survey as a way for understanding motivation, behaviors, and previous experiences regarding e-shopping and satisfaction. In addition to that, it is recommended to increase the sample size, and study the behavior of participants from other cities.

Keywords: e-shopping, e-consumer, sociodemographic factors, Chi-square test, Algeria.

Introduction

Since the advent of digitalization, consumers have benefited from a wider range of products, easier access to online stores, and time savings. At the start of the twenty-first century, attitudes toward the value of information had shifted dramatically. (Souki & Asmani, 2023). The rise of e-commerce has created new financial needs that traditional payment systems are often unable to meet. (Aigbe & Akpojaro, 2014). As a result, e-commerce is rapidly expanding and offers companies the opportunity to increase online sales (Junadi, 2015). The use of technology in modern banking services, also known as electronic payment systems, improves banking performance by allowing various activities to be implemented quickly and accurately while increasing productivity (Sharma, 2013). Currently, every individual and company is familiar with e-commerce to make sales and purchase products and services (Masihuddin, et al, 2017).

This study aimed to investigate consumers' views on e- satisfaction in Tizi-Ouzou (Algeria).

2. Conceptual framework

Several studies emphasised the issue of online shopping (Junadi, 2015; Hou & Xu, 2010; Shahabuddin, 2014; Ghane et al, 2011; Boukhedimi, 2025; Goker & Ayar, 2020; Prahiawan et al. 2021):

2.1. e-commerce

E-commerce is one of the most significant benefits that advances in information technology bring to human life (Bartok, 2018). It should be noted that online shopping increased dramatically during the Covid-19 outbreak as governments attempted to reduce disease transmission by implementing necessary precautionary measures such as travel restrictions, physical store closures, and social distancing (Le & Chu, 2022). In short, e-commerce is the activity of shopping in the electronic environment that has moved away from being a situation where individuals only pay the price and buy the product.

2.1.1. e-commerce types

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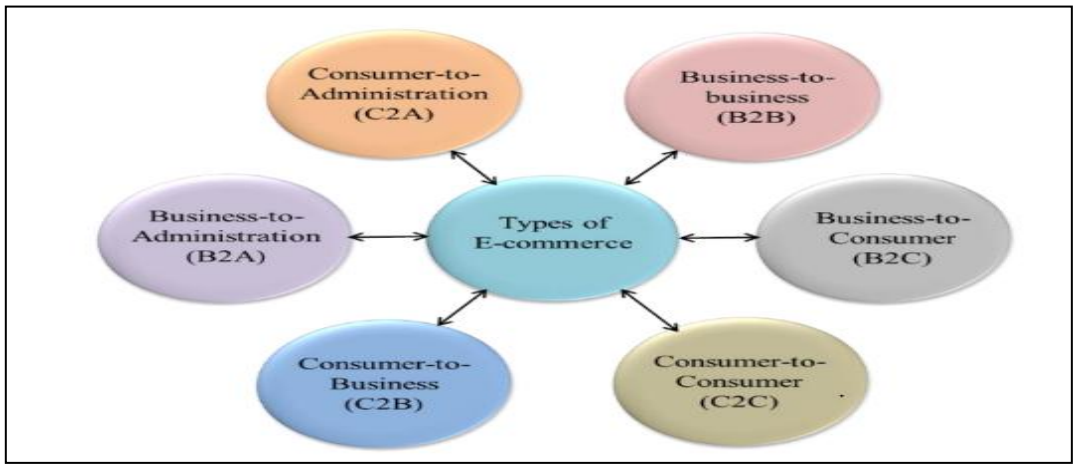
According to Jain, Malviya and Arya (2021), there are mainly six basic types of electronic commerce as shown in the Figure **1**

Fig. 1: Schematic illustration of the Types of the E-commerce based on their Characteristics



Source: Jain, Malviya and Arya (2021),

1. Business-to-Business (B2B):

Electronic commerce B2B includes all electronic products or services transfers between firms. In general producers and traditional industrial wholesale companies use this approach for electronic trading.

2. Business-to-Consumer (B2C):

Company and final client electronic / company partnerships e-commerce business to consumer. It is the e-commerce shopping section, where conventional retail business typically takes place. These partnership styles can be simpler, more complex and intermittent and can be discontinued. This business type has expanded considerably because of the advent of the Internet with a number of online shops and centers that offer customers' products of any kind such as computers, electronics, books, accessories, cars, food, financial materials and digital publications. In contrast to retail sales in conventional trade, the buyer typically has more knowledge about insightful content available and it is generally accepted that you can buy cheaper, without jeopardizing a similarly individual customer experience as well as promising easy processing and distribution.

3. Consumer-to-consumer (C2C):

Type C2C electronic e-commerce encompasses all trade in goods or services electronically between customers. Typically this exchange is done by a third party that offers an online transaction forum.

4. Consumer-to-business (C2B):

In C2B is reversed the usual context of exchange in goods. This method of e-commerce is widely used in crowdsourcing-based companies. For companies that aim precisely at some types of services or items, individuals also sell their services or products. These events include locations at which artists ask for several suggestions for a logo and only one is successfully selected and purchased. Another popular medium in this business segment is the markets which sell photos, photos, media and design elements free of royalty.

5. Business-to-administration (B2A):

This portion comprises all internet transactions between companies and the government. This covers a wide variety of diverse programs, notably in areas such as taxation, social care, healthcare, legal documentation and records, etc. These modes of services have been significantly extended in recent years by spending in e-government.

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6. Consumer-to-administration (C2A):

The C2A model includes all electronic purchases between governments and individuals. Application highlights include:

- Education – disseminating information, distance learning, etc.
- Social Security – via information distribution, making payments, etc.
- Taxes – filing tax returns, payments, etc.
- Health – appointments, information about illnesses, payment of health services, etc

2.2 E-payment

Electronic money was defined by the European Central Bank as: "an electronic stock of cash value on a technical method commonly used to make payments to contractors other than its issuance, without the need for a bank account when the transaction is made and used as a prepaid portable tool.

From the other side, Electronic payment is a payment mechanism that uses electronic media that do not involve cash (Hascaryani, 2013). Electronic payment systems can also define as a type of inter-organizational information related to transaction systems, linking various associations, and linking to individual clients. Need for complex interaction require between partners, the technology and environment.

According to the Federal Financial Institutions Examination Council (2010), electronic payment is a new retail payment practice in which a merchant retrieves payment information for goods and services and enters it into an electronic template, which generates electronic files for network processing. Furthermore, electronic payments can be defined as the electronic transfer of a payment from the payer to the recipient via an electronic payment mechanism. E-payment, often known as electronic payment, is a modern payment method that includes all activities linked to digital payment and card payments. It allows for the paperless exchange of money. Additionally E-payment systems are regarded as one of the most important drivers of economic success in the developing world, and they make a substantial contribution to improving financial service capacities and provision. Essentially, a payment system is a collection of regulations that allows users to transfer money (Roozbahani, Hojjati, and Azad, 2015). In short, the e-payment service includes a web-based user interface that enables customers to access and manage their bank accounts and transactions remotely (Hidayanto et al, 2015).

E-payment provides significant cost savings on paper-based payments (Premchand & Choudhry 2015). Furthermore, an effective and dependable e-payment system allows for faster payouts, better tracking, and transparent transactions, less time spent, cost savings, and enhanced confidence between vendors and purchasers. The development and adoption of technology in the e-payment system entail financial transactions. Assimilated users and quality e-payment technology tend to shape their own perceptions and expectations (Ab Hamid, & Chen, 2020).

Overall, e-payment refers to electronic payment in the context of e-commerce online transactions conducted over the Internet. Electronic payments can also be defined as a paperless payment process (Junadi, 2015).

2.3. E-Satisfaction

Offline satisfaction in traditional retailing reflects people's feelings about a store's features, but consumer perception influences its image (Hou & Xu, 2010). A customer can only be satisfied if the services are of high quality (2023). Several studies have found strong positive relationships between service quality, customer happiness, and loyalty (Hsu. J. & Hsu. C, 2008; Shahabuddin, 2014). As a result, Men Wei et al. (2023) published a paper titled "Enhancing Customer Satisfaction in E-commerce: A Survey among Generation Z in Malaysia," in which they focused 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

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service into their research. The findings show that pricing, security, quality, and delivery service on an e-commerce platform all improve generation Z satisfaction.

2.4 E-trust

Mayer, Davis, and Schoorman, (1995) defined trust as a customer's confidence in the exchange options. Furthermore, Ghane et al. (2011) stated that e-trust refers to customer confidence in online transactions. Furthermore, Al-dwairi, Mumtaz, and Kamala (2009) identified e-vendor integrity, capacity, and service quality as factors influencing consumer trust. As a result, e-service quality features are expected to have a direct impact on e-trust by communicating the credibility of the site and system to customers (Ghane et al, 2011). Furthermore, Prahiawan et al. (2021) demonstrated that e-trust influences e-word of mouth, implying that online consumers' perceptions of e-trust influence their e-word of mouth toward an 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.

3. Research methodology

This study used both qualitative and quantitative methodologies. The qualitative technique was motivated to focus on conceptual frameworks, which are primarily based on e-commerce, offline word of mouth, and online word of mouth, as it was addressed throughout the conceptual section by reviewing publications from Google Scholar, Science Direct, and Research Gate. In addition, certain keywords were investigated, such as e-commerce and e-satisfaction. Furthermore, the quantitative method was employed to test the proposed hypotheses. This research was conducted utilizing an online survey and the Chi-square test.

3.1 Sampling

Customers who had made at least one online transaction from Algeria made up the sampling unit. As stated in (Chang Huang and Wu, 2006; Polya, 1920; Johnson, 2004; Berenson et al, 2012; Elsherif, 2021; Nair, Wierman & Zwart, 2022; Boukhedimi et al, 2023; Sriram, 2023), the sample size (n=155) is representative according to the central limit theorem (CLT), given that the total number of e-commerce users in Algeria was 14.05 million in 2022 (Saifaddin, 2023). As a result, the mean's sample distribution will be regularly distributed, as long as one has a sufficiently large sample size (e.g, n= 30).

3.2 Data collection

An online survey was carried out among 155 respondents living in Algeria, users of online shipping. As a means of gathering data, a questionnaire has been selected, in which participants were asked questions on their satisfaction with online payment. The sample technique used for the online survey was probability (random form), and it ran from July 20, 2023, to January 25, 2024. After that, the gathered data was loaded into SPSS program V26 so that study hypotheses could be tested.

3.3. Research hypotheses

Four hypotheses are suggested in this paper, which is cited below.

H1. Gender has a significant impact on the online shipping satisfaction.

H2. Generational differences have a considerable effect on the e-satisfaction.

H3. Marital status has a significant impact on e-purchasing satisfaction.

H4. Education level has a significant impact on satisfaction with e-shipping.

4. RESULTS & DISCUSSIONS

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In terms of gender distribution, women made up 56.13% of the sample, while men made up 43.87%. Looking at the count by age category, respondents are mostly from Generation Y (76.77%), followed by Generation Z (20%), and Generation X (2.53%).

On the other view, the majority of online shoppers (90.32%) in our sample hold a bachelor's, master's, or doctoral degree. However, 9.68% are undergraduates. Overall, both graduates and undergraduates are eligible to buy online

The final demographic variable to be analyzed in the descriptive statistics section is marital status. In this regard, 92.26% of the sample research is unmarried, whereas 2.58% are married with kids. However, only 5.16% of respondents don't really have any children.

The Chi-square test was used to evaluate the independence of the dependent variable (e- satisfaction), which is reflected by the question of whether respondents are satisfied with e-shopping, and the independent variable, which is made up of demographic characteristics (gender, age ranges, marital status, and educational level).

- **Null hypothesis (H_0):** Association isn't significant if p-value > 0.05

- **Alternative hypothesis (H_1)**: Association is significant if p-value < 0.05

Table1. Results of Chi-square test of independency

Factors	Gender	Age cohort	Marital status	Educational level
p-value	0.083	0.151	0.738	0.222

Source**:** Survey results

From table 1 above, it can provide comments on the results obtained. In this case, an independence relation is verified between the demographic factors and the online shopping satisfaction. On the other hand, there is no significant impact of these factors on the e shopping satisfaction. Furthermore, the cross-tabulations shown in the table below help to interpret the Chi-square test findings.

Table2. The cross tabulation of the study

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	∑	N
Gender	Men	17	30	18	3	-	68	155
	Women	27	35	13	6	6	87	
Age range	Generation X	-	1	2	1	-	4	155
	Generation Y	36	45	25	7	6	119	
	Generation Z	8	19	4	1	-	32	
Marital status	Married with children	1	2	-	1	-	4	155
	Married without children	1	2	4	-	1	8	
	Unmarried	42	61	27	8	5	143	
Education level	Postgraduates / graduates	41	60	26	7	8	140	155
	Undergraduates	3	5	5	2	-	15	

Source**:** Survey data

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Thus, it is evident that most of the men and women are affected by the online word of mouth. Moving to the other demographic variable, the majority of all age cohorts and academic level were satisfied with the e-satisfaction. Finally, it can be confirmed that there are no significant differences between married with or without children and unmarried participants regarding the online shipping satisfaction.

Table3. Study result

Hypotheses	Variables	p-value	Relationship	results
H1	Gender	0.083	**Independence**	**Rejected**
H2	Age ranges	0.151	**Independence**	**Rejected**
H4	Marital status	0.738	**Independence**	**Rejected**
H5	Educational level	0.222	**Independence**	**Rejected**

Source**:** Survey results

Table.3 discusses the study's findings, which show that all hypotheses were dismissed.in other words, there are no significant differences between satisfaction regarding online shopping process and each sociodemographic variables.

5. Conclusion

This paper presents an analysis that offers insights into the demographic factors influencing e- satisfaction in Tizi-Ouzou (Algeria). Overall, the results indicate that there are no significant differences between men and women (p-value: 0.083), age groups (p-value: 0.151), academic level (p-value: 0.222), or marital status (p-value: 0.738). As a result, the study's findings may be valuable in scientific research.

In accordance with the study's limitations, the survey was administered online via Google Form. As a result, future research should include a qualitative survey to better understand motivation, habits, and previous experiences with e-shopping and electronic payment, in order to improve reliability and increase the study's significance. Another issue is that the study participants prioritized specific variables (for example, unmarried, women, generation Y, graduates, and postgraduates). Furthermore, it is advised to increase the sample size. As a result, future research should include these points, as well as the previously overlooked attributes.

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