

The impact of digital innovations on transforming consumer behaviour and decision-making Case of study: Online Algerian retailers

تأثير الابتكارات الرقمية على تغيير سلوك المستهلك واتخاذ القرار دراسة حالة: تجار التجزئة

الجزائريون على الإنترنت

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Abstract:

This paper focused on the link among digital innovation, customer behaviour and decision-making. We chose Algerian online retailers as a case study since it is one of the sectors integrating digital innovation in Algeria. We have approached this topic from a customer's perspective as they became aware of different digital innovations in this retail sector, making the study realisable. This work is divided into two parts; the first is theoretical, where we will dress an overview of digital innovation in businesses and the transformation of consumer behaviour and decision-making due to digital innovation implementation. The second part is devoted to the empirical study, in which we will discuss the results of our online survey intended for regular consumers of all ages. The objective is to understand better consumer behaviour and the transformation of decision-making processes in the online Algerian retailer sector.

Key words : Digital innovation; Consumer behaviour; Online retailing; Marketing; Management.

Jel Classification Codes : D7, M15, M1, M31

ملخص :

ركزت هذه الورقة على الرابط بين الابتكار الرقمي وسلوك العملاء وصنع القرار. اخترنا تجار التجزئة الجزائريين على الإنترنت كدراسة حالة لأنها أحد القطاعات التي تدمج الابتكار الرقمي في الجزائر. لقد تناولنا هذا الموضوع من منظور العميل حيث بدأ هذا الأخير في إدراك الابتكارات الرقمية المختلفة في قطاع البيع بالتجزئة ، مما يجعل الدراسة قابلة للتحقيق. ينقسم هذا العمل إلى قسمين ؛ الأول نظري ، حيث سنقدم نظرة عامة على الابتكار الرقمي في الأعمال التجارية وتغيير سلوك المستهلك وصنع القرار بسبب تنفيذ الابتكار الرقمي. الجزء الثاني مخصص للدراسة التجريبية، والتي سنناقش فيها نتائج الاستطلاع عبر الإنترنت الذي خصص للمستهلكين المنتظمين من جميع الأعمار. الهدف هو فهم سلوك المستهلك بشكل أفضل وتحويل عمليات صنع القرار في قطاع البيع بالتجزئة الجزائري عبر الإنترنت.

كلمات مفتاحية: الابتكار الرقمي؛ سلوك المستهلك؛ البيع بالتجزئة عبر الإنترنت؛ تسويق؛ إدارة أعمال.

تصنيف JEL: D7, M15, M1, M31

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INTRODUCTION

Nowadays, more and more organisations recognise that they have to transform, innovate, and adopt new technology to stay competitive. They are digitising all their internal operations and processes to facilitate them and make things better, cheaper, faster and more accessible so that they can find new ways to engage more users, implement new products and services to the market, and face competition.

Digital innovation and technology evolution support consumers with great appropriateness and comfort by providing them with multiple choices and personalising their purchase experience by setting up many plans to deliver the best-personalised customer experience after remodelling their behaviour from in-store purchases to digital shopping. Through digital innovations, organisations can understand and reach target customers faster and easier via online channels like e-commerce platforms, official websites, mobile applications and social media. They are actively paying attention to understanding and encouraging the customer not only to be loyal to the brand and a specific product or service but to be the brand ambassador and promote the product.

On the other hand, digital innovation brings risks because it will increase competition and provide other product substitution, so there will be a risk that a company takes the most significant part in the market with its new innovative product, which directly affects consumer behaviour. The consumer decision-making process is vital to better understanding consumer behaviour, preference and acceptance; it helps organisations make the right decisions for better profit.

In Algeria, the number of Internet users experienced a significant increase, especially in the past few years. In the current conditions of competition, it becomes increasingly more challenging to innovate. The ability to lead the digital invention and innovation process to introduce new products that will allow companies concerned about their sustainability to win new customers and retain others. We can only understand the nature and usefulness of launching new products if we know the challenges it presents. The innovation policy is the safest and most appropriate way for the company to adapt to its environment. We adopted this topic and case of study, the Algerian online retailers because it is one of the sectors that integrate digital innovation. The most important for this study are consumers; they became aware of different digital innovations in this retail sector, making the study realisable. This study aims to know the changes in consumer behaviours and decision-making processes.

Problem statement:

Digital innovation influences consumer behaviour and decision-making, **so how is it transforming consumer behaviour and decision-making?**

In this paper, we will focus mainly on the consumer side, the relationship between consumer behaviour and decision-making, decision making and how they are transforming in a digital innovation era.

We will start with an overview of the transformation of consumer behaviour and decision-making due to digital innovation implementation. Then in the empirical study, we will discuss the results of our online survey intended for regular consumers of all ages. This will allow us to understand better the consumer's behaviour and decision-making process transformation in the online Algerian retailer sector.

1 .Digital innovation in businesses and the transformation of consumer behavior and decision making

1.1 Digital innovations

Innovation is the creation and adoption of something new, which creates value for the organisation that adopts it (Baldwin & Curley, 2007). We can identify three words in this definition: newness, adoption, and value. Being innovative does not mean getting a completely new idea; it can be new for the customer, organisation, or even society. However, many successful innovations are accommodations of existing ideas, products, or services, which are already adopted and fruitful in some other orb. Innovation also means value creation, and innovations will decline unless the value is sustained. Holt (2002) says innovation is the fusion of a user need and a technological opportunity. Ultimately, there is only successful innovation when users, organisations, and society perceive and receive the value.

Following Schumpeter, innovation is affected by entrepreneurs who bring more advanced and new combinations of existing resources. The intelligent reorganisation of current and emerging solutions means that innovation often reappears existing solutions and information more than inventing.

New things can happen in new ways because of innovation. Frequently innovation definitions are highly related to the invention and practical implementation. We want to study innovation from the impact perspective and see why digital innovation is essential. It can make a difference in our highly dynamic innovation landscape.

In summary, this notion, which is still not significantly correlated today, digital and innovation have troubling similarities and rely on three significant consubstantial steps with any innovation process:

- 1- Observe and define: experience under the microscope;
- 2- Imagine: creativity and design thinking;
- 3- Prototype and test: lean start-up and Fab labs.

1.2 Digital innovations in businesses

A digital business or digital innovation strategy (DBS) is a strategy that uses digital technology or digitisation as a means of change or transformation improvements within an organisation to change or create value. These strategies become increasingly crucial as digitisation takes a larger and larger share of all industries, not just reserved for typical internet/tech companies like Google, Facebook, and Apple. Several researchers have studied the field of DBS and noted its importance (Matt et al., 2015; Bharadwaj et al., 2013; Drnevich & Croson, 2013). Integrating digital technologies in a company often affects a large part of it, such as products, processes, distribution channels, and supply chains (Matt et al., 2015). These benefits are attributed to multiple parts of the organisation and can lead to redesigning the entire business model (Downes & Nunes, 2013). In the past, DBS Bank and

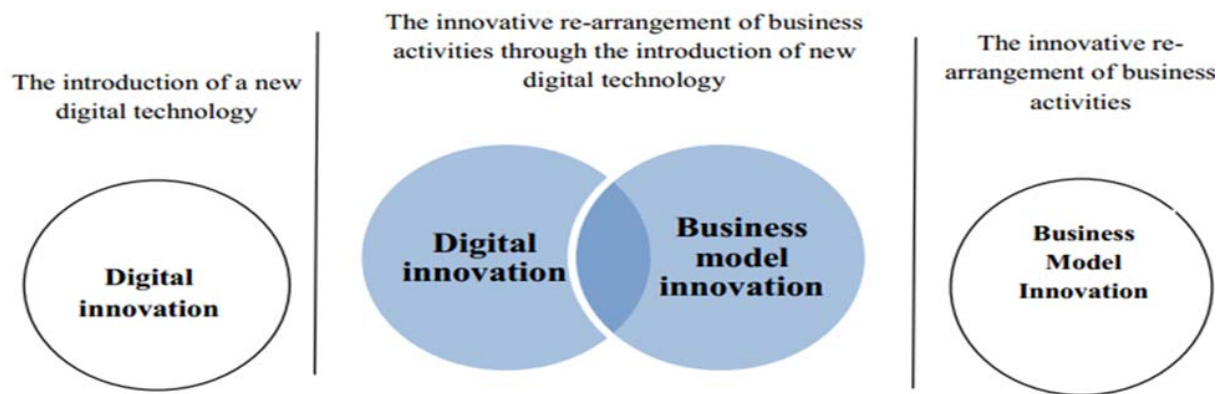
the overall corporate strategy were aligned but not seen as a single entity strategy. However, recent research argues that these two strategies should be merged, so the whole business strategy should be DBS (Bharadwaj et al., 2013; Cap Gemini) and MIT, 2013). The ultimate goal for manufacturing companies to digitise their organisations is to approach industry 4.0, a company that fully embraces digital technologies. Errol et al. (2016) developed a three-step model that companies can use to envision and solve their journeys towards Industry 4.0. The framework has a lot in common with other DBS frameworks; as mentioned above, Errol et al. (2016) provide a clear top-down roadmap to achieve the target. The first stage involves introducing the concept of Industry 4.0 in the organisation and identifying partner value networks. The second stage involves identifying the business model to work on and how to implement it successfully. At this stage, the roadmap of its structure allows the company to evaluate four distinct market segments from the top down first, market customer developments and expectations. Second, value proposition includes developing products according to the market. Third, in order to do this, essential resources, technology, and procedures must be identified. Finally, in order to achieve the specified value proposition, a network and partners must be identified. Moreover, to fulfil the statements in stage two, the final stage has to involve particular initiatives. Digital innovation is part of Business Model Innovation. As previously said, businesses are beginning to see the importance of implementing digital solutions. Uber and Airbnb have set the bar for what a modern digital firm should be (Jansson & Anderson, 2016; Transformator Design, 2017). However, technology has no intrinsic value (Mustafa, 2015; Transformator Design, 2017). The yield from a technology's commercialisation is determined by the business model's ability to capture value (Teece, 1986, 2010; Chesbrough, 2010). Chesbrough (2010, p. 354) expresses this in the following way:

"A mediocre technology pursued in the context of a great business model may be more valuable than a great technology utilised in the context of an average business strategy."

Businesses must consider how to successfully establish new business models and procedures that mix workers with increasingly powerful technology to create value (Fitzgerald et al., 2013). For mature companies, digital and business model innovation are ways to renew their competitive advantage (Amit & Zott, 2010; Brynjolfsson & McAfee, 2012; Fitzgerald et al., 2013; Sund et al., 2016; Jansson & Anderson, 2016; Gartner, n.d.-a). Both activities are intended to assist businesses in thriving in an increasingly dynamic world. However, there is a significant difference in that digital innovation focuses on integrating new technology into the business model, regardless of whether it is done on a strategic or operational level. The junction of business model innovation and digital innovation, the instrument for managing digitalisation, can be defined as: the strategical re-arrangement of business activities to establish a new business model with better value than before, enabled by the introduction of new digital technologies, see Figure 1.

1.3 The transformation of consumer behaviour and decision-making due to digital innovation implementation

Fig.1. The interaction between digital innovation and business model innovation



Source : Business Model Innovation for a digital future, 2017

The advent of digital innovations, especially in the retail industry, has brought about two transformations: transformations from consumer to technology use and the transformation of virtual stores or websites (Koufaris et al., 2002). Thus, studying the behaviour of the online consumer goes beyond the traditional field of marketing (Pavlou & Fygenson, 2006) and, in turn, become a research stream in its own right, which takes its roots not only in classical theories of consumer behaviour but also of the various works developed in information system on the acceptance of technologies.

In-store purchase is a decision-making process that follows the same steps as purchasing a product in-store according to an extensive resolution of the problem (Helme Guizon, 2001). On the other hand, these stages are influenced by specific factors in the media that generate new consumer behaviour and make purchases fundamentally different behaviour on the internet from in-store purchases (Alba et al, 1997). From there, and to develop the stages of the online purchase process, we are inspired by the Engel, Blackwell and Kollat model developed in 1968 (Engel et al., 1990), which remains one of the models that has most influenced the theory of the behaviour of the consumer. This integrative model structures the explanatory factors of the consumer's behaviour around three main components: the processing of information, the decision-making process and the variables influencing the decision-making process. The latter present in a succession of stages: recognition of the need, research information, evaluation of alternatives, choice and post-purchase evaluation (Engel et al., 1990).

The net has revolutionised our communication, exchange of information, and perform business; it is an excellent way to exchange content like online shopping information, MP3 files, pictures, and video-on-demand (VoD). Moreover, its result on business has been considerable; for instance, a banking procedure is estimated at \$1.07, while the same

procedure costs a cent over the net. This reduces time, lower costs, lower human interactions, and enhances customer convenience.

The drives of the networking trade are also present in homes; people request quicker Internet access, networked systems and devices, and improved diversion. Hence, associate invasions of intelligent devices like digital TVs (televisions), laptops and smart phones into today's homes.

Data digitisation, voice, video, and communications are leading a consumer product congregation, which has created the need for networked devices. The power to distribute information, voice, and video inside the house has brought a new experience to the consumer industry.

The Internet, combined with internal networking and intelligent connected systems, has resulted in a digital decade. Our personal and business lives have returned to relying on this digital revolution.

Rapid technological innovations and advancements enable smart phones, tablets, and wearables; once used primarily by the younger generation, it is now widely used by all segments of society (Priporas, Stylos, and Fotiadis, 2017). Today's consumers can experience outstanding and efficient business services, in line with consumer expectations for more responsive and equally efficient business services (Foroudi et al., 2017). Changing consumer behaviour significantly impacts business strategy, as business owners must embrace customer experience management and integrate it into their operations (Kotler, Kartajaya & Setiawan, 2017).

However, everything is a double-edged sword; digital innovation has its downsides, too; though business owners cannot always take the risk of innovating because of many consequences related to the managerial side or consumer side, it can also hinder growth. There are numerous stories of businesses that failed due to their reluctance to innovate. Technology is disrupting industry after industry, and this disruption will continue.

2 .Consumer behaviour and decision-making processes transformation in online Algerian retailers

After talking about digital innovation and seeing all aspects of it in the first chapter, from the overview, digital innovation ecosystem and its benefits and disadvantages to its implementation in businesses and the real impact of it on consumers behaviour and decision-making; plus explaining how digital innovations and technology work in the retail industry. In the practical chapter, we will continue our research to find the answer to our problem statement and see the authenticity of our hypotheses. Our case study is The Online Algerian Retailers. We will take this study from the consumer perspective to see how digital innovations in Algeria, particularly the Algerian online retailers, are transforming Algerian consumer behaviour and decision-making and how consumers react to digital innovations.

Thereby, we will start this by describing the methodology of our work, specifying it and what it included, which is a quantitative study; we represented it by a survey analysis, then explaining in detail the components of the methodology and highlighting our purpose from it.

2.1 Methodology

As part of our study, which consists of Algerian online retailers and how digital innovations transform consumer behaviour and decision-making, we decided to establish the study based on a quantitative study targeting Algerian consumers to determine the possibility of an impact of digital innovations on consumer behaviour and decision-making.

In our study, we followed the simple random sampling method. According to our desired target, because the size of the population and its geographical dispersion at the level of the national territory make the process too long and expensive, so we have distributed and sent the questionnaire randomly to different people.

Our questionnaire consisted of 23 divided into parts; each part helped identify whether our hypotheses were true or false.

- The first part: Questions 1 to 4, identification of the population: gender, age, professional category and level of education.
- The second part: Questions 5 and 6, consumer's knowledge of e Commerce platforms.
- The third part: Questions 7 to 8 plus question 18; these questions address how consumers find products online and how they keep themselves updated.
- The fourth part: Questions 9 to 11, treat the buying process.
- The fifth part: Questions 12 to 17, plus question 22, are about consumer behaviour and their motivation to make decisions.
- The sixth part: Questions 19, 20, 21, 23, what consumers think about online retailers and the impact of digital innovations implementation in this industry

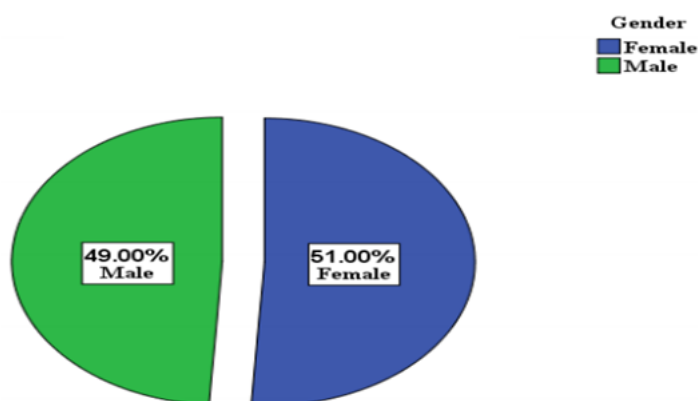
After collecting all the data from the Google Forms survey, we analysed the answers by flat and crossed sorting via IBM SPSS 22 statistics.

2.2 Data analysis

- General analysis of questions (Flat sorting)

Part 1: Identification of the population:

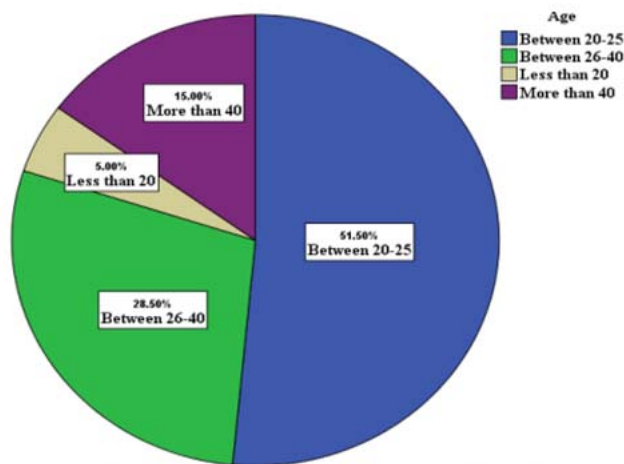
Fig.2. Gender distribution



This pie chart represents the percentage of males and females who replied to our survey, and we have 49% of males, so females are 51%.

Source: Pie chart produced by us from SPSS software

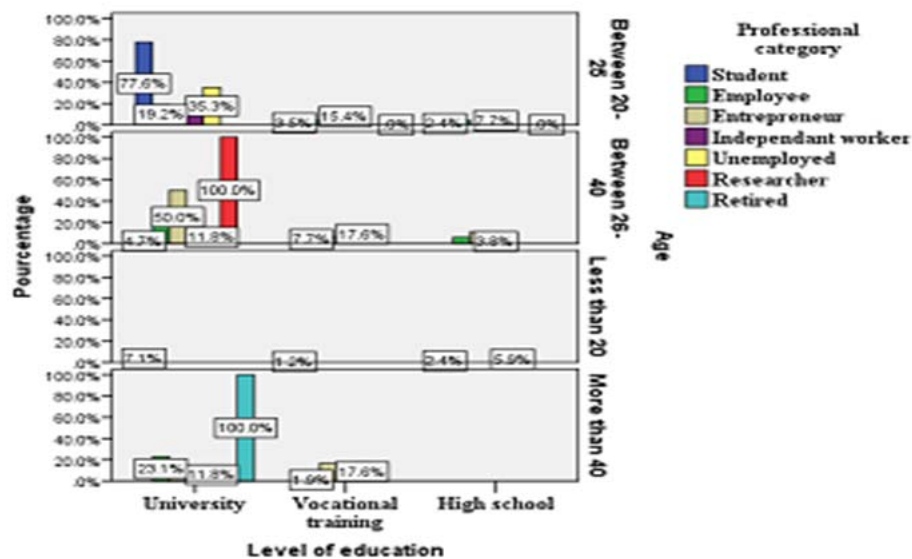
Fig.3. Different age groups



This chart shows the age groups of respondent people; as we can see, the smallest category of respondents are aged less than 20 years old (5%), while the majority are aged between 20 and 25 years old, representing more than 51%, then the next category is people aged between 26 and 40 they represent more than 28%.

Source: Pie chart produced by us from SPSS software

Fig.4. Graphical representation of professional category by age and education level

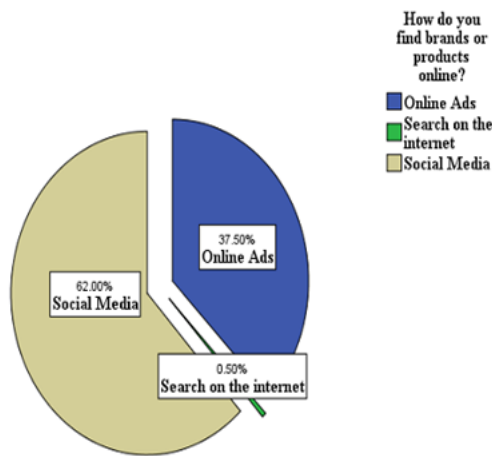


Source: Clustered bar chart produced by us from SPSS software

Figure (4) represents the professional categories by two other variables, which are age and level of education, this graphical representation was used to understand more the nature of respondents of our survey, more than 77% of people aged between 20 and 25 years old are students at university, more than 35% are graduated from university but unemployed, we go to the second category of age which is 26 to 40 years old 50% of them are graduated from university. They are entrepreneurs, and people over 40 years old, who graduated from university and retired. In contrast, the smallest ratios go to different professional categories who had vocational training or graduated from high school.

Part 2: Consumers' knowledge of e-commerce platforms

Fig.5. Ways of knowing about brands online

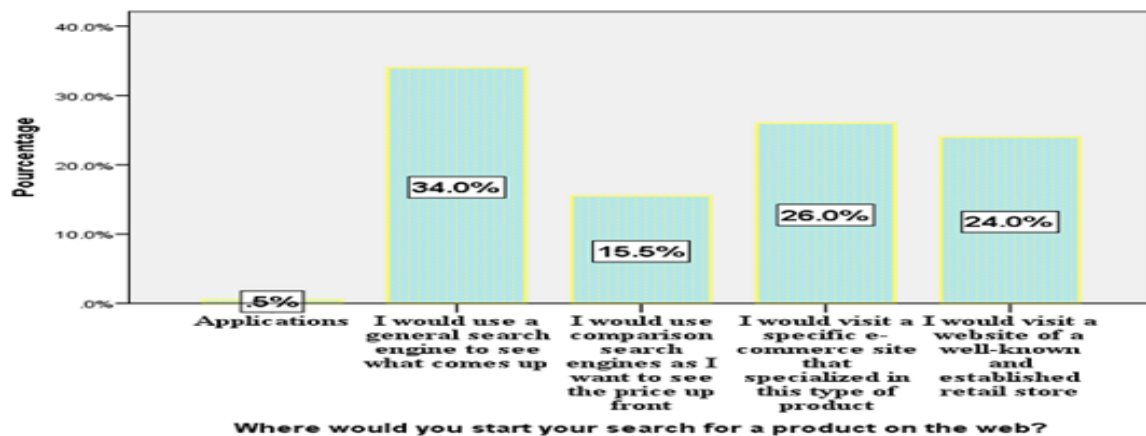


We notice that most respondents know products or brands via social media, representing 62%, while more than 37% know from online ads, and only 0.5% search on the internet to know about products or brands.

Source: Pie chart produced by us from SPSS software

Part 3: How consumers find products online and how they keep themselves updated:

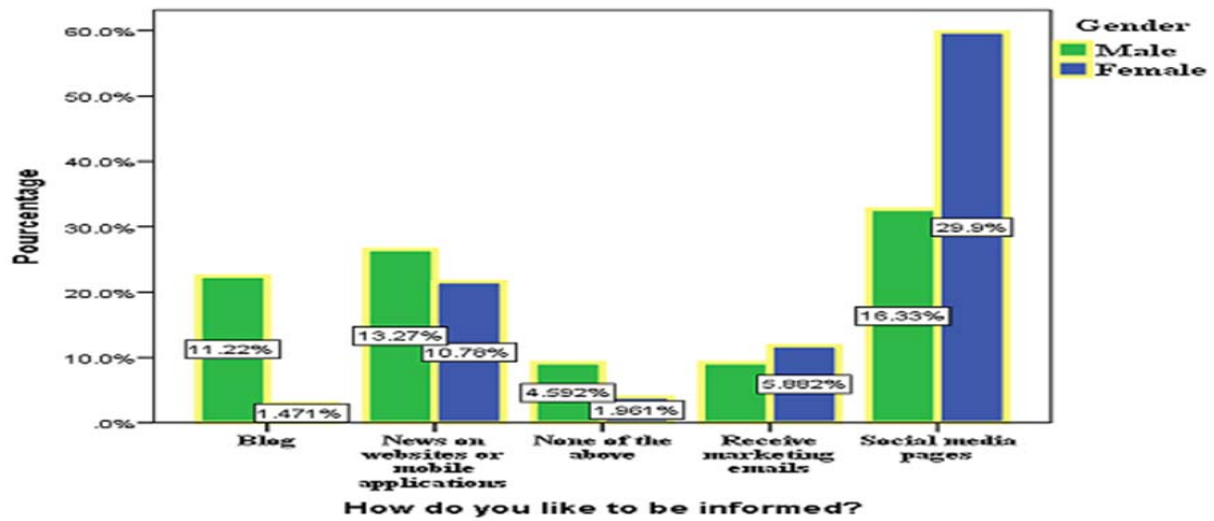
Fig.6. Online research



Source: Bar chart produced by us from SPSS software

This question is to know how people behave while browsing for a product on the web, so it was evident that most of the respondents 34% prefer using a general search engine and seeing what comes up; the next 26% of them visit a specific e-commerce site that is specialised in that type of product, while 24% prefer visiting a website of a well-known and established retail store. Only 16.6% use comparison search engines to see the prices up front.

Fig.7. Getting informed about new brands or products online

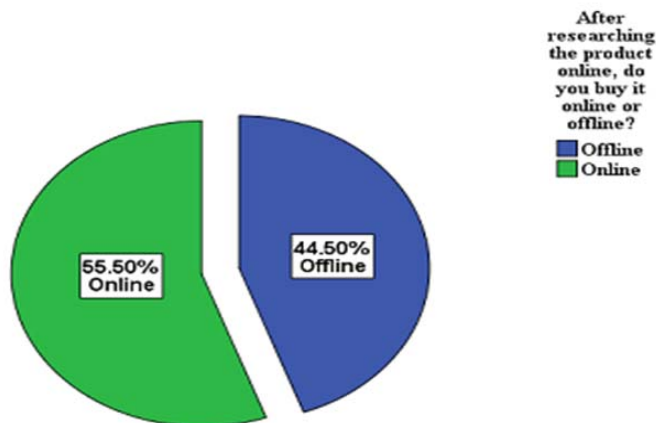


Source: Bar chart produced by us from

People like to be informed through social media; as we can see, 29.9% of females and 16.33% of males chose social media; in the second place, 13.27% of males and more than 10% of females chose news on websites or mobile application, and more than 11% prefer blogs, while only 5% like to receive marketing emails.

Part 4: The buying process:

Fig.8. Online VS offline purchase

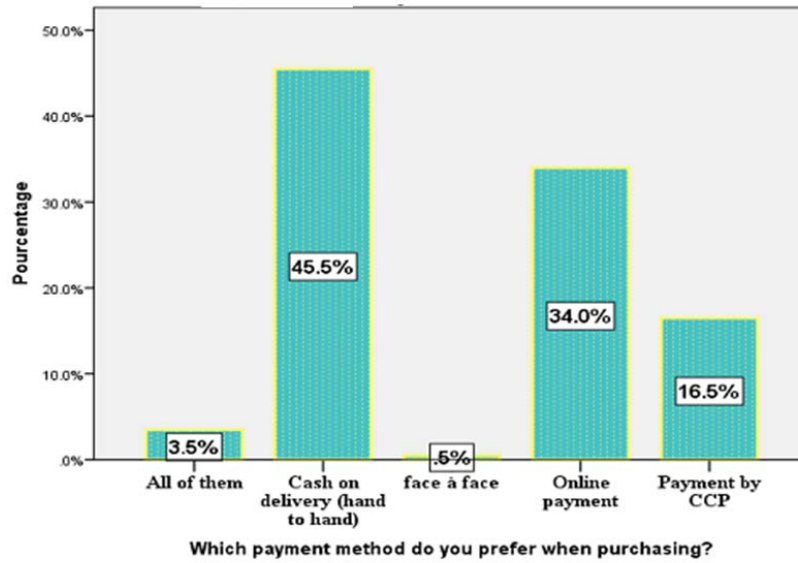


Source: Pie chart produced by us from SPSS software

We notice that for most people who search online for products they purchase online, more than 55% chose online purchasing, while the rest, 44%, browse online and then buy offline.

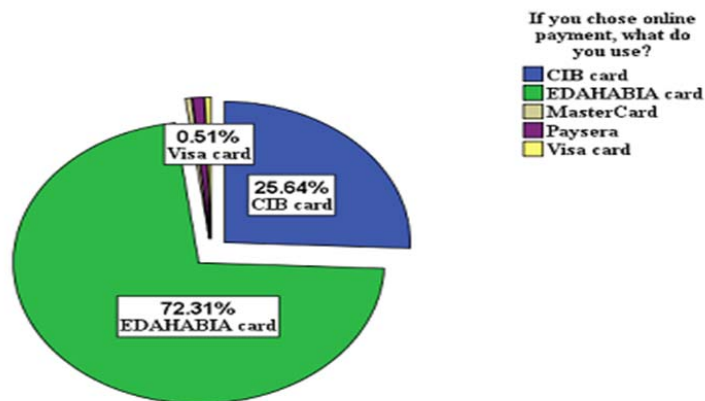
Figure 9 shows that more than 45%, pay by cash on delivery, and it is because trust matters. The next 34% pay online, which is still a good result, then 16.5% pay by Postal checking account (EDAHABIA card) and only 3.5% uses all of them.

Fig.9. Payment method



Source: Bar chart produced by us from SPSS software

Fig.10. Payment cards

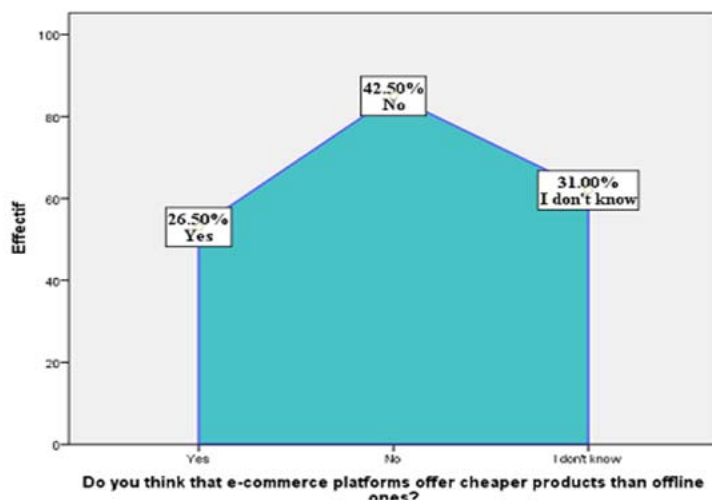


Source: Pie chart produced by us from SPSS software

This question is related to the previous one; people who preferred online payment have replied too on this question to choose which card they use, so as we can see, more than 72% of them use the EDAHABIA card, 25.6% use the CIB card, and the minority uses cards like Paysera, MasterCard or Visa card.

Part 5: Consumer behaviour and their motivation to make decisions:

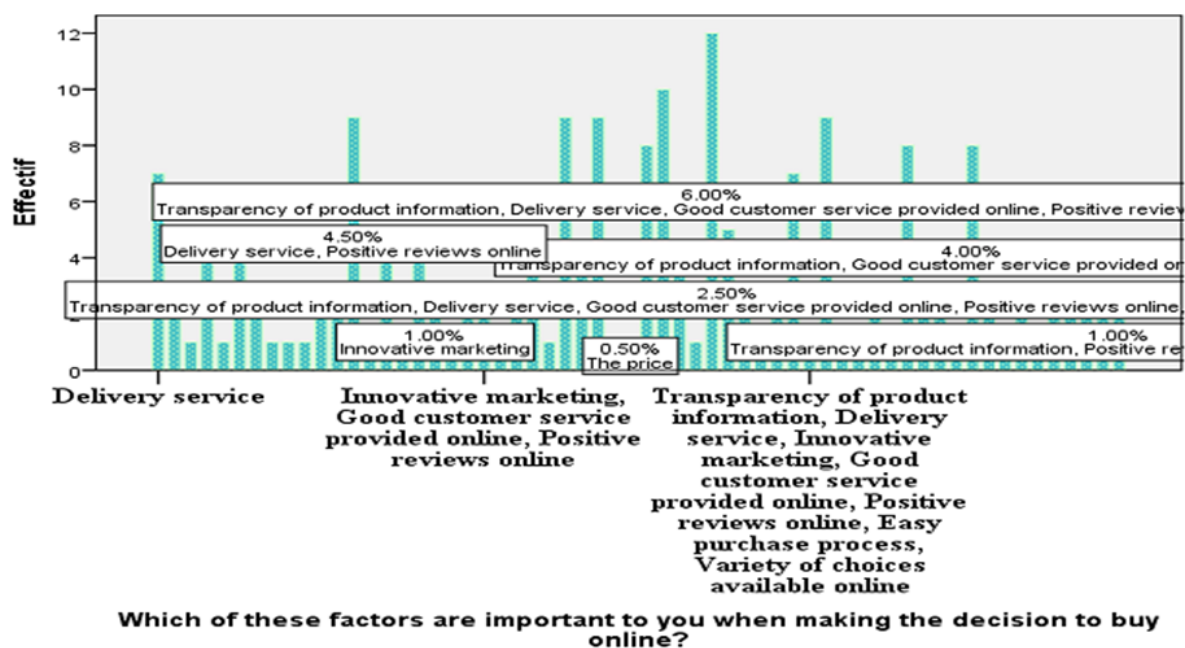
Fig.11. Online VS offline (Cheaper products)



Source: Surface chart produced by us from SPSS software

To see what makes consumers buy online or decide to buy online, we asked if they find products online cheaper than offline or the opposite, so 26.5% said yes, 42.5% said no, and 31% did not know.

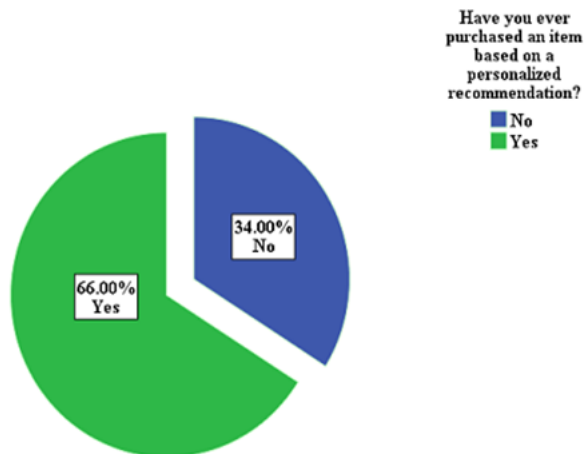
Fig.12. Factors influencing purchase decision



Source: Bar chart produced by us from SPSS software

The most critical factors that make consumers purchase online are product information transparency, delivery service, excellent online customer service and positive reviews.

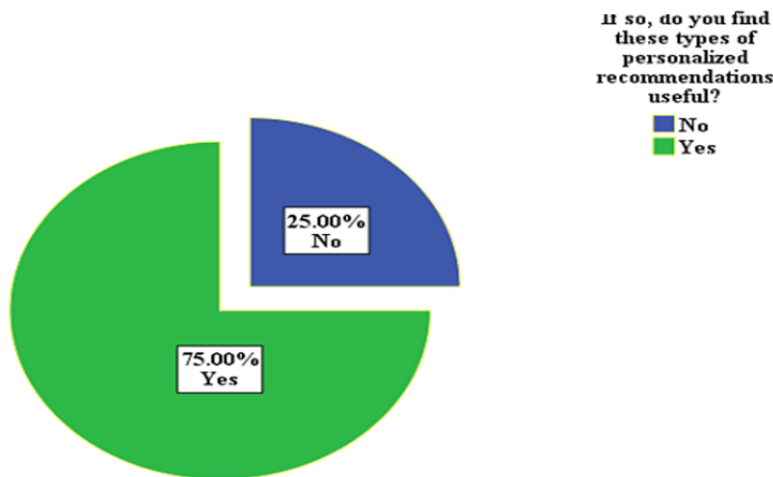
Fig.13. Purchase based on a personalized recommendation



It is clear from this chart that most people have already purchased a product based on a personalised recommendation; they represent 66%, while this strategy did not work with the other 34%.

Source: Pie chart produced by us from SPSS software

Fig.14. Usefulness of personalized recommendation

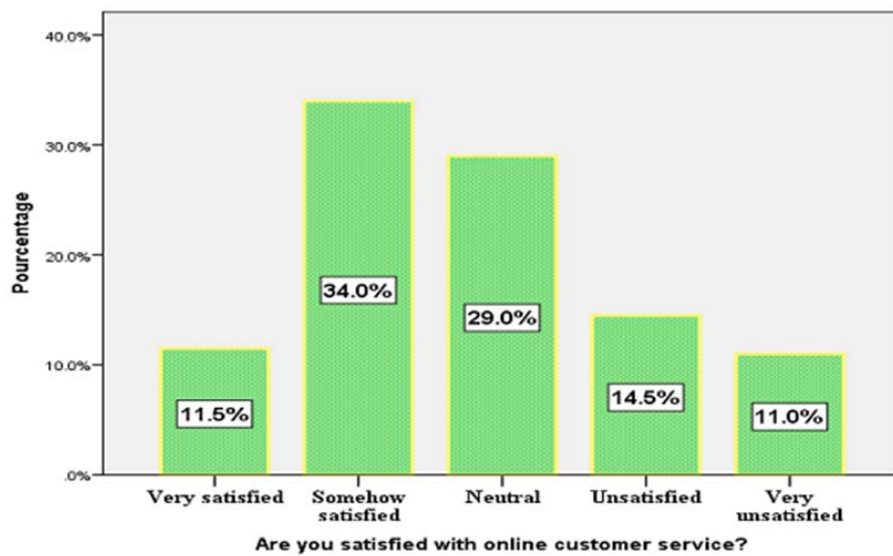


This question is related to the previous one, people who purchased an item from a personalised recommendation, most of them 75% find it useful. In comparison, 25% of respondents do not find it any useful.

Source: Pie chart produced by us from SPSS software

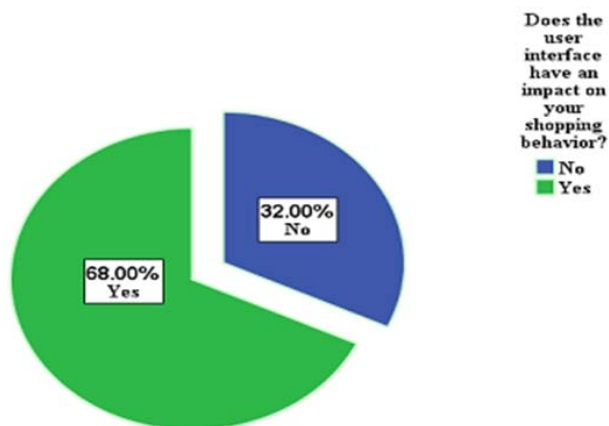
Figure 15 represents the degree of satisfaction of customers with online customer service, so 34% of them are somehow satisfied. In comparison, only 11% were very unsatisfied, and 29% of respondents preferred to be neutral. We found a good result because most respondents were satisfied with the online customer service.

Fig.15. Satisfaction with online customer service



Source: Bar chart produced by us from SPSS software

Fig.16. The impact of UI on shopping behaviour

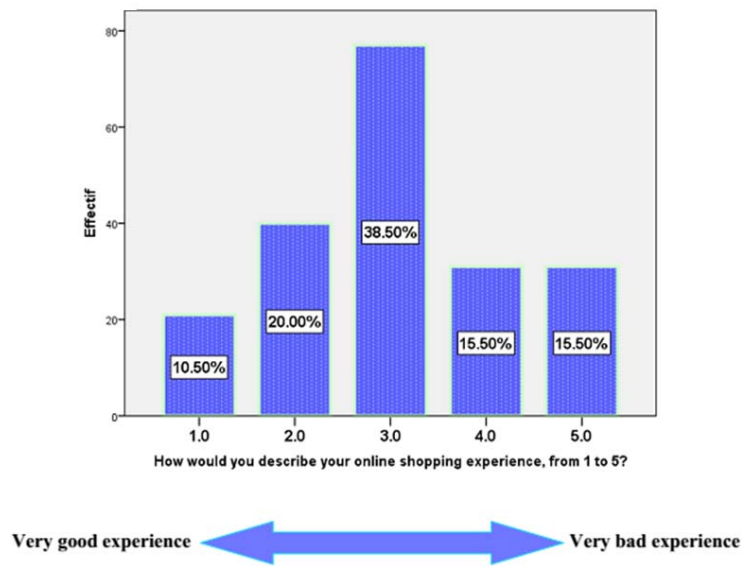


The user interface UI is essential for shoppers; 68% like a good display and an attractive design to provide a pleasant shopping experience, while 32% need help finding it.

Source: Pie chart produced by us from SPSS software

Figure (17) represents the degree of online shopping experience, in a scale of 1 to 5; most respondents (38.5%) gave a 3, which is neutral. 10.5% gave 1 (an excellent experience), 20% gave a 2, and then there was equality between 4 and 5, representing 15.5% (very bad experience).

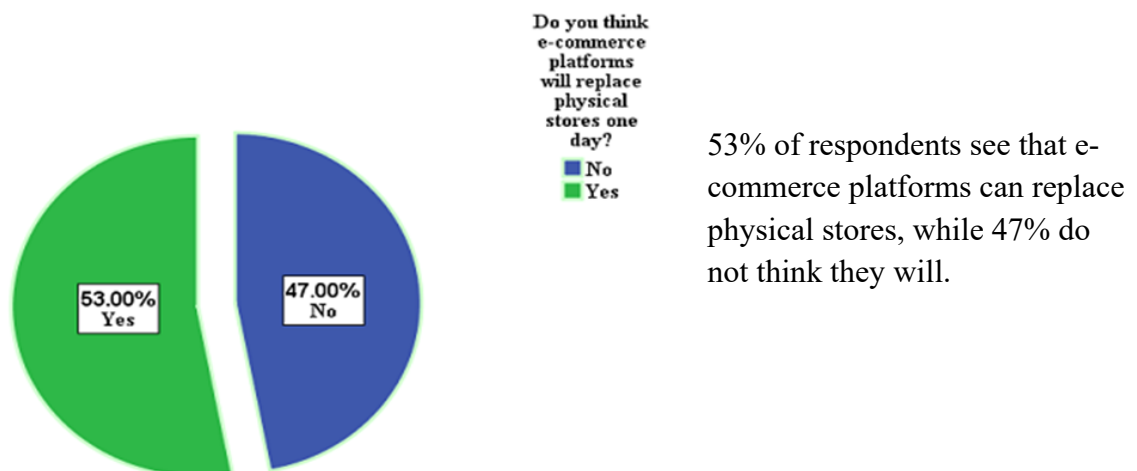
Fig.17. The degree of online shopping experience



Source: Bar chart produced by us from SPSS software

Part 6: What consumers think about online retailers and the impact of digital innovations implementation in this industry?

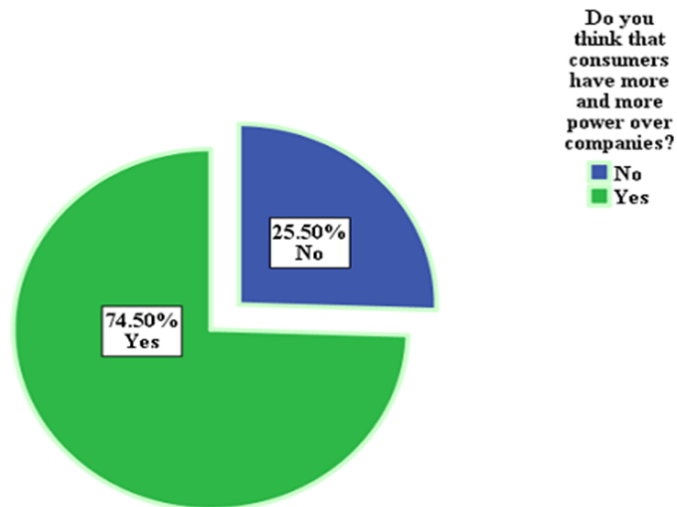
Fig.18. e-commerce platforms VS physical stores



Source: Pie chart produced by us from SPSS software

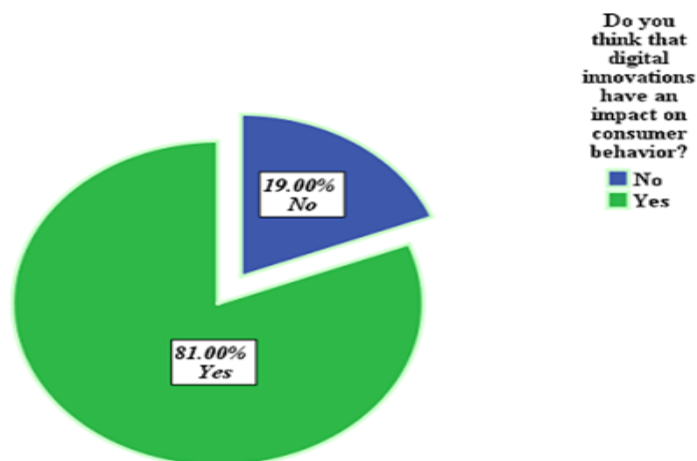
More than 74% of respondents see that consumers have power over e-commerce companies, while only 25.5% see the opposite, that companies have power over consumers.

Fig.19. Power of consumers over companies



Source: Pie chart produced by us from SPSS software

Fig.20. Impact of digital innovation on consumer behaviour



Source: Pie chart produced by us from SPSS software

Figure 20 represents the main subject of our paper, which is digital innovations; we noticed that digital innovations impact consumer behaviour and decision-making; 81% replied with a yes, and only 19% said no.

- The relationship among variables (Cross sorting):

We dedicated this part to cross-sorting, which allows us to highlight the relationship between variables, thus making it possible to combine several questions and obtain more detailed analyses.

Table1. The relationship between purchasing mode and online customer service satisfaction

	Are you satisfied with online customer service?					Total
	Neutral	Somehow satisfied	Unsatisfied	Very satisfied	Very unsatisfied	
After researching the product online, do you buy it online or offline? Offline	16.5%	11.0%	7.5%	1.5%	8.0%	44.5%
Online	12.5%	23.0%	7.0%	10.0%	3.0%	55.5%
Total	29.0%	34.0%	14.5%	11.5%	11.0%	100.0%

Source: Cross table produced by us from SPSS software

Table 1 shows that:

- The respondents who purchase online, 23% are satisfied with the online customer service, 10% are delighted, 12.5% are neutral, 7% are unsatisfied, and only 3% are unsatisfied, which explains the behaviour and the choice of customers buying online.
- The respondents who purchase offline, most of them chose to be neutral; they represent 16.5%, 11% are somehow satisfied, and only 1.5% are delighted. So the neutral respondents may not have information about online service customers because they preferred to buy traditionally.

According to Table 2 we notice that:

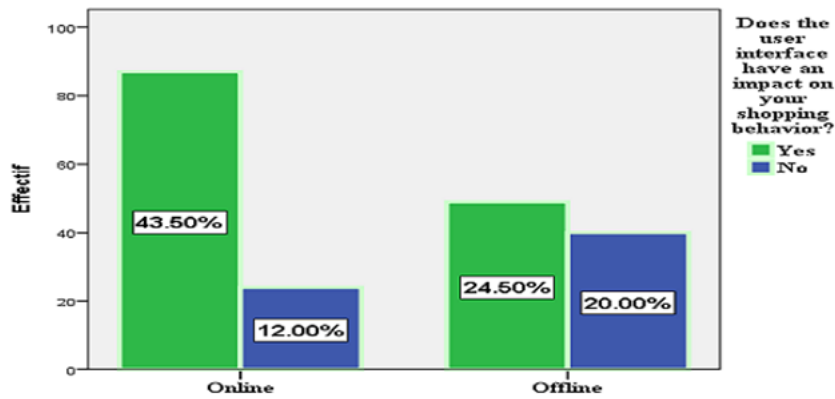
- 43.5% of online respondents are interested in the user interface, which impacts their shopping behaviour, while UI does not impact 12% of online shoppers.
- And 24.5% of respondents who buy traditionally have an interest in the user interface, which impacts their shopping behaviour, so they chose to buy offline. In comparison, 20% are not concerned about UI. As illustrated by (Figure 21) below:

Table2. The relationship between purchasing mode and the user interface impact

		Does the user interface have an impact on your shopping behavior?		Total
		No	Yes	
After researching the product online, do you buy it online or offline?	Offline	20.0%	24.5%	44.5%
	Online	12.0%	43.5%	55.5%
	Total	32.0%	68.0%	100.0%

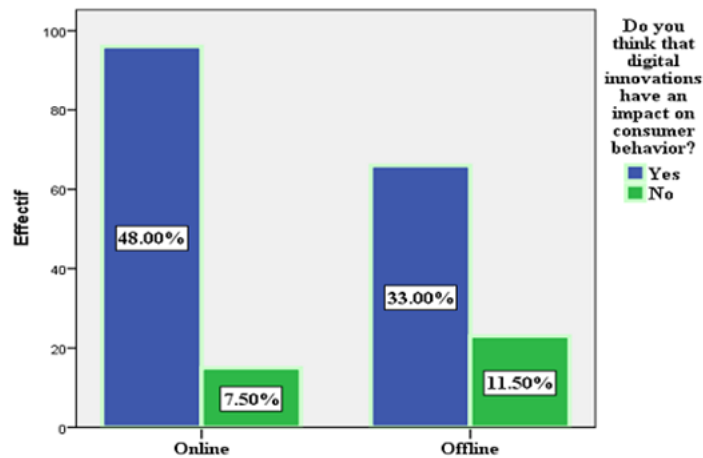
Source: Cross table produced by us from SPSS software

Fig.21.The relationship between purchasing mode and user interface



Source: Bar chart produced by us from SPSS software

Fig.22. The relationship between purchasing mode and digital innovation impact on consumer behaviour



Source: Bar chart produced by us from SPSS software

Figure 22 confirms that digital innovations have an impact on both online and offline buyers, since:

- It impacts 48% of online and 33% of offline buyers.
- It does not impact 11.5% of online buyers and only 7.5% of offline buyers.

2.3 General discussion of results

- Online Algerian retailers' platforms are quite known; 67% of people know at least one platform.
- 62% of respondents know about brands or products online through social media, and 37.5% through online ads.
- The search for a product online, 34% of the respondents use a search engine and see what comes up, or 26% visit a specific e-commerce platform that is specialised in that type of product, so we can see that people started having the culture of looking on the internet before deciding on purchasing.
- Social media impacts consumer behaviour, especially women; they like to get informed about new products or brands through it, then news on websites and mobile apps come in second place, and blogs are used mainly by men to get informed and updated.
- Then we analysed the buying process; comes after finding and researching brands online, and here there were those who chose to buy online and others who chose to buy offline, but most of the respondents preferred to purchase online (more than 55%).
- For the payment method, in the ones who buy online, more than 45% chose payment on delivery or hand-to-hand payment, this consumer behaviour reflects maybe a trust issue in electronic payments, though 34% chose online payment and most of them use EDAHABIA card and more than 25% have the CIB card.
- Then we analysed the consumer's motivations to make decisions, more than 42% of respondents see that products sold online are cheaper, which is a significant motivation to buy online.
- Some factors motivate consumers and make them decide to purchase online, like the transparency of product information; Delivery service; Innovative marketing; Good customer service provided online; Positive reviews provided online; Easy purchase process; Variety of choices available online.
- Personalised recommendation is a crucial factor for consumer behaviour or decision making; more than 66% of consumers have already purchased at least one item from a personalised recommendation. It is a valuable technique for consumer behaviour and decision-making.
- Next, we have online customer service; most consumers are somehow satisfied, which can make them decide to purchase online; very few are very satisfied or unsatisfied.
- User interface or UI impacts shopping behaviour. If the shopper can interact smoothly with the content and it is attractive and easy to use, it can impact shopping behaviour and make decision-making easier.

- After all the processes of buying or looking for products online, from 1 to 5, most consumers gave a 3 for the degree of the online shopping experience, which is neutral, not a bad experience but not a good one either.
- From analysing consumers' thinking and culture, most see that these online retailers' platforms will replace physical stores one day. They see that they have more and more power over companies, which means that companies work according to consumers' preferences and not the opposite. In general, digital innovations impact consumers' behaviour and decision-making.

In our analysis, we combined the variable « buying the product online or offline » with the following variables:

1. « Where the search for a product starts on the web »; to see if search engines or e-commerce websites can influence the shopper to buy online.
2. « Where to find cheaper prices »; to see if prices influence the consumer's decision.
3. « Online customer service satisfaction »; to see if good online customer service can make the consumer do online shopping.
4. « Impact of the User Interface on the shopping behaviour »; an exemplary interaction of a good UI makes the shopping experience a lot easier and fun.
5. « The way of being informed »; keeping the consumers updated on the web about new products or brands makes them purchase online.
6. « Impact of digital innovations on consumer behaviour and decision making »; if digital innovations, which are all mentioned above, impact consumers, they obviously will decide to purchase online.

Conclusion:

Digital innovation remodels markets by changing how goods and services are manufactured, sold, and consumed. In this paper, we talked about how digital innovation changes how consumers think, behave and make decisions. Digital innovation has replaced the traditional relationship between preferences and choices. Behaviours and decision-making in today's markets are often the results of technological advancements. As von Hippel affirmed, the evolution of company behaviour comes from the increased awareness that the best way to lock in consumers and respond to their evolving needs is to involve them in developing a firm's new products or services.

To understand digital innovations in Algeria, we chose in the empirical study one of the most common industries that can have a digital touch, which is online retailers, so after studying and analysing our data, we found out that there are some factors or in another term digital innovations that transform consumers behaviour and decision making about purchasing online, for example like personalised recommendation it is one of the motivations to buy online, we also have an excellent customer service provided online, it makes the buying process much more accessible, an attractive User Interface makes the visual more pleasant, and there are other motivating factors such as transparency of information about the product, delivery service, providing online payment, innovative marketing. Then at the end of this study, 81% of respondents on our questionnaire admit that digital innovations transform consumer behaviour and decision-making.

Furthermore, now, we can answer our problem question by affirming the hypothesis that implementing digital innovations impacts consumer behaviour and the decision-making process. This hypothesis is validated according to our results and with great certainty.

Online Algerian retailers are changing consumer's behaviour and decision-making; consumers are increasingly engaged in digital innovations.

Though the journey of this industry is fraught with difficulties, especially in Algeria, digital innovations in the retail industry are something new in our society. However, they are still having an impact and transforming consumers.

As we saw in the results of our questionnaire and after analysing it; multiple digital innovations exist mainly in the Algerian platforms that transform, to some extent, the behaviour and decision-making of consumers like the online customer service, user interface or UI, providing online payment methods, keeping customers constantly updated and informed can be through social media, online ads, websites or blogs...

Furthermore, there are motivating factors that lead consumers to decide to buy online: prices, product information transparency, delivery service, innovative marketing, positive reviews and other factors.

Moreover, all that we mentioned above has to be present and Algerian retailers' platforms have to consider it if they want to innovate because it is a step forward to the success of this industry.

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