Analysis and modeling of purchase behavior on Social Networks

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TESIS DOCTORAL

Analysis and modeling of purchase behavior on social networks.

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‘’Tal vez no es fácil cambiar la realidad, pero al menos fui capaz transmitir su voz al mundo’’- Shireen Abu Aqleh-1971-2022.

Para ti España

Para ti Palestina

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Nada es imposible, para conseguir tu objetivo tienes que trabajar duro, tener esperanza, paciencia, ilusión, y no parar. El éxito es el resultado de la perfección, el trabajo intenso, el aprendizaje del fracaso, la lealtad y la persistencia. La vida tiene un montón de retos y oportunidades que pueden aparecer sólo una vez. Creo que esta etapa de doctorado fue un reto y una oportunidad grande, Dios mil gracias por estar conmigo y hacer que cumpla este sueño.

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Granada, mayo de 2022

Index

Figures

Tables

Chapter 0

''I am not in competition with anyone but myself. My goal is to improve myself continuously.''- Bill Gates

Introduction

The Introduction offers the reader clearly understand the objectives and the structure of the thesis. This chapter initiated by presenting an overview of the thesis. After that a brief explanation of the problem approach and research objectives. Finally, outlining the structure thesis.

1.1. Introduction

In recent years the world has been affected by social networks. Social media has become a part of the economic and social life of the world (Zeng and Gerritsen, 2014). The Internet and social media are used by almost half of the world's population, and this phenomenon is growing rapidly (Jashari and Rrustemi, 2017). Giudice (2016) suggests that the Internet has changed the management process inside and outside the companies. In addition, the Internet makes it possible to increase the competitiveness of companies around the world through the exchange of precise information and social value over the long term, thus affecting customer relationship management and business performance. Furthermore, thanks to the rapid development of the Internet, as well as Web 2.0 technologies, customers are switching away from traditional media such as magazines, television, radio and journalists to online social media (Oh et al., 2017). Social media offers a form of allowing people to communicate with each other, it also allows people to communicate with companies around the world (Khobzi, 2018). Besides, social media is one of the most important tools for many companies and businesses. Customers use the Internet to browse, research and buy services and products (Pourkhani et al., 2019). On the other hand, social media satisfies customers' needs for self-actualization by giving them the opportunity to express their feelings and share their shopping experiences through social media by liking or hating a brand (Kusumasondjaja and Tjiptono, 2019).

COVID 19 has affected everyone life, politics, and especially economics and businesses sectors, we have seen good and bad effects for COVID19 all over the world. Consumer behavior during the lockdown becomes different some were having depression and other were improving their self’s.

Moreover, some sectors like tourism had too many problems, while other sectors had advantages especially who sell their products and services on the Internet and social commerce. Also, we have seen that too many sectors have joined Facebook and especially Instagram commerce as Instagram businesses accounts let companies sell their products on it in different easy ways. During lockdown, Instagram was adding new tools and features for small businesses to increase their sales and have new clients and to reach to several clients all over the world. Furthermore, throughout lock down the only easy way was to buy through online commerce as many countries were not be allowed to walk in the street or use the car, and at the same time it was safer and less risk buying through online commerce. Various people start learning how to use social media and Internet to get their things easy as they were trying to find easy ways to get what they want or desire to enjoy and live during that hard time.

Social commerce is the application of social media as a canal of electronic commerce (e-commerce). It is easy to connect with consumers, containing public relations, and may spread the goal group methodically. Sidewise from Facebook, that realizes as the greatest common social commerce network. Instagram is additional new method for marketers that entrepreneurs may generate public relations media in a diversity of formats. In Instagram we can post images, videos, Instagram story, and IGTV. Huge foreign businesspersons have understood the importance of accomplishment their goal audience through using multimedia on Instagram as well. For

Instance, Starbucks, National Geographic, Chanel, Oreo, Nike, or even BMW and numerous additional businesses go live on the Instagram application. They carry their services, product information, and promotional activities go live on the Instagram application (Kaewpackdee and Lekchareon, 2020).

Since November 2016 when Instagram started testing shopping features until today, this new commerce platform has undergone significant changes. Thanks to "Business Accounts", customers can easily browse and shop through Instagram.

In celebration of Instagram's 10th anniversary, Instagram released a number of features and promised sustained support for small businesses and creators. Moreover, Adam Mosseri the head of Instagram, affirm that they are working on a number of new features to support creators make a living and expect more updates soon. Also, Mosseri confirm that Instagram will be easier for businesses to sell their products and services. Besides, the development supports a move to online retail in response to the global pandemic. Giving to the business's latest Global State of Small Business Report, a number of small businesses are making a significant percentage of sales online (Hootsuite, 2020).

Furthermore, there are three main advantages for Businesses from Instagram shopping. First, Instagram shopping decreases friction and makes shopping easier for users. Second, Instagram shopping allows businesses to promote products directly. And Finally, Businesses can expose their products to users with a high buying Intent (Law, 2020). In this sense, Instagram commerce is really a great instance of direct shopping as a new effective and acclaimed subcategory of e-commerce operating on social media and available through mobile applications. As well, it offers clients with information about services and products from the brands or trades they can cooperate with. Direct shopping influences structures such as chosen "buy now" buttons for clients to click on them as a fast and easy way to complete the buying process (Brusch and Rappel, 2020).

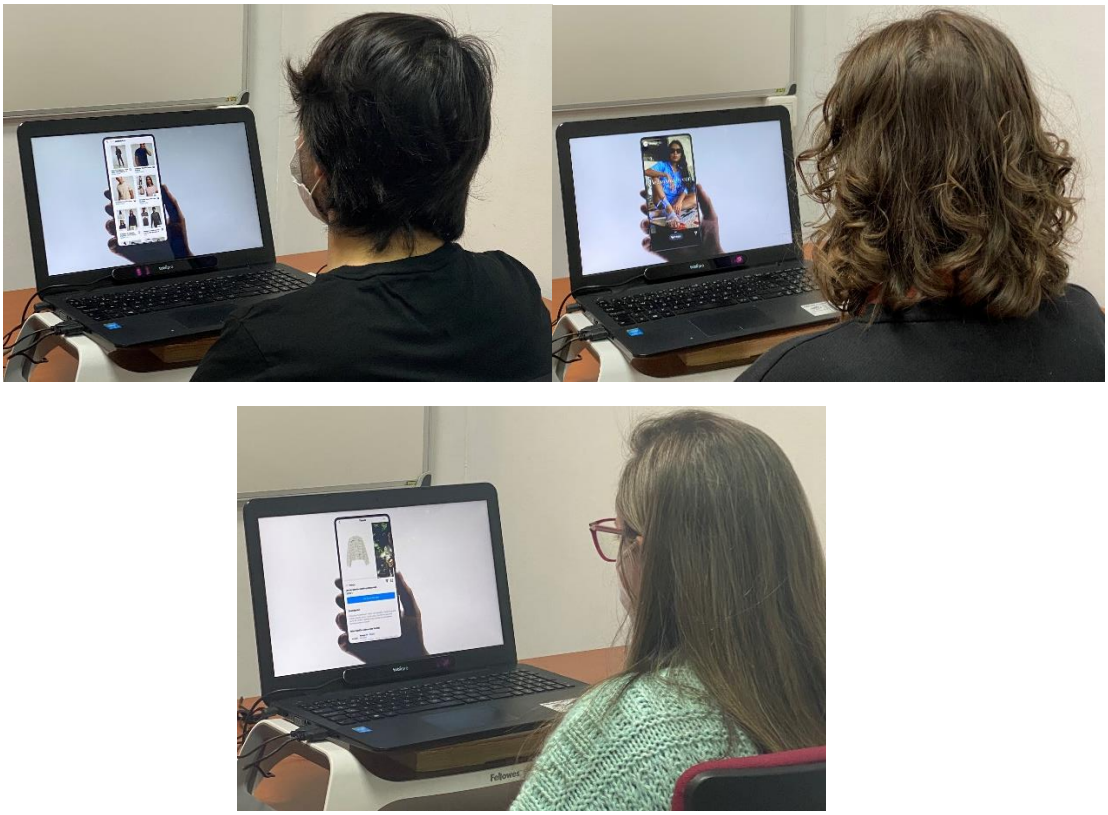
1.2. Problem approach and research objectives

Social media is a potential and strong sales channel for companies. This new sales channel called social commerce in particular, and due to the relevance of the social network Instagram, the thesis focuses on Instagram commerce.
The main objective of the thesis is to analyze the purchase intention that users can make on social media and specifically in the case of Instagram.
From this general objective other relevant issues are determined:

- Objective 1: To analyze the importance of social commerce in the scientific literature through a bibliometric analysis.
- Objective 2: To model and analyze the purchase behavior in Instagram commerce in Palestine and Spain.
- Objective 3: To analyze the moderating effect of other socio-demographic and behavioral factors of the users on the adoption of this type of commerce.
- Objective 4: To analyze the background of the adoption of this type of commerce.

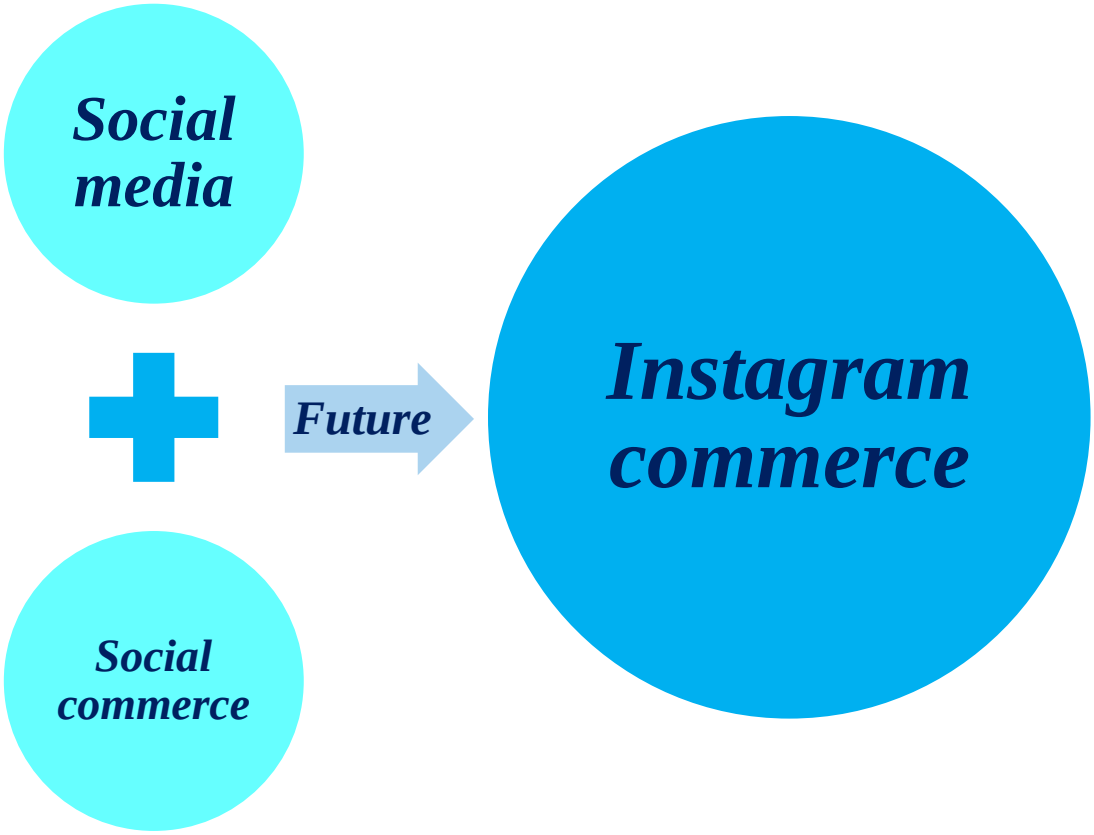
- Objective 5: To identify the determinants of impulse buying on this new type of commerce.
- Objective 6: To analyze the buying behavior of users through psycho-physiological techniques, specifically with the use of Eye tracking.

Figure 1: Examples from the eye tracking experiment



Source: Author

Figure 2: Future online sales commerce



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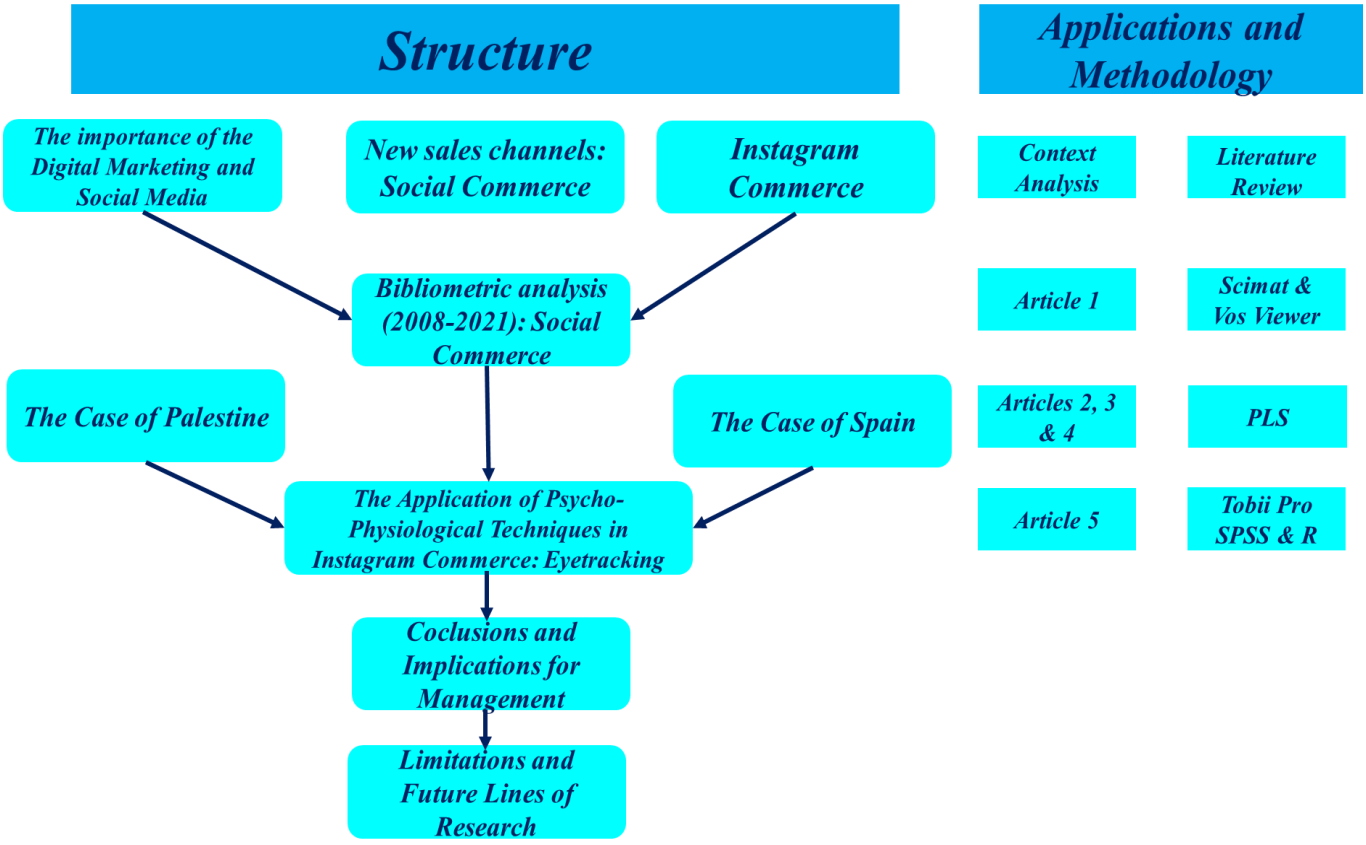
A summary of the objectives of this thesis is presented in Figure 3.

Figure 3: Objectives and methodology of the thesis



Source: Author

1.3. Thesis Structure

This dissertation starts with the introductory that provide the reader a clear and brief description of the objectives of this work. In Chapter 1 where the reader can understand briefly what is the digital marketing, evolution of the web from web 1.0 to web 5.0, social media, types of social media and in particular the Instagram. Also, this chapter pays special attention to different advantages and disadvantages for the mentioned concepts. Moreover, this chapter finalizes by explaining the situations of the Internet, social media, e-commerce and digital marketing for the proposed countries Spain and Palestine.

Chapter 2 continues by focusing the attention on the evolution of social commerce, the advantages of social commerce for clients, retailers, and other types of enterprises. More over this chapter pay attention on the new sales channel the Instagram commerce that include a brief description of this

new innovative social commerce, the advantages and disadvantages, features, and the several methods of buying through Instagram commerce. In addition, this chapter end by presenting an attractive overview of the relevant applied methods and software in each article:

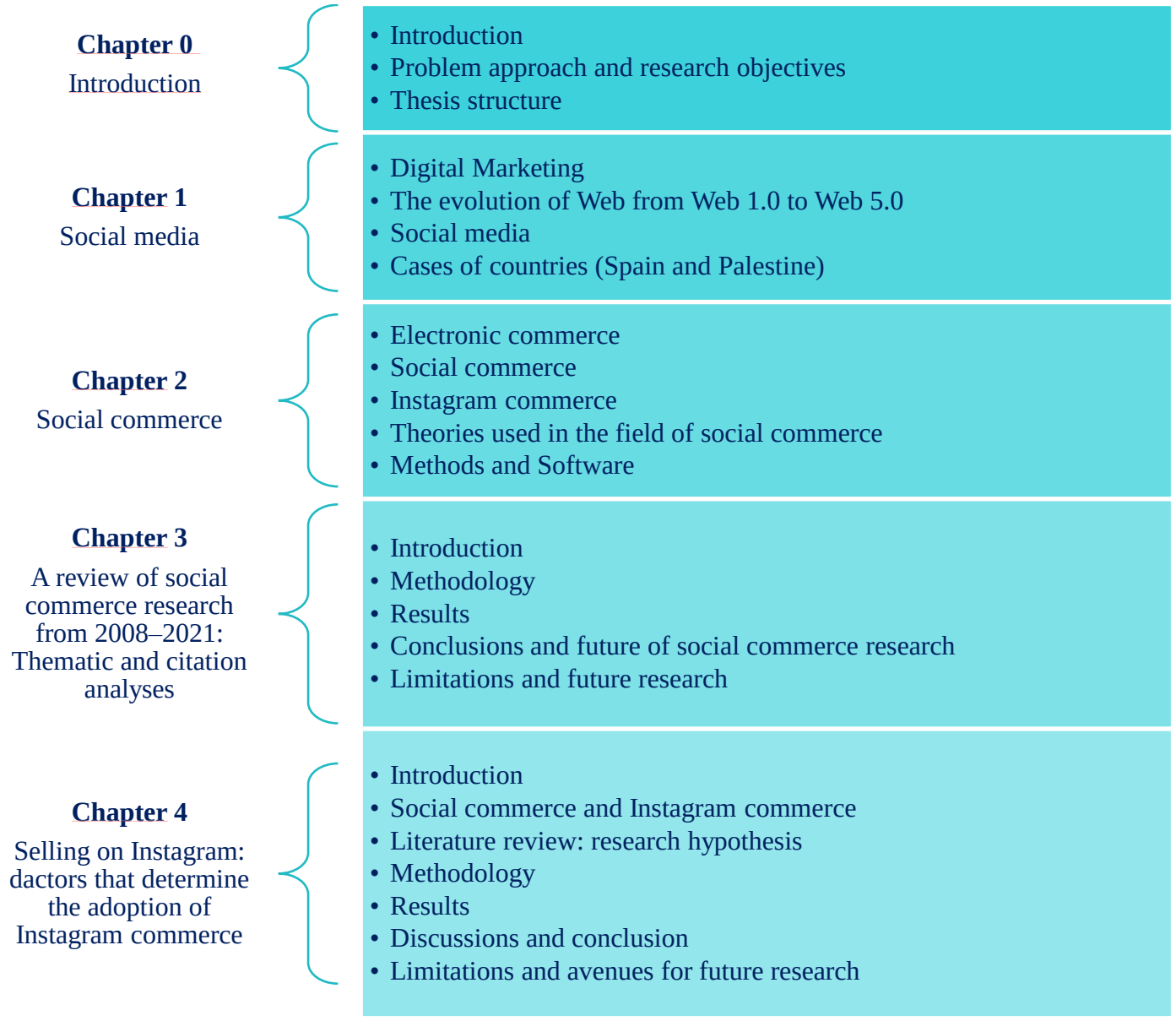
- Bibliometric analysis: ScitMAT and Vos Viewer
- Structural Equation Model: Smart PLS
- Neuroscience (Eye Tracking): Tobii Pro, SPSS and R

The essential section of the thesis includes five different research studies regarding the social commerce and in particular Instagram commerce. The first study (bibliometric analysis) purposes to categorize, evaluate and map the literature on social commerce, thus revealing its intellectual and theoretical creations as well as providing and revising the state of the field's research art and reliably establishing opportunities for future research. The second and the third are about Palestine, but with different objectives. In the second study aims to demonstrate the influence of social networks on the purchasing decisions of individuals by focusing more on Instagram commerce, and on the other hand, to analyze the factors that drive purchases in the context of the development of sales in social businesses, more specifically, on Instagram in Palestine. While the third study with double participants purposes to analyze the factors that drive purchases via Instagram and contribute to the growth of Instagram commerce and to examine the moderating role of gender, age, and experience in Instagram use on the proposed relationship between six variables derived from Commitment–Trust Theory, the TAM model, and Consumer Decision-making Theory. Furthermore, in study 4 and 5 are related to Spain, study 4 aims to explore the positive influence of the measures adopted during summer 2020 on Spanish social commerce users' urge to buy impulsively on Instagram commerce. And finally, the last study proposes an experimental analysis using the "eye tracking" methodology that aims to approach the lack by providing a deeper and more comprehensive view of the effectiveness of advertising according to the main types of visual representation of a brand for two specific social commerce tools (the brand profile in the Instagram "store/shop" and in Instagram stories) in terms of attention and recall; in addition, it is analyzed whether certain sociodemographic variables (gender and age) and the level of experience in the use of these new social commerce systems (based on frequency of use) determine the intention to use this new commercial platform.

The last chapter provide an overall reflection on the results attained in the 5 studies and a series of conclusions of attention to the academic world as well as for business and management. It further highlights the limitations of the study, as well as future attractive lines of research.

The structure of this thesis is summarized in Figure 4

Figure 4: Thesis structure



Chapter 5 Drivers of purchase intention in Instagram commerce	• Introduction • Theoretical background • Research methdology • Results • Conclusions and practical findings • Managerial implications • Limitations and avenues for future research
Chapter 6 To buy or not to buy, that is the question: understanding the determinants of the urge to buy impulsively on Instagram commerce	• Introduction • Background literature • Development of the hypotheses • Research methodology • Results • Final discussion and conclusion • Limitations and avenues for future research
Chapter 7 Surprise me with the visual representation of the brand in the social commerce! An eye-tracking study based on the characteristics of users	• Introduction • Theoretical background: Justification of the hypotheses • Methdology • Results • Limitations and future lines of researh
Chapter 8 Conclusion	• Main conclusions • Implications for management • Limitations and future investigations

Source: Author

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'' Satisfaction lies in the effort, not in the attainment, full effort is full victory. ''- Mahatma Gandh

Social media

This chapter let the reader clearer and concise insight in the origin of the concept, characteristics, advantages and disadvantages for digital marketing, the evolution of the Web, social media, types of social media by focusing on Instagram. It describes the cases countries of Spain and Palestine with technology, digital marketing, Internet, social media and especially Instagram, and e-commerce. Finally, there are several figures that explain the situation and statics data of the world, and more concentrating on Spain and Palestine.

2.1. Digital marketing

Marketing was all about connecting with customers in the right place at the right moment. This means that companies need to reach their customers where they are spending most of their time, today customers spend most of their time on the Internet.

Digital Marketing includes all the marketing activities performed on the Internet. Businesses and companies are taking advantages of digital channels such as social media, websites, search engines, text, multimedia message and email to communicate with both current and potential clients. Moreover, digital marketing is essential and crucial for the business and brand awareness. Brands have website or at least any social media platform. Customers can know about brand from the digital content and marketing. Besides, digital marketing involves a lot of choices and associated strategies, allowing companies to be creative and experiment with a variety of marketing strategies on a budget. In addition, digital marketing is defined by the use of various digital channels and strategies to engage with clients where they spend most of their time: online. The top digital marketers have a strong idea of how each digital marketing campaign can support their overall objectives. Further, based on the purposes of the marketing strategy, marketers can leverage a broader campaign across the free and paid channels available to them.

Digital marketing allows companies to reach a wider public than they could reach with traditional methods, and to target potential customers who are more likely to buy their product or service. It is also typically more cost-effective than traditional advertising and allows companies to measure success on a day-to-day basis and change course as needed.

2.1.1. Advantages of digital marketing

Among the advantages of digital marketing, Alexander (2022) and Kingsnorth (2022) propose the following benefits:

1- Businesses can concentrate their marketing efforts on the potential customers most likely to buy their product or service. For example, through focusing on social media targeting features or SEO strategies in selecting location, gender, age.

2- Digital marketing is more cost-effective than outbound marketing techniques. Digital marketing allows companies to keep track of marketing campaigns day-to-day and reduce the amount of money they spend on a particular media channel if it is not producing a strong return on investment.

3- Digital marketing levels the competitive playing field across the business sector and enables them to compare and compete with larger brands. For instance, search engines don't mind which brand is the greatest; rather, search engines prefer to put priority on the content that most closely matches the target audience.

4- Digital marketing is measurable. Digital marketing let companies to start and end the metrics which include time on page, shares, clicks, and views. Also, it let companies to measure the ROI, for example the website traffic, companies can see of many people view their website's homepage through using digital analytics software or digital analytics data. Another example is the attribution modeling it is an effective digital marketing strategy connected with the best tools and technologies that permits companies to track all sales back to a client's first digital touch point with the company.

5- For companies it is easy to adapt or change to digital marketing strategies.

6- Digital marketing can enhance companies' conversion rate and the quality of their leads.

7- Businesses can attract the public at all steps with digital marketing

2.1.2. Types of digital marketing

In addition, several activities are related to digital marketing, Alexander (2022), suggests the following classification:

1- Search Engine Optimization (SEO) that include on page SEO, Off page SEO, Technical SEO.

2- Content Marketing, such as blog posts, eBook and whitepapers, infographics, audio or visual content.

3- Social media Marketing, for example Facebook, Instagram, Twitter etcetera.

4- Pay Per Click (PPC), for instance paid ads on Facebook, Twitter Ads campaigns, and sponsored messages on LinkedIn.

5- Affiliate Marketing that includes posting affiliate links from social media accounts, and posting affiliate links from your social media accounts.

6- Native Advertising such as BuzzFeed-sponsored posts, Facebook and Instagram advertising.

7- Marketing Automation for examples E-mail newsletters, social media post scheduling, lead-nurturing workflows, campaign tracking and reporting.

8- Email Marketing for instance follow-up emails to website viewers who downloaded anything, Holiday offers for loyalty members. blog subscription newsletters, clients' welcome emails, and Tips or similar series emails for client nurturing.

9- Online public relations include engaging comments on the business website or blog, reporter outreach via social media for example talking to journalists on Twitter, and engaging online reviews for the businesses.

10- Inbound Marketing for examples emails contact lists vs. email spam, blogging vs. pop-up ads, and video marketing vs. commercial advertising.

11- Sponsored Content for instance influencer of marketing.

12- Search Engine Marketing (SEM) for examples Google Ads and Bring Ads.

13- Instant Messaging Marketing for instance WhatsApp and Facebook Messenger.

2.2. The evolution of Web from Web 1.0 to Web 5.0

Today the era Web Technology can be simply defined by the user in dissimilar expressive way (figure 5). But matter in fact numerous users is quite unidentified to the information that from where the WWW was invented first (Choudhury, 2014). In the late of 1989 the Web was discovered by Tim Burners-Lee (Kamel Bouls and Wheeler, 2007).

Figure 5: Web evolution

Source: Author

2.2.1. Web 1.0

Between 1989 to 2005 Web 1.0 was its implementation. Web 1.0 describes a network of information connections. Regarding Tim Berners-Lee the founder of Web 1.0 considers the Web as "read-only" (Bernerse-Lee, 1998; Choudhury, 2014). Furthermore, Web 1.0 was considered as the initial generation of the World Wide Web, which was essentially defined as an information space in which the items of attention mentioned to as resources are recognized by international identifier called as Uniform Resources Identifiers (URIs). The Primary generation Web was era static pages and content delivery purpose only. The early web permitted us to search for info and read it. Also, there was very slight in the way of content contribution or user interaction (Choudhury, 2014).

There are several characteristics of Web 1.0 are: First, Web 1.0 technologies consist of the main web protocols: URI, HTML and HTTP. Second, Web 1.0 consists of static web pages and habits a basic hypertext markup language. Third, Web 1.0 is read-only content. Fourth, Web 1.0 allows establishing an online presence and making information accessible to anyone at any time (Choudhury, 2014; Khanzode, 2016).

However, there are some limitations to Web 1.0. First, lack of Dynamic representation i.e., to obtain individual static information, no web console was obtainable to execution dynamic proceedings. Second, the Web 1.0 pages can only be understood by people (Web readers) they do not have machine well-matched content. Third, the web main is only responsible for updating users and handling the content of website (Choudhury, 2014).

2.2.2. Web 2.0

Web 2.0 is the next generation of the web. It was developed by Dale Dougherty in 2004 as a reading and writing web (Bernerse-Lee, 1998). The web 2.0 came out from a conference brainstorming session between O'Reilly and Media live International. Web 2.0 technologies make it possible to manage and bring together large international crowds with mutual interests in social connections (Choudhury, 2014).

According to Tim O'Reilly, Web 2.0 is defined as the business revolution in the IT industry brought about by the transfer to the Internet as a platform, and an effort to understand the instructions for success on that innovative platform. Foremost among those instructions is the following: To construct applications that have an impact on the network so that they are better the more people use them (Aghaei et al., 2014; Choudhury, 2014; Khanzode, 2016).

Web 2.0 allows for main properties such as collaborative, participatory and distributed practices that enable formal and informal compasses of everyday web activity. In other words, this is one of the main characteristics of Web 2.0, which includes "relational" technologies, participatory media and a social digital technology that, in general terms, can be distinguished from the Web of wisdom. The people-centered web and the participatory web deal with reading and writing on the web, which makes the web bidirectional. In addition, Web 2.0 has an additional interface with less

control. Web 2.0 is not only an innovative version of web 1.0, but also suggests flexible web design, updates, creative repurposing, collaborative content creation and alteration in web 2.0 which would be measured as one of the prominent structures of web 2.0 is to sustain collaboration and facilitate shared intelligence gathering rather than web 1.0 (Choudhury, 2014; Khanzode, 2016).

However, there are some limitations to Web 2.0. First, interconnectivity and information sharing between platforms through community constraints were still incomplete (Abel et al., 2007) and (Chan et al., 2009). Second, Web 2.0 has constant repeat cycle of updates and changes to services (Anderson, 2007). Third, there are ethical issues related to the practice and creation of Web 2.0 (Anderson, 2007).

2.2.3. Web 3.0

In 2006, John Markoff of the New York Times invented Web 3.0 (Nova, 2011). Web 3.0 can be specified as executable web. Additionally, the basic awareness of web 3.0 is to describe structure data and relate it for the purpose of additional effective discovery, integration, automation and reuse across numerous applications. It is able to recover data management, improve customer satisfaction and support the establishment of partnerships on the social web, simulate innovation and creativity, support mobile Internet accessibility, inspire the factor of globalization phenomena. Web 3.0 is also known as semantic web. The semantic web was devised by Tim Berners-Lee, discoverer of the World Wide Web. The semantic web provides a shared framework that allows data to be shared and reused across community, enterprise and application boundaries. Moreover, Web 3.0 is a web where the perception of website or web page disappears, where data is not retained but shared, where services show different views for the same data or the same web. Those services can be applications (such as browsers, virtual worlds or anything else), devices or others, and they have to be absorbed in personalization and background, and both will be achieved by using vertical search (Choudhury, 2014; Khanzode, 2016).).

There are different features of Web 3.0 are as follows; web personalization, intelligent web, saas business model, esource positioning, open-source software platform, and distributed database -or what is called as "World Database" (Nova, 2011).

2.2.4. Web 4.0

Web 4.0 is an innovative evolution of the Web paradigm that is based on numerous social relationships, models and technologies (Almeida, 2017). Web 4.0 can be reflected as Ultra Intelligent Electronic Agent, Ubiquitous Web and Symbiotic Web (Fowler and Rodd, 2017). The interaction between machines and humans in symbiosis was the motive behind the symbiotic web. It is as powerful as the human brain. Advances in telecommunication development, progression of nanotechnology in the world and controlled interfaces use web 4.0 (Choudhury, 2014).

Web 4.0 will be the read-write-run-concurrent web. It reaches a critical mass of participation in online networks that bring global transparency, power, participation, sharing partnership in major societies such as social, political, industrial and other communities. In addition, Web 4.0 or WebOS will be, for example, a middleware in which it will begin to function similarly to an operating system. The WebOS will be equivalent to the human brain and involves a huge network of extremely intelligent interactions (Salisah, 2019).

2.2.5. Web 5.0

Web 5.0 is not complete and is still being developed, the form is still being formed. Web 5.0 will consist of a connected web that connects to people as they connect to each other (like a personal assistant). In addition, Web 5.0 will be about emotional interaction between computers and humans. Interaction will become a daily routine for many people from neurotechnology. At the moment the web is "emotionally" neutral, meaning that the web does not observe the emotions and feelings of users. This will change with web 5.0 - emotional web. For example, www.wefeelfine.org, which maps people's emotions. With headphones on, people interact with content that relates to their changes or emotions in visual recognition (Flatworldbusiness,2018; Dincer, 2020).

2.3. Social media

2.3.1. Concept of social media

Now social media is used by billions of users around the world and has fast become one of the important technologies (Appel et al., 2020). Social media is a group of Internet-based applications that shape on the technological and ideological basics of Web 2.0, and permit the exchange and construction of user-generated content (Kaplan and Haenlein, 2010; Olanrewaju, 2020).

Social media can be supposed of in a few dissimilar ways. In a practical sense, it is a group of software created digital technologies, typically presented as websites and apps that offer users through digital environments in which they may send and obtain digital information or content over some type of online social network. In this sense, social media is the major platforms and features of Instagram, Facebook and Twitter. Moreover, in practical terms of social media as additional category of digital marketing channel that marketers can usage to connect with customers through advertising. Nonetheless social media can be further broadly, seeing it few as digital media and exact technology services, and further as digital places where users conduct important parts of their lives. From this viewpoint, it means that social media develops less about the exact technologies or platforms, and more about what users do in these atmospheres. To date, this has inclined to be mainly about information sharing, and, in marketing, frequently supposed of as a form of (online) word of mouth (WOM) (Appel et al., 2020).

On the other hand, given the huge potential audience available who are expenditure numerous hours a day using social media across the many platforms, it is not shocking those marketers have comprised social media as a marketing channel. Academically, social media has also been comprised, and a wide body of research on social media marketing and associated topics, for instance online word of mouth (WOM) and online networks, has been established. In spite of what researchers and practitioners have investigated over the last 15–20 years on this topic, due to the fast-paced and ever-altering nature of social media and how customers use it the future of social media in marketing could not be only a continuance of what we have previously seen but will be in a different development view (Appel et al., 2020).

Social media are further than just an interface that provides aural affordances, textual and visual. Social media have become a way of lifestyle for hundreds of millions of people around the world. Though, earlier researchers and experts begin to exploit the value of social media for public relations, or any extra expert context, the field wants to advance suitable descriptions and theoretical concepts for thoughtful about communication in facilitated environments (Kent and Li, 2020).

2.3.2. Social media and marketing and entrepreneurship

The increase of social media has controlled to changes in how entrepreneurs succeed their day-to-day activities. Due to the reputation of social media to entrepreneurs and the benefits it permits them; it has involved attention from varied discipline areas counting information systems and management. This is demon-started by the growing number of academic articles that are being published annually (Olanrewaju, 2020).

The initial researches on social media and entrepreneurship have studied the role of social media mainly in entrepreneur marketing (Bulearca and Bulearca, 2010; Hensel and Deis, 2010). The role of social media on entrepreneur marketing is well studied which has controlled to the publication of review papers precisely on social media marketing (Misirlis and Vlachopoulou, 2018) and thus this will be debated briefly. Social media is changing the marketing landscape by permitting entrepreneurs to promote their products on numerous social media platforms (Cant, 2016) reaching a cost benefit over traditional advertising and marketing processes (Brink, 2017). The use of social media marketing is more noticeable in business to customers (B2C) than business to business (B2B) organizations (Kantorová and Bachmann, 2018). Marketing on social media has been recognized to involve numerous activities for instance advertising (Cole et al., 2017), brand management (Ahmad et al., 2018; Ananda et al., 2019), and client relationship management (Guha et al., 2018). Social media have caused three important moves in the marketplace. First, social media allow companies and clients to connect in ways that were not probable in the past. Such connectedness is empowered by numerous platforms, such as social networking sites (Facebook), content communities (YouTube), and microblogging sites (Twitter), that permit social networks to build from common values and interests (Kaplan et al., 2010). Second, social media have altered the way companies and clients interact and impact each other. Social interaction includes actions,

whether through passive observations or communications, that impact others' consumption and choices behaviors (Chen et al., 2011). Nair et al. (2010) categorized such social connections as word-of-mouth (WOM) effect or infection effects. Moreover, Muller and Peres (2019) claim that social interactions trust powerfully on the social network structure and offer companies with measurable value (also raised to as social equity). Second, social media have altered the way companies and clients interact and impact each other. Social interaction includes actions, whether through passive observations or communications, that impact others' consumption and choices behaviors (Chen et al. 2011). Nair et al. (2010) categorized such social connections as word-of-mouth (WOM) effect or infection effects. Moreover, Muller and Peres (2019) claim that social interactions trust powerfully on the social network structure and offer companies with measurable value (also raised to as social equity). Third, the creation of social media data has made it progressively probable for businesses to better achieve client relationships and improve decision making in business (Libai et al., 2010). Social media data, together with additional digital data, are extensively considered by the 3Vs (volume, variety, and velocity), which raise to the huge quantity of data, numerous bases of data, and extensive real-time data (Alharthi et al., 2017). An enormous quantity of social media data derived from diverse sites (blogs, forums, social networks) and in many formats (image, video, text) can now be simply extracted and helpfully exploited with the support of innovative information technologies (Moe and Schweidel, 2017).

2.3.3. Advantages and disadvantages of social media.

There are several advantages and disadvantages of social media for companies (Webfx, 2021). According to Nadaraja and Yazdanifard (2013), Van and Van (2014), Ristova (2014), Izakova (2021) and Trivedi and Malik (2021) the advantages of social media for companies are as follows:

1- Companies can reach a large number of users. The ability to reach a large number of people is a great advantage of social networks. It allows companies to find more potential customers who wish to have their services or products. Business can have a direct connection with their audience. Social media is one of the limited marketing strategies that let businesses to connect directly with their audience. Where businesses can know who is interested in them by follow them on the social media accounts. Through social media companies can know better their audience and what they want, which leads them more engagement in their page and their business. Moreover, businesses can provide better customer service, in other words, a direct connection between the business and audience that let businesses resolve their problems easier. Also, businesses can gain valuable insight about their clients, companies can see who interacts with their posts, and this can help them to adapt a strategy to make their products and services better for their followers on social media.

2- The capability to post organic content for free is an incredible advantage of social media for business. This opens numerous opportunities for companies to connect with appreciated leads at no cost. Companies can post as much content as they want to involve their audience too, where they are enabling to post photos, videos, and more on the social media network.

3- Companies have access to paid advertising services on social media. Each social media platform offers its own form of paid advertising. Paid advertisements offer business the opportunity to connect with involved leads that have not found their business yet. Social media platforms let businesses to adapt their ads to appear in the feed's accounts of social media users who are looking for products and services. This generates a great opportunity for their business to increase to get and reach new leads.

4- Companies can build their brand on social media. When companies connect with interested leads, they expose their brands. Also, when they post on social media their products and services this let to build brand recognition frequently with their audience, and followers can share these posts with their friends and family which help to have new people to know their brand.

5- Companies can drive traffic to their website through social media. When companies post on social media they can include the link of their websites, where customers can check and learn about the products and services.

6- Companies can evaluate their performance, through a marketing campaign on social media, where companies can track the campaign and checking the results and information (for instance, how many people see the posts, comments, likes share and more, seeing the metrics like impressions, clicks and conversions). Therefore, companies can optimize and improve their campaigns, products and services from this way and have a new social media strategy performance.

7- Businesses can join social media networks for free. None of the largest platforms have a signup fee.

8- Companies can generate viral content. Companies can gain valuable information about their customers through social listening, which helps them to better manage the business.

Secondly, the same authors identified the following disadvantages:

1- Companies can receive negative feedback on social media. People use social media to post content they like, nonetheless they also use it to share experiences they didn't like. When somebody had a bad experience with any business, sometimes they go direct and leave negative feedback on social media, and some people leave negative feedback to prevent others having the same experience.

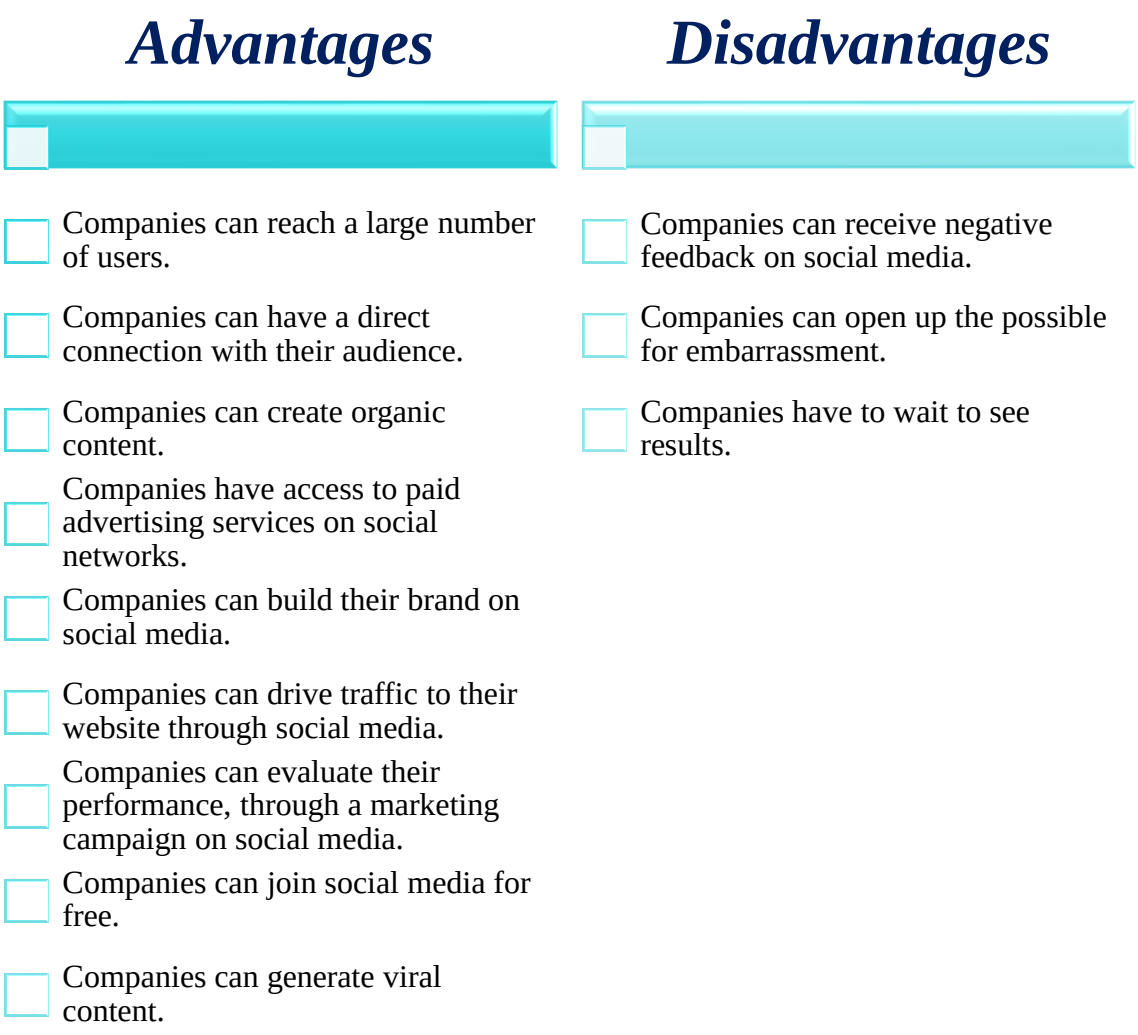
2- Companies can open up the possible for embarrassment. When companies post anything in their accounts, it easy to go viral on social media. People always look at the bad and good

things of companies, if businesses are not careful of their posts it can be end up embarrassing their company and receiving caught in difficult situation.

3- Companies have to wait to see results, when companies post content on social media wait and they do not see immediate results, and sometimes they have to post various contents to determine the success of their campaign.

Figure 6 outlines the advantages and disadvantages of social media for companies.

Figure 6: Advantages and disadvantages of social media



Source: Webfx (2021)

2.4. Classification of social media

2.4.1. Facebook and Messenger

Facebook is a part of the Meta Platforms Company. Besides, Facebook is a free app where users over the world can access and create their profiles, upload and share posts and photos, and join groups. On the 4th of February 2004, Mark Zuckerberg and co-founders Dustin Moskovitz, Chris Hughes, and Eduardo Saverin have launched Facebook. While the messenger was introduced in 2011 on mobile phones. Moreover, in 2021 there were more than one billion active users on Facebook. After that, in 2015 video calling was launched in Messenger, then in 2016 Facebook Marketplace has introduced. Later, in 2017 more than 2 billion users use Facebook every month. Facebook's goal is to give persons the control to build community and bring the world closer together (Facebook Inc., 2021).

There are more than 80 Facebook offices in the world and the headquarters in California. Moreover, Facebook helps people connect with family, friends, and communities of people who match their interests. Connecting with friends and family, and discovering new friends is easy with features such as Watch, Groups, and Marketplace Further, Facebook helps everyone, give people a voice, keep people safe and protect privacy, promote economic opportunity, build connection, and community (Facebook Inc., 2022).

Messenger has everything that users need to feel close to their favorite people. Now Messenger controls conversations within Facebook, Instagram, and Portal. People can enjoy videos with their friends, and watch music videos, movies, and TV shows with their friends while they are on a video chat. Also, users can connect with businesses, find deals and make reservations (Messenger, 2022). Furthermore, Businesses can utilize their Facebook pages to interact with existing clients, acquire new clients, and manage customer support (Chi, 2021).

2.4.2. YouTube

YouTube was founded in 2005 by Jawed Karim, Steve Chen, and Chad Hurley. YouTube is an online video-sharing and social networking platform. YouTube is the leading video-sharing platform and is the second most visited website on the web. YouTube has more than 2 billion users online per month, and users watch more than 1 billion hours of videos on YouTube. More than 500 hours of YouTube content are downloaded every minute. There are localized versions of YouTube for more than 100 countries around the world, in 80 languages. Furthermore, YouTube's purpose is to allow everyone to hear and see the world, YouTube believes that everyone deserves to have a voice and that the world is a better place when sharing and building community through YouTube stories (Szmuda et al.,2021; YouTube, 2021).

YouTube has always provided a source of engaging content, though it is also becoming an extremely important tool for marketers. Indeed, over half of marketers (55%) use YouTube as part of their marketing approach. Besides, YouTube is the second main search engine; YouTube can help businesses improve their SEO and overall brand awareness. In addition, YouTube enables marketers to deliver single content that is easy for audiences to view,

consume and share (HubSpot YouTube, 2022). YouTube has altered YouTube and has evolved from a video-sharing website to a work opportunity for content creators in both new and mainstream media. Also, Popular YouTubers are using traditional media to construct their private brand (Holland, 2016). Furthermore, with YouTube Ads businesses can grow, reach customers and find other new clients, and businesses can see the results that they want such as subscribers, visits, and website, and get more sales and purchases. In this sense, Audiences say they are twice as likely to purchase something they viewed on YouTube. More than 70% of audiences say YouTube introduces them to new brands. Also, the Audience are 4 times more willing to use YouTube than other platforms to search for information about a product, service, or brand (YouTube Ad., 2022).

2.4.3. Instagram

Kevin Systrom and Mike Krieger co-founded Instagram in October 2010. Between October till December 2010, Instagram developed the vision of facilitating communication, and Instagram has reached 1 million active monthly users. Then between January 2011 till September 2011 Instagram put hashtags to let users discover photographs of others, and Instagram has reached 10 million active monthly users. After that, in April 2012 Facebook buys Instagram for approximately 1 billion dollars. Between February 2013 and November 2013 Instagram developed video sharing, and Instagram has reached 100 million active users per month.

Afterward, in December 2014 Instagram reached 300 million active users per month. Then in September 2015, Instagram advertisements start going worldwide. And Instagram has reached 400 million users per month. Later, between March 2016 till June 2016 Instagram transform from chronological to algorithmic, and Instagram reached 500 million active users per month. In August 2016, Instagram added a new feature which is the stories. Then, in April 2017 Instagram reached 700 million active users per month. After that, in 2018 Adam Mosseri was hired as the new head of Instagram. In June 2018, Instagram enters the video content in an extensive format, with the launch of IGTV, also Instagram has reached 1 billion active monthly users. Subsequently, in March 2019 Instagram shopping launched. In May 2020 Instagram announces shops on Instagram commerce. Also, in August 2020 Instagram reels launch in over 50 countries worldwide. Later, in January 2021 Instagram used artificial intelligence (IA) to improve photo descriptions for blind and visually reduced people (Adsmurai, 2020; latest Instagram News, 2021).

Instagram is among one the free social media platforms for sharing photos and videos. Since its release, Instagram has transformed into a popular way to connect with friends, family, brands, influencers, celebrants, and more (Antonelli, 2020).

Instagram brings users closer to other users and the things they like, Instagram allows users to create influence, connect with more people, and create engaging content, etc. Moreover, businesses can share and increase their brand with their followers and the global community. There are different features for Instagram, such as Reels where people can share videos with friends and anyone on Instagram, further feature, stories where users can post moments of their life every day, also, IGTV where users can discover original video content from creators, they like or new accounts they are interested in. Furthermore, shopping feature where users can shop in different

ways and browse the latest trends and fashion from their favorite brands and creators. Similarly, the search and browse feature, where users can find content, they like from accounts they don't follow. Finally, users can send messages, photos, and videos privately to their friends on Instagram (Instagram Features, 2021).

2.4.4. Twitter

Twitter was founded in 2006 by Jack Dorsey, Noah Glass, Biz Stone, and Evan Williams. Twitter's goals are to contribute to the public conversation. Community discussion helps the world learn faster and solve public difficulties. Twitter is an open service that serves as a home to a world of diverse viewpoints, ideas, information, and insights. Twitter poses free, global discussions that allow all people to generate, discover, allocate, and consume information about the topics and events that matter most to them (Twitter, 2020).

Twitter has different values being fast, fun, and free, promoting health, making things simple and straightforward, uniting profit and purpose, and earning people's trust (About Twitter, 2022). Twitter aims to make content that is very easy to read for our modern world, which is full of technology and attention deficits (Forsey, 2021). In addition, Twitter is a global team that works from anywhere. Parag Agrawal is the CEO of Twitter (About Twitter, 2022).

Twitter is a famous social media platform with 100 million daily active users and 500 million tweets sent daily by users over the world. On the other hand, Twitter was initially designed as an SMS-based platform, therefore the 140-character limit was originally a simple necessity: the cell phone companies enforced the limit, not Twitter (Forsey,2021). PR teams and marketers can leverage Twitter to raise brand awareness and engage their audience. Twitter provides a powerful platform to increase the number of followers and provide audiences with valuable content before they become clients (Forsey, 2021).

2.4.5. Others platforms

Pinterest:

In December 2009 founded Pinterest by Ben Silbermann, Paul Sciarra, and Evan Sharp. Pinterest is a social media and image sharing, where users are allowed to discover and share information on the Internet using images and videos, and animated GIFs and videos (Pinterest, 2021). Pinterest is the 14th main social media in the world. There are 431 million active users on Pinterest. Besides, shopping engagement increased by 20% at the end of 2021. Advertisers on Pinterest can reach over 200 million users (Hirose, 2022).

WhatsApp:

In 2009, Brian Acton and Jan Koum created WhatsApp after they left their job at Yahoo. But now WhatsApp is owned by Meta company. WhatsApp is a free most popular mobile messaging application that enables users to connect with family and friends. WhatsApp utilized to send group messages, make calls and share multimedia files, depending on the kind of mobile device. The application also enables international communication within the user community. Also, WhatsApp

has business accounts (Carmicheal, 2021). On WhatsApp are two billion monthly active users (Statista Research Department, 2022).

WeChat:

At the end of 2010, Tencent has launched WeChat in China. WeChat is an application that lets users to text, chat, make video calls, record voice messages, and play games. Besides, The WeChat service account is a business solution that provides companies with the ability to connect with clients and utilize the application to serve their service requirements (Needle, 2021). Moreover, WeChat contains 1.2 billion monthly active users (Statista Research Department, 2022).

TikTok:

TikTok has developed by a Chinese technology company called ByteDance in 2018. TikTok is a social media application that enables users to record, edit and share short 15- or 60-second looping videos with sound effects, music clips, and video effects. TikTok became famous in 2020 during Covid-19, with billions of downloads of the app by users around the world. Over 1 billion monthly active users on TikTok (Bump, 2022a).

Reddit:

Reddit has launched in 2005 by Medford Massachusetts. Besides, Reddit is home to thousands of communities, never-ending conversations, and real human connections. Regardless of whether users are into breaking news, sports, TV fan theories, or an endless stream of the coolest animals on the Internet, there's a community on Reddit for users. There are more than 50 million daily active users. More than 100 thousand are active communities, with more than 13 billion posts and comments on this platform. And over 1.5 billion active monthly users (Reddit, 2022).

Telegram:

In 2013 Telegram has developed by the brothers Nikolai and Pavel Durov. Telegram is a cloud-based texting application that emphasizes the security of its customers. To ensure security, Telegram offers some unique characteristics that protect messages from getting to the wrong people. For example, companies can encourage companies to keep messages encrypted to avoid inevitable unauthorized access, and companies can even establish "self-destruct" timers that remove the message after a given period of time. For example, companies can encourage companies to keep messages encrypted to avoid inevitable unauthorized access, and companies can even establish "self-destruct" timers that remove the message after a given period of time. This is especially helpful for B2B companies that could exchange sensitive data that hackers might be interested in. Telegram has 550 million monthly active users (Fontanella, 2021; Business Insider, 2022).

Quora:

Quora has developed by 2009 Adam D'Angelo and Charlie Cheever. Quora is a social question-and-answer networking website. Through the years, Quora has established a strong reputation for providing the best answers to the questions driven by a question-and-answer engine from highly-

engaged and curious users. Moreover, in June 2017 Quora created the advertising services. 300 million monthly active users on Quora (Daniels, 2022).

Snapchat:
Evan Spiegel and Bobby Murphy launched Snapchat in 2011. Enables users to make video-based stories related to their life and send photos or videos through messages to their family and friends. Different from most other apps, Snapchat content expires after 24 hours or immediately. This platform allows users to produce more casual and non-censored content than other platforms that are widely publicized. Besides, Snapchat contains 332 million daily active users (Bernazzani, 2019; Bump, 2022b).

LinkedIn:
In 2002 Reid Hoffman's found LinkedIn, but LinkedIn has launched in 2003. LinkedIn aims for networking, sharing ideas, and building careers. Besides, LinkedIn allows its users to share and connect their information to other professionals, comprising colleagues, possible employers, business partners, competitors, new recruits, and clients. On LinkedIn more than 830 million members from all over the world (Zantal-Wiener, 2021; Linkedin, 2022).

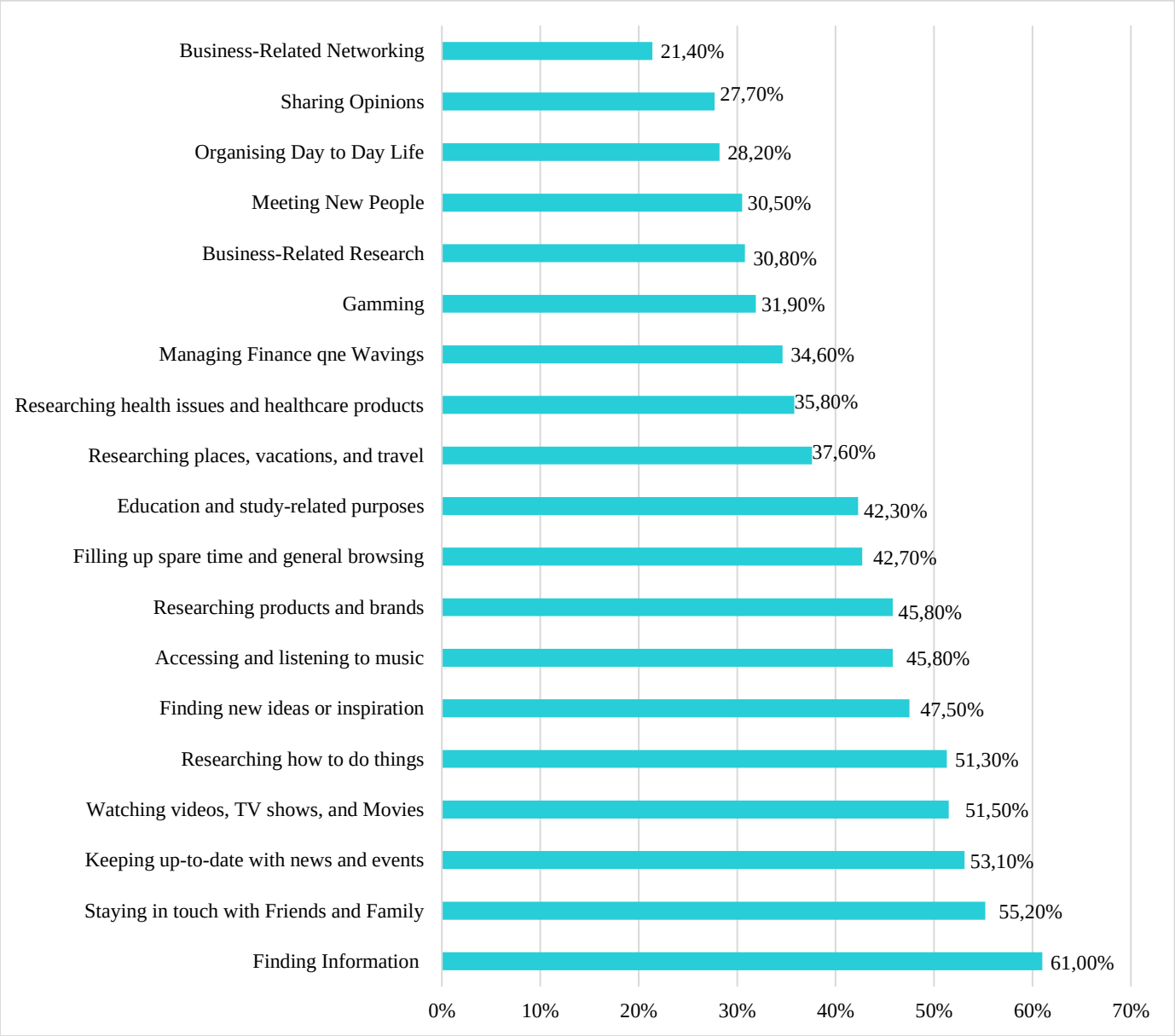
2.5. Cases of countries

2.5.1. Summary

The total population of the world is 7.91 billion, there are 8.28 billion mobiles connections, 4.95 billion are Internet users, and 4.62 billion users are active on social media. In 2022 data show that there was an increase in the use of the Internet and social media by world population. Besides, Ages from 16 to 64 spend 6 hours and 58 minutes using the Internet while, 2 hours and 27 minutes using social media (Kemp, 2022a).

The main reasons of population world (figure 7) for using the Internet for ages between 16-64 are finding information, staying in touch with friends and family, Keeping up to date with news and events, watching videos, TV shows, and movies, researching how to do things, finding new ideas or inspiration, accessing and listening to music, researching products and brand, filling up spare time and general browsing, education and study-related purposes, researching places, vacation, and travel, researching health issues and health care products, managing finance and savings, gaming, business-related research, meeting new people, organizing day to day life, sharing opinions, and business related networking (Kemp, 2022a).

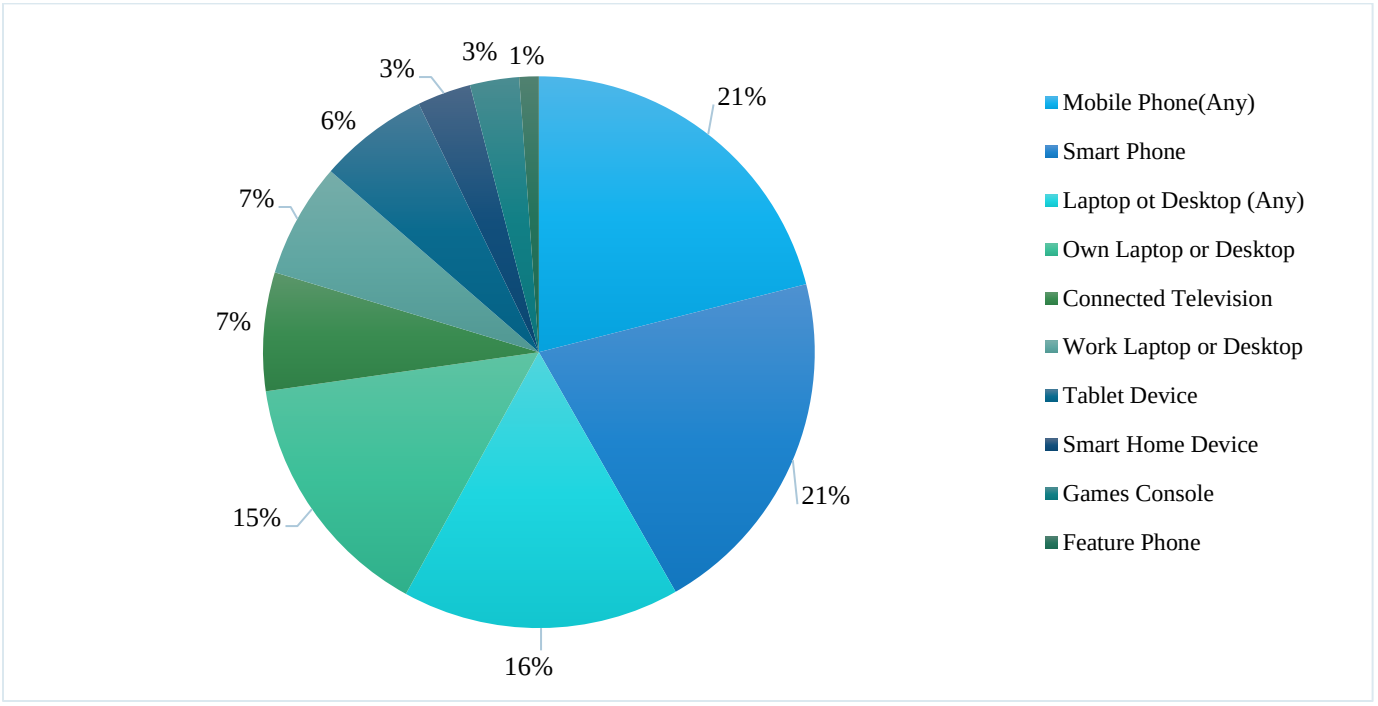
Figure 7: Main reasons for using the Internet



Source: Kemp (2022a)

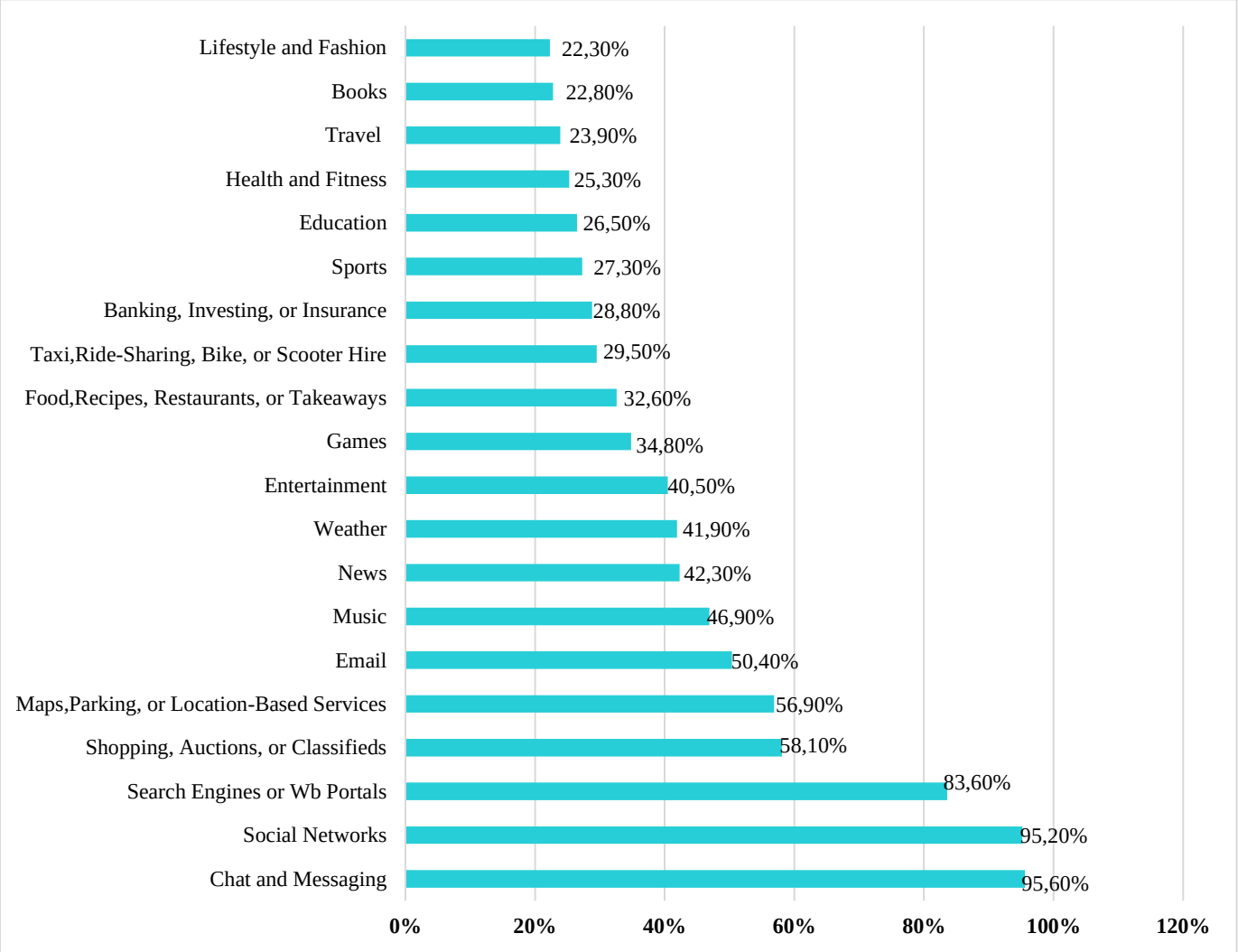
Internet users over the world, use different devices to access the Internet (figure 8) such as mobile phones, laptops or desktops, smartphones, feature phones, own laptops or desktops, work laptops or desktops, connected television, smart home devices, and games console. The top types of websites visited and apps used (figure 9) and most visited websites SEMrush ranking in November 2021 are Google.com, Youtube.com, Facebook.com, Wikepedia.org, Amazon.com, Instagram.com etc. (Kemp, 2022a).

Figure 8: Devices used to access the Internet



Source: Kemp (2022a)

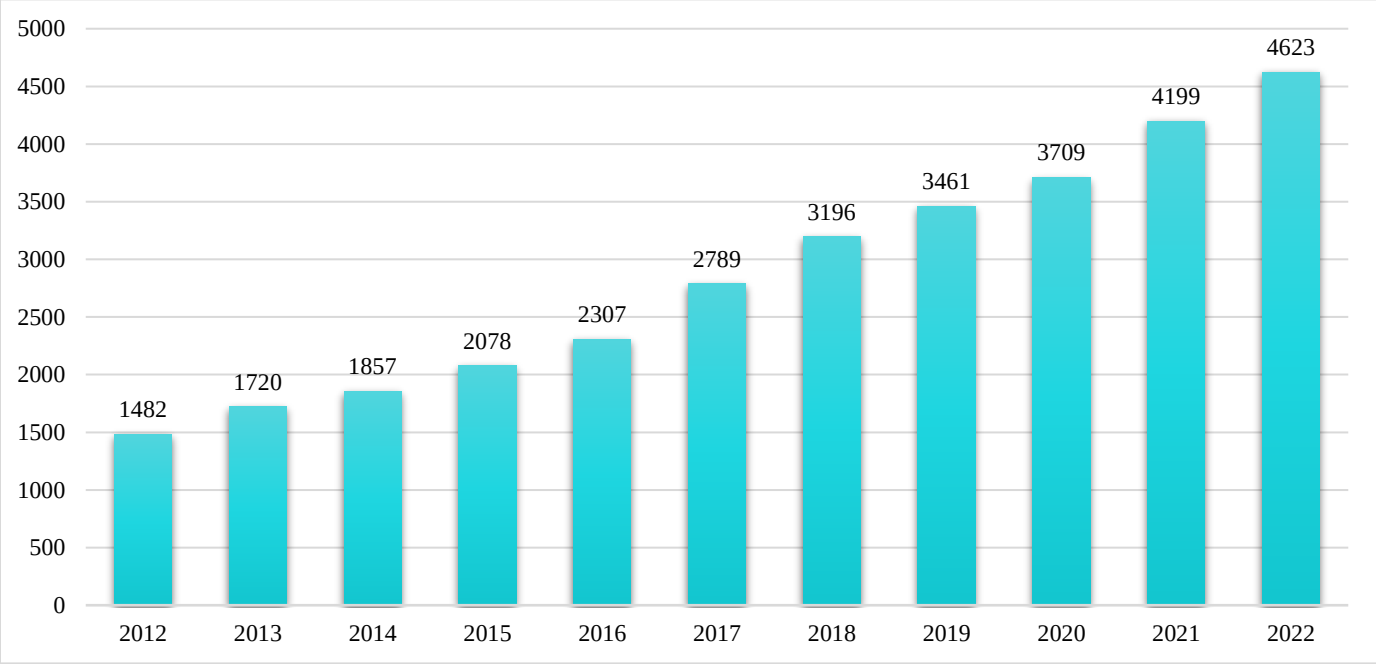
Figure 9: Top types of websites visited and aps used



Source: Kemp (2022a)

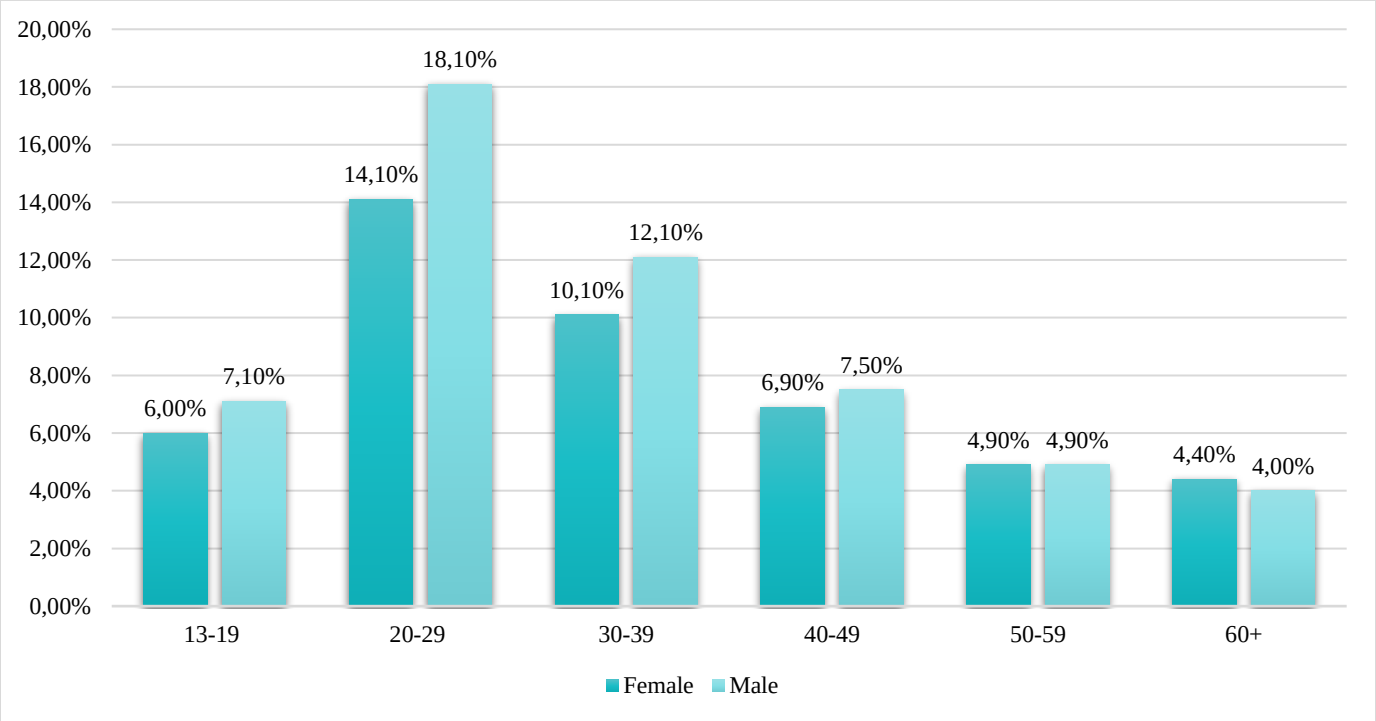
From 2012 January 2012 till January 2022 there was a huge increase in using social media by the world population (figure 10), both females, males and of different ages use social media (figure 11), active countries on social media are located in Northern Europe, Western Europe, Northern America, etcetera (figure 12). Besides, there are main reasons for using social media (figure 13). Facebook, YouTube, WhatsApp, and Instagram are the most used social platforms (figure 14). Also, WhatsApp, Instagram and Facebook are the favorite social media platforms of the whole world population (figure 15), regarding ages and gender for each group data show that there is a difference in the favorite social media platform (figures 16 and 17). Furthermore, users of social media around the world spent on YouTube, Facebook, WhatsApp, TikTok, and Instagram more than on any other apps (figure 18) (Kemp, 2022a).

Figure 10: Social media users over time



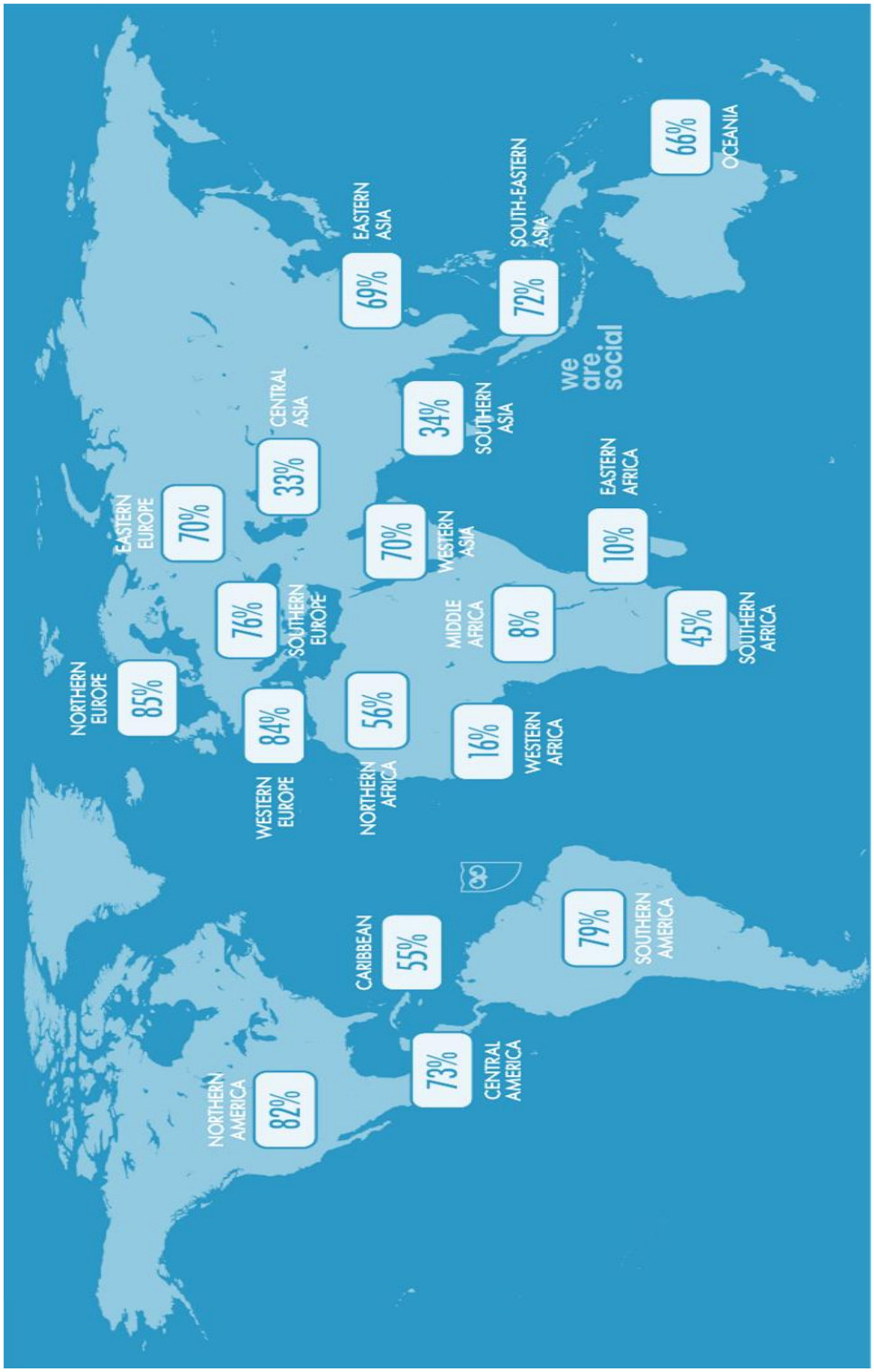
Source: Kemp (2022a)

Figure 11: Demographic profile of social media users



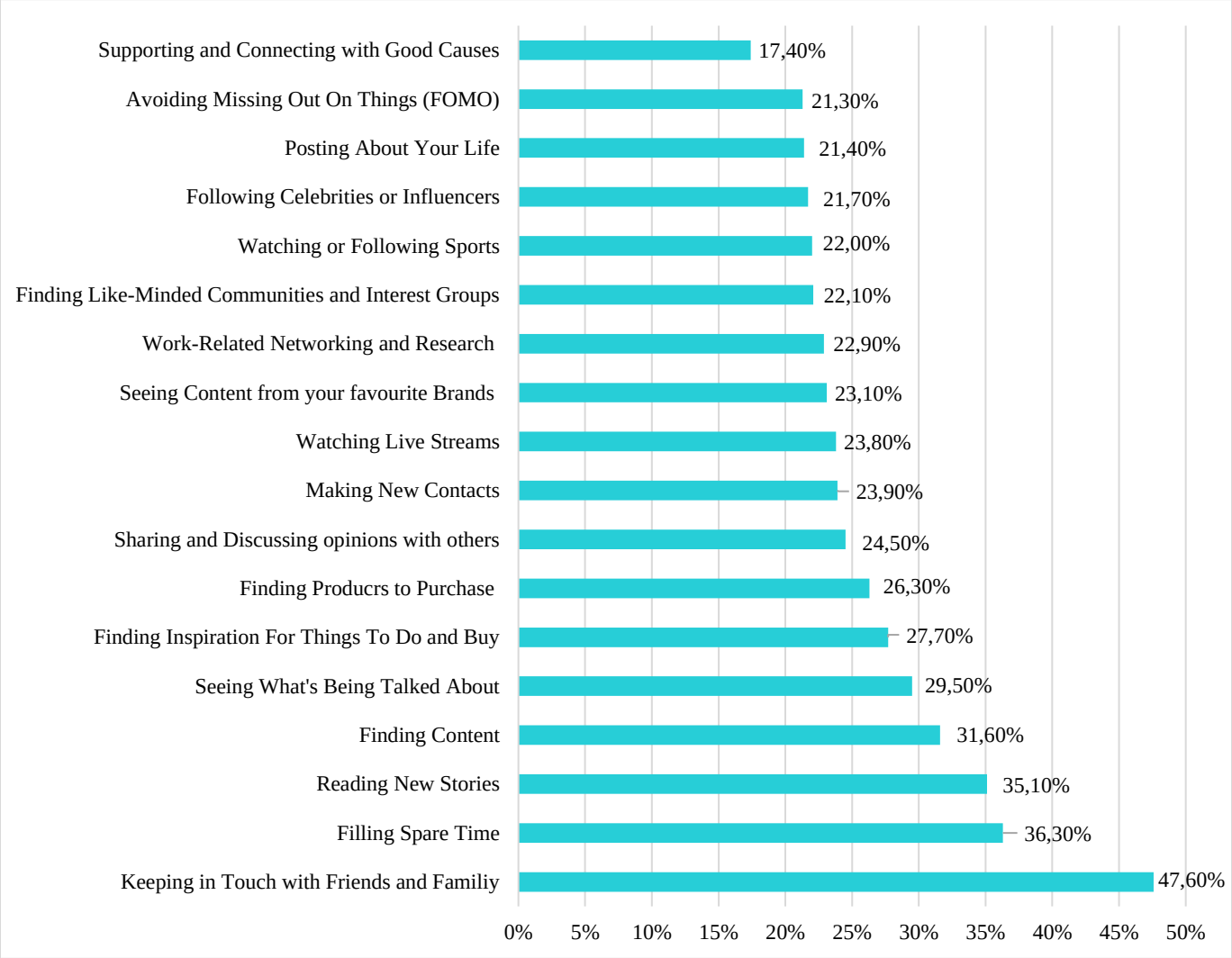
Source: Kemp (2022a)

Figure 12: Active countries on social media



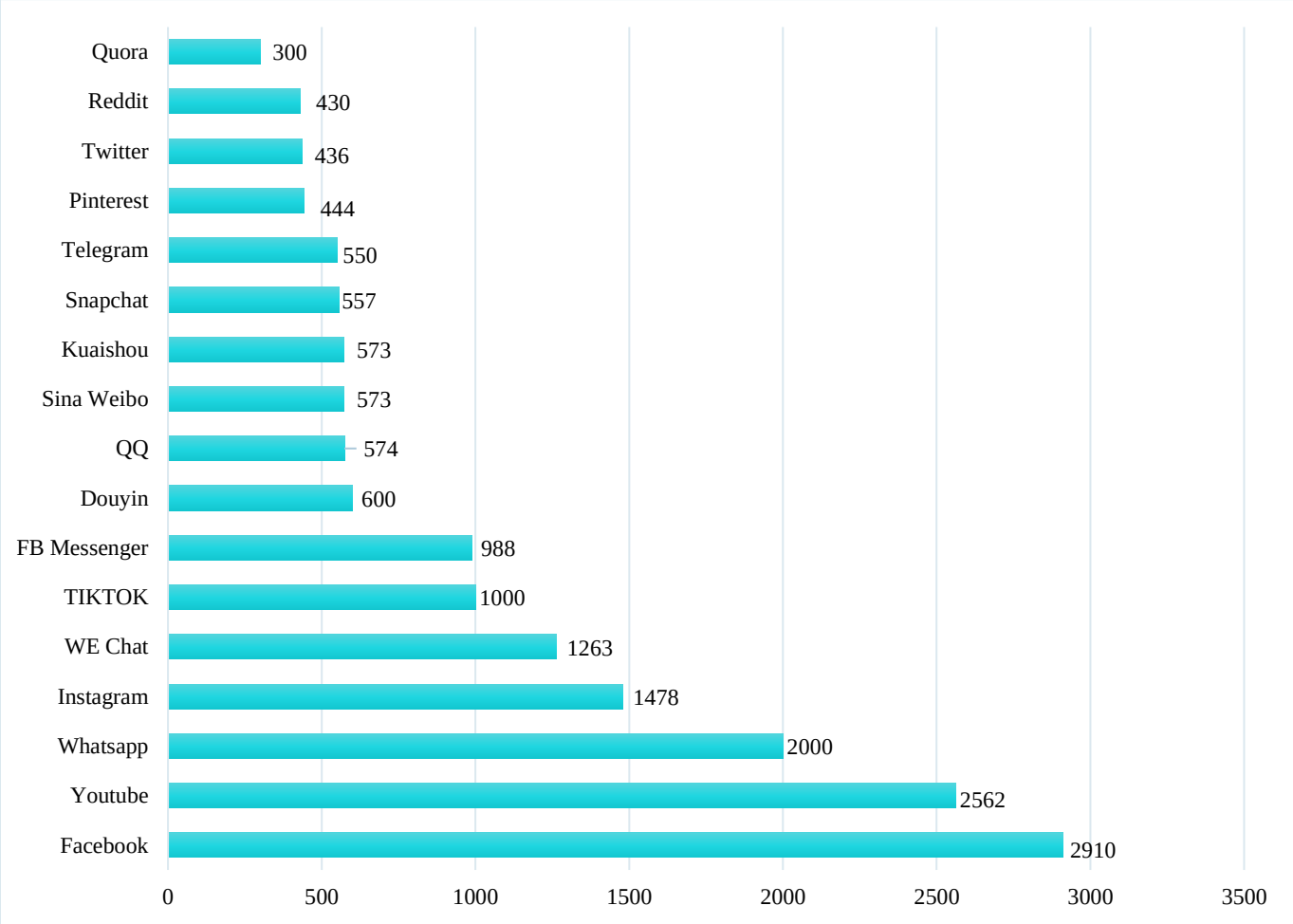
Source: Kemp (2022a)

Figure 13: Main reasons for using social media



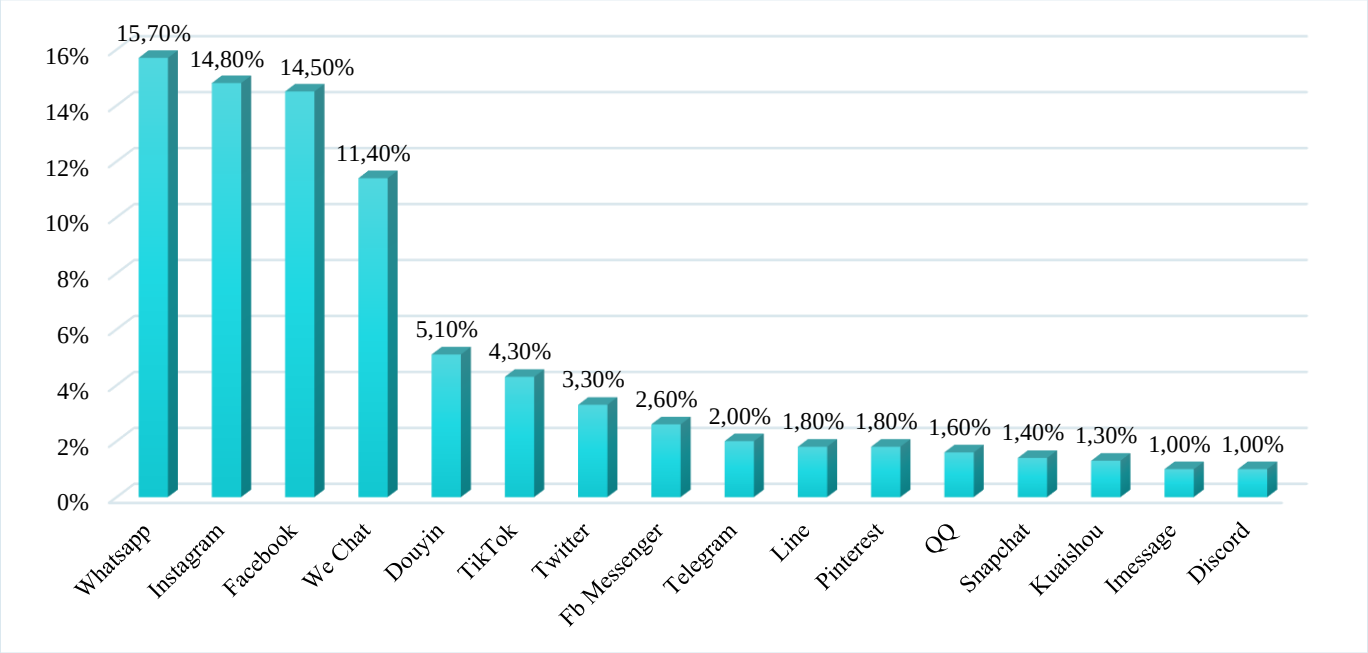
Source: Kemp (2022a)

Figure 14: The world's most- used social platforms ranking of social media platforms by global active user (in millions)



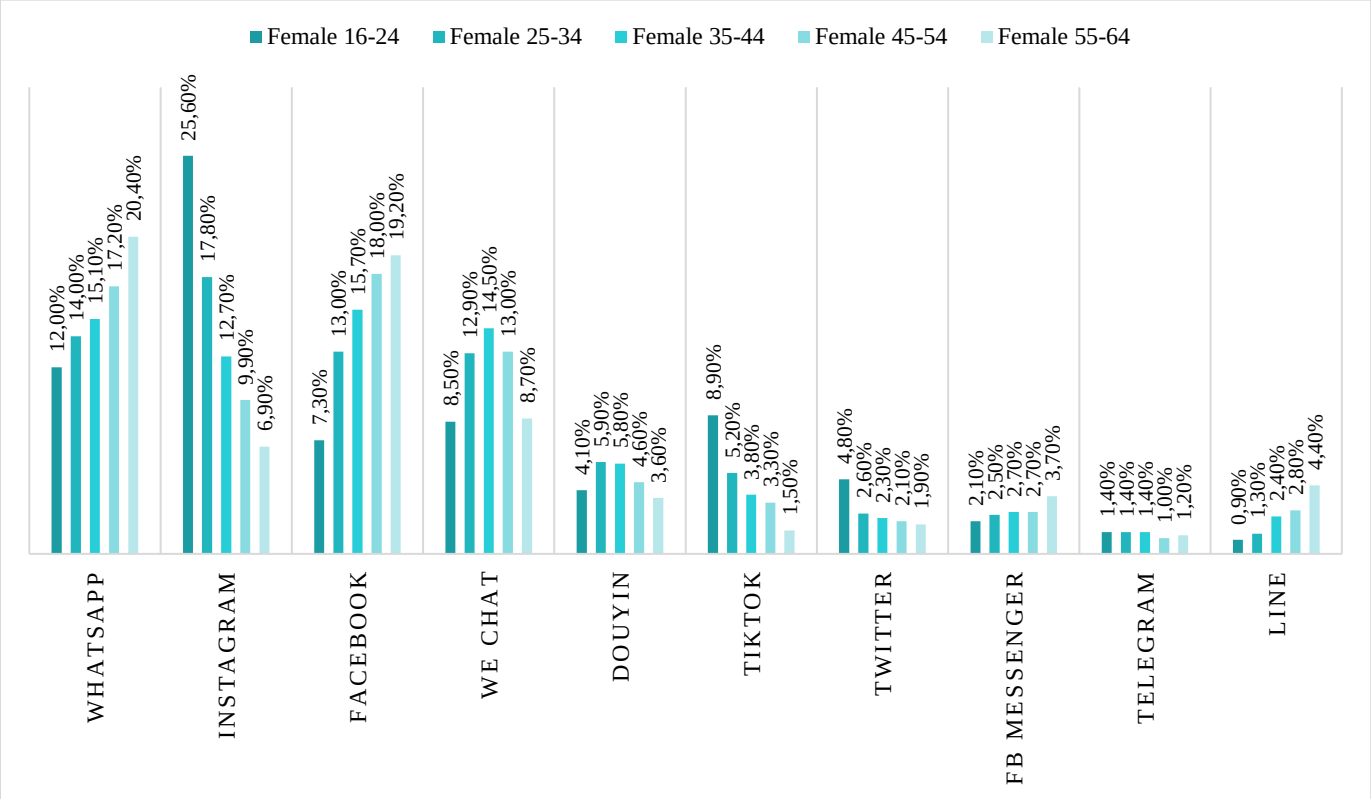
Source: Kemp (2022a)

Figure 15: Favorite social media platforms



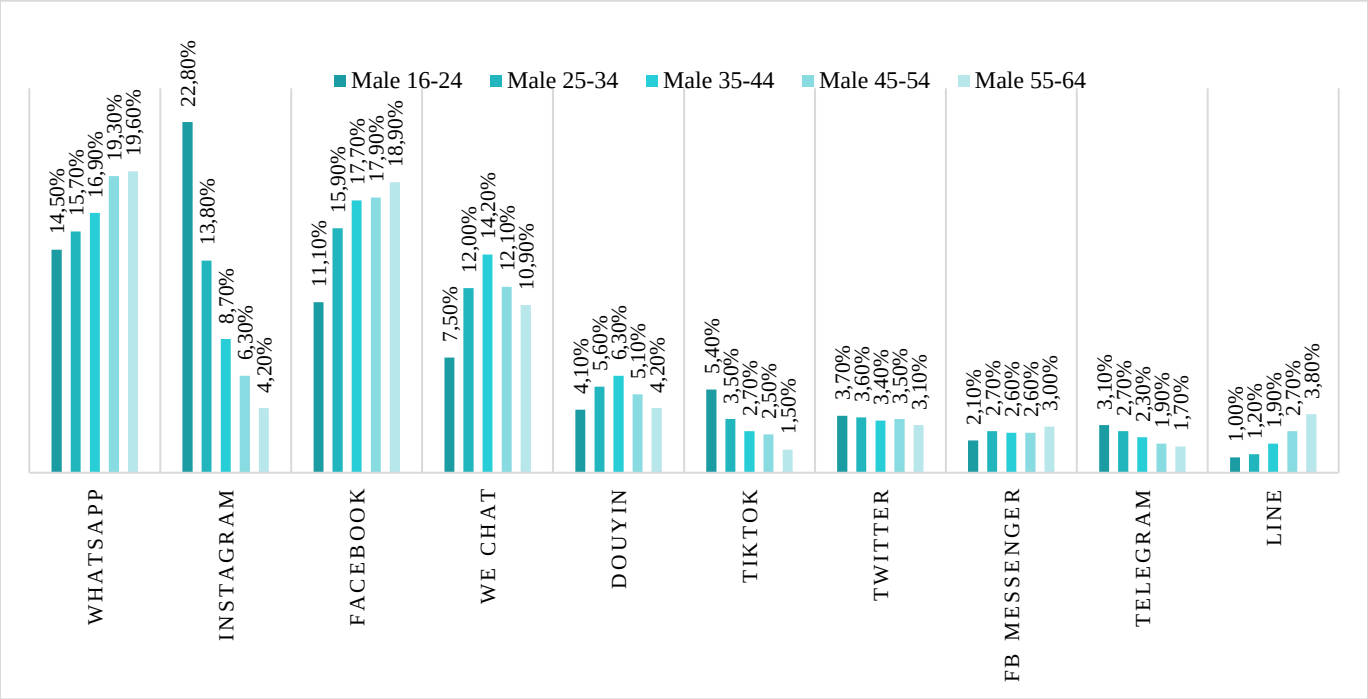
Source: Kemp (2022a)

Figure 16: Favorite social media platforms (Female vs Ages)



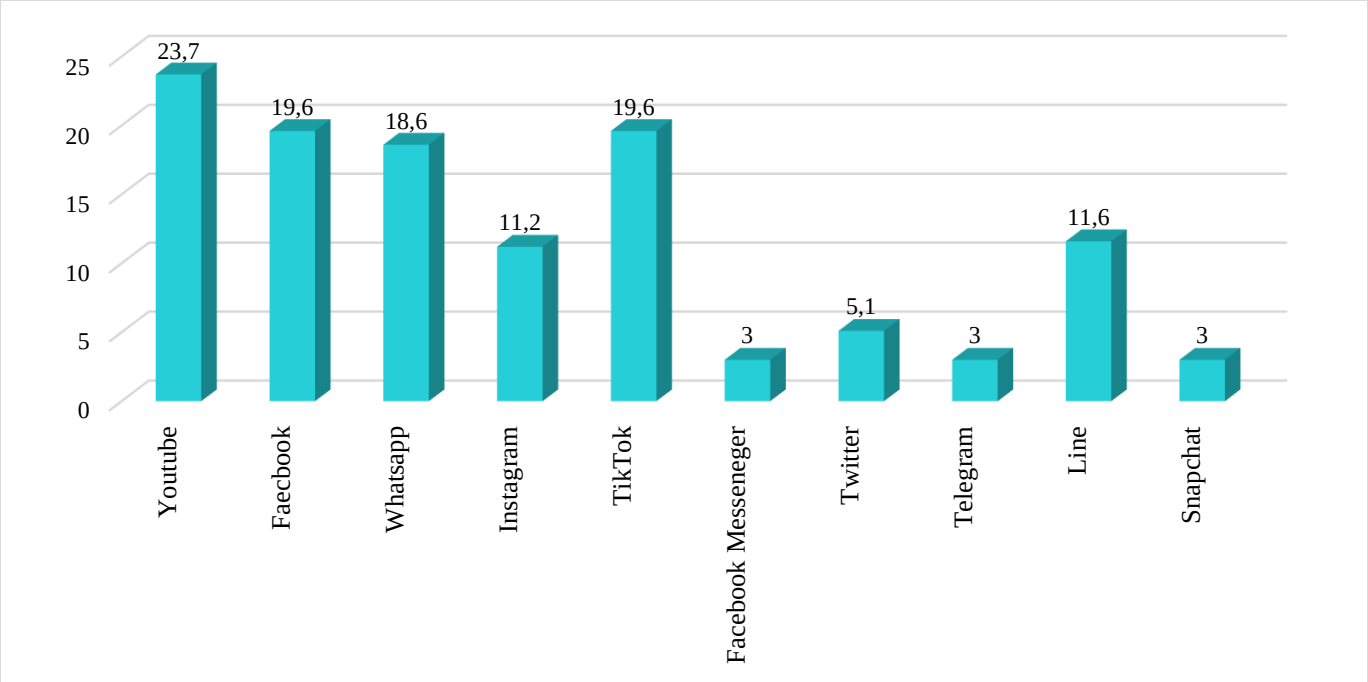
Source: Kemp (2022a)

Figure 17: Favorite social media platforms (Male vs Ages)



Source: Kemp (2022a)

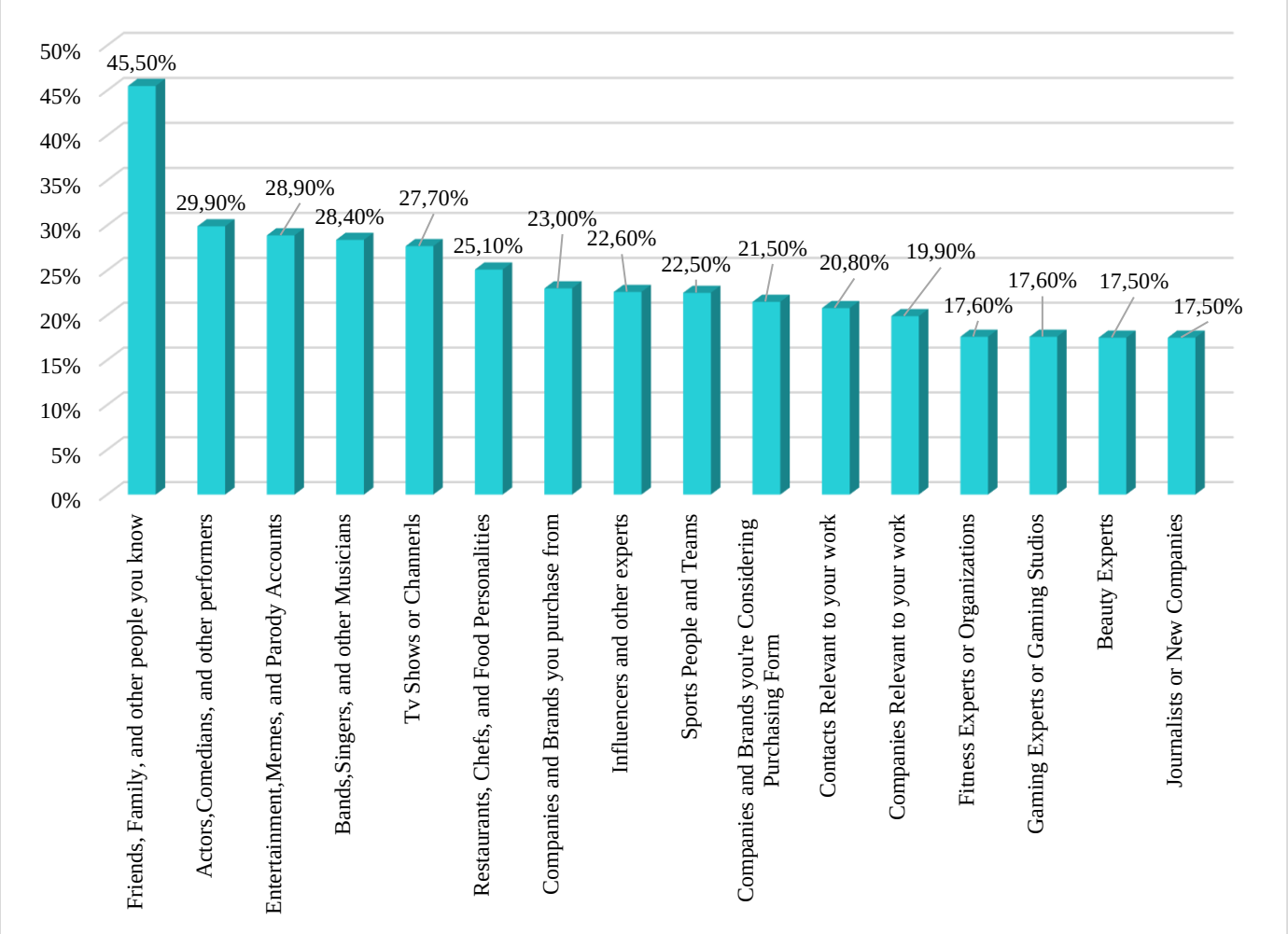
Figure 18: Time spent with social media apps (Hours/Month)



Source: Kemp (2022a)

Users of social media around the world follow accounts of friends, family, actors, entertainment, brands, restaurants, companies, influencers etc. (figure 19) (Kemp, 2022a).

Figure 19: Types of social media accounts followed



Source: Kemp (2022a)

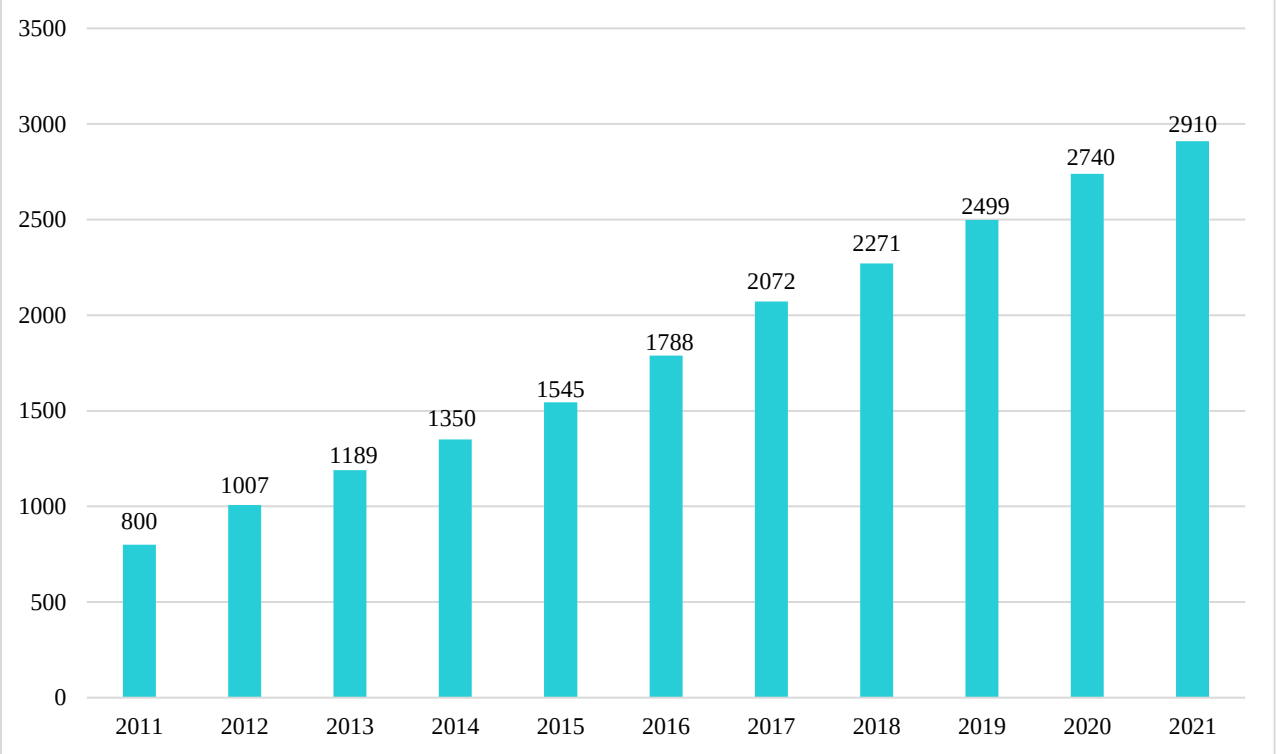
2.5.2. *World social media platforms*

Facebook:

Data show that there was an increase in active users around the world in using Facebook from quarter 3 in 2011 till quarter 3in 2021 (figure 20), there are 2.91 billion monthly active users, and 72.5% of Facebook advertising reach users in a month. Besides, 43.4% is the percentage of its AD Audience that Facebook reports is female, and 56.6% is the percentage of its AD audience that

Facebook reports is male. Moreover, 98.5% of the world's population of Facebook users use their mobile phones to connect to the Facebook platform. Furthermore, 26.6% of Facebook Marketplace's reach as a percentage of Facebook's total advertising reach, 43.4% percentage of its Ad audience that Facebook reports is female, and 56.6% is male. Additionally, the most followed pages on Facebook are Facebook app, Samsung, Cristiano Ronaldo, MR. Bean, CGTN, 5-Minute Grafts, Shakira, Real Madrid C.F, Will Smith, and Coca-Cola (Kemp, 2022a).

Figure 20: Facebook monthly active users (in millions)



Source: Kemp (2022a)

YouTube:

The potential reach of Ads on YouTube is 2.56 billion, 32.4% of YouTube ads reach world population users, and 51.8% of Ads reach Internet users. 46.1% of Female age over 18 its Ad YouTube reach, while males reach 53.9%. Besides, the Netherlands, South Korea, New Zealand, Sweden, U.A.E., Switzerland, Denmark, Canada, and Spain are the most countries YouTube advertising reach rate for ages over 18. While, South Africa, India, Russia, and Indonesia are the most countries that spent using YouTube apps on their mobile phones. Besides, the top YouTube searches query are song, songs, DJ, dance, and new song. Most popular YouTube channels are T-series, Cocomelon-Nursery Rhymes, Set India, PewDiePie, and Mrbeast. Although, most viewed YouTube videos are Pinkfong baby shark- Kids songs & stories- and Luis Fonsi featuring Daddy Yankee– "Despacito" (Kemp, 2022a).

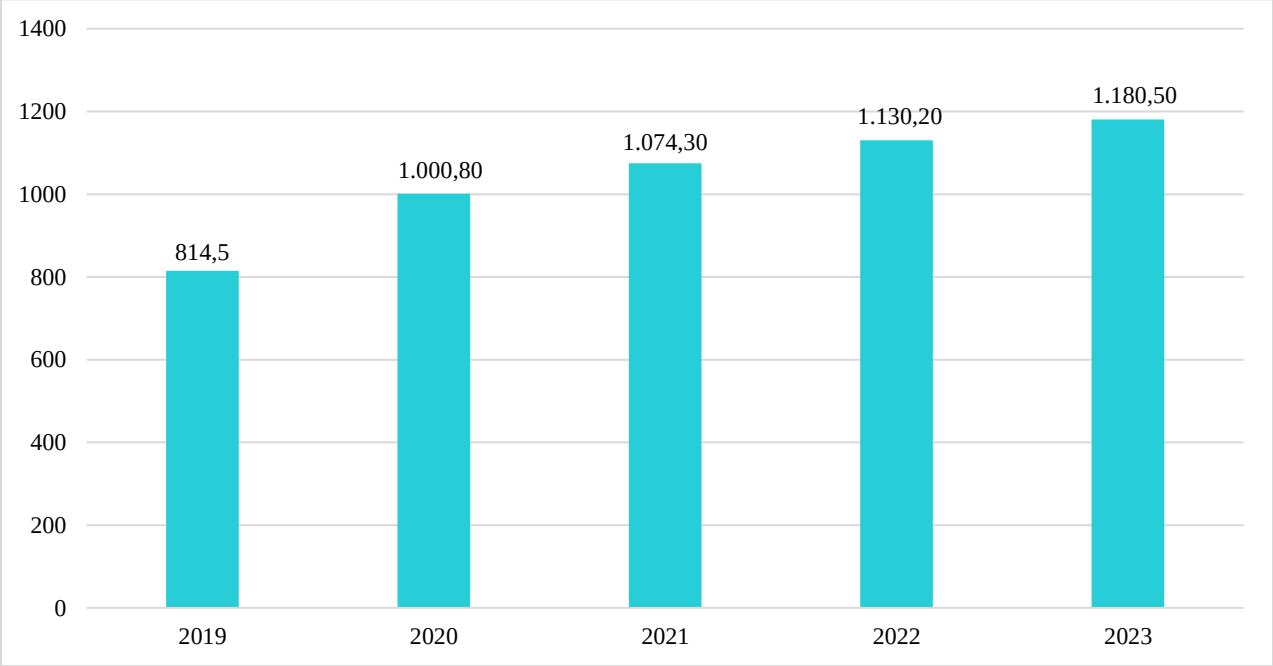
Instagram:

Over time, there was a rise in the number of Instagram users (figure 21) (Statista, 2022a). In October 2020 forecast estimates that there may be about 1.2 billion Instagram users globally by 2023. With more than 120 million active Instagram users (Statista, 2022b). The potential reach of ADS on Instagram is 1.48 billion, 18.7% of Instagram Ads reach the world population, and 29% of Instagram Ads reach to world Internet users. 49.3% of Instagram Ads reach the female audience, while 50.7% to the male audience, also it reaches young users more than old users. There was an increase in Instagram advertising from January 2020 to January 2022 (figure 22). Moreover, Turkey, Sweden, Argentina, and Brazil are the most countries with Instagram advertising eligible reach rates. While Turkey, Argentina, Indonesia, and Brazil are the most countries that spend on the Instagram app using their mobile phones. Furthermore, 1.07 of the potential audience can be reached with Instagram Stories Ads, 72.6% of Instagram stories Ads reach as a percentage of Instagram's total advertising reach. These Ads reach 51.1% of female Instagram users, and 48.9% of males Instagram users. While 675.3 million potential audiences can be reached with Ads on Instagram Reels. These Ads reach 45.7% as a percentage of Instagram's total advertising reach. These Ads reach 46.1% of female Instagram users, and for 53.9% of male Instagram users (Kemp, 2022a).

In Addition, to the Instagram Shop Audience, 187.6 million potential audiences can be reached with Ads in the Instagram Shop Tab. 12.7% of the Instagram shop Ad reach is a percentage of Instagram's total advertising reach. 58.8% of the Instagram shop Ad audience are female, and 42.2% are male. Besides, the Instagram Explore Tab audience, 792.4 million is the potential audience that can be reached with Ads in the Instagram explore tab, 53.6% of the Instagram explore tab ad reach as a percentage of Instagram's total advertising reach. 51.2% of the Instagram explore tab ad audience are female, and 48.8% are male (Kemp, 2022a).

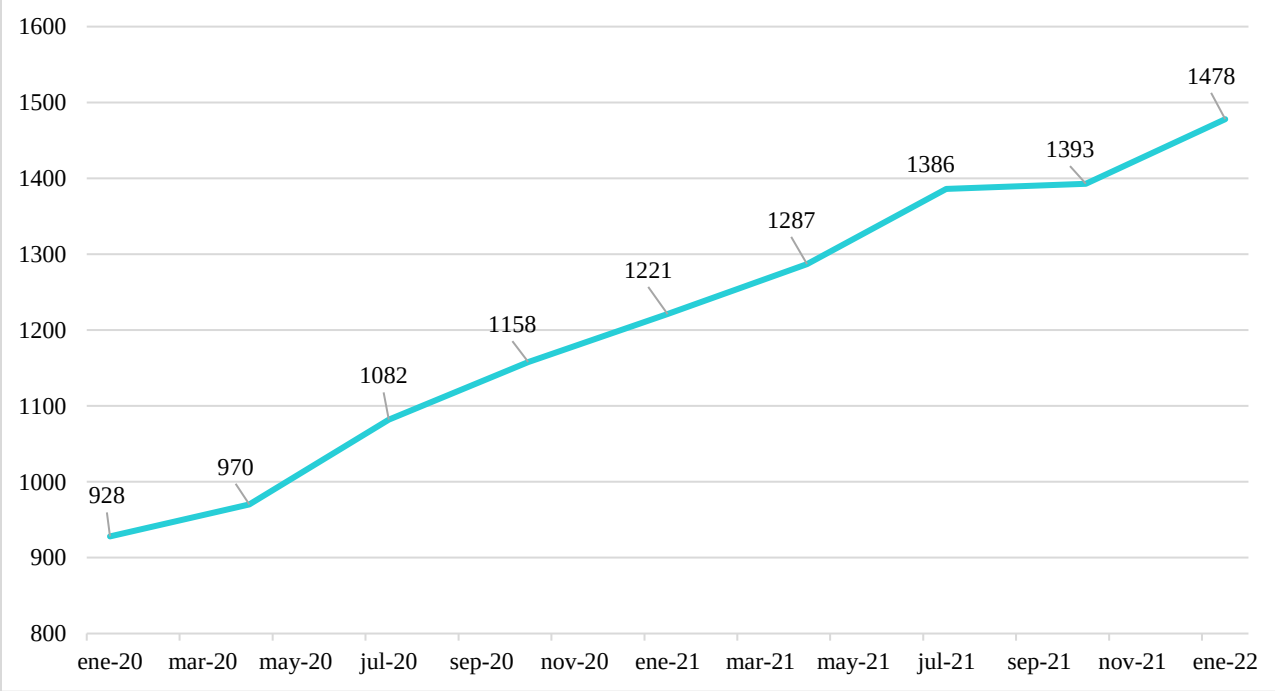
Furthermore, the most popular Instagram accounts with the highest followers are @Instgram, @Cristiano, @Kyliejenner, @Leomessi, and brands such as @Nike. While the most used Instagram hashtags are #Love, #Instagood, #Fashion, #Photooftheday, #Art (Kemp, 2022a).

Figure 21: Number of Instagram users (in millions) worldwide from 2019- 2023



Source: kemp (2022a)

Figure 22: Instagram advertising reach (in millions)

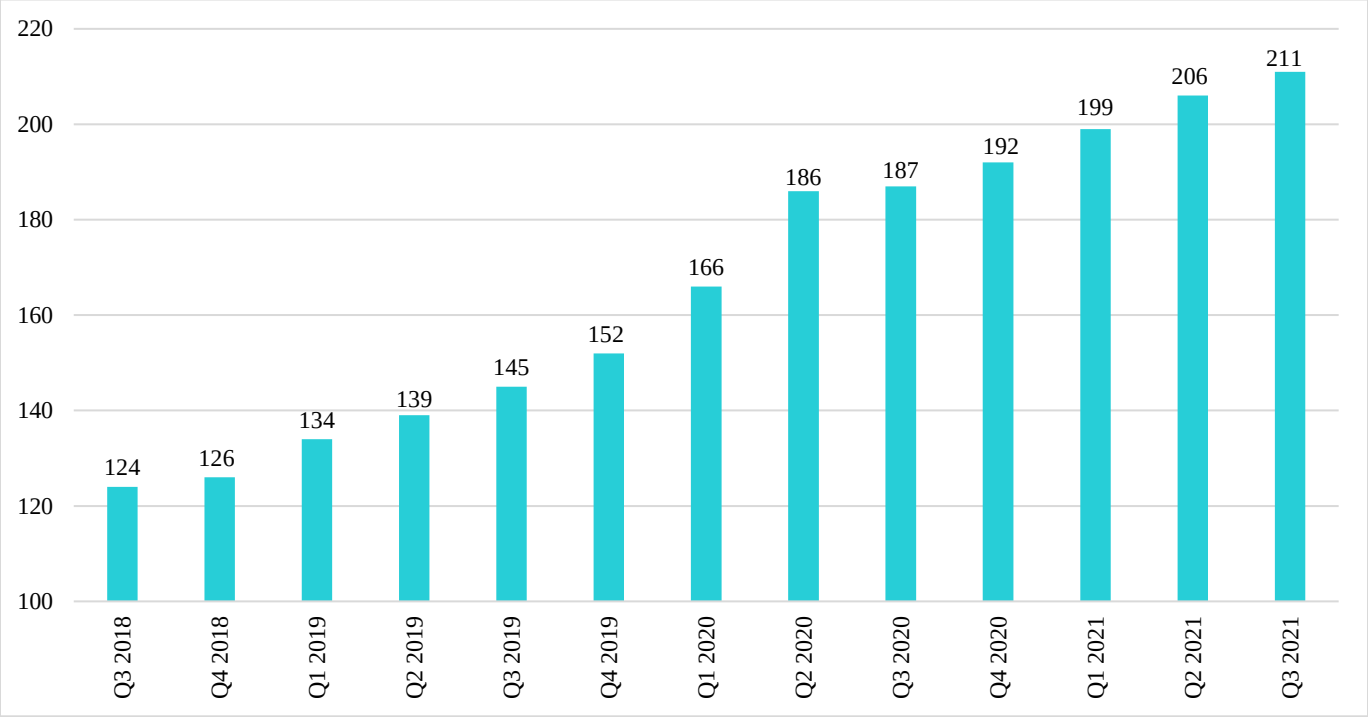


Source: Kemp (2022a)

Twitter:

From quarter 3 in 2018 till quarter 3 in 2021, there was an increase in active users on Twitter (figure 23). 436.4 million is the total potential reach of Ads on Twitter, 5.5% of Twitter ads reach the world population, while 8.8% of its Ads reach Internet users, also, it reaches for 43.6% of females and 56.4% of males. Besides, Singapore, Japan, Saudi Arabia, and Ireland are the most countries that have a potential reach for Twitter Ads. Moreover, the most popular Twitter accounts with the highest number of followers are @Barackobama, @Justinbieber, @Katyperry, @Rihanna, and @Cristiano (Kemp, 2022a).

Figure 23: Twitter monetizable daily active users (in millions)



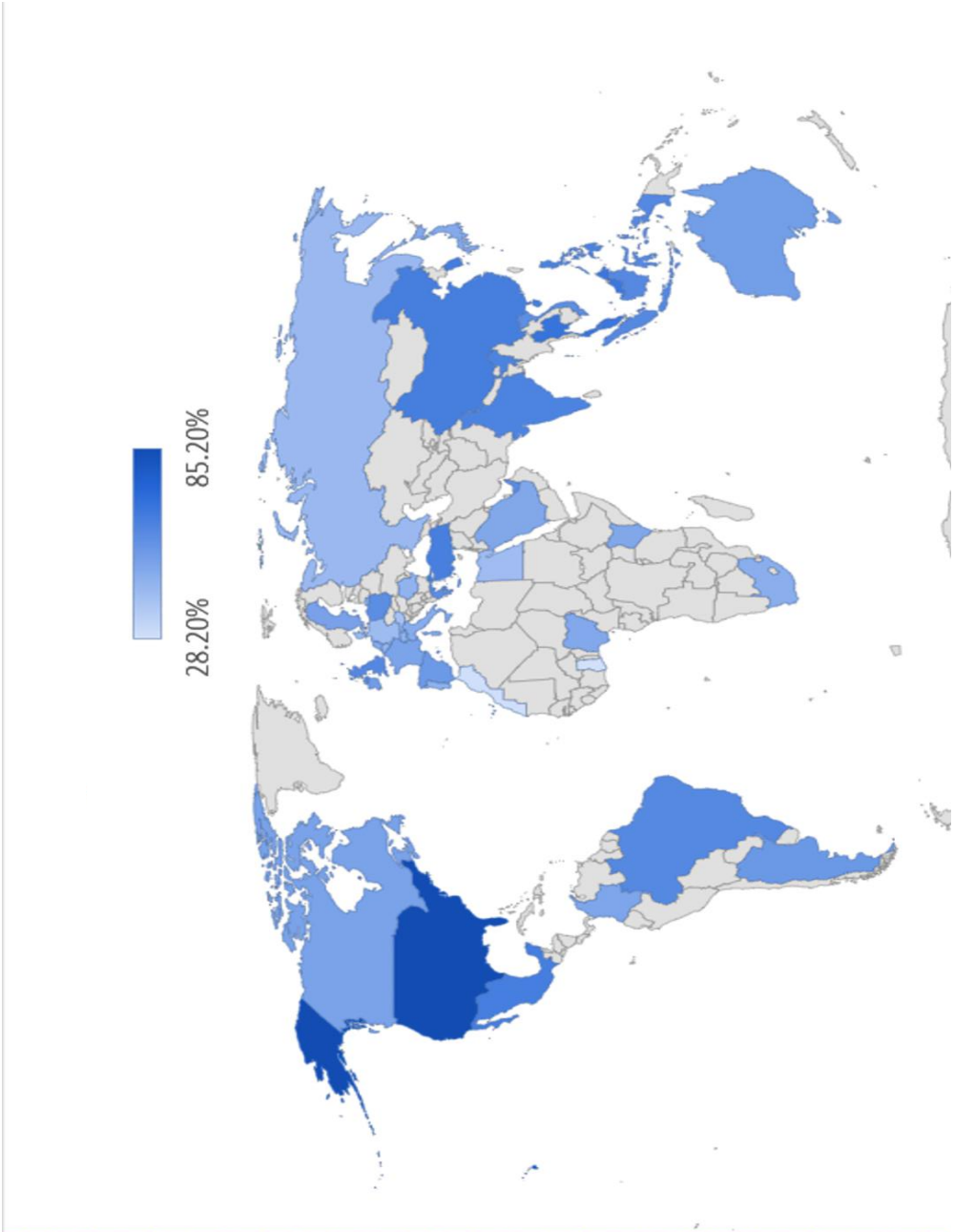
Source: Kemp (2022a)

2.5.3. World E- commerce

During the week, 58.4% of the world population aged from 16 to 64 are Internet users who purchase online products and services. 28.3% of the world population order groceries from online stores per week, though 14.4% of the world population buy a second-hand item via an online store per week, while 24.6% buy from used an online price comparison service per week, and 17.8% use a buy now later pay service per week (Kemp, 2022a).

The most countries that they do online purchases weekly are Thailand, Malaysia, South Korea, Mexico, China, Turkey, and Taiwan (figure 24). In addition, females of all group ages do more online purchases than males. Besides, there are different reasons why or what encourages people around the world to buy online (figure 25) such as free delivery, coupons and discounts, reviews from other customers, easy returns policy, quick and easy online checkout process etc. (Kemp, 2022a).

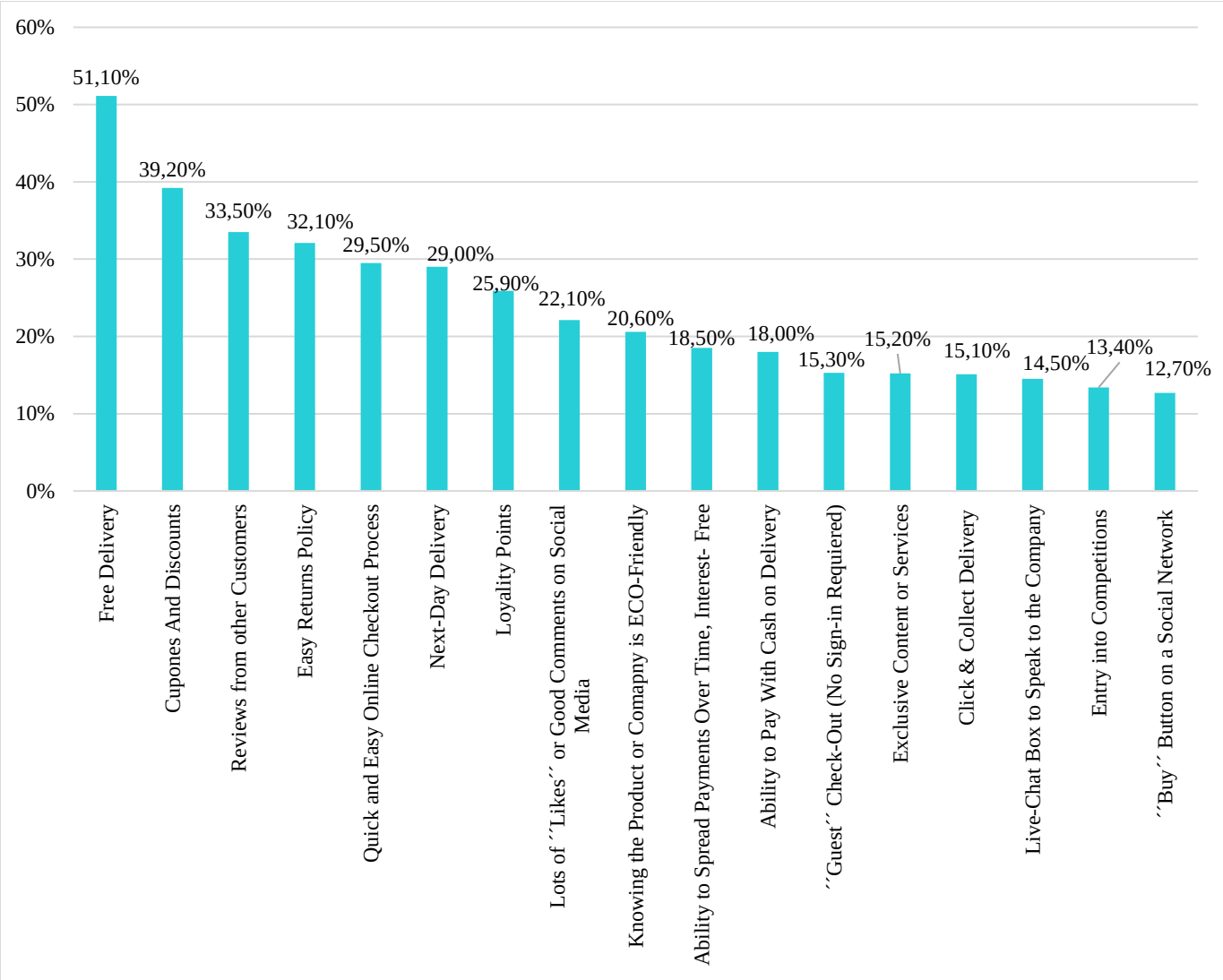
Figure 24: World weekly online purchases



Thailand	68.33%
Malaysia	66.60%
South Korea	64.90%
Mexico	64.50%
China	64.40%
Turkey	64.00%
Singapore	63.80%
Philippines	62.80%
India	62.50%
Indonesia	60.20%
U.K	60.60%
Brazil	60.40%
UAE	59.70%
Poland	58.90%
Greece	58.70%
Worldwide	58.50%
Vietnam	58.40%
USA	85.20%
Argentina	54.70%
Spain	54.40%
Ireland	52.90%
Australia	52.70%
Hong Kong	52.40%
Sweden	51.30%
Canada	51.10%
France	50.70%
New Zealnds	49.90%
Colombia	49.80%
Kenya	49.20%
Saudi Arabia	49.10%
Nigeria	48.90%
Japan	48.20%
Netherlands	48%
Italy	47.60%
South Africa	46.70%
Portugal	45.50%
Romania	45.10%
Switzerland	44.40%
Belgium	43.40%
Russia	42.50%

Source: Kemp (2022a)

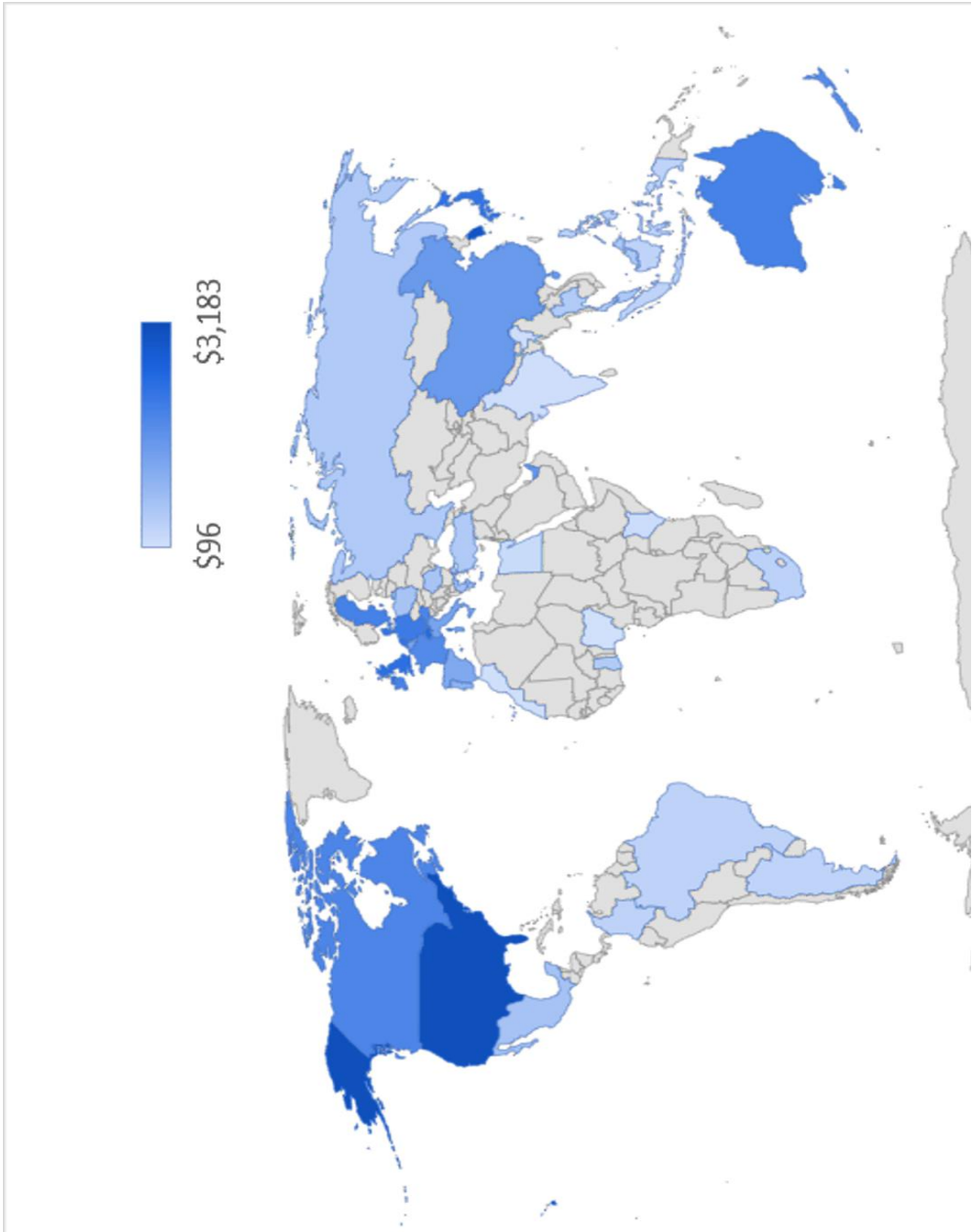
Figure 25: Online purchase drivers



Source: Kemp (2022a)

There is a huge increase in consumer goods e-commerce in the world, 3.78 billion number of people purchasing consumer goods via Internet, $3.85 trillion the total annual spends on online consumer goods purchases (USD), $1,017 is the average annual revenue per consumer goods e-commerce user (USD), and 60.1% s the share of consumer goods e-commerce spends attributable to purchases made via mobile phones. In addition, for each category annually e-commerce consumer goods spend $988.4 billion on electronics, $904.5 billion on fashion, $436.8 billion on furniture, $392.9 billion on toys and hobby, $381.5 billion on personal and household care, $376.6 billion on food, $211.5 billion on beverages, and $155.0 on physical media. Moreover, Hong Kong, USA, South Korea, Switzerland, UK, and Netherlands are the most countries who are consumer goods e-commerce (figure 26) (Kemp, 2022a).

Figure 26: World consumer goods e-commerce average revenue per use (ARPU) in dollars



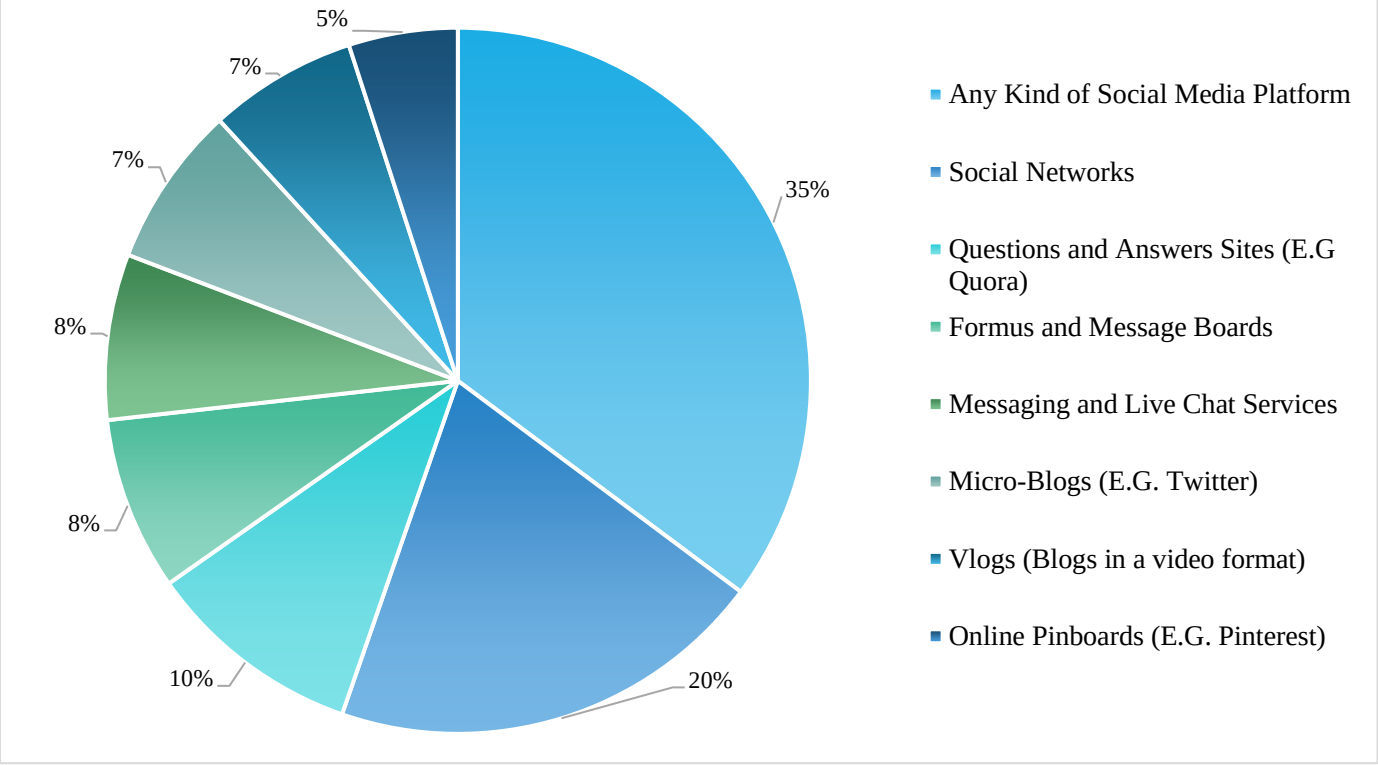
Hong Kong	$3,183
USA	$3,105
South Korea	$2,995
Switzerland	$2,411
U.K	$2,317
Netherlands	$2,232
Japan	$2,227
Denmark	$2,221
Germany	$2,067
Sweden	$1,971
Australia	$1,968
Ireland	$1,939
Canada	$1,889
Austria	$1,879
Singapore	$1,869
France	$1,786
New Zealand	$1,751
UAE	$1,561
China	$1,494
Italy	$1,290
Belgium	$1,233
Spain	$1,178
Worldwide	$1,017
Portugal	$934
Greece	$733
Mexico	$680
Poland	$658
Romania	$631
Malaysia	$566
Russia	$531
Turkey	$521
Thailand	$518
Ghana	$511
Saudia Arabia	$475
South Africa	$389
Philippines	$388
Colombia	$355
Brazil	$349
Argentina	$339
Indonesia	$339
Vetnam	$240

Source: Kemp (2022a)

Data show that there is a big increase in the online food delivery in the population of the world, 1.75 billion number of people ordering food delivery via online platforms, there was an increase of 18.9% (+277 million) from 2021 and 2022 in the number of online food delivery users, $ 270.3 billion is the total annual value of online food delivery orders (USD). There is an increase of 19.6% (+$44 billion) from 2021 and 2022 in the value of online food delivery orders. And $155 of average annual value of online food delivery orders per users (USD) (Kemp, 2022a).

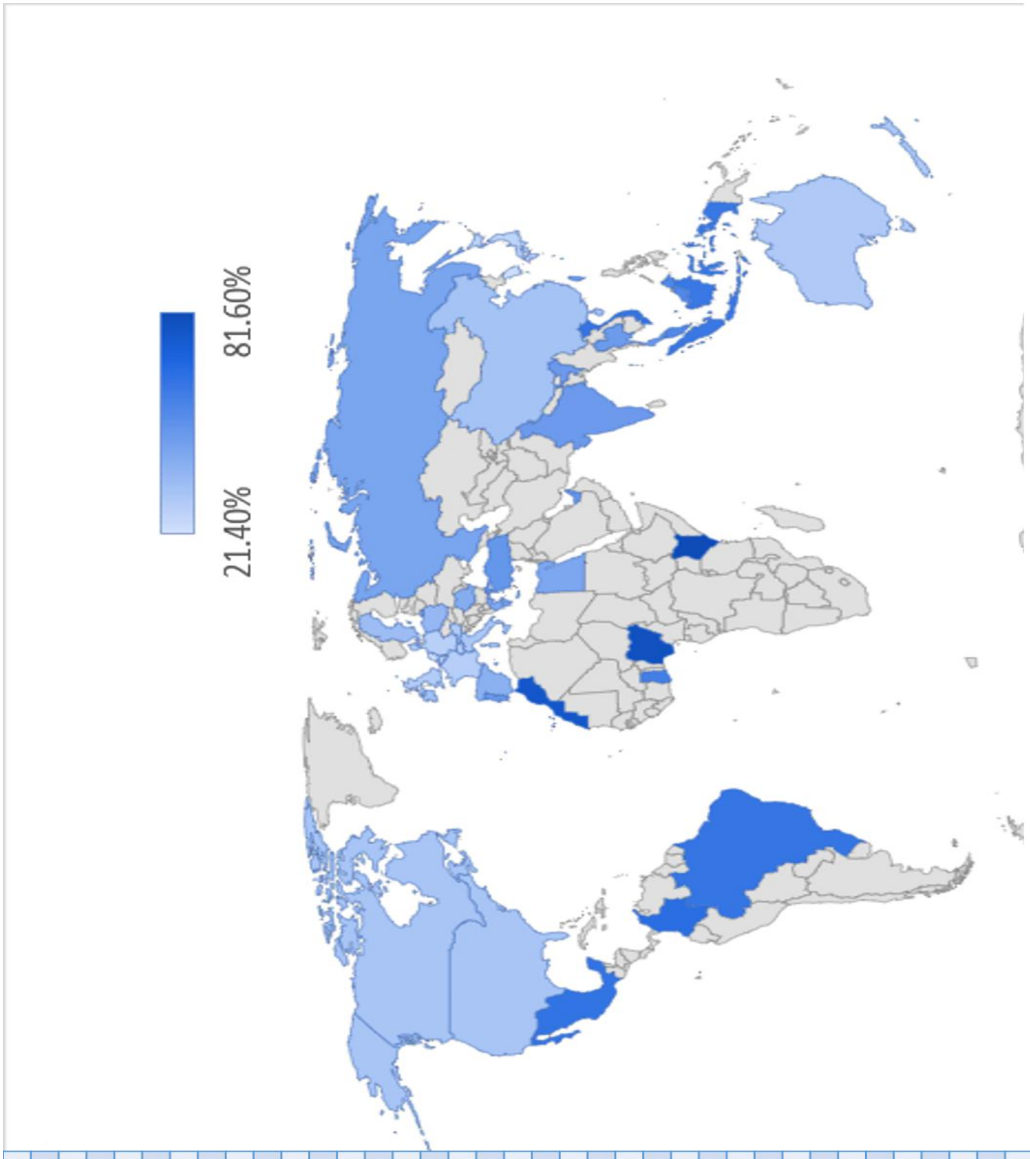
Brand Research: users from the whole world use social media for brand research (figure 27), they research through any kind of social media platform, social networks, question and answer sites (for example Quora), forums and message boards, messaging and live chat services, micro-blogs (for example Twitter), vlogs (for example blogs in a video format), and Online pinboards (for example Pinterest). Besides, Kenya, Nigeria, Morocco, Colombia, Argentina, Mexico are the most countries use social networks for brand research (figure 28). Regarding gender and ages, female and young users use social media for brand research (figure 29) (Kemp, 2022a).

Figure 27: Use of social media for brand research



Source: Kemp (2022a)

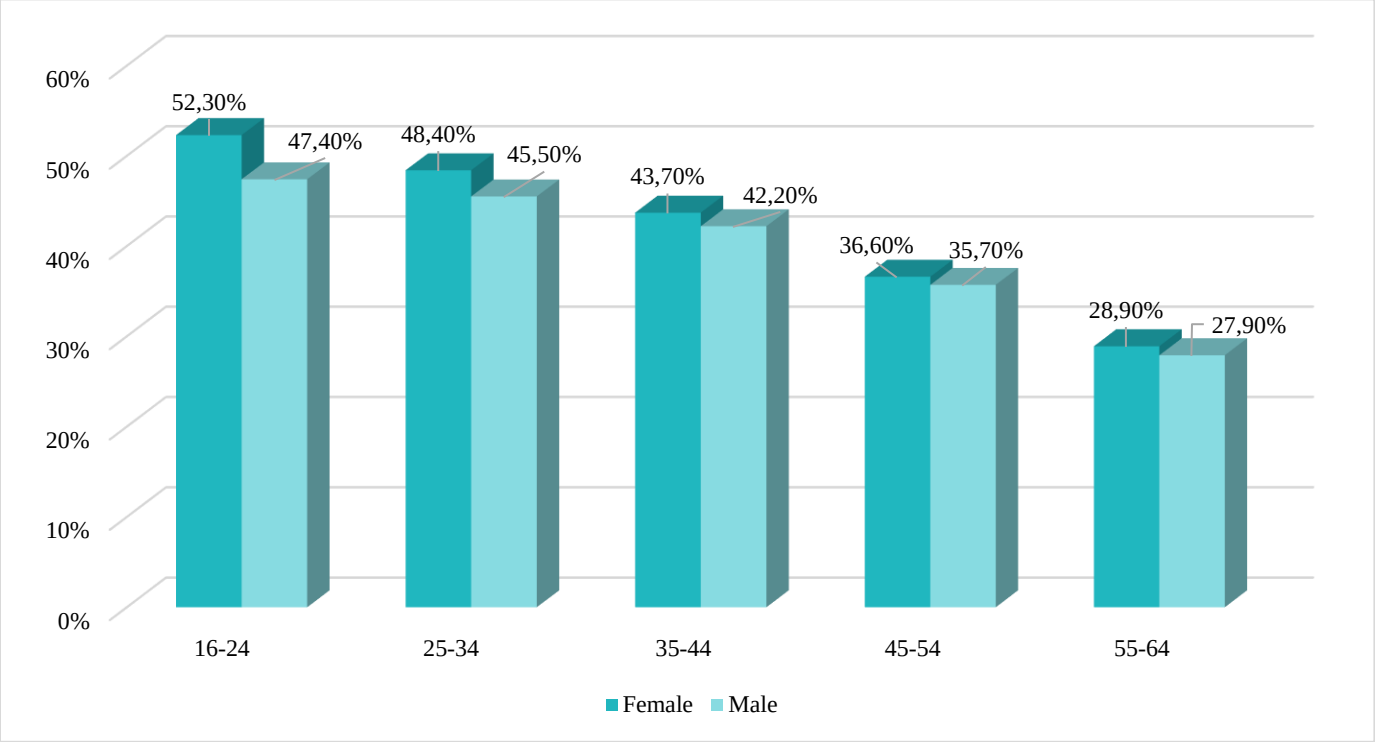
Figure 28: Use of social networks for brand research



Kenya	81.60%
Nigeria	79.20%
Morocco	75.70%
Colombia	65.10%
Argentina	64.20%
Mexico	63.00%
Vietnam	62.60%
Brazil	62.50%
Indonesia	61.10%
South of Africa	60.40%
Philippines	60.30%
Ghana	58.60%
Saudi Arabia	58.00%
Malaysia	54.70%
Turkey	50.00%
UAE	49.90%
Portugal	48.80%
India	47.90%
Thailand	47.70%
Taiwan	47.50%
Russia	44.20%
Worldwide	44.00%
Egypt	43.50%
Greece	42.60%
Romania	41.50%
Hong Kong	40.70%
Spain	39.80%
Singapore	38.00%
Poland	37.00%
Sweden	35.10%
Ireland	33.90%
China	32.90%
USA	31.90%
Canada	31.80%
Italy	31.00%
Australia	30.30%
New Zealand	30.30%

Source: Kemp (2022a)

Figure 29: Demographic profile of use social networks for brand research

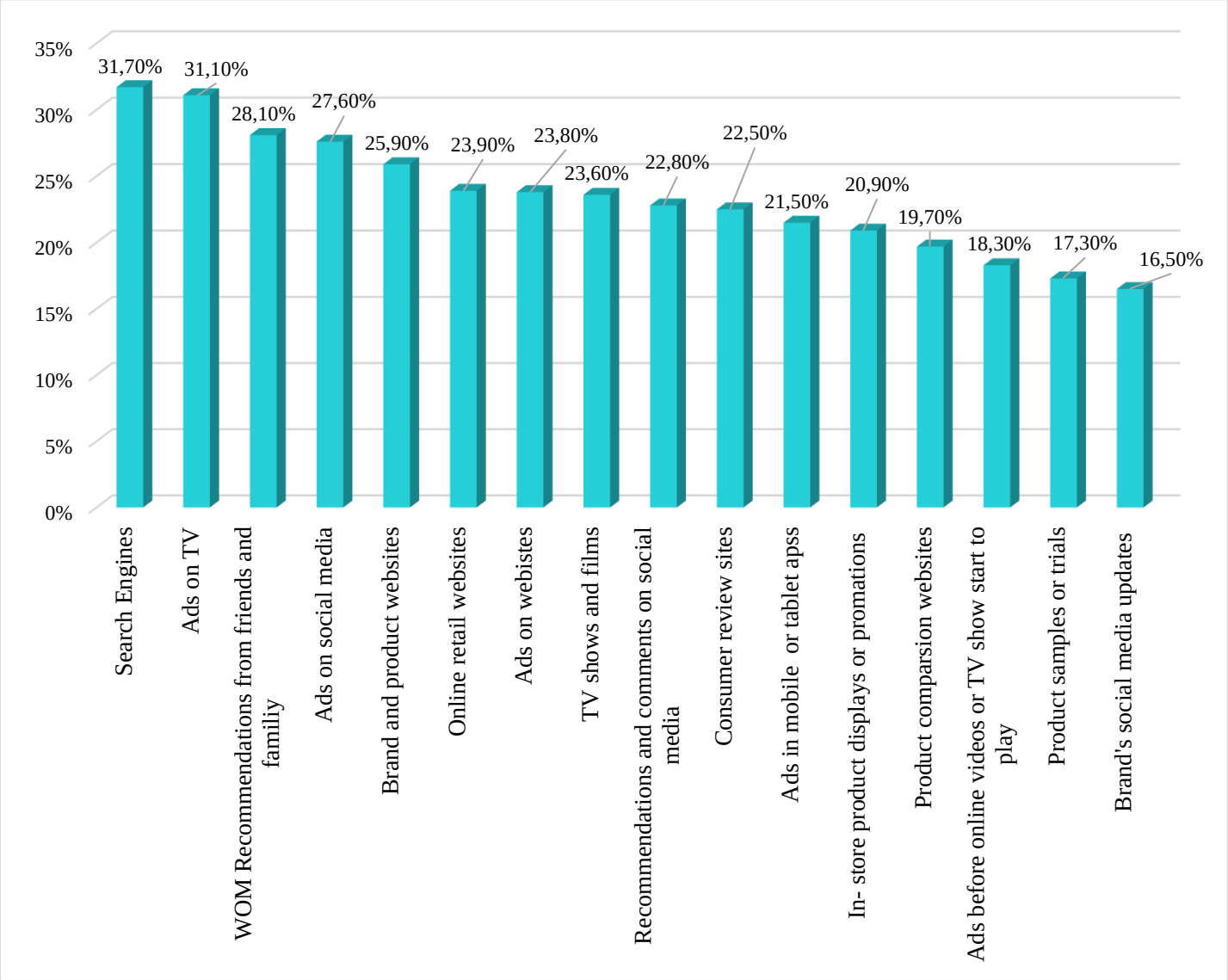


Source: Kemp (2022a)

2.5.4. Digital marketing

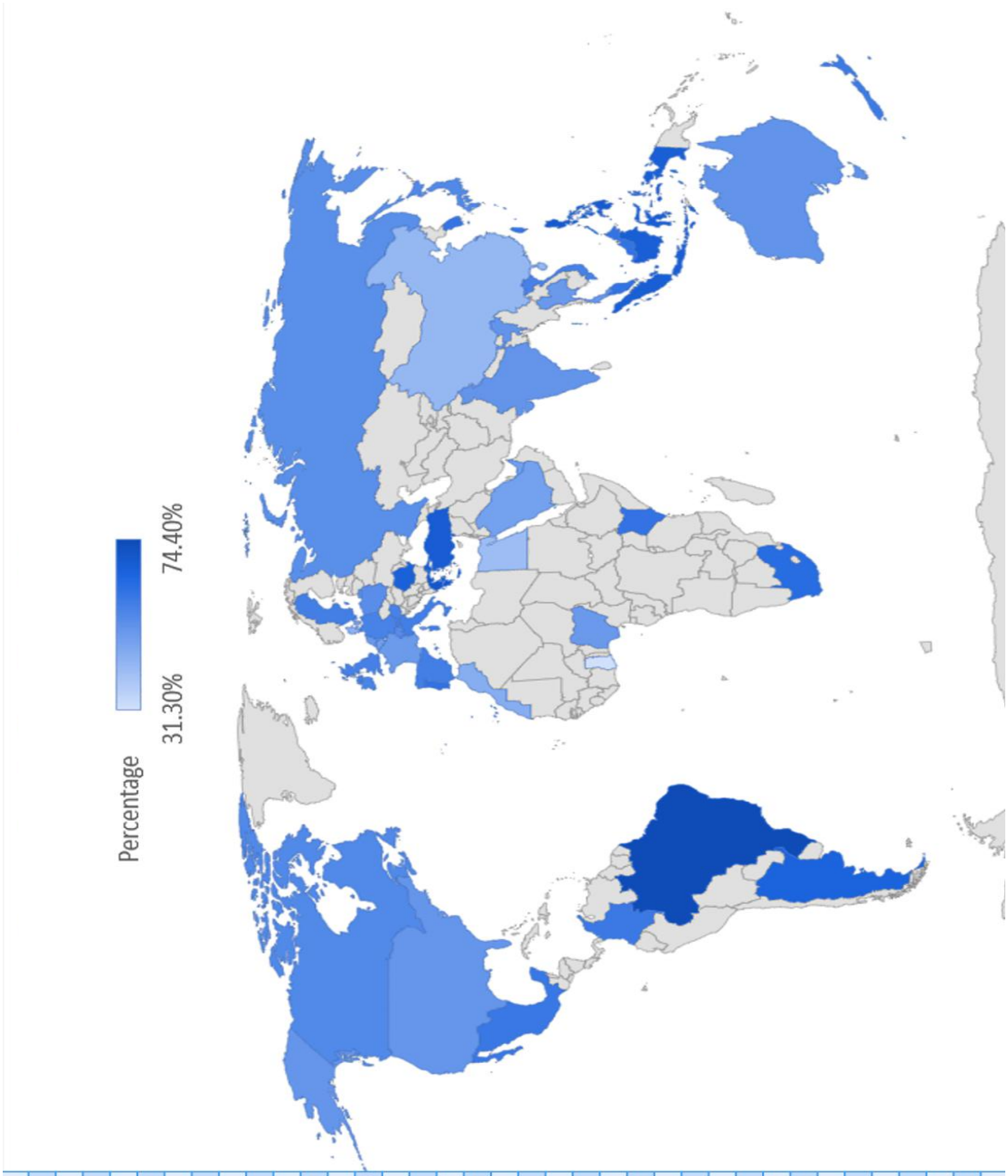
There are different channels and mediums for people to discover new products, brands, and services (figure 30), such as search engines, Ads on TV, Word of Mouth recommendations from friends and family, Ads on social media, Brand and Product Websites, Online retails websites, Online retail websites, Ads on Websites, TV shows ads films, recommendations and comments on social media etc. Besides, Brazil, Greece, Philippines, Turkey, Indonesia, and Romania are the most countries with ages 16 to 64 who research brands, products, and services online before make a purchase (figure 31). Moreover, the main channels for online brand research (figure 33) are search engines, social networks, consumer reviews, brand and product websites, price comparison websites, mobile apps, video sites, questions and answer sites (for example Quora), discount voucher and coupon sites, blogs on brands and products etc. (Kemp, 2022a).

Figure 30: Sources of brand discovery



Source: Kemp (2022a)

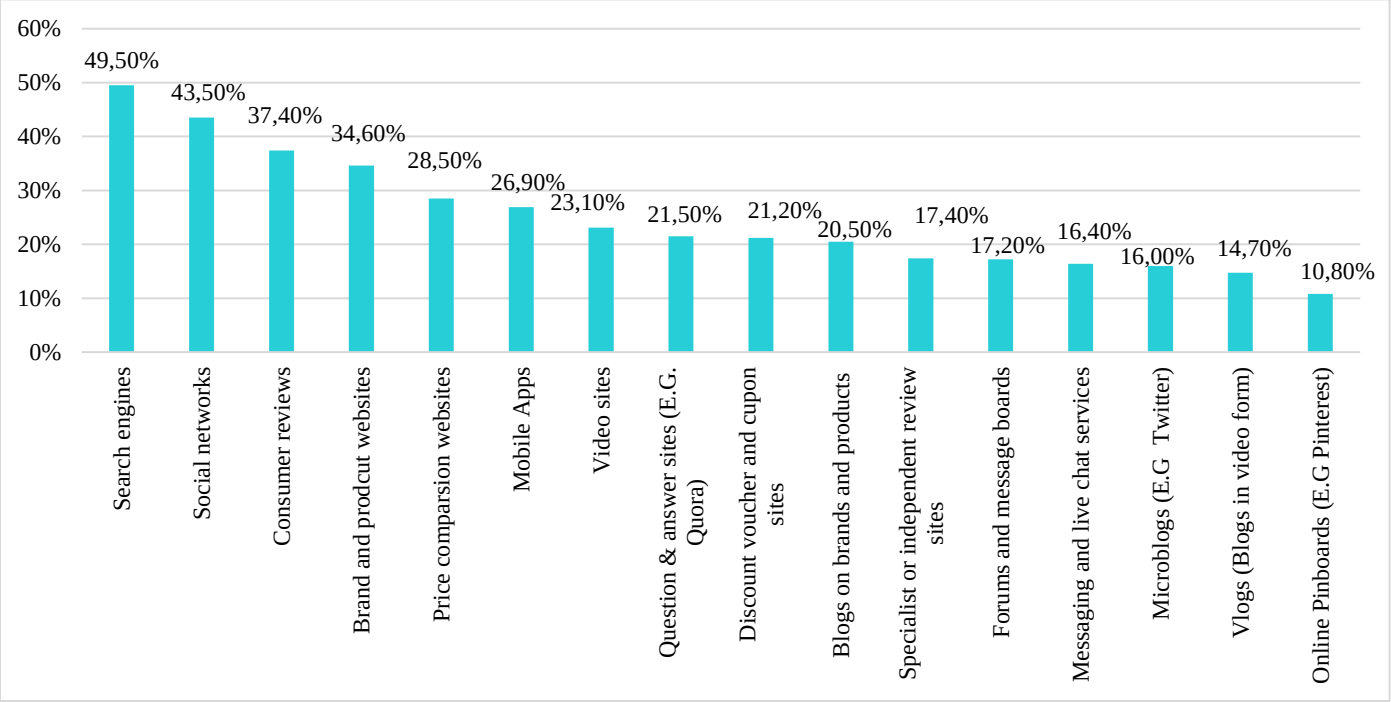
Figure 31: Countries online brand research



Brazil	74.40%
Greece	70.40%
Philippines	69.30%
Turkey	68.20%
Indonesia	67.50%
Romania	66.80%
Argentina	66.00%
South Africa	63.30%
Portugal	61.40%
Malaysia	61.10%
Kenya	60.90%
South Korea	60.80%
Taiwan	60.50%
Mexico	59.70%
Colombia	59.50%
New Zealand	58.80%
Sweden	58.10%
Spain	58.00%
Italy	57.90%
U.K	57.30%
Vietnam	57.10%
Austria	56.70%
Germany	56.70%
Ireland	56.60%
Singapore	56.50%
Canada	55.40%
Japan	55.10%
Switzerland	54.40%
Poland	53.80%
Russia	53.60%
Worldwide	53.00%
Australia	52.10%
India	51.90%
USA	51.60%
Netherlands	50.80%
Hong Kong	50.60%
Nigeria	50.60%

Source: Kemp (2022a)

Figure 32: Main channels for online brand research



Source: Kemp (2022a)

We choose two countries (Figure 34) Spain and Palestine to analyze them in our studies.

Figure 33: World map

Source: Author

2.6. Spain

The total population of Spain in January 2022 is 46.73 million, 50.8% of Spain's population is female, though 49.2 percent of the population is male. Most of the Spanish live in urban areas (81.3 %) whereas 18.7% live in rural areas (Kemp, 2022b).

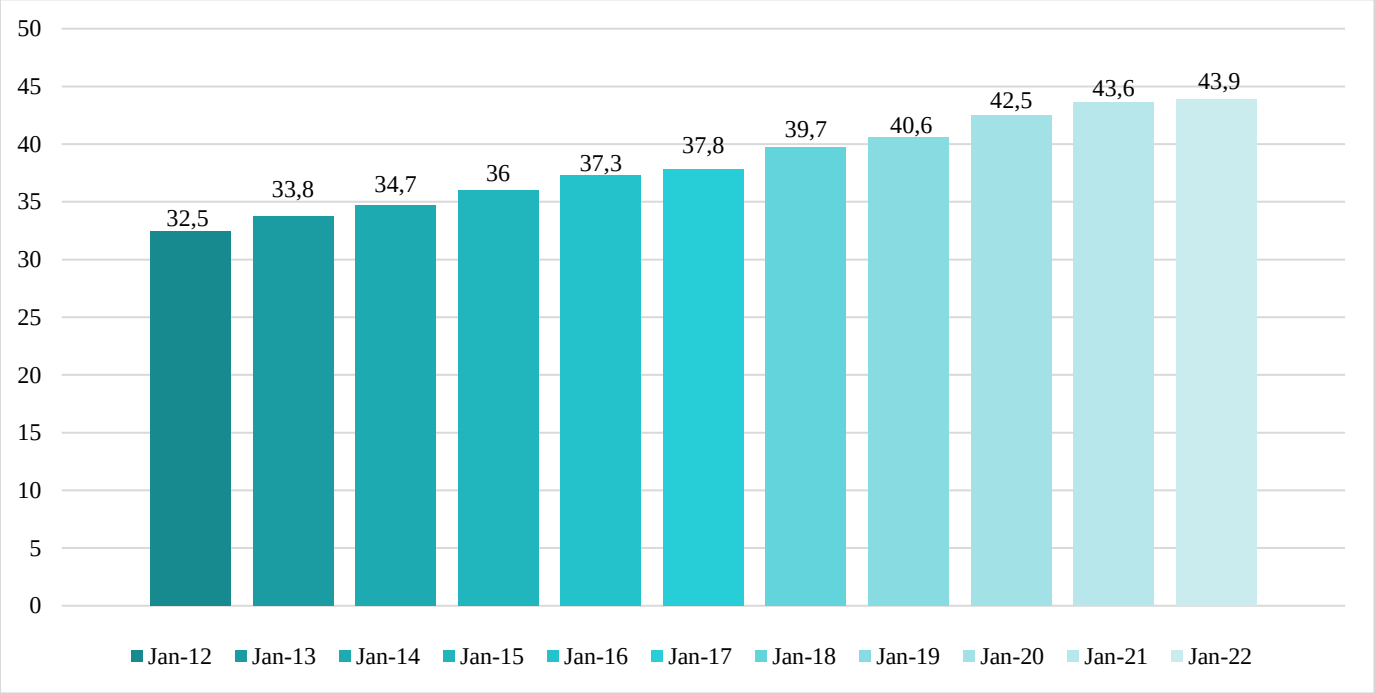
There are 55.52 million cellular mobile connections, 43.93 of Spanish population are Internet users, and 40.70 million are active users on social media. Besides, 97.0% of Spanish population have any type of mobile phone, 96.7% have smartphones, 5.5% have feature phone, 81.0% have laptop or desktop computer, 55.9% have tablet device, 38.4% have smartwatch, 30.6% have TV streaming device, 16.7% have smart home device, and 4.0% have virtual reality device (Kemp, 2022b).

Spanish Internet users ages from 16 to 64 spend 6 hours and 4 minutes on using Internet, 3 hours and 13 minutes spend on watching TV (broadcast and streaming), 1 hour and 53 minutes spend on social media, 1 hour and 16 minutes spend on reading press media (online and physical print), 1 hour and 14 minutes spend on listening to music streaming services, 1 hour spend on listening to broadcast radio, 35 minutes spend on listening to podcasts, 54 minutes spend on using games console (Kemp, 2022b).

Around 94.0% of Spain's population are Internet users, 92.3% of Spanish Internet users accesses the Internet via their mobile phones. From January 2012 till January 2022 there was a huge increase in Internet active users (figure 34). Moreover, ages between 16 and 64 active users spend 2 hours and 48 minutes on Internet via mobile phones, 3 hours and 16 minutes via computers and tablets. In addition, there are main reasons for Spanish ages between 16 and 64 for using Internet (figure 35) such as finding information, following news and current events, researching how to do things, researching places and travel etc. Furthermore, most visited websites in Spain are Google.com, YouTube.com, Facebook.com, Wikepedia.com, Google.es, Amazon.es, Marca.es, Elmundo.es, and Elpais.com (Kemp, 2022b).

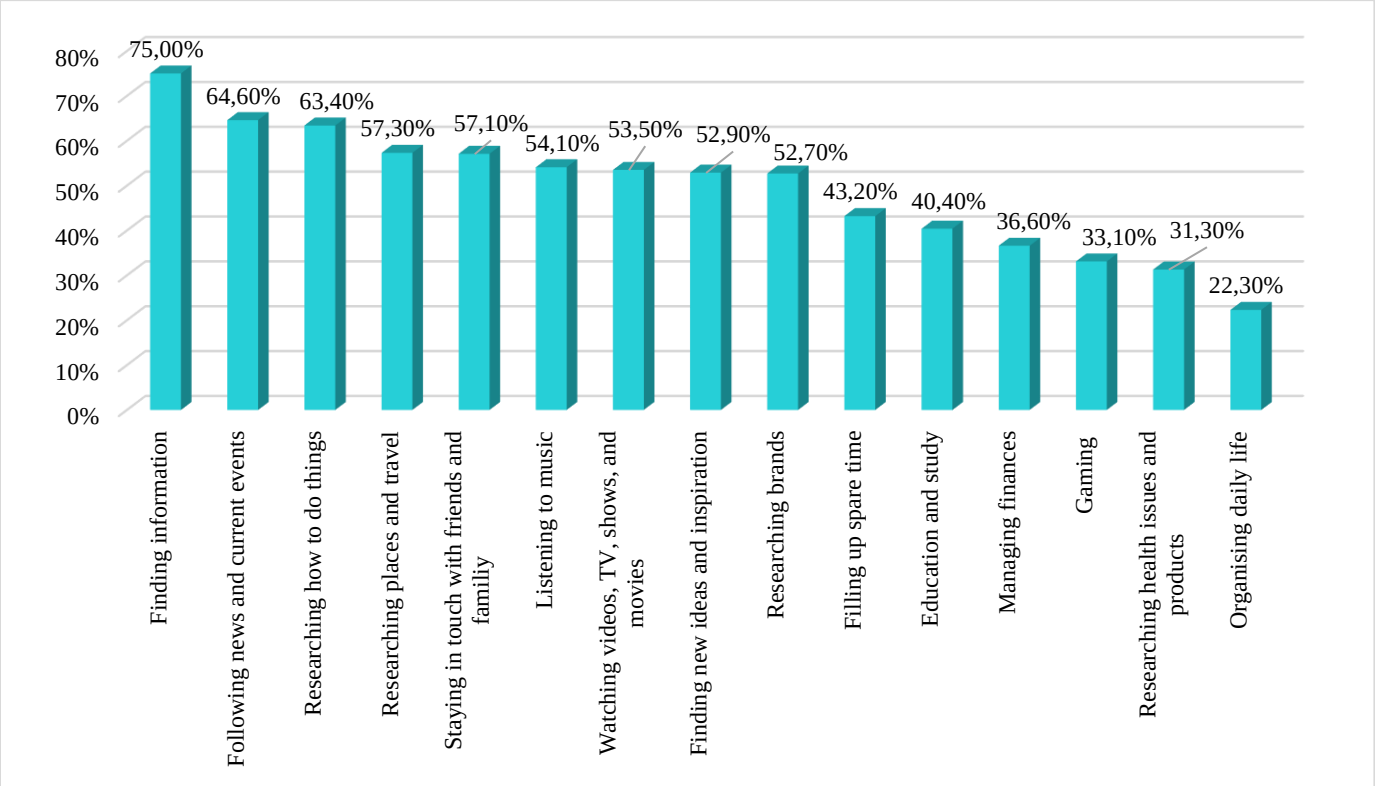
Spanish people ages between 16 and 64 access online information by using voice assistants (for example Siri, and Google Assistant) to find information each week (21.2% of Spanish population), 39.8% of Spanish people visit social networks to look for information about brands and products, 23.9% use image recognition tools (for instance Google Lens, Pinterest lens) on mobile each month, 45.6% use online tools to translation text into different languages each week. Furthermore, 35.2% of Spanish users use a banking investment or insurance website or mobile app each month, 18.4% use a mobile payment service (for example Apple Pay, and Samsung pay) each month, and 9.0% own any form of cryptocurrency (for instance Bitcoin and Ether) (Kemp, 2022b).

Figure 34: Internet users over time in millions



Source: Kemp (2022b)

Figure 35: Main reasons for using the Internet



Source: Kemp (2022b)

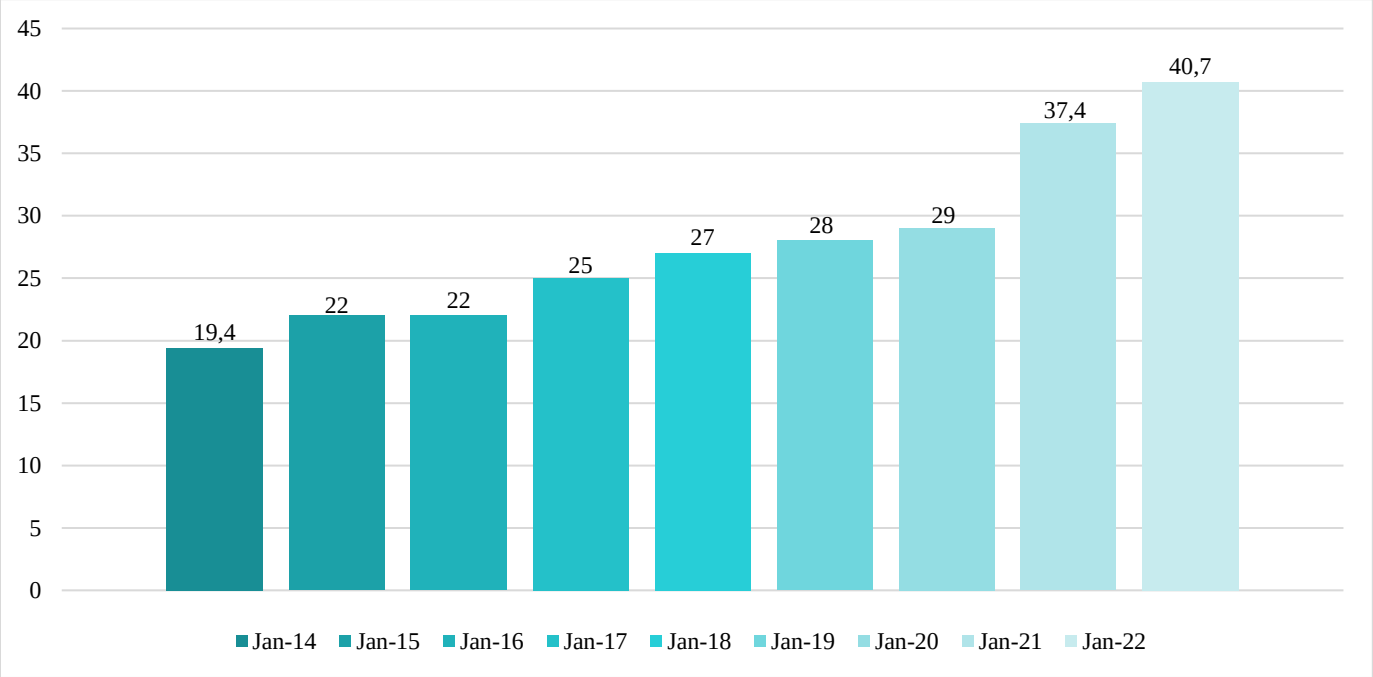
2.6.1. Online privacy and security with Spanish population

66.6% express concern about what is real vs what is fake on Internet, 52.2% worry about how companies might use their online data, 40.3% decline cookies on websites at least some time, 38.0% use a tool to block advertisement on the Internet at least some time, and 20.1% use a virtual private network (VPN) to access the Internet at least some time (Kemp, 2022b).

2.6.2. Social media in Spain

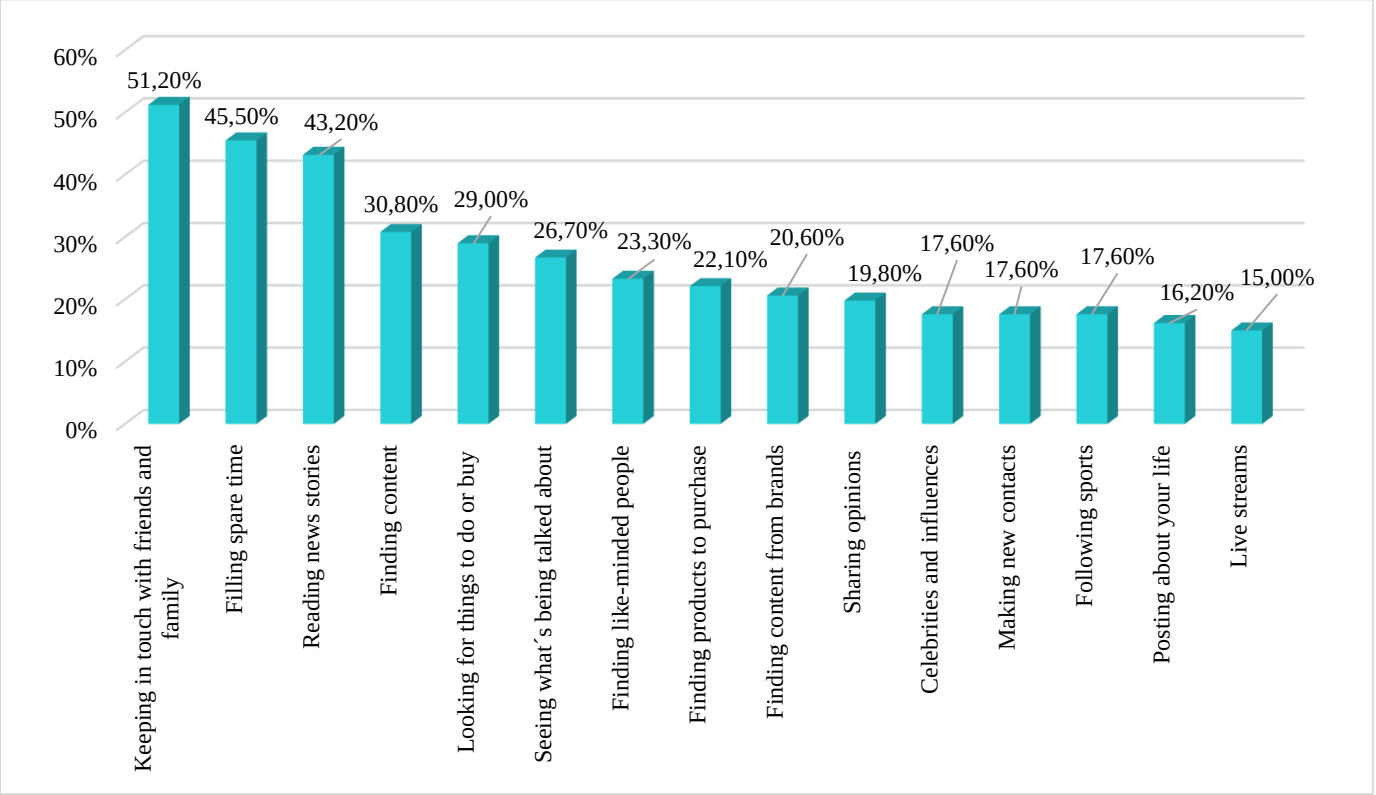
There was an enormous rise between January 2014 and January 2022 in number of social media Spanish active users (figure 36). There are 51% female of active social media users while 49% male active social media users. Besides, there are numerous reasons for Spanish users for using social media (figure 37) such as keeping in touch with friends and family, filling spare time, reading new stories, finding content, looking for things to do or buy, seeing what's being talked about, finding like-minded people, finding products to purchase and finding content from brands etc. In addition, the most used social media platforms (figure 38) between ages 16 to 64 each month are WhatsApp, Facebook, Instagram and Twitter. However, WhatsApp and Instagram are the most favorite social media platforms (figure 39) (Kemp, 2022b).

Figure 36: Social media users over time in millions



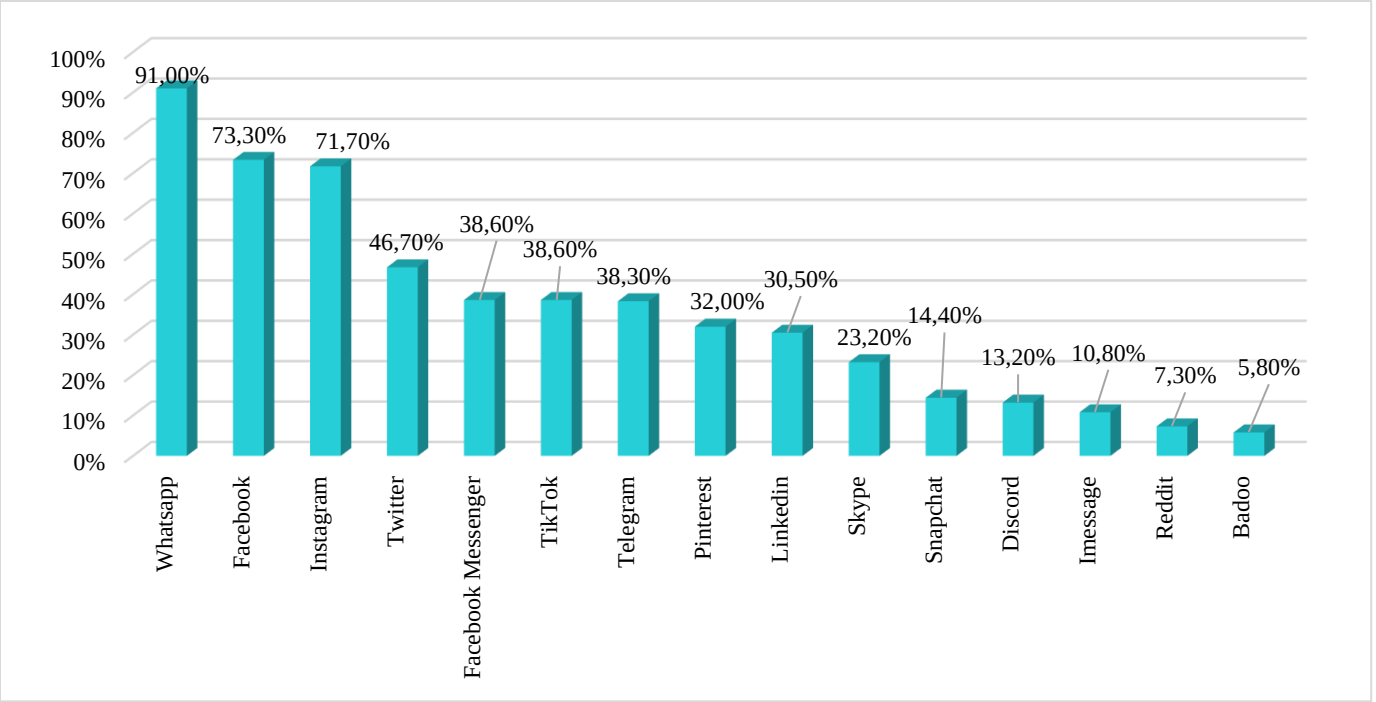
Source: Kemp (2022b)

Figure 37: Main reasons for using social media



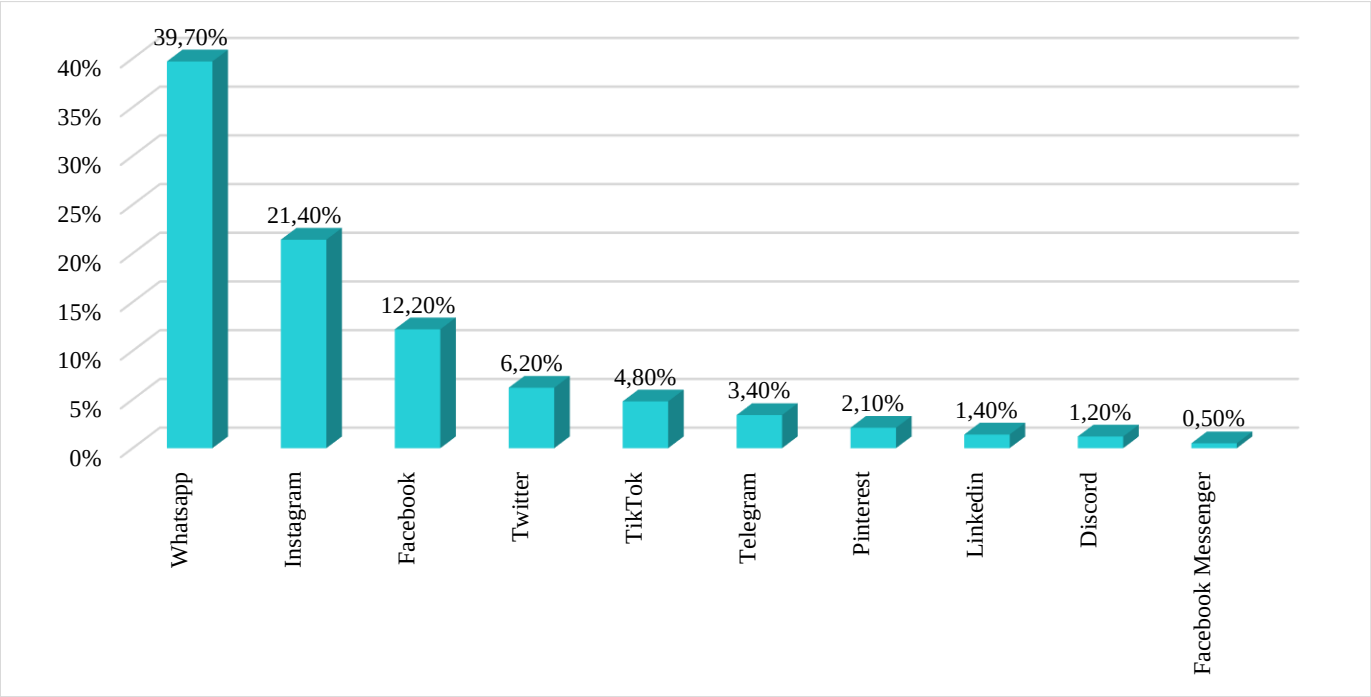
Source: Kemp (2022b)

Figure 38: Most used social media platforms



Source: Kemp (2022b)

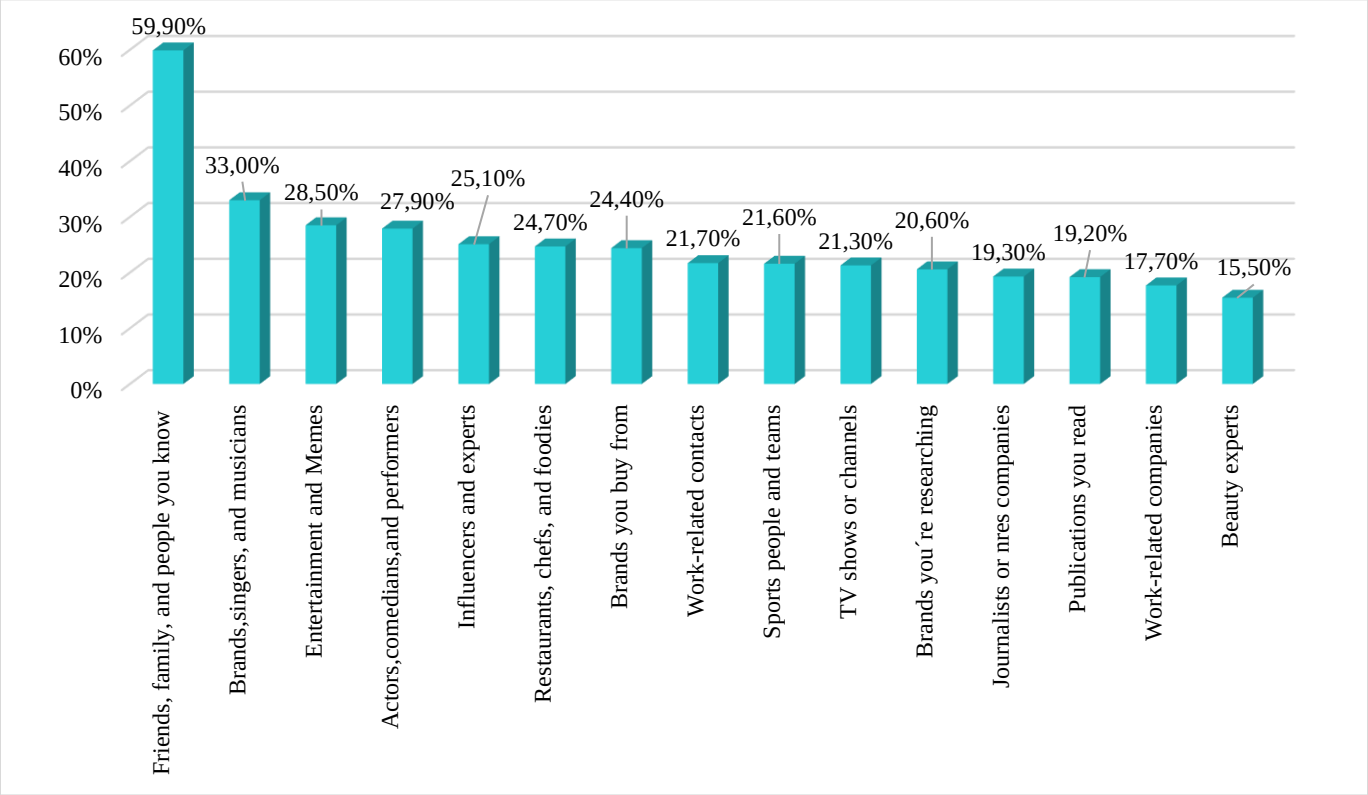
Figure 39: Favorite social media platforms



Source: Kemp (2022b)

Additionally, in Spain users search to find information about brands and products on different social media channels such as 64.6% use any kind of social media platform, 39.8% use social networks, 17.2% use question and answer sites (for example Quora), 13.2% use forums and message brands, 7.4% messaging and live chat services, 7.4% micro-blogs (for instance Twitter), 7.8% use vlogs (blogs in a video format), and 5.3% use online pinboards (for example Pinterest). Besides, Spanish people follow accounts on social media (figure 40) such as Friends, Family and people they know, brands, singers, and musicians, entertainment and memes, actors, comedians and performers, influencers and experts etc. (Kemp, 2022b).

Figure 40: Types of social media accounts followed



Source: Kemp (2022b)

Facebook in Spain:

There are 21.7 million users on Facebook in Spain, the number of Facebook users has dropped slightly compared to 2020 (-2.72%). This decline comes after two years of stabilization at around 22 million. Facebook's adopters are getting older, users ages 40 to 65 are up 3% and the 18 to 39 age range has declined by 4% over the past three years. The youngest age group (18 to 39 years) loses almost 5 points compared to 2020 (4.47%) to those over 40 (+2.47%) and over 65 (+1.86%). There are 46% females and 54% males. Moreover, Granada (78.96%), Santa Cruz de Tenerife (77.19%), Valencia (69.47%), Almería (68.54%), Las Palmas de Gran Canaria (67.47%), and Barcelona (67.21%) are the cities with the highest percentage of profiles compared to the total population (The social media family, 2022).

There are 20.20 million potential audiences that can be reached with Ads on Facebook, 43.2% of Facebook’s potential advertising reach as a percentage of the total population. 53.0% of its ad audience are female, while 47.0% are male. Moreover, devices used to access Facebook, for instance, 97.9% use any kind of mobile phone, 2.1% only use a laptop or desktop computer, 20.3% use both computers and mobile phones, 77.6% only use mobile phones (any type) (Kemp, 2022b).

YouTube in Spain:

Spain is one of the 10 top countries in users in Spain as 91.6% of its population use YouTube (GMI Blogger, 2022). There are 40.70 million potential reach Ads on YouTube, which reaches 87.1% of Spanish Users, while 92.7% reaches Internet users, it reaches 51.0% of female, while it reaches 49.0% of male. Besides, the top 5 YouTube searches from 1 January to 31 December 2021 in Spain were Musica, Canciones, TikTok, Fortnite, Peliculas (Kemp, 2022b).

Instagram in Spain:

Instagram has more users than Facebook in Spain. The number of Instagram users has grown by 20% in the last year in Spain. This means that it already has more users than Facebook -also owned by Meta- according to the VIII edition of the Study on the use of social networks in Spain prepared by the social media family (Moreno, 2022).

Now Instagram has 24 million users in Spain, with a huge increase as it was with only 7.4 million users in 2015. 56% of its accounts are located in the 50 most populated Spanish cities, and the majority of them are between 18 and 39 years old, making it the preferred social network of millennials. Granada (99.23%), Barcelona (97.76%), Valencia (84.84%), Santa Cruz de Tenerife (81.51%), and Madrid (75.63%) are the cities with the highest proportion of Instagrammers. Beside there are 54.17 females and 45.83% males (The social media family, 2022).

There are 22.85 million total potential reach of ads on Instagram, which reaches 48.9% of the Spanish population, while 52/0% reaches Internet users, it reaches 55.2 female, while 44.8% reaches male. There was a huge increase in Ads on Instagram, 8.8% (+1.9 million) (Kemp, 2022b).

Most of the Spanish brands use Instagram commerce and shopping to sell their products and services. For example, Inditex group such as Zara (@zara) with 49.9 million followers, Mango (@mango) with 13.3 million followers, Pull&Bear (@pullandbear) with 7.4 million followers. Another examples El Corte ingles (@elcorteingles) with 912K followers, Cortfiel group (@cortfiel_official) with 212 followers, Primor (@pprimor) with 1.2 million followers, BIMBA Y LOLA (@bimbaylola) with 1.3 million followers, and many other Spanish brands are using Instagram commerce.

In Spain, Skechers (@skechersspain) with 119 K followers has been the first firm to incorporate the tool into its profile on Instagram. The footwear firm has taken less than 24 hours to make the option a reality (EsFashion, 2020).

Twitter in Spain:

There are 4.2 million users of Twitter in Spain. It is not the social network with the most users (12th in the global ranking), but it is probably one of the most influential, as it is the usual speaker of public opinions. Granada is the city with the highest Twitter user penetration rate, with 28.85%

of its total population. It is followed by Seville (22.41%), Valencia (22.36%), Barcelona (22.26%) and Malaga (18.29%) (The social media family, 2022).

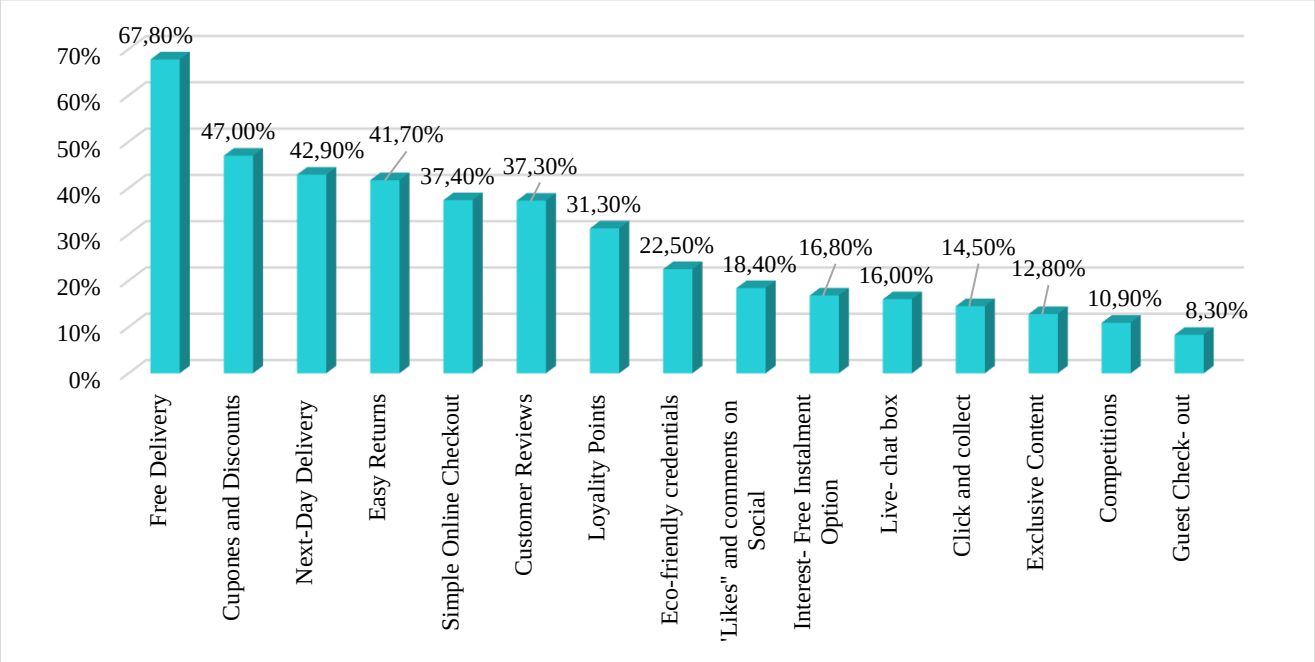
From 2021 till January 2022, there was a decrease in Twitter Ads to -6.4% (-600 thousand) with a total of 8.75 million potential audiences that Twitter reports can be reached with Ads on Twitter. It reaches 18.7% of the Spanish population, while it reaches 19.9%of the Internet users (Kemp, 2022b).

4.5.3. Electronic commerce in Spain

During the week Spanish Internet Users ages from 16 to 64 purchased a product or service online with a percentage of 54.4%, 18.1% ordered groceries via an online store, 14.8% bought a second-hand item via an online store, 22.9% used an online price comparison service, and 6.0% used a buy now pay later service (Kemp, 2022b).

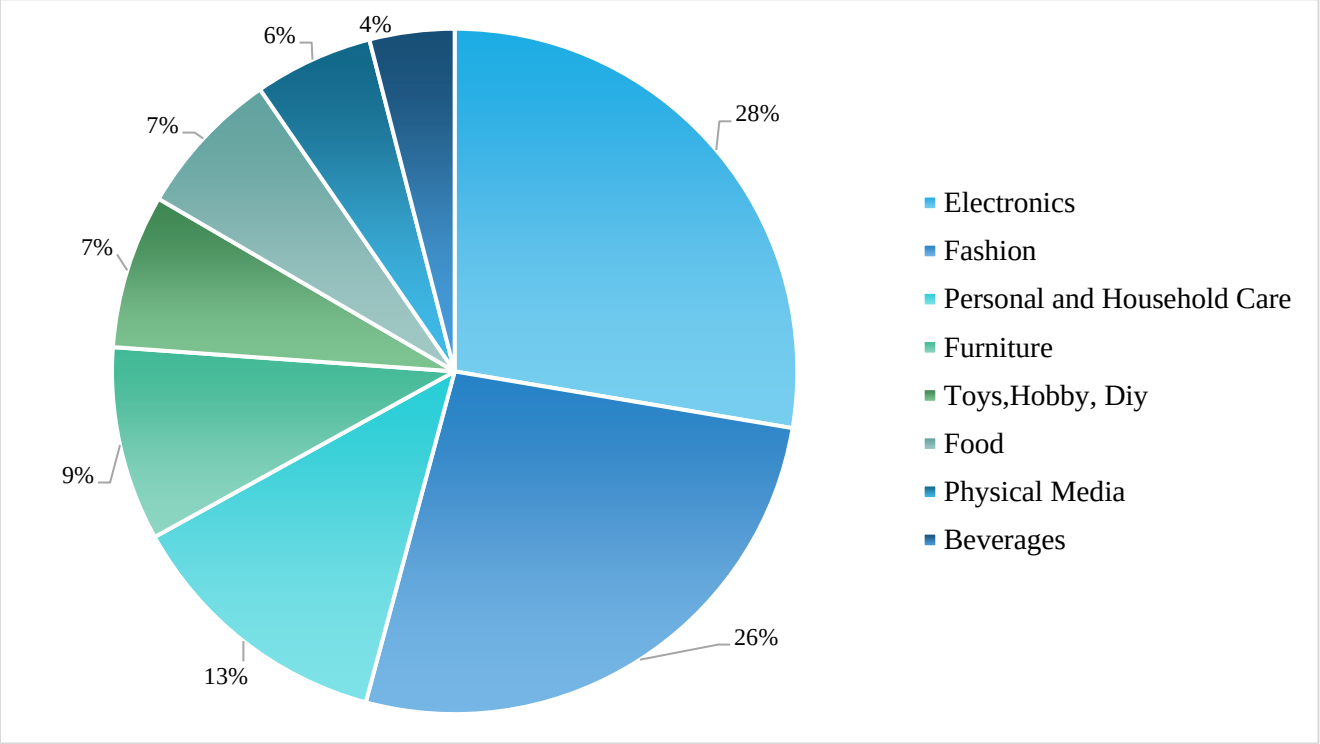
Some factors encourage Spanish Internet users to buy online (figure 41) such as free delivery, coupons and discounts, next-day delivery, easy returns, simple online checkout, customer reviews, and loyalty points (Kemp, 2022b). Furthermore, Electronics and Fashion (43) are the most products purchase by Spanish people through e-commerce platforms.

Figure 41: Online purchase drivers



Source: Kemp (2022b)

Figure 42: E-commerce: consumer goods categories in billion dollars



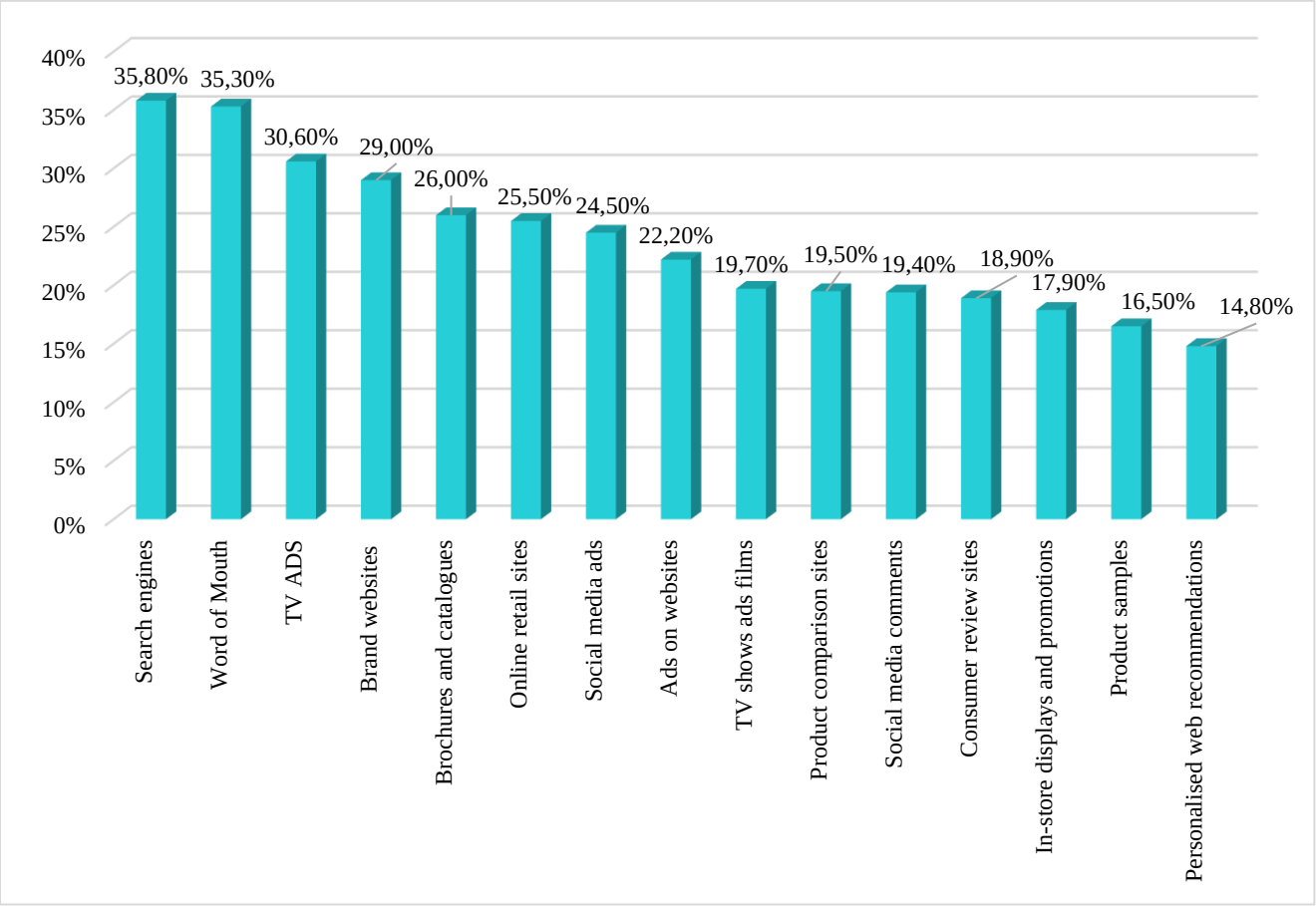
Source: Kemp (2022b)

3.5.4. Digital marketing in Spain

There are sources of brand discovery (figure 43) of Internet users aged 16 to 64 who discover new brands, products, and services via each channel or medium such as search engines, word of mouth, TV Ads, brand websites, brochures and catalogues, online retail sites, and social media Ads. Furthermore, 58.0% of Spanish Internet users aged from 16 to 54 researched brands online before making a purchase, 62.1% visited a brand´s website, 12.9% clicked or tapped on a banner ad on a website, 12.7% clicked or tapped on a sponsored social media, and 15.6% downloaded or use a branded mobile app. Additionally, the main channels for online brand research (figure 44) are search engines, social networks, brand websites, consumer reviews, price comparison sites, specialist review sites, discount coupons sites etc. (Kemp, 2022b).

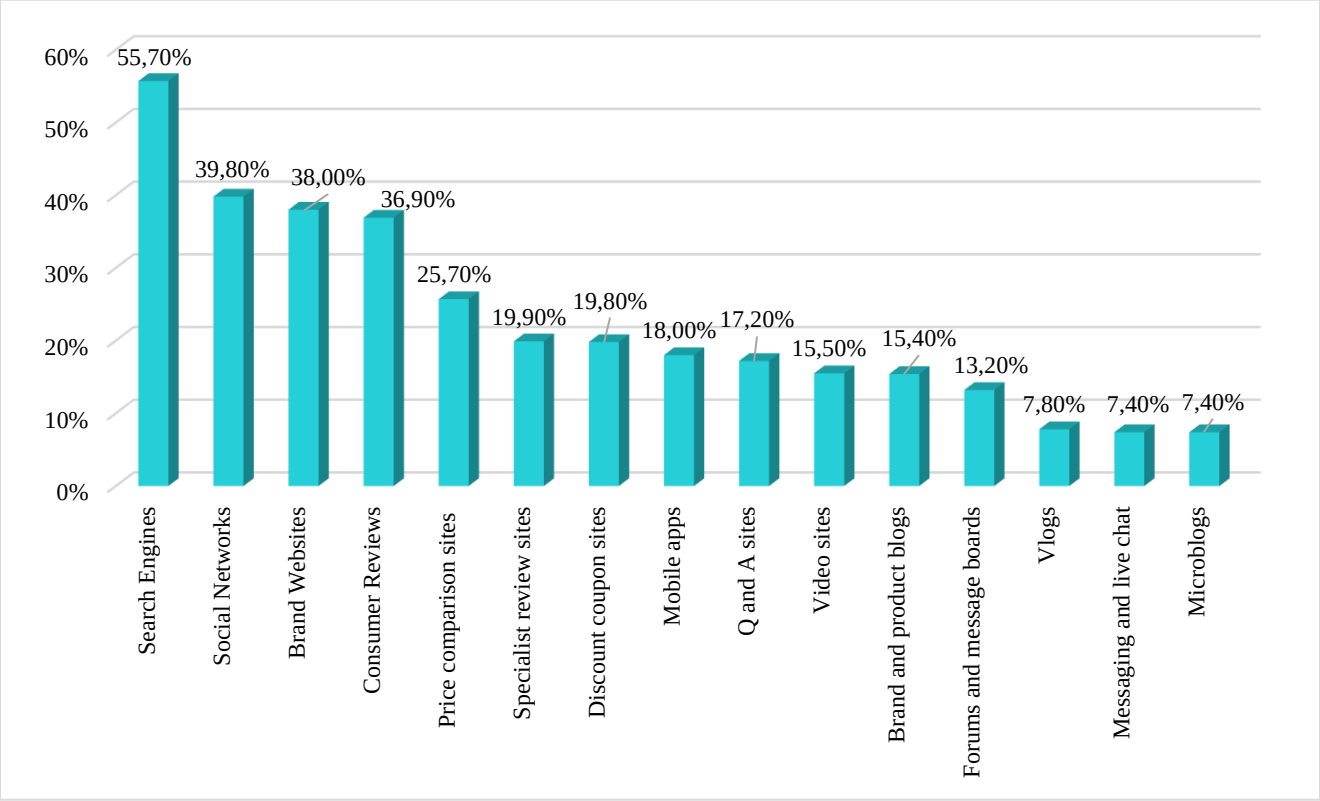
The COVID-19 has transformed shopping habits in retail and digital commerce forever. This is indicated by the second quarter edition of Salesforce's Shopping Index report, which shows that while e-commerce revenues grew 20% in the first quarter, in the second quarter the growth has shot up to 71% globally, and to 67% in Spain. This increase in e-commerce sets a precedent in retail trends that will have to be taken into account for the high sales seasons of autumn and winter. According to the report, e-commerce revenue experienced the largest increase since Salesforce launched the Shopping Index seven years ago. Traffic and spending also showed record increases in Spain of 33% and 19.7%, respectively, in the second quarter, compared to the increases we've seen since 2013 (IT Digital Media Group, 2020).

Figure 43: Sources of brand discovery



Source: Kemp (2022b)

Figure 44: Main channels for online brand research



Source: Kemp (2022b)

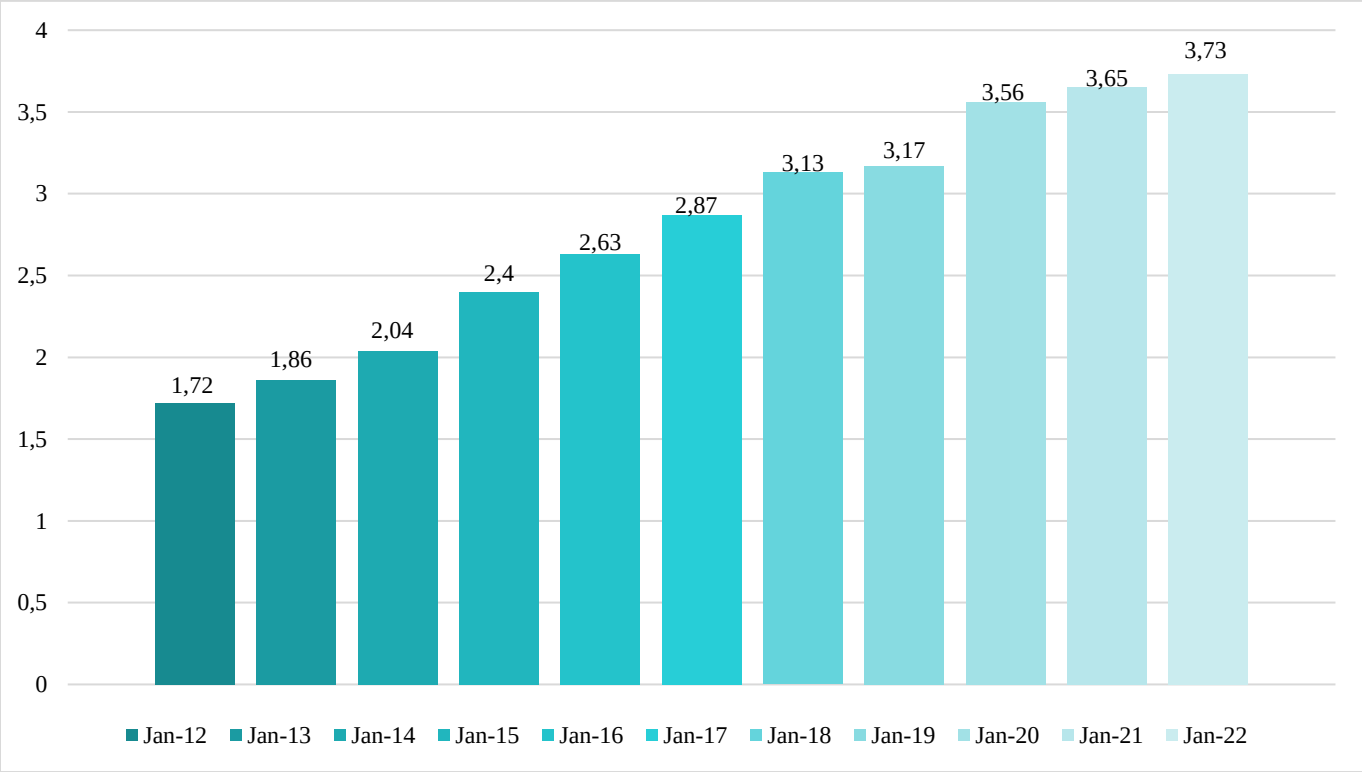
2.7. Palestine

Palestine is an emerging country. The total population of Palestine in January 2022 is 5.28 million, 49.3% of Palestine's population is female, though 50.7 per cent of the population is male. Most of the Palestinian living in urban areas (77.3 %) (Kemp, 2022c).

There are 4.37 million cellular mobile connections, 3.73 of Palestine's population are Internet users, and there was an increase in Internet use over time (figure 45). 3.40 million are active users on social media. 99.0% of Palestinian share social media users accessing via mobile devices. Besides, 65.05% percentage of total web pages served to web browsers running on mobile phones, 33-98% on laptop and desktop computers, 0.96% on tablet devices, and 0.02% on other devices. Additionally, the top-visited websites are Google.com, Youtube.com, Alwatanvoice.com, Facebook.com, and Maannews.net. Moreover, 64.3% are social media users, there is an increase over time in social media users (figure 46). 48.5% are females while 51.5% are male, and most of them are young users (Kemp, 2022c). Most of the Palestinian (55%) prefer connect on social media in the afternoon. Furthermore, Facebook, WhatsApp and Instagram are the most social networks used by Palestinian (figure 47). In addition, Facebook and Instagram (figure 48) are the most

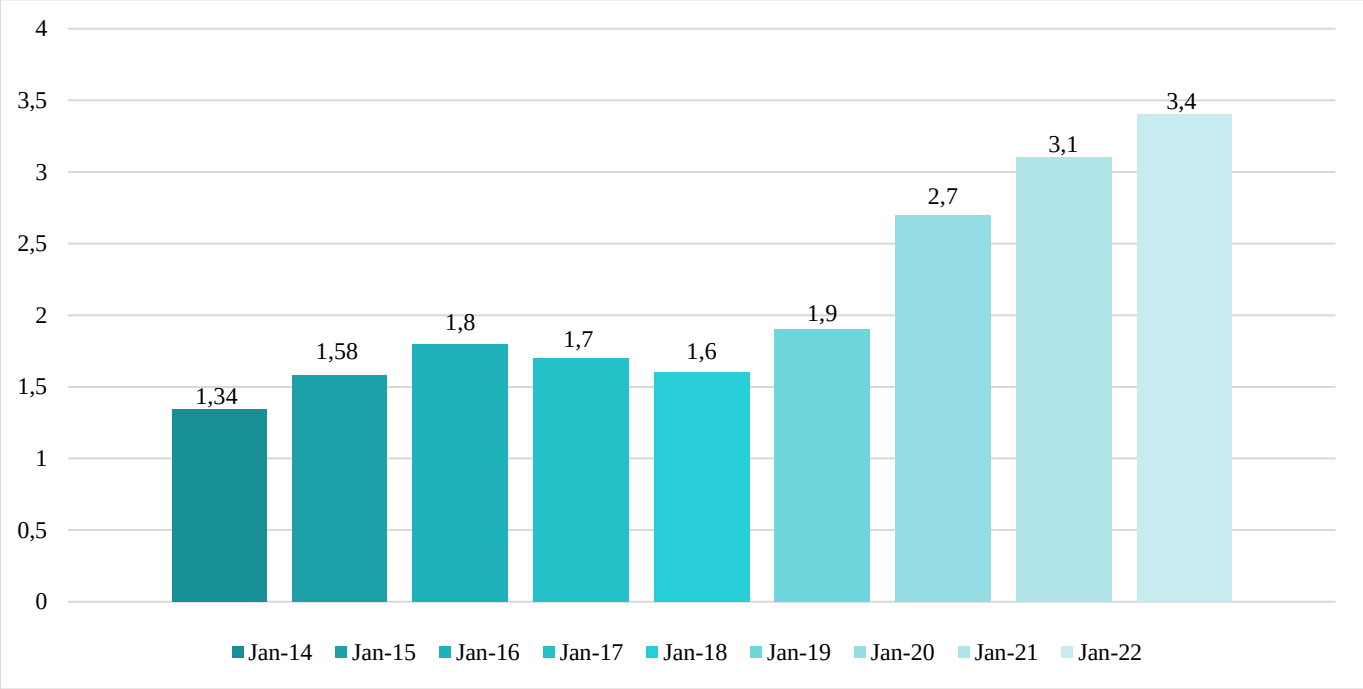
favorite social media for Palestinian. Further, keeping in touch with friends and family and reading news (figure 49) are the most reason why Palestinians use social media (Ipoke, 2022).

Figure 45: Internet users over time in millions



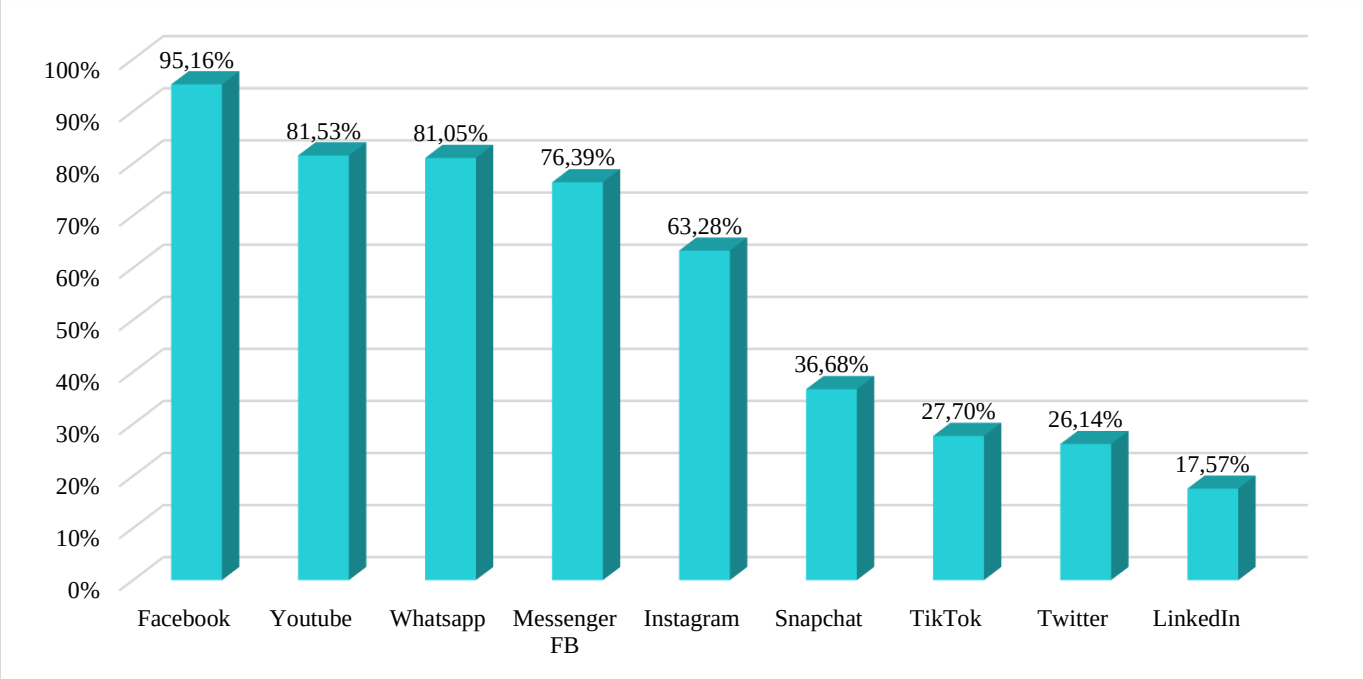
Source: Kemp (2022c)

Figure 46: Social media users over time in millions



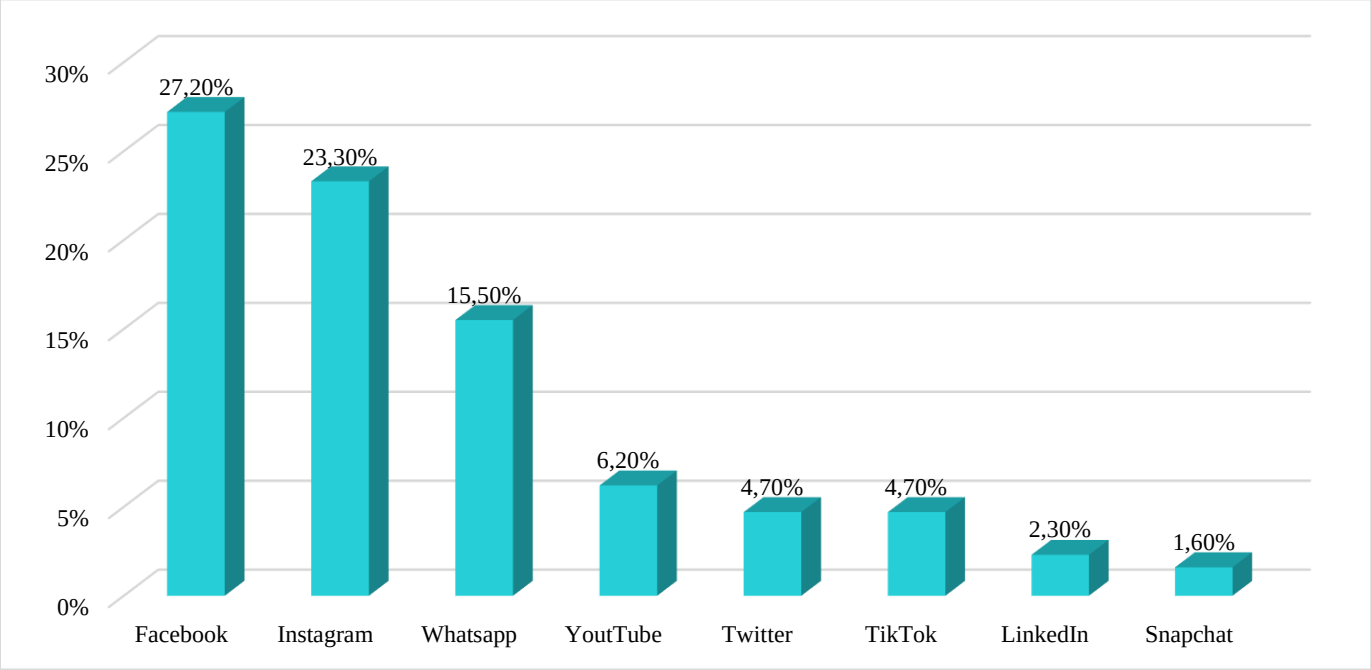
Source: Kemp (2022c)

Figure 47: Most used social media platforms



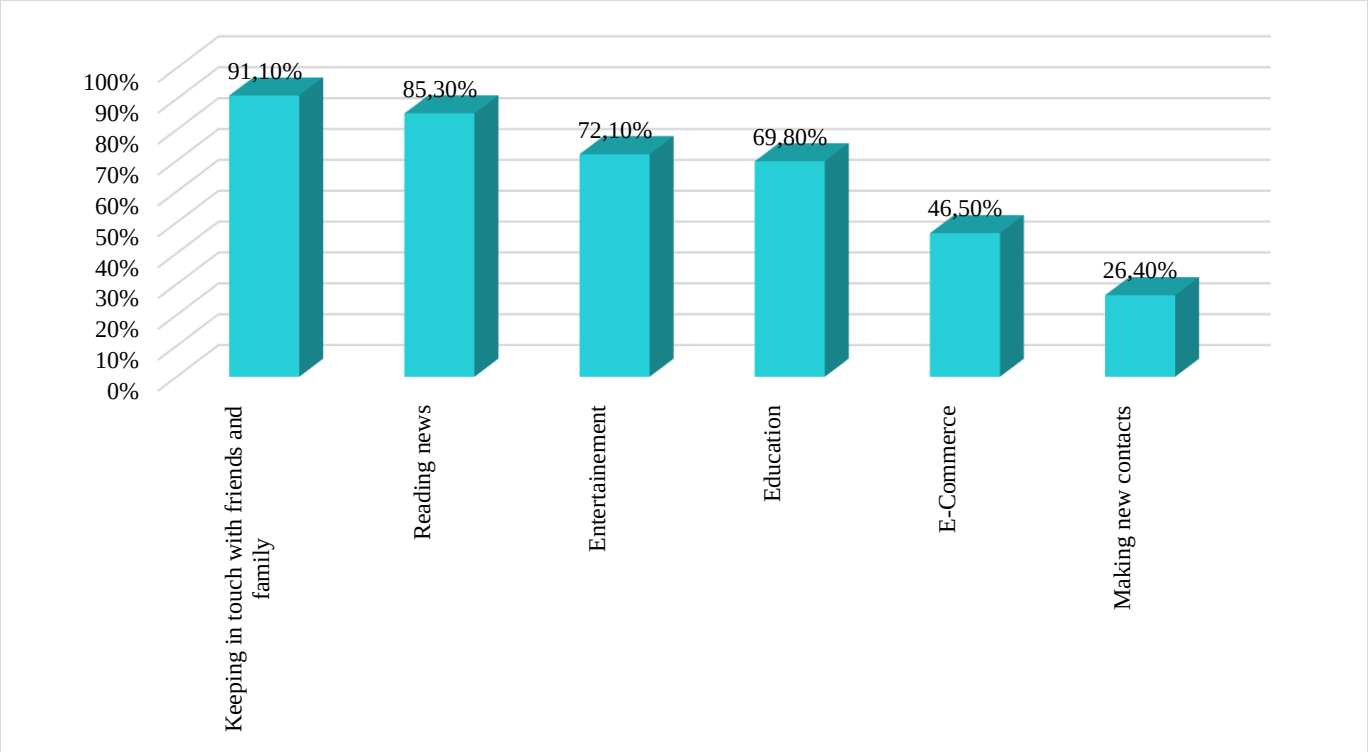
Source: Ipoke (2022)

Figure 48: Favorite social media platforms



Source: Ipoke (2022)

Figure 49: Main reasons for using social media



Source: Ipoke (2022)

2.7.1. Social media in Palestine

Facebook in Palestine:

Facebook is the most social media platform uses by Palestinian, as there are 95.16% of Palestinian on this platform. There are more than 3.9 million users. There are 46.3% females and 53.1% males. Ages between 25 till 35 are the most users on Facebook (Ipoke, 2022).

2.65 million is the potential audience that can be reached with Ads on Facebook, 50.2% is the Facebook potential advertising reach as a percentage of the total population. 46.2% percentage of its Ad audience that Facebook are female, while 53.8% are male. Besides, 99.0% of Palestinian use any kind of mobile phone to access Facebook, 1.0% only use laptops or desktop computers, 14.1% use both computers and mobile phones, and 84.9% only use any type of mobile phone (Kemp, 2022c).

YouTube in Palestine:

During COVID-19 YouTube reach to 81.53% of Palestinian social media users, especially between young Palestinian (Ipoke, 2022).

Instagram in Palestine:

There are more than 2.5 million users on Instagram. 63.2% of Internet users use Instagram. 52.2% of Instagram users are females while 47.6% are males. Ages between 18-24 and 25-34 are the most users on Instagram. Besides, Instagram is the most platform uses for e-commerce in Palestine (Ipoke, 2022).

1.85 million the total potential reach of Ads on Instagram, 35.0% of Instagram Ads reach the total population of Palestine, there was an increase of 23.3% (350 thousand) year on year change in Instagram ad reach, 49.6% of Instagram Ad reach the total of Internet users. Besides, 53.9% of Instagram Ads reaches female, while 46.1% reaches male (Kemp, 2022c).

Twitter in Palestine:

Twitter has played a big part during 2021 in political ads, there was an increase of 26.14% in joining new users. There are more than 1.03 users. There are 65% females Twitter users, while 35% male users. Most Twitter users are young users aged between 18-and 24 (Ipoke, 2022).

2.7.2. Electronic commerce in Palestine

Based on the 2017 Electronic Transactions Law, e-commerce transactions in the West Bank and Gaza are governed by the Palestinian Ministry of Telecommunications and Information Technology. During 2019, 8% of Palestinian Internet users bought goods and services online that range widely from toys, shoes, sportswear, furniture, fashion, cosmetics. In view of the presence of a good telecommunications infrastructure, a well- established banking system and advanced IT

applications that ensure Internet security, the e-commerce market in the West Bank and Gaza has a potential for strong and great growth. The leading telecommunications company, Paltel, has launched e-payment services that enable clients to either delegate responsibility to a bank to pay their invoices online or to pay electronically online directly with credit cards. E-commerce has also expanded in the Palestinian handicraft sector, particularly in Hebron, where Palestinian ceramics are sold online by wholesalers. Parcels sent to the West Bank and Gaza via Jordan from Arab countries that lack diplomatic relations with Israel can suffer long delays (Trade GOV, 2022).

E-commerce continues to expand and spread in Palestine. And it has a become a new way of retailing brands, since 2020 and especially during COVID-19 restrictions it has created a new opportunities and important shifts in markets. And it let companies with no technology and digital marketing to close. Social media benefit companies during COVID-19 to sell their products, Instagram is the most social commerce platform use for e-commerce in Palestine (Ipoke, 2022). During the lockdown, several Palestinian companies used social media to sell their products for the first time (Trade Gov, 2022). Furthermore, most of the companies in Palestine have accounts on social media, where they advertise their products and services, and also sell them to the world. As social media helped the small business to grow in Palestine. Besides, Palestinian prefer to buy from the fashion and technology sectors on social media (Nadsoft, 2022). For example the coral beach jewelery (95.1 K followers), nagham.pro (465 K followers), lanaa.line (481 K followers), Meraki closet Palestine (185 K followers), 970 ps (9843 followers) are Palestinian shops that sell their products on social media, and especially on Instagram.

Since the pandemic of COVID-19, 43% of shoppers now feel more comfortable about online shopping, and nearly 40% of consumers feel more comfortable buying through social commerce and e-commerce platforms and sites as they do not feel afraid to buy through social media platforms like before the lockdown due to the COVID-19 pandemic, as during the lockdown they were buying different products and services such as food, technology machines, and clothes. Furthermore, Brands and shoppers will benefit from increased interaction on social media platforms alongside their digital stores. The more payment options, the more attractive the stores and acceptance to the public, so e-shop owners have to offer different ways of selling to avoid losing customers. By 2040, it is estimated that 95% of all purchases will be through e-commerce. Online stores with a social media presence have average sales of 32% more than those without an e-commerce presence, with 74% of consumers relying on social networks to make 90 purchasing decisions (Ipoke, 2022). In addition, Sellers spend about $ 7.3 billion on artificial intelligence technologies, while more than 120 thousand stores are expected to use augmented reality technologies by 2022 (Ipoke, 2022).

Stories on social media platforms such as Instagram and Snapchat, stories are one of the main elements in promoting products and services in a quick and easy way. As people like to receive short and quick information. Some specialists in this field have pointed out that this type of content constitutes an addiction in the user by continuing to flip this short content for long periods. By analyzing the behavior of media users by specialized statistical websites, it has become clear that they are very much willing to post this type of temporary and fast content. Some studies indicate

that brands publish one temporary content every four days indicating that this type of content is becoming more popular (Ipoke, 2022).

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''What new technology does is create new opportunities to do a job that customers want done. ''- Tim O'reilly

Social commerce

This chapter discuss the evolution and the develop of social commerce and Instagram commerce. As Instagram is the new channel of sales for companies and it is one of the main channels to buy products for customers. This chapter achieved to understand the theories uses in the field of social commerce such as the technology acceptance model, trust commitment theory, stimulus organism response, reputation theory, consumer decision- making theory. This chapter contributes, therefore, to achieve a better understanding of the methods and software of social commerce in explaining the Bibliometric analysis (ScitMAT and Vos Viewer), the structural equation model (Smart PLS), and Neuroscience (eye tracking) (Tobii Pro, SPSS, and R).

3.1.Electronic commerce

Electronic Commerce (E-Commerce) is transforming the whole nature of global commerce, but this revolution is taking place at various speeds in different areas of the world. Besides its remarkable advance in developed countries, e-commerce is increasingly more widely adopted in emerging countries, where its acceptance level is rising quickly. Because of the changes that are currently occurring in the form of purchasing are taking place around the world, commerce has shifted from occurring through face to face contact between people to taking place through non-tangible channels and a wide range of choices, provided depending on the client's needs, aimed at purchasing products, and services As an outcome, companies that traditionally have offered products for sales via traditional channels are discovering improved alternatives to obtain attractive benefits through the online ones (Villa et al., 2018). In addition, e-commerce can be described as an online business deal through the Internet to import or export goods or services. In this regard, online stores are at the heart of the business while Internet users are the buyers or customers. Moreover, e-commerce is often called Internet business (Javid et al., 2019).

E-commerce includes any transaction carried out through electronic devices, enabling business and transforming internal and external relationships to create value and explore market opportunities driven by the new rules of a digital economy. It enables the integration of all transactions of information, products, services or payments through electronic networks, and provides integrated solutions to any transaction through the Internet. Which is considered to be the use of digital communication networks to enable the buying and selling for any product or service (Wigand, 1997; Chuang and Shaw; Andrews, 2002; Cuéllar and Tovar, 2005; Peng and Kurnia, 2008; Jones et al., 2013; Peña García, 2014; Vallejo et al., 2015; Villa et al., 2018). Additionally, regarding to Clark (1999) there are different types of e-commerce such as Business to Business (B2B), Business to Customers (B2C), Customer to Customer (C2C), Customer to Business (C2B), Business to Administration (B2A), Customers to Administration (C2A).

Furthermore, e-commerce can be described from several viewpoints. From the viewpoint of communication, e-commerce is the transfer of products, services, information or payments carried out through computer networks, telephone lines, or other similar communications technology. Besides, from the viewpoint of business process, e-commerce is the process of applying technology to achieve workflow or transaction. In Addition, from the viewpoint of service, e-commerce is a tool to accomplish the organization's and the customer's goals, and to adequately control costs by improving the delivery time. Finally, from an online viewpoint, e-commerce offers the possibility of purchasing and viewing products and information from the Internet or other online services (Phelps et al., 2012; Villa et al., 2018).

The growth in the use of mobile applications continues to increase (Tang, 2019). The rise of smartphones and new mobile technologies has dramatically changed people's perceptions of their telecommunication devices. Mobile applications are referred as mobile operating systems that execute on smart devices and provide enhanced computing power and a range of features through application software (Logan, 2017). Furthermore, Mobile commerce is a technological frontier and

is an exciting field for investigation because of its relative novelty, potential applications, and fast growth (Ngai and Gunasekaran, 2007). In the last years, many people around the world start buying from their mobile phones. Mobile commerce can be considered a subset of e-commerce (Coursaris and Hassanein, 2002) and relates to any transaction with financial value that is carried out over a mobile network (Guan et al., 2002). In addition, mobile commerce refers to transactions conducted through a smartphone or mobile device. Also, mobile commerce applications enable location tracking via GPS to provide their clients with assistance in locating products in their store (Bloomenthal, 2022).

3.2.Social Commerce

3.2.1. Concept of social commerce

Social commerce has become an important development model in the background of ecommerce of the future especially in the business sector. This new type of social commerce initiatives creates high-cost active products to entice customers to share products through social platforms. There is no clear definition for social commerce as it is a new method of e-commerce, which lets customers to produce content via social communication to influence diverse product shops. In addition, social commerce is the use of social media, online media and other communication networks in the background of social media, it is a new form of e-commerce that use social media technology to conduct personal relationships and business information current communication and supports the buying and sales of goods via social communication and user produced satisfied **(**Wang and Xie, 2020). Moreover, the charisma and increasing appeal of social networking sites, like Facebook, Instagram, and Twitter, transformed the innovative standard of e-commerce into social commerce, affecting customers' behavior (Riaz et al., 2021).

Social commerce has many definitions and emerges as a new type of online platform that allows customers to share experiences, opinions and information about where, what and from whom to buy (Xu and Liu, 2019). Social commerce has also been described as the amalgamation of social media, technology, and e-commerce (Yao et al., 2019). In addition, social commerce is being developed as social network platforms upgrade to progressive Web 2.0 and Web 3.0 technologies (Gibreel et al., 2018). Moreover, social commerce creates relationships between merchants and customers since it encourages trade, collaboration, and trust (Lin, 2019). Social commerce includes group purchasing, social shopping, collaborative consumption and social bundling (Doha et al., 2019). Furthermore, in 2005 Yahoo introduced social commerce for the first time, which let consumers share, comment and review products (Baethge et al., 2016). Social commerce indicates a 'social' dimension adopted from social media platforms, for example, Snapchat, Instagram, and Facebook (Henninger et al., 2019a). Social commerce' is the application of social media as a canal of e-commerce. It is easy to connect with consumers, containing public relations, and may spread the goal group methodically (Kaewpackdee and Lekchareon, 2020). Additionally, the rapid advance of social commerce has provided new opportunity for companies and businesses (Othman et al., 2019). Many customers from all over the world now prefer to buy services and products through national and international online channels (Palos-Sanchez et al., 2019). Social commerce

is a developing platform that involves dissimilar social features to entice the attention of online customers (Hussain and Li, 2021). Chen et al. (2019) suggest that social commerce is alike to traditional e-commerce through the transaction because the characteristic of physical separation may aggravate uncertainty. According to Meilatinova (2021) social commerce states an extension of e-commerce sites, combined with social media and Web 2.0 technology to inspire online acquisitions and interactions with clients before, during, and after the buying. On the other hand, social commerce refers to the exchange of products and services of financial value, as well as all the activities associated with the implementation and initiation of business dealings using social media. Furthermore, since social commerce can be mobile and can consequently be considered as part of mobile commerce, social commerce differentiates itself from mobile commerce by operating in social media communities. Besides, with regard to application commerce (business transactions over retail apps), most users log on to their social media profiles through smartphone applications. Thus, social commerce can also be associated with app commerce if the business interactions take place in a social context through a dedicated application (Brusch and Rappel, 2020). There are two core types of social commerce websites: on the one hand, e-commerce sites based on Web 2.0 concepts and technologies (i.e., www.amazon.com), and on the second hand, e-commerce platforms based on the foundations laid by the Web 2.0 technologies that later upgraded to the most up-to-date e-commerce technologies (for example, www.facebook.com/Starbucks). With regard to the first type, social features such as content sharing and communication between users are not especially considered. However, the second type of social commerce websites feature a distinct purchasing method that leverages data from user purchase pricing and purchase history among other factors. Thus, the aforementioned factors are especially considered when examining this particular type of social commerce (Esmaeili et al., 2020).

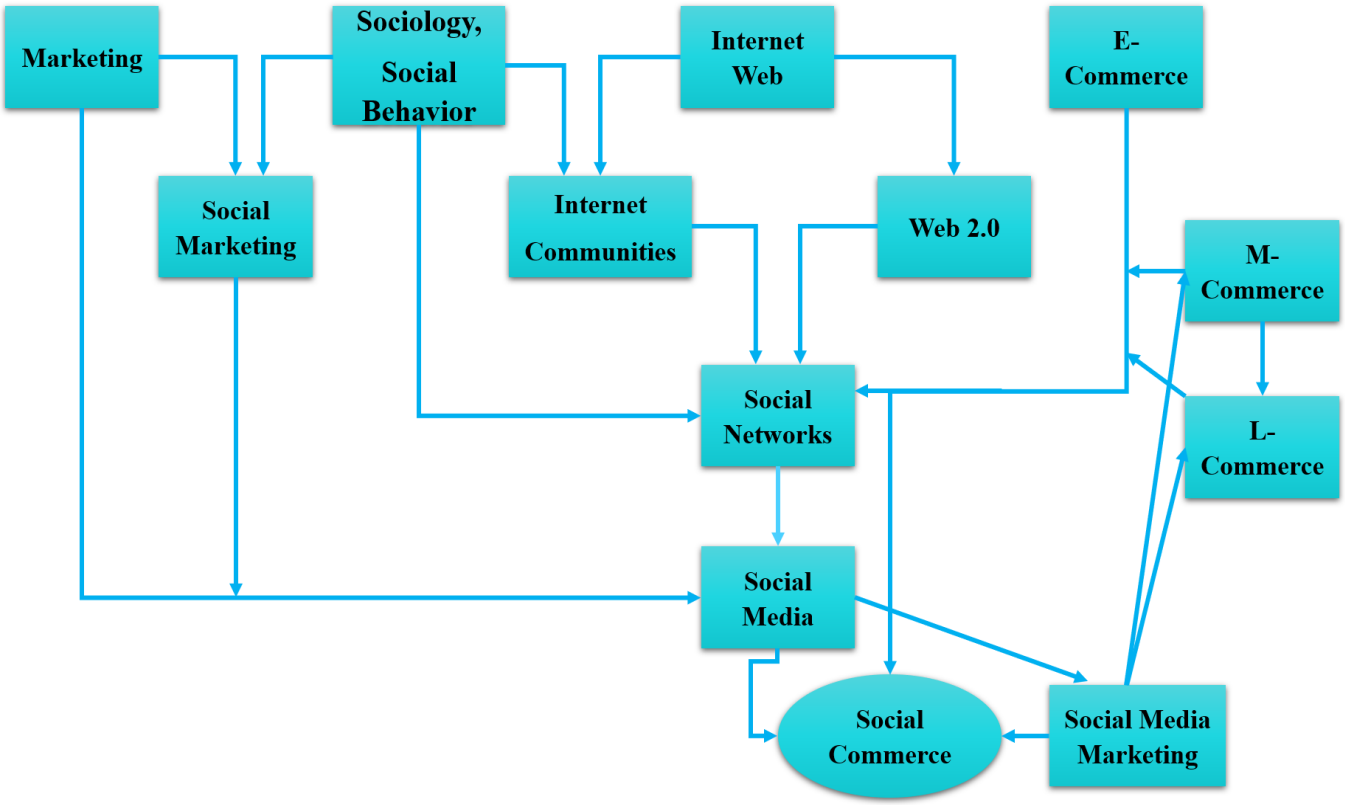
Social commerce as an attractive means to improve product sourcing by allowing companies to connect with their customers while providing competitive advantages. Besides, social commerce can also be approached as a subcategory of e-commerce which supports social connections and encourages electronic word-of-mouth among satisfied customers. Additionally, social commerce enables customers to cooperate online and get advice from other trusted users while finding products and services and learning about them through social networks, tags, podcasts, blogs, chat rooms, and ranking and recommendation systems. Social commerce is becoming a significant hub for product sourcing, which supports firms to connect through clients and to gain competitive advantages. Social commerce is measured a subgroup of e-commerce, that supports social connections and user gratified contributions. Furthermore, a social commerce is a place where people can cooperate online and obtain advice from other trusted individuals, discovery products and services, and buying them by social networks, tagging, podcasts, blogs, chat rooms, ranking and recommendation systems. (Abed, 2020). Besides, social commerce is useful for customers and companies providing advantages such as selling through social media, improving e-commerce websites by adding social media tools, and combining social media to drive the overall commercial performance of brick-and-mortar retailers (offline) while improving their customer service (Bürklin et al., 2019). Likewise, on social commerce customers can like, comment, share, and review products and services (Henninger et al., 2019b). Additionally, social commerce helps customers obtain and compare information about products and services in order to make the best purchase decision (Blazquez et al., 2019). In this sense, Jin and Ryu (2019) revealed that social

commerce can build trust, improve relationships between companies and consumers, and develop interpersonal relationships between brands and their consumers, creating a considerable opportunity for brands to co-create value for their consumers. Finally, social commerce activities may establish a common identity and bonds between customers. In this sense, community identification is developed over a comprehensive range of behaviors such as commitment to the purpose of the community, achievement of objectives, widespread mutuality, satisfaction of common needs, acceptance of guidelines on participation, and welcoming new members. Furthermore, bonds among social commerce customers can be established through continuous interactions among those who are more active in the community and also between the less experienced users, who value the information provided by the platform connoisseurs to whom they feel emotionally attached through gratitude (Molinillo et al., 2020). In social commerce, firms use social media to trade, involve and interact with their consumers, create communities, and advance loyalty behaviors, through tools for instance video sharing, review systems, online chats and virtual groups, among others (Molinillo et al., 2021).

3.2.2. The evolution of social commerce

Social commerce developed from the combination of numerous fields (figure 50), regarding to Marsden and Channey (2012) describe how social media contributes to sales, creation it a social commerce application. Social commerce was the growth of Web 2.0 technologies, then commercial applications, social networks activities, and the use of social software (blogs and wikis) appears. Moreover, a main driver of social commerce is the globalization of business. This encouraged the essential for collaboration of clients, employees, and partners, sometimes worldwide. Web 2.0 applications formed an effective and efficient platform for such collaboration. Also, Web 2.0 is a main funder to social media, which is the main driver of social commerce. on the other hand, the growth and fast development of smartphones and mobile computing have likewise enabled social commerce. Mobile commerce is the foundation for social commerce models for instance social Networks, consumer/company networking, and location-based applications. In addition, A key importance of social commerce is its marketing orientation. Traditional marketing actions were practical to Internet marketing in the mid-1990s, when businesses started building websites and using e-mail to promote their products for sale offline. As the Web established, marketer’s practical the Internet to enable e-commerce dealings. Until that fact, dealers-controlled brand messages and sustained their promotion and other communication speeches to clients and potential customers. With the rise of social media, marketing communication altered to a discourse with Internet users, and numerous marketing strategies evolved or totally altered to support social commerce (Turban et al., 2017).

Figure 50: The main foundations of social commerce



Source: Turban et al. (2017)

The two main fundamentals in social commerce are social media marketing and Enterprise 2.0. Social media marketing (SMM) is the application of marketing communication and other marketing tools using social media. Social media marketing enables social commerce, repairs brand reputation damage in social media, builds brands, and raises long-term client relationships, among other things. The second main category of social commerce is Enterprise 2.0, similarly known as social media-based Enterprise, which is used by a growing number of businesses to behavior numerous social media and social commerce activities inside the creativities (e.g., recruiting, problem-solving, joint design, and idea generation) (Turban et al., 2017).

3.2.3. Advantages of social commerce

Turban et al. (2017) proposes to identify three major categories which are shown in Figure 51.

Figure 51: Stake holders types

Source: Author

3.2.4. The advantages of social commerce for clients

The achievement of social commerce depends on its benefits to clients. According to Turban et al. (2017), the main advantages include:

1- It is easy for clients to use social commerce technology.

2- Clients can get excellent customer service from suppliers.

3- Clients can achieve wide social context and relevance during their purchasing decisions.

4- Clients can easily obtain recommendations from their friends and other users through social networks, which allows them to decide whether or not to buy the product or service they want.

5- Purchases are better coordinated by exact wants, tastes, needs, and wishes of clients; this rises satisfaction and decreases product choice decision time.

6- Social commerce makes it easier for customers to help other clients (social support).

7- Clients can communicate with people and companies that would otherwise be inaccessible to them.

8- Social commerce adjusts to the lifestyle of mobile devices.

9- Clients are offered special promotions (for example, through Groupon) in order to obtain high discounts.

10- Clients can find new friends (for example, for travel) and communicate in the social networks.

11- Social commerce develops greater trust in suppliers (through closer relationships).

3.2.5. The advantages of social commerce for retailers

The achievement of social commerce depends on its benefits to Retailers. According to Turban et al. (2017), the main advantages include:

The retailers can benefit from social commerce in the following ways:

1- Improved sales as collective filtering and other social impact approaches are used.

2- Sellers get free word-of-mouth marketing advertising.

3- Clients can give their opinion on product design and the market communication strategy.

4- Improved website traffic (recall the Sony opening case), which rises sales and revenue.

3.2.6. The advantages of social commerce for other types of enterprises

Giving to Turban et al. (2017) to increase sales and revenue companies can benefit from social commerce in a wide variety of ways:

1- Foster improved internal relationships (for example by growing employee satisfaction and productivity).

2- Offer free advice to small enterprises by other experts and enterprises (for example through LinkedIn groups).

3- Comprehend that it is typically not expensive to install and operate social commerce systems.

4- Discover specialists rapidly, both externally and internally, whenever wanted.

5- Perform market research inexpensively, rapidly and get feedback from business partners, employees and customers.

6- Rise market share and profits.

7- To build strong brands via promotions and conversations on social media.

8- Micro segment in order to reach the very small markets with low-cost branded offerings.

9- To manage the business and brand reputations online.

10- To construct brand communities for positive word-of-mouth online.

11- Improve customer support and service.

12- Rise sales, and traffic at the firm website and at physical retailers.

13- Enable market research by monitoring online discussions.

14- Raises the ranking of brands and companies on search engine results pages.

3.2.7. Concerns and limitations of social commerce

While social commerce has numerous chances for organizations, its implementation may include some certain risks and maybe potentially complex problems for example combination of existing and new technologies. Representative risk aspects are challenges in justifying social trade initiatives with senior managers. privacy and security issues, possibilities of scheme, legal worries, quality of user generated content (UGC), and the loss of staff time during working hours. Companies also risk loss monitoring their corporate images and social media reputation. The main barriers to the acceptance of Enterprise 2.0 are resistance to modification, effort in measuring ROI, and problems of combination with current IT security and systems (Turban et al., 2017).

3.3.Instagram commerce

Instagram commerce or Instagram shopping is a new amazing feature on Instagram. Since November 2016 Instagram started testing shopping features. In March 2019 Instagram checkout launched. Instagram is the perfect place for companies and businesses to engage with a diverse and exciting community of buyers (Instagram Shopping, 2022). Each month, there are 130 million users of Instagram tap to disclose product labels in shopping posts and publications. At the moment only in the USA is available the checkout, while the other ways of buying through Instagram are available in most of the world (Instagram Shopping, 2022).

There are different features in Instagram (figure 52) that lets users to shop through photos and videos, that offers business and companies an immersive storefront for users to discover their greatest products and services that comprises shops (storefront where users can buy directly form the businesses and brands profiles), shopping tags (it is a feature that lets users to tag products from the catalog of businesses that can let users to buy these products from the website or in the app), shop in explore (A tab in Explore that allows users browse tagged shoppable content from creators and brands), collections (a collection of products that businesses and brands can organize for their shop store to benefit users discover the products and services they desire to have), product detail page (which include information related to a product for example price, colors, and product description), Ads with product tags (Businesses can build new advertisements with product tags or enhance existing purchase posts in the Instagram app and Ads Manager to grow the reach of the content they create for shoppable content. These advertisements generate conversions, links and engagement), product launches (where users can set a reminders when a product is available, as this method let businesses and companies to advertise a product on Instagram, then users got a notification so he/she can buy it), shopping partner permissions (where business can have permissions with other business to tag products and link shop, that let them rise the reach of their products and services), Live shopping (which let creators and businesses tag a product while they are going live on Instagram) (About Instagram shopping, 2022).

There are several ways of buying through Instagram (figure 53). First, buying through the principal shop (storefront). Second, buying through the story on the user profile home page. Third, buying through the post on the user profile home page. Fourth, buying through the profile of the brand. Fifth, buying through the view shop of the brand profile. And, Sixth, buying through the story of the brand profile.

3.3.1. Advantages and disadvantages for Instagram commerce (business accounts)

According to Burgess (2022), the main advantages include:

1- Businesses can put information in the Instagram bio such as email, phones, links etcetera.

2- Its free and easy to use.

3- Consumers can shop through the application of Instagram.

4- Businesses can learn more about their audience through Instagram insight where businesses can know what is happening on their content and profile for example the total number of impressions per week, the gender of the followers, the ages of the followers, and the total of time that followers are actively posting, etcetera.

5- Swipe up links in stories, and contact links.

6- Businesses can run advertisements to increase brand awareness.

Secondly, the same author identified the following disadvantages:

1- Businesses can feel less personal and reduce their visibility.

2- Reduce organic reach as it is hard for businesses to appear always on the explore page.

3- Business should pay for the ads to reach to users.

4- For small business with few followers have limited features.

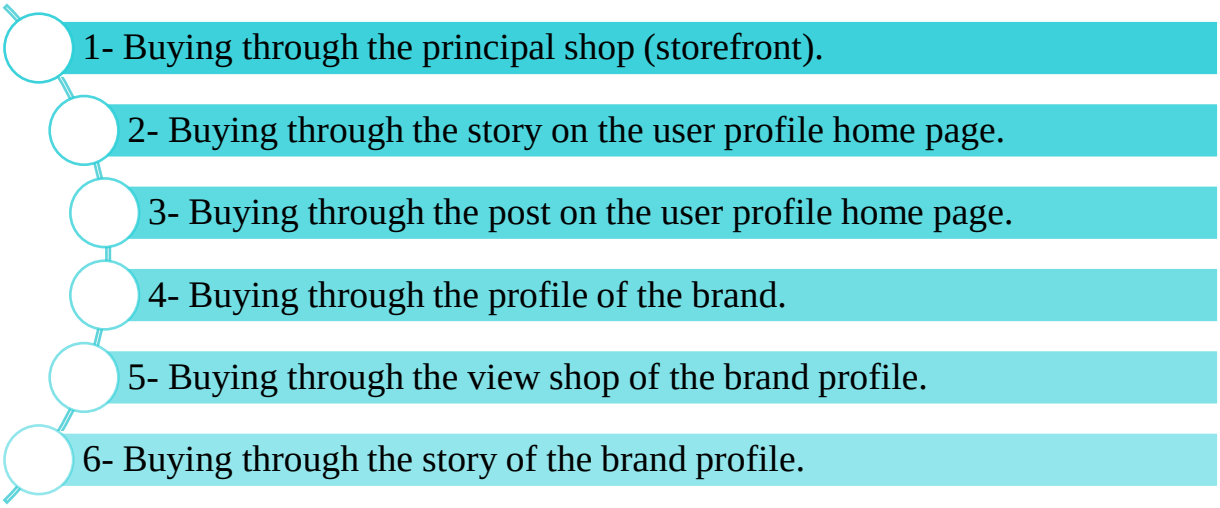
5- Competitors can see everything as everything is public.

6- It is hard to use it through PC as it is a mobile app.

Figure 52: Feature of Instagram commerce

Source: Author

Figure 53: Methods of buying through Instagram commerce



Source: Author

3.4. Theories used in the field of social commerce

3.4.1. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) (Davis et al., 1989) is an adaptation of the general Theory of Reasoned Action (TRA) of Fishbein and Ajzen (1977), and it is specifically aimed at modelling the acceptance of information systems. Dass and Pal (2011) examined TAM to reveal that consumers' acceptance of technological innovations is predicted through their intention to use the innovation, which in turn is defined by a person's innate beliefs about the innovation. Intention to buy is a concept of the technology acceptance model constituting one of the greatest and most effective theories in predicting consumers' intention to use a system (Pavlou, 2002). Moreover, Rauniar et al. (2014) reported that Perceived Ease of Use and Perceived Usefulness affect consumers' attitudes toward technology usage (i.e. Purchase Intention). According to TAM, Intention to use technology can lead to the adoption or rejection of new technology. Moreover, TAM suggests that the intended behavior of consumers in the use of an information system emerges from intention, which is created by customers' attitudes toward the use of new systems and the system's perceived usefulness (Zhu, 2016). Also, numerous technology adoption models have confirmed that ease of use, usefulness, attitude, perceived trust, and subjective norms are the most significant factors impacting customer intention and eventually the continued usage of new technology (Dwivedi et al., 2019). In this context, researchers who have assessed the determinants of intention have generally focused on the perceived usefulness and perceived ease of use examined in the TAM model. Moreover, TAM has been approached in several studies to evaluate the acceptance of innovative technology in numerous fields: email usage, acceptance of mobile shopping applications, acceptance of e-shopping, and acceptance of the use of social media (Nedra et al., 2019). Furthermore, numerous scholars have adopted TAM to examine online shopping (Zhu, 2016). Besides, Venkatesh and Davis (1996) found that both Perceived Usefulness and

Perceived Ease of Use have a direct impact on intention as a behavior determinant, therefore eliminating the need to incorporate Attitude into the research model of the present study. In addition, Qinchang (2016) explained that the TAM proposed behaviors toward information systems are derived from intention, created by customers' attitudes toward the use of new technology and the Perceived Usefulness of information systems. Additionally, Nedra et al. (2019) revealed that TAM has already been advanced in numerous research studies to estimate the acceptance of innovative technology in many fields such as e-mail usage, acceptance of mobile shopping applications, acceptance of e-shopping, and acceptance of the use of social media. With regard to e-commerce extant literature (Martins et al., 2014) TAM is usually approached as a foundational theory. Furthermore, most of the previous research on social commerce adoption has widely used TAM (Hajli, 2012; Abed, 2016; Sheikh et al., 2017; Samarasinghe and Silva, 2019; Doha et al., 2019; Makmor et al., 2019 ; Cho and Son, 2019; Kwon et al., 2020; Abed and Ezzi, 2020 ; Sarker et al., 2020).

3.4.2. Trust Commitment Theory

Trust Commitment Theory (TCT) (Morgan and Hunt, 1994), describes trust and commitment as two important factors instrumental to cultivate and sustain beneficial relational exchanges in marketing. In addition, Morgan and Hunt (1994) suggest that trust and commitment also play a key role in driving customer behavior, inspiring sellers to maintain investment relationships by collaborating with exchange partners for valuable short-term advantages compared with the prospect of remaining with current partners. Nevertheless, there is little research on the application of TCT in studying the purchase intention of social commerce. Trust theory is used as a context to study the relationship between customers' trust in social commerce (Beyari and Abareshi, 2018). Trust should be measured as a priority for customer purchase intention afterward using social commerce, as trust plays a key role in online connections. In this sense, TCT has been commonly applied and used within diverse research backgrounds, for instance, in an interpersonal relationship (Costa, 2003), buyer–seller relationship (Doney and Cannon, 1997), and inter-organizational relationship (Geyskens et al., 1996), and it occupies a dominant position in examining relationships established on the Internet (Wu et al., 2010). In this research model, trust is used as an aspect to test the elements affecting customer purchasing intention.

According to Moorman et al. (1992) is to clarify the growth of long-term relationship between exchange parties. Commitment means ''a stable desire'' between parties to keep an important and valued relationship. Trust is a multi-disciplinary concept, which will occur once one party has sureness in an exchange partner's honesty and reliability. Besides, this theory designates five antecedent variables (opportunistic behavior, relationship benefits, relationship termination costs, and communication) and five consequence variables (decision-making uncertainty, collaboration, agreement, functional conflict, and tendency to leave) (Morgan and Hunt, 1994). In addition, Trust commitment theory main principle is that founding and supporting business relationships between exchange parties necessitates simultaneous acceptance of partnership trustworthiness and sureness as dynamic inseparable variables (Wang et al., 2016). As well, this theory can be used to endure and establish trade relationships between customer, employees and vendors. Also, the

commitment-trust theory of relationship marketing sites trusts and the supplementary sense of commitment as the elementary structure blocks on which to base powerful relationship marketing (Morgan and Hunt, 1994).

3.4.3. The Stimulus Organism Response

The Stimulus Organism Response (S–O–R) model essentially posits that human behavior (action and reaction) and stimulation are connected and affect each other through the human organism. In the early days of environmental psychology, Mehrabian and Russell (1974) proposed the stimulus–organism–response (S–O–R) model. This framework comprises three distinct dimensions: the environment or stimulus (S) that creates behaviors and responses, the organism (O) that responds and the actual response (R). In addition, the S–O–R model aims to combine individuals' responses to clarify common emotions and perceptions with regard to external stimuli along with the positive or negative behaviors that are subsequently generated. In this regard, the S–O–R model theorizes about the connections between people and the environments in which they live. In this sense, stimuli are parts of the environment felt by a person. In the context of the S–O–R model, organism refers to the processes within people's mind that drive the impact of stimuli on their probable responses or actions. Response is theorized as people's acceptance or avoidance of their environment (Mehrabian and Russell, 1974). In addition, the relevance of the S–O–R framework can mostly be explained by its holistic approach to the emotional, cognitive and affective developments that a person experiences while considering the acceptance or avoidance of a specific behavior. The S–O–R framework has been used by numerous researchers to describe alterations in the purchase making processes in a variety of contexts, including tourism (Kim et al., 2020) and service encounters (Gupta et al., 2019) and online shopping environment (Animesh et al., 2011).

3.4.4. Reputation Theory

Reputation Theory (RT) (Bromley, 1993; Emler, 1990) supports the individuals and organizations are involved in many reputation-related processes. Furthermore, Bromley (1993) and Leuthesser (1988) posited that companies are interested in monitoring their own reputation. Moreover, Fishbein and Ajzen (1977) and Nisbett and Ross (1980) indicated that monitoring reputation leads to understanding the degree to which the reputation of an entity is good or bad. Furthermore, monitoring facilitates the growth of reputation-related opinions. Such opinions might be described as either descriptive (involving a set of relations tied to a social category) or causal (referring to the degree to which a specific action affects the reputation of a company). Additionally, this theory suggests that a community entity strives to achieve reputation (Bromley, 1993). Companies with a good reputation see improved sales compared to companies with a lower reputation (Bromley, 1993; Yoon et al., 1993). In this sense, reputation management emerges in response to reputation issues. Usually, companies engage in actions that will cement and improve their reputational standing.

3.4.5. Consumer Decision- Making Theory

Consumer decision making has always been a topic that has long interested researchers and investigators. In 1963 developed the theory by Howard. This theoretical approach considers the consumption decision as a problem-solving task aimed at a specific consumption choice (Olson and Reynolds, 2001). This theory affirms that when consumers search for information from their own sources, they will evaluate their choices by purchasing from a variety of products (Hennig-Thurau et al., 2004).

3.5. Methods and software used in each article

3.5.1. Bibliometric analysis

Bibliometric mapping, or science mapping, is a significant research topic in the field of bibliometrics. Bibliometric analysis is a statistical evaluation of published scientific articles, books, or the chapters of a book, which can help measure the influence of a work within the scientific community. Besides, Bibliometric analysis offers a means to overcome some limitations of the additional classical methods to literature reviews (meta-analysis or content analysis). (Morris and Van Der Veer Martens, 2008; Van Eck and Waltman, 2010; Cobo et al., 2012b).

SciMAT:

SciMAT founded by a research group (Soft Computing and Intelligent Information Systems), such as Cobo, López-Herrera, Herrera-Viedma, and Herrera at the university of Granada (Cobo et al., 2016). SciMAT is built on the science mapping analysis approach accessible in Cobo *et al.* (2011), which permits investigators to carry out science mapping studies under a longitudinal perspective (Price and Gürsey, 1975; Garfield, 1994). Thus, includes measures, methods, and algorithms for all the stages in science mapping workflow, from preprocessing to the visualization of the outcomes. SciMAT permits the investigators to transfer out researches based on numerous types of bibliometric networks. Diverse standardization and similarity measures that are available for use with the data. Many clustering algorithms can be selected to cut up the data (Cobo et al., 2016). Moreover, in the visualization module there are three pictures (evolution areas, strategic diagrams, and cluster networks) are used together, which lets the investigator to obtain a clearer understanding of the findings (Cobo et al., 2016).

The main features of SciMat are SciMAT incorporates methods for constructing the most of the bibliometric networks, diverse similarity measures for standardizing them and constructing the maps utilizing clustering algorithms, and a variety of visualization tools to interpret the results. In addition, SciMAT enables the analyst to conduct a scientific mapping approach in a longitudinal context for the purpose of analyzing and mapping the intellectual, conceptual or social evolution of a field of investigation over successive periods of time. Besides, SciMAT includes all the required modules to perform all the stages of the scientific mapping workflow, that can be

customized on an ad-hoc configuration. It assists the research analyst in performing the various stages of the scientific mapping workflow, from the acquisition of data and pre-processing to the visualization and evaluation of the output. Furthermore, SciMAT constructs scientific maps enhanced with citation-based bibliometric measurements including: q2-index, g-index, hindex, hgindex, etc. Further details about the h-index and its variants are available on the h-index & variants website. Lastly, SciMAT provides a full range of preprocessing facilities, for example, time cutting, duplicate and misspelled element detection, data reduction and network preprocessing (Cobo et al., 2016).

VOS Viewer:

VOS viewer was established by Nees Jan van Eck and Ludo Waltman at Leiden University's Centre for Science and Technology Studies (CWTS) (VOSviewer, 2022). VOS viewer permits users to make scientific maps based on network data and discover them. Besides, VOS viewer is a software tool for building and visualizing bibliometric networks. These networks may for example contain journals, researchers, or separate publications, and they can be created based on citation, bibliographic coupling, co-citation, or co-authorship relations. VOS viewer likewise gives text mining functionality that can be used to build and visualize co-occurrence networks of cruel terms removed from a form of scientific literature (Visualizing Scientific Landscapes, 2022).

3.5.2. Structural Equation Model

Structural equation modelling (SEM) is a group of statistical methods that allow analyzing a set of relationships between one or several independent, continuous or separate variables, and one or several dependents, continuous or separate variables. Both independent and dependent variables can be any measured factor or variable. SEM is also known as causal modelling, causal analysis, path analysis, simultaneous equation, analysis of covariance structures or factorial analysis. The two last ones are essentially special types of SEM. In addition, SEM allows answers to questions that include multiple factor regression analysis. At the simplest level, a researcher proposes a relationship between a single measured variable (acceptance of risk behaviors) and other measured variables (gender, academic performance and institutional linkages) (Ullman et al., 2012).

In recent years there was an increase in the researches of the Applications of structural equation modelling (SEM) (Hair et al., 2017a; Matthews et al., 2016; Rutherford et al., 2011, 2012). This is mainly due to the method's enhanced capability to assess the validity and reliability of multi-item concept measures as well as test structural model relationships (Bollen, 1989; Hair et al., 2012). Besides, SEM is a mixture of two powerful statistical methods: structural path analysis and exploratory factor analysis, which allows simultaneous assessment of the structural model and the measurement model (Lee et al., 2011). In addition, the variance clarified in the dependent variable(s) is higher using SEM than multiple regressions because it accounts for both direct and indirect effects (Lee et al., 2011).

On the other hand, PLS-SEM is maximizing the variance described in the dependent variable(s). Besides, PLS-SEM is based (se centra) on the composite model (Hair et al., 2017b). But, PLS-

SEM is a non-parametric method, which prevent the direct determination of inference statistics. In contrast, researchers depend on bootstrapping (classically using 5,000 samples) to originate standard error estimates of model parameters, which enable significance testing. Also, structural relationships are assessed by the size and significance of the beta coefficients. Structural model evluation in PLS-SEM reflects the model's predictive competences, classically using the coefficient of determination (R2 value), which tests the model's in-sample prognostic power (Hair et al., 2017b). Furthermore, PLS-SEM overcomes the surface contrast between predictive and confirmatory research, subsequently investigators using the method expect their model to have high predictive correctness, though also being grounded in well-developed fundamental descriptions (Sarstedt et al., 2018). For variance-based SEM (PLS-SEM), a more exact measure of discriminant validity, heterotrait-monotrait ratio of correlations (HTMT), was newly planned (Henseler et al., 2015).

Smart PLS:

In 2005 Smart PLS was established by Ringle, Wende and Will. Besides, Smart PLS is one of the leading and famous software applications for partial least squares structural equation modelling (PLS-SEM). Since the lunch of Smart PLS, the program has expanded in popularity not only because it is easily obtainable to researchers, scholars and academies, nevertheless also because it has a sociable user border and advanced reporting characteristics (Wong,2013). Besides, Regarding Purwanto et al. (2020) Smart PLS is a statistical software with the similar aim of testing the relationship between variables, both between indicator variables and with latent variables. Moreover, with Smart PLS users can calculate and examine several analyses such as the endogenous variable variance, Inner model path coefficient sizes and significance, Outer model loadings, Indicator reliability, Internal Consistency Reliability, Convergent validity, Discriminant validity, Examination Structural Path Significance in Bootstrapping (Wong,2013). The use of Smart PLS is extremely recommended when there is a limited number of samples, though the model built is quite complex. Also, the benefits of Smart PLS are that it is easy to use, the price of the software is inexpensive, although the disadvantage is that not all categories of SEM can be done because this software program is devoted to processing SEM data with minor samples, consequently it is not appropriate for investigation with big samples (Purwanto et al., 2020).

Multigroup Analysis (MGA):

Multigroup analysis (MGA) enables testing whether predefined groups of data have significant differences in their estimates of group-specific parameters for example path coefficients, outer weights, and outer loadings. SmartPLS gives results from three different methods based on the results of bootstrapping for each group (Ringle et al., 2015; Hair et al., 2021).
There are several analyses for MGA such as the Confidence Intervals (Bias Corrected), this technique calculates the bias-corrected confidence intervals for the group specific approximations of parameters in the PLS path model. The group-specific outcomes of a path coefficient are significantly dissimilar if the bias-corrected confidence intervals do not coincide. Beside the Partial Least Squares Multigroup Analysis (PLS-MGA), this technique is a nonparametric significance analysis for the difference in group-specific outcomes based on the PLS-SEM bootstrapping outputs. An outcome is significant at the 5% error probability level if the p-value is less than 0.05

or greater than 0.95 for a specified group-specific path coefficient difference. Moreover, Parametric Test, this technique is a parametric significance test for the difference in group-specific PLS-SEM outcomes that makes the assumption of equal variances among groups. lastly, Welch-Satterthwait Test, this technique is a parametric significance analysis for the difference of group-specific PLS-SEM outcomes that assigns different variances between groups (Ringle et al., 2015).

Furthermore, using the application of MGA, investigators are therefore able to analyze the differences among two models that are identical for various groups. The analysis of the presence or absence of multigroup differences can be performed on the basis of a bootstrap or permutation outcome for each group. Additionally, PLS-MGA be useful in determining differences between a priori specified groups among the whole dataset (Horn and McArdle,1992; Keil et al., 2000; Matthews, 2017).

Additionally, the steps in adapting MGA PLS-SEM, first, generate data groups. Second, test the Invariance (MICOM) such as configural invariance, compositional invariance, and composite equality (full invariance, partial invariance, and no invariance). Third, analyze and Interpret Permutation results (Matthews, 2017).

3.5.3. Neuroscience

In the last two periods neuromarketing is measured to be an evolutionary concept in marketing which makes use of neuroscientific tools in order to degree human associated factors for example emotions, perceptions, attributes and memory that affect the customer's behavior decisions making. Besides, the Neuromarketing application brings new opportunities and challenges to several industries (Kurtoglu and Ferman, 2020). Further, Neuromarketing has just expanded considerable popularity and facilitated businesses to produce deeper insights into customer behavior. Neuromarketing has offered new ways of theorizing customer behavior and decision making (Nilashi et al.,2020). Regarding Chavaglia et al. (2011) Neuromarketing is one of the new fields of marketing that uses brain-imaging methods to examine brain replies to marketing incentives. Investigators hire brain imaging to expose why and how consumers resolve on generates and what parts of their brains inspire them to take action. Further, Neuromarketing is clarified by the union of neuroscience and marketing to find how customers actually make their purchasing decisions in online shopping. Neuromarketing is realized as a new innovation in marketing as it includes the use of neuroscience in marketing study, in a method that studies which incentives lead to an exact kind of performance between consumers. Neuromarketing efforts to take the decision-making information since activates to reach the wanted consequence for the marketing goals. Neuromarketing assists commercials to enable product expansion and marketing/advertising through thoughtful extra about the attention of consumers through the use of developments in neuroscience. Consequently, currently, numerous businesses have started around the world to offer some procedure of profitable neuromarketing services (Plassmann et al., 2012). Neuromarketing can contribute meaningfully to sustainability in diverse customs, for

instance sustainable use, awareness of the keys for green product marketing, green technology adoption, and environmental management. Besides, the growth and the improvement of additional sustainable products, awareness concerning sustainable consumption, and current marketing plans for sustainable products can be the key aids of the neuromarketing methods in sustainability (De Oliveira, 2014).

Neuroscience in marketing:

Neuromarketing applies a combination of marketing and neuroscience approaches with the goal of detecting the nervous and mental measures that control a person's selections and actions. Consequently, investigative these procedures would be helpful to explain clients' reactions to marketing motivations. Adding neuroscientific methods can assist the researchers to notice a stronger understanding of marketing, counting purchaser behavior. Moreover, Neuroscience offers new ways to measure heterogeneity in customer behavior through measuring variances in separate sensitivity across areas or structural changes in the brain. The Discovery of individual alterations at the neural level can produce concepts for how marketers can perceive sections of customers in markets (Camerer and Yoon, 2015).

Eye movement analysis - Eye tracking:

Eye movement analysis, usually named "eye tracking," practices infrared-light-emitting diodes to examine eye behavior (Li et al., 2015; Isabella et al., 2015). Besides Eye movement analysis is frequently used as a supplement to additional psychophysiological measures, for instance, galvanic skin replies (Boshoff and Toerien, 2017) and EEG (Khushaba et al., 2012), to recognize behavior constructed on which and when mental and emotional replies are activated. Further, Marketing researchers have used eye tracking to interpret customers' reactions to advertisements above information exposed through self-reported measures (Sung et al., 2019). Zhang and Yuan (2018) initiate evidence of a connection among gaze duration and memory, describing how eye tracking can support disclosing the effects of discrete advertising fundamentals (such as brand, product, and endorser) on thought and emotion in customers. Regarding Bradley et al. (2008) Eye tracking technology can measure pupillometric actions. The size of the pupil, which variations given to visual stimulus, is an additional technique for measuring arousal. Moreover, the Eyes are the key emphasis in this technique as the location and outline of a subject's gaze are studied to control which pictures or shares of an image illicit the greatest attention. As current eye tracking equipment is very bright and moveable, it's probable to generate real time situations and register the natural eye gaze of clients (Mishra and Shukla, 2020).

Tobii pro:

Tobii pro founded in 2001 by John Elvesjö, Mårten Skogö, Henrik Eskilsson. Tobii Pro is the world leader in eye tracking investigation solutions, creating cutting-edge eye tracking technology (Tobii pro, 2015). The goal of the company is to develop the world's most versatile and reliable eye-tracking technology. And, to do this, they spend a great deal on research and development to provide eye trackers that offer the highest accuracy, precision and reliability. Furthermore, the products and services enable investigators to develop innovative scientific findings and companies to do more efficiently, more productively, more safely, or to improve their products and services. The products and services enable investigators to develop innovative scientific findings and companies to do more efficiently, more productively, more safely, or to improve their products and services. The key to this relies on the awareness provided by eye tracking. The hardware and software offer deep information about human behavior, cognitive function and visual attention, which can be leveraged to advance scientific research and enhance business processes and offerings (Tobii pro, 2015).

Tobii pro and Eye tracking

Eye tracking is the processing of precisely measuring where a person is looking/gazing. Due to the fact that the visual focus of human eyes is heavily connected to cognitive function, this information is extremely important for better understanding the human behavior. Besides, Eye tracking is the process of monitoring eye movements to identify where a human is gazing, what they are gazing at, and for what length of time their gaze is in a particular place. Due to the fact that people' eyes are among the main tools used for decision making and learning, eye tracking is widely used by investigators and companies seeking to investigate human behavior, as it is the unique approach to precisely and reliably measure and comprehend the visual attention (Tobii pro blog, 2018).

How does the eye tracking Work?

First, an eye tracker utilizes invisible near-infrared light and advanced high-definition cameras to shine light through the eye and capture the light's reflection to the cornea.
Second, Advanced algorithms are utilized to determine the exact position of the eye and precisely where the eye is focused. This allows visual behavior and fine eye movements to be measured and studied, because the eye position is able to be measured and mapped several times per second. The speed at which an eye tracker is capable of capturing these pictures is referred by its frequency.
Finally, it is also possible to make a recording of the scene a human is looking at, and then using eye-tracking software it is able to provide a visual map of how the human saw the items in the picture (Tobii pro blog, 2018).

Two statistical software programs have been used to carry out the analyses with this technique: SPSS and R, which are explained below.

SPSS:

SPSS discovered in 1968 by three students (Norman H. Nie, C. Hadlai (Tex) Hull and Dale H. Bent) at the University of Stanford. Between 1968 till 1975 SPSS became a product, between 1975 till 1984 SPSS became a corporation, between 1984 till 1992 SPSS became in the age of the PC, thus SPSS was the primary to market with a statistical software product on PC DOS. From 1992 till 1996, SPSS the age of Windows the company of SPSS was concentrated on statistical software products, and the acquisition approach was supplemented by incorporating other statistical product companies, such as SYSTAT (1994) and Jandel (1996). Also, from 1997 till 2002 was the transition to the enterprise, The business expanded from $110m in 1997 to a predictable $209m in 2002 through the achievements of NetGenesis (analytical application for Web data), ISL (data mining software), netExs (a Web interface for OLAP technology), acquisitions of Quantime (market research application software), ShowCase (business intelligence software for the middle market), and LexiQuest (text mining software). In 2003 Predictive analytics is effectively recognized as a part of the market. SPSS provided a leading thought-leadership role in the appearance through 2003 of predictive analysis as an important, different part of the wider business intelligence software sector. Also, predictive analysis complements and improves additional info technologies. Furthermore, in 2004, the Predictive analysis applications come of age when SPSS renowned for the launch of predictive analytics applications, building skills and integrating technologies from recent achievements, counting Data Distilleries. A major new release of Predictive Marketing was announced, as well as a newly released application, Predictive Call Center. Further extensive development efforts laid the foundation for the introduction of new applications in 2005. In 2009 IBM developed SPSS, and it is completely combined into the IBM Corporation Business Analytics Software portfolio. Furthermore, Today, SPSS is known as a leader in the predictive analytics market. A combination of advanced analytics and decision optimization, predictive analytics will remain a major emphasis for the company as it aims to improve the market's awareness of the business advantages offered by predictive analytics (About SPSS Inc.).

SPSS means a statistical software for the field of social sciences that has a user-friendly interface with an easy-to-use form and is widely utilized for analyzing and processing data with statistical analysis features and a data processing system with a graphical framework. This software is generally used for the social sciences field only, although later developments are utilized for a variety of fields (Purwanto et al., 2020). In addition, SPSS is one of the greatest extensively used and often used software for quantitative investigations. To generate a complete data analysis, an investigator should be aware of the use of the program. SPSS was created with the aim of making it easy for investigators to arrange and generate the appropriate data according to the given method (Purwanto et al., 2020).

R:

R established in 1993 by Ross Ihaka and Robert Gentleman. The R language was inspired by the S language for statistical computing developed by John Chambers, Rick Becker, Trevor Hastie, Allan Wilks and others in the mid-1970s. R is statical and programming language, and a free

popular software that is hugely controlling and extensive reaching environment for carrying out statistical analysis such as classical statistical tests, clustering, linear and nonlinear modelling, and time-series analysis. Also, R includes graphical techniques (Cryer and Chan, 2008; Dryden and Mardia, 2016).

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Chapter 3

A review of social commerce research from 2008–2021: Thematic and citation analyses

Study 1

Journal under review: Journal of Strategic Marketing

Study 1: A review of social commerce research from 2008–2021: Thematic and citation analyses

Abstract

Given the importance of social commerce, researchers have long studied it from diverse perceptions. Numerous reviews and meta-analytical papers have been published on social commerce. Results of review articles have shown information gaps and variations from the approach planned here. Consequently, there is a need for comprehensive study of social commerce research themes in the past, present, and future, which this research fulfils along with an investigation of additional features of social commerce. Using numerous bibliometric analyses, a comprehensive thematic review of social commerce research is discussed for two periods (from 2008 till 2017 and from 2018 till 2021). Four hundred and forty-five articles were taken from the ISI WOS database. To do this, a science mapping was performed using the software SciMAT and VOS viewer. This study identified the following social commerce- related themes during the first period, online, usability, impulse buying, adoption and review terms were heavily studied. Though, information, satisfaction, communities, moderating role, flow, internet and online reviews terms were deeply studied in the second period. These and other findings contribute to the discussion of the social commerce concept, approached from an evolutionary perspective.

Key words: Bibliometric study, co-word analysis, social commerce

4.1. Introduction

Bibliometric mapping, or science mapping, is a significant research topic in the field of bibliometrics (Morris and Van Der Veer Martens, 2008; Van Eck and Waltman, 2010; Cobo et al., 2012b). Besides, SciMAT is built on the science mapping analysis approach accessible in Cobo et al. (2011a), which permits investigators to carry out science mapping studies under a longitudinal perspective (Price and Gürsey, 1975; Garfield, 1994).

Although this approach was formerly advanced to carry out theoretical science mapping analysis, this science mapping analysis approach establishes the following steps (Cobo et al., 2011a). First, it is employed to distinguish the substructures contained (mostly clusters of writers, words or references) in the investigated field using bibliometric analysis (author bibliographic coupling, co-word analysis, co-citation, journal co-citation, journal bibliographic coupling, author co-citation, bibliographic coupling, or co-author) for each period studied. Second, it lays out in a low dimensional space the outcomes of the first stage (clusters). Third, it is used to examine the evolution of the distinguished clusters through the diverse stages studied to distinguish the key general evolution areas of the study field, their origins and their interrelationships. Fourth, it allows a performance analysis of the dissimilar clusters, periods and evolution areas to be performed, utilising bibliometric measures.

Additionally, VOS viewer developed by Waltman and Van Eck (2012). VOS viewer permits users to make scientific maps based on network data and discovering them. Besides, VOS viewer is a software tool for building and visualizing bibliometric networks. These networks may for example contain journals, researchers, or separate publications, and they can be created based on citation, bibliographic coupling, co-citation, or co-authorship relations. VOS viewer likewise givess text mining functionality that can be used to build and visualize co-occurrence networks of cruel terms removed from a form of scientific literature (Visualizing Scientific Landscapes, 2022).

E-commerce and the Internet play a growing role in society and the economy, resulting in changing customer behaviours (Rybaczewska and Sparks, 2021). The presence of social interaction in the e-commerce business model, or social commerce, has expanded theoretical and commercial attention in numerous fields, such as consumer management research, information technology and service operations management (Shin et al., 2021).

Xie and Wang (2021) discuss the term e-commerce, which refers to any commercial business that involves the transmission of information over the Internet. by definition, it employs the Internet as a platform for financial transactions and communication while conducting simultaneously numerous business actions. Moreover, e-commerce is an Internet-based tool, typically for the exchange of Internet-based services and products. E-commerce increases by commercial transactions and commercial transactions connecting exchange (e.g., money) inside organisational or personal borders. E-commerce’s usage of information and information technology in business effectively raises productivity, promotes extensive buyer participation and collective customization and decreases costs. Furthermore, e-commerce is used for numerous online business

transactions for both services and products. E-commerce characteristically handles all transactions connecting a sale, purchase or transfer of ownership or rights over computer-mediated networks, thus offering an entree to services and goods over the Internet.

E-commerce is a business in which information technology is used to raise sales and offer a foundation for new services, products and business efficiency. Over the course of its activities, each business communicates with numerous other entities, namely private or corporate customers, suppliers and business partners. When collaborating with each other, these entities exchange numerous categories of information: they negotiate the terms of dealings, transmit and take orders for goods, exchange documents, file complaints about unsuitable services, allocate press releases and notify individuals about their services and products. Moreover, e-commerce comprises numerous activities: e-commerce of goods and services, electronic sales, electronic delivery of digital information and direct marketing to customers (Išoraitė and Miniotienė, 2018). According to Kütz (2016), e-commerce draws on technologies, for instance, for supply chain management, mobile commerce, automated data collections systems, nternet marketing, electronic funds transfers, inventory management systems, electronic data interchange and online transactions processing.

According to Busalim and Hussin (2016), traditional e-commerce only allows clients to buy products or services, whereas social commerce also allows clients to develop social communications with the firm and other clients using social media platforms.

Riaz et al. (2021) stated that from the viewpoint of communication and connections, e-commerce includes positioning only on the quality of product and delivery developments, thus delivering the greatest service to customers by contributing a directional exploration to confirm the present location of the product using Web 2.0 (business-to-customers) and EDI (electronic data interchange) technologies. Nevertheless, social commerce operates on social networking sites that emphasise a user-centric design providing one-to-one contact between customers and a business/seller.

Social media and Web 2.0 applications have converted e-commerce into a new business model, which is called social commerce. This growth has changed the clients' role by placing clients in a unique position to affect other purchasers and by offering them control in buying decisions (Busalim and Ghabban, 2021).

Social commerce has increased since the 1990s (Curty and Zhang, 2011) when two main e-commerce businesses, Amazon and eBay, offered rating and review structures on their sites for products or sellers' performance (Busalim and Hussin, 2016). Since then, social commerce has changed to develop into a worldwide phenomenon along with the popularity of social networking sites (Wang and Zhang, 2012). Moreover, the charisma and increasing appeal of social networking sites, like Facebook, Instagram and Twitter, have transformed the innovative standards of e-commerce into social commerce affecting customers' behaviour (Riaz et al., 2021).

Social commerce is a developing platform that involves dissimilar social features to draw the attention of online customers (Hussain and Li, 2021). Chen et al. (2019) suggest that social commerce is similar to traditional e-commerce in its transactions because the characteristic of physical separation may exacerbate uncertainty. According to Meilatinova (2021), social commerce is an extension of e-commerce sites, combined with social media and Web 2.0 technology to inspire online acquisitions and interactions with clients before, during and after the buying.

Social commerce engages individuals in communicating and shopping using social media (Hwang and Kim, 2014). Social media is normally regarded as the next great wave in social life, business and technology (Lin and Lu, 2011). In recent years, social commerce platforms have been offering more business opportunities on account of rapid growth (Al-Adwan and Kokash, 2019). In social commerce, firms use social media to trade, involve and interact with their consumers, create communities and advance loyalty behaviours through tools such as video sharing, review systems, online chats and virtual groups, among others (Molinillo et al., 2021).

The rising popularity of social commerce may change the buying behaviour of customers (Riaz et al., 2021). In addition to a legal agreement, the platform features help customers to establish psychological agreements, by which customers might have more expectations of the sellers and platforms. For instance, social commerce websites typically deliver tools to enable interactions between a customer and a seller (Busalim, 2016; Al-Adwan and Kokash, 2019).

These interactive structures offered by the platform support and encourage customers to satisfy their expectations (Mata and Quesada, 2014), thus producing a psychological agreement with the platform. In social commerce, explicit agreements are not enough to keep customer–platform relations (Pavlou and Gefen, 2005); hence psychological agreements are considered to be a new and advanced idea to apply. The extant literature has only a minor discussion on the meaning and categories of psychological agreements in social commerce; thus, this aspect still needs additional investigation (Hussain and Li, 2021).

Social commerce is the application of social media as a channel for e-commerce. It is easy to connect with consumers and engage in public relations, and it may reach the target group methodically. Besides, Facebook realises as the greatest common social commerce network. Instagram is an additional new method for marketers, by which entrepreneurs can generate public relations media in a diversity of formats. On Instagram, we can post images, videos, an Instagram story and IGTV. Foreign businesspersons have understood the importance of reaching their target audience through using multimedia on Instagram as well. For instance, Starbucks, National Geographic, Chanel, Oreo, Nike, even BMW and numerous additional businesses go live on Instagram. They present their services, product information and promotional activities live on Instagram (Kaewpackdee and Lekchareon, 2020).

The present study responds to this need to investigate additional aspects of social commerce. This article offers a co-word and bibliometric analysis of social commerce research published in

journals between 2008–2021, comprising 445 journal articles. This research is the most comprehensive social commerce thematic analysis conducted to date and the only one to use bibliometric analysis across the whole scientific output on social commerce published in high-impact journals.

Bibliometric analysis offers a means to overcome some limitations of the additional classical methods to literature reviews (meta-analysis or content analysis). In specific, bibliometric analysis overcomes the absence of a systematic technique with which to select the applicable researches and assess their content, the limited number of researches that can be inspected, the personal nature of the investigator's assessment, and the lack of pointers and exact metrics (Muñoz Leiva et al., 2015). In the context of this background, we suggest that the uniqueness and value of this paper lie in the following major contributions.

First, this is the first systematic quantitative analysis of social commerce research that applies a bibliometric approach using co-word analysis and mapping during 2008–2021. Bibliometric analysis has been used across disciplines as varied as management information systems (Culnan, 1986), integrated marketing communication (Muñoz-Leiva et.al., 2015), financial marketing (Muñoz-Leiva et.al., 2012; 2013) and comparative advertising (Del Barrio-García et. al., 2020) among others. Second, it is the most complete and exhaustive study to date on social commerce research (since its appearance, up to and including 2021), shedding light on the conceptual structure of social commerce and identifying the most relevant themes over the two decades of social commerce history. The information accessible in this research contributes to scientific output on social commerce by adding to the results gained from the application of traditional approaches, thus helping to initiate an extensive and more reliable view of the scientific output with the highest level of inspiration. Finally, the work is a snapshot of the thematic evolution of social commerce research over time, thus providing researchers and experts with a better understanding of the current state of the art and the future of social commerce research.

4.2. Methodology

4.2.1. Keyword co-occurrence analysis

In the present research, we use a reduced form of the bibliometric method suggested by Cobo et al. (2011). This method combines both science mapping tools and performance analysis tools to examine a research field and distinguish and envisage its theoretical subdomains (specific topics/themes or overall thematic areas) and thematic evolution.

We furthermore organised in a complementary approach three different software applications SciMAT, VOSviewer and Web of Science. In the present research, a bibliometric study of social commerce research conducted during 2008–2021 was carried out using co-occurrence analysis of keywords or co-word analysis. Co-word analysis is a powerful technique for visualising, discovering and describing the relations between words, topics and terms in different fields in scientific research (Whittaker, 1989; Callon et al., 1991; Coulter et al., 1998). This technique

decreases the space of keywords to a set of network graphs that efficiently show the strongest relations between the words (Coulter et al., 1998).

The combination of performance tools and scientific mapping techniques allows the detection and visualisation of the conceptual subdomains (specific topics or general thematic areas) as well as their evolution (Cobo, 2011; 2012a; 2012b). This is possible by reducing and arranging the keywords in graphic spaces that are called strategic diagrams as well as by thematic networks that illustrate the strongest relationships between them.

Specifically, the content analysis of the articles consulted is based on a co-occurrence matrix. The co-occurrence frequency (cij) between the two keywords is assumed to be the number of documents in which two keywords appear together among the collection of documents analysed. Second, the equivalence index (eij) between keywords has to be calculated (Callon et al.,1991), for which the formula is

$$e_{ij} = \frac{c_{ij}^2}{c_i \cdot c_j},$$

where cij is the number of documents in which keywords i and j co-occur, and ci and cj represent the number of documents in which each one appears.

Each keyword network or topic can be categorised according to two parameters (Callon et al., 1991; Cobo, 2012b):

Centrality measures the degree of interaction of a cluster (or set of keywords) with other clusters and can be expressed as

$$c = 10 \cdot \sum e_{kh},$$

with k being a keyword belonging to the cluster and h being a keyword belonging to other clusters.

Centrality measures the strength of external links to other clusters or topics (represented by the most central word). This value can be understood as a measure of the importance of a topic in the development of the entire field of research analysed.

Density measures the internal strength of the cluster and can be measured as

$$d = 100 \cdot \frac{\sum e_{ij}}{w},$$

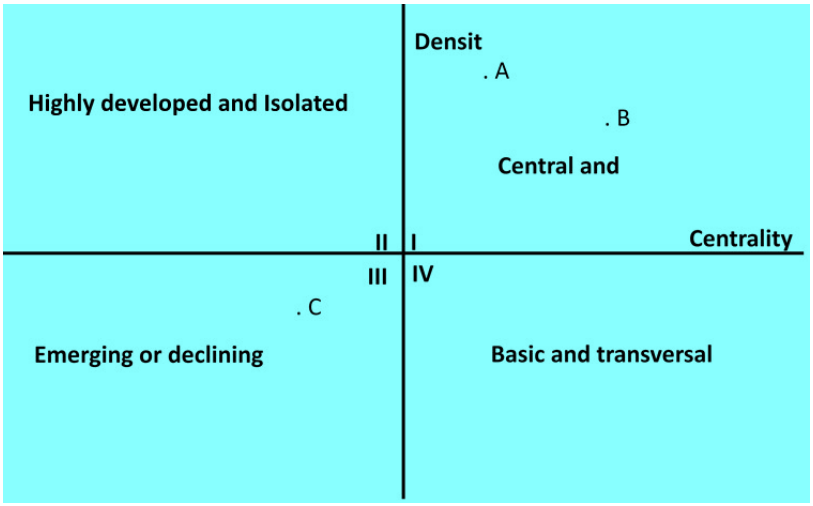
where i and j are the keywords belonging to the cluster and w is the number of keywords in the cluster.

Density measures the strength of the internal links between all the keywords that are part of that cluster or research topic. This value can be considered as a measure of the degree of development of the topic under research.

From the range of these two parameters, it is possible to represent the set of topics on a two-dimensional space called a strategy diagram (see example in Figure 54), giving place to four groups (Callon *et al*. 1991; Cobo, 2012b):

1. The topics located in the upper right quadrant are well developed and important for the structuring of a research field. These are topics known as drivers of the specialty because of their strong centrality and high density.
2. The topics in the upper left quadrant have well-developed internal linkages but irrelevant external relationships and are therefore considered to be marginally important for the area. These topics are highly specialised and are peripheral in nature.
3. The topics in the lower left quadrant are marginal and poorly developed. They present low levels of density and centrality, mainly representative of emerging or disappearing themes.
4. The topics located in the lower right quadrant are important for the research field but have not been sufficiently developed and can be classified as transversal and basic or general themes.

Figure 54: Quadrants in a strategic diagram

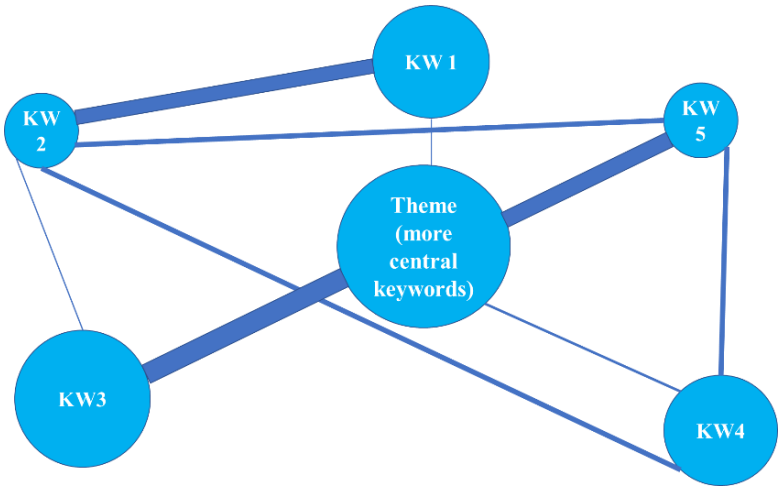


Source: Adapted by the authors from Callon et al. (1991) and Cobo (2011)

The keywords and their interconnections are represented graphically in the form of thematic subnetworks (see example in Figure 55). These networks can be labelled using the name of the most significant keyword for the topic in question and with the highest centrality (usually the one at the centre of the subnetwork). The volume of the spheres is proportional to the number of documents corresponding to each word or the number of times cited, for example, and the density of the lines joining the spheres is proportional to the frequency of co-occurrence between the two. A document is linked to another if it contains at least two words that are present in the thematic network (Muñoz-Leiva et al., 2015).

Co-word analysis was realised using SciMAT software (Cobo et al., 2012b). In addition, the VOSviewer software developed by Waltman and Van Eck (2012) was used to build a country co-authorship and Citation network.

Figure 55: Example of a thematic network



Source: Author

4.2.2. Data sets

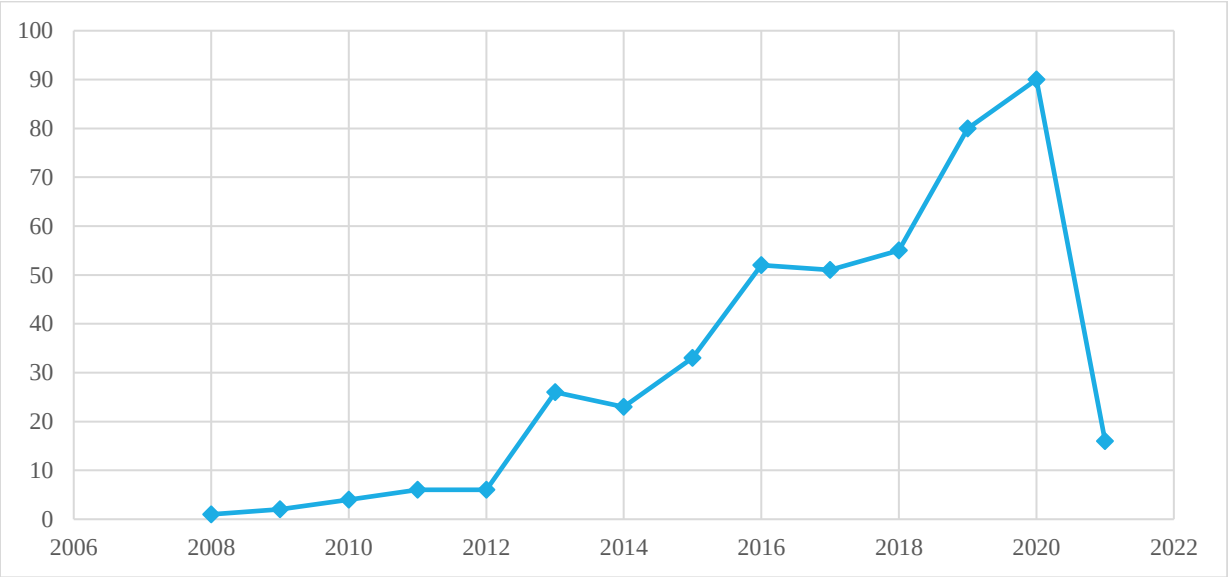
We collected the data from the Web of Science (WOS), which is a platform based on Web technology that has collected the references from the main scientific publications of all disciplines—scientific and technological, humanistic and sociological—since 1945, which is essential to support research and the recognition of the efforts and advances made by the scientific and technological community (Jjperez, 2020). A total of 445 references to documents were downloaded from the database, including keywords, abstracts and citation measures.

The consultation in WOS, with a publication deadline of March 31, 2021, was as follows: TS = (´´Social commerce´´) where TS is the topic, with browsing by document type (article, review, letter, book, book chapter, proceedings papers).

Given that the data were downloaded from the ISI WoS, the authors provided keywords and the keywords plus of the documents were used together. Prior to this, the keywords underwent a normalisation process to link the singular and plural forms of the keywords. Shortenings were also combined with their own keywords.

In co-word analysis, from a longitudinal perspective, the first period studied is usually the longest to get a representative number of published papers. The last time interval reflects where the changes are heading compared to previous periods, which should allow a more accurate indication of future trends (emerging and declining). In our particular case, two data sets were created, one for each period (2008–2017 and 2018–2021), corresponding to 9 years for the first period and to 3 years for the second, respectively. The number of publications for each period was 204 for the first (2008–2017) and 241 for the second (2018–2021) (Figure 56).

Figure 56: The number of social commerce papers recorded in the ISIWoS from 2008 to 2021



Source: Author

4.3. Results

4.3.1. Performance analysis

4.3.1.1. Terms associated

The terms most frequently (more than two repeats) associated with the search are shown in Table 1. The concepts or tools were described by linking them to social commerce. The co-word analysis involved the themes used in the query (e.g., consumer/customers, social commerce, social media and network, social, trust, purchase intention, information, behaviour, review, websites, online, product, word of mouth, etc.).

Table 1: Terms associated with social commerce

Term	Number/ Items	Documents	Term	Number/Items	Documents
Consumers/Customers	89	188	Satisfaction	5	51
Social Commerce	53	435	B2C Ecommerce	5	16
Social media and Network	47	168	Attitude	5	14
Social	41	66	Advertising	5	6
Trust	32	186	Utilitarian	4	9
Purchase Intention	31	177	UTAUT	4	6

Information	29	113	SEM	4	8
Behavior	29	117	Perspective	4	9
Review	22	44	Organization	4	8
Web- Sites	21	47	Moderating Role	4	29
Online	21	96	Internet	4	35
Product	20	32	Instagram	4	9
Word of Mouth	19	111	Design	4	25
Quality	19	86	Content	4	3
Communities	17	65	Antecedents	4	28
Mobile	15	24	Willingness	3	3
Marketing	14	22	Usefulness	3	11
Technology	13	61	Sustainability	3	4
Business	13	39	Service	3	12
Brand	13	21	Security	3	4
TAM	12	79	Retail	3	4
Self	12	22	Promotion	3	4
Personality	12	22	Perception	3	11
Privacy Concerns	11	21	Interactivity	3	8
Experience	11	51	Enjoyment	3	9
E-commerce	11	108	Ease of Use	3	5
Knowledge	10	25	Competition	3	7
Risk	9	40	Commitment	3	20
Price	9	18	Attraction	3	4
Adoption	9	45	Wellbeing	2	2
Product-Recommendations	8	18	Web 2.0	2	19
Motivation	8	27	Twitter	2	5

Social- Interaction	7	19	Theory of Planned behavior	2	4
Innovation	7	18	System	2	20
Impulse-Buying	7	10	Small and medium sized enterprise	2	2
Facebook	7	30	Shopper	2	4
Engagement	7	25	Reputation	2	9
Communication	7	28	Presence	2	18
Support	6	80	Perceived benefit	2	3
PLS	6	12	Online sales	2	2
Market	5	6	Online Reviews	2	10
Loyalty	6	28	Model	2	88
Impulsiveness	6	6	Gender	2	10
Feature	6	13	Effectiveness	2	3
Decision	6	27	Economy	2	2
Cross culture	6	6	Emotion	2	3
Affordance	6	6	Expectation	2	3
Store	5	7	Age	2	4
Online Market places	5	9	Follower	2	3
S-O-R Framework	7	11	Flow	2	8
Social Shopping	5	23	**Total**	**945**	

Source: Author:
Those terms with a frequency equal to or greater than 2 have been selected.

4.3.1.2. Authors

From the 991 authors who have published on social commerce, the most important has been the journalist and editor Hajlin with 15 articles (see Table 2). Between 2014 and 2021, Hajlin has published several papers on social commerce in the UK and other countries and on the importance

of social commerce in e-commerce. Hajlin is followed by Benyoucef of Otta University, who has made a significant contribution to the concept of social commerce as well as to theories and design models for social commerce. Also, Turel of California State University, has focused on examining the roles of social commerce constructs and social support constructs. The social commerce field of study shows a large number of authors with a small number of papers (1 or 2).

Table 2: Authors with the largest number (majority) of publications on social commerce

Authors	Record Count	University/Country
Hajli, N	15	Swansea University, United Kingdom
Benyoucef, M	7	Telfer School of Management, University of Ottawa, Canada
Turel, O	7	California State University Fullerton, Fullerton, California, USA
Wang, Yc	7	Newcastle University London Campus, United Kingdom
Huang, Z	6	School of Computer Science, Shaanxi Normal University, Xi'an, China.
Lin, Xl	6	West Texas A&M University, United State
Shanmugam, M	6	College of Information Technology, University Tenaga Nasional, Selangor, Malaysia
Tajvidi, M	6	Swansea University, United Kingdom
Herrando, C	5	University of Zaragoza, Zaragoza, Spain
Papasratorn, B	5	King Mongkut's University of Technology Thonburi, Thailand
Shen, J	5	College of Business Administration, Rider University, USA
Wang, Xq	5	University of Electronic Science and Technology of China, China
Yao, Z	5	School of Economics and Management, Beihang University, Beijing, China
Zhang, P	5	Syracuse University, NY, USA

Source: Author.
Authors who have published 5 or more articles on social commerce have been selected.

As shown in Table 3, the journals with the highest number of papers are related to business (173), computer science information systems (127), information science library science (70),

management (69), computer science interdisciplinary application (48), computer science theory methods (48), engineering electrical electronic (24) and telecommunications (22).

Table 3: Most productive journals in social commerce

Journals	Record Count
Business	173
Computer Science Information Systems	127
Information Science Library Science	70
Management	69
Computer Science Interdisciplinary Application	48
Computer Science Theory Methods	48
Engineering Electrical Electronic	24
Telecommunications	22
Computer Science Artificial Intelligence	20
Operations Research Management Science	16
Psychology Multidisciplinary	16
Psychology Experimental	15
Social Sciences Interdisciplinary	14
Computer Science Software Engineering	13
Economic	11

Source: Author
We have selected those journals with a frequency equal to or greater than 10.

4.3.1.3. Countries

With support from the VOSviewer software, we generated a network of the most co-authorship and cited countries to analyze the development of the field of study worldwide for Social commerce.

Figure 57 shows the co-authorship between countries. It is important to highlight that the most productive countries are those that have the most networks with other countries (see table 4). The USA, China, England, and India have strong research networks among themselves and with other countries. Non-mentioned countries have related publications, but since they do not have networks, they were not included in the co-authorship map.

A) Co-authorship of Countries

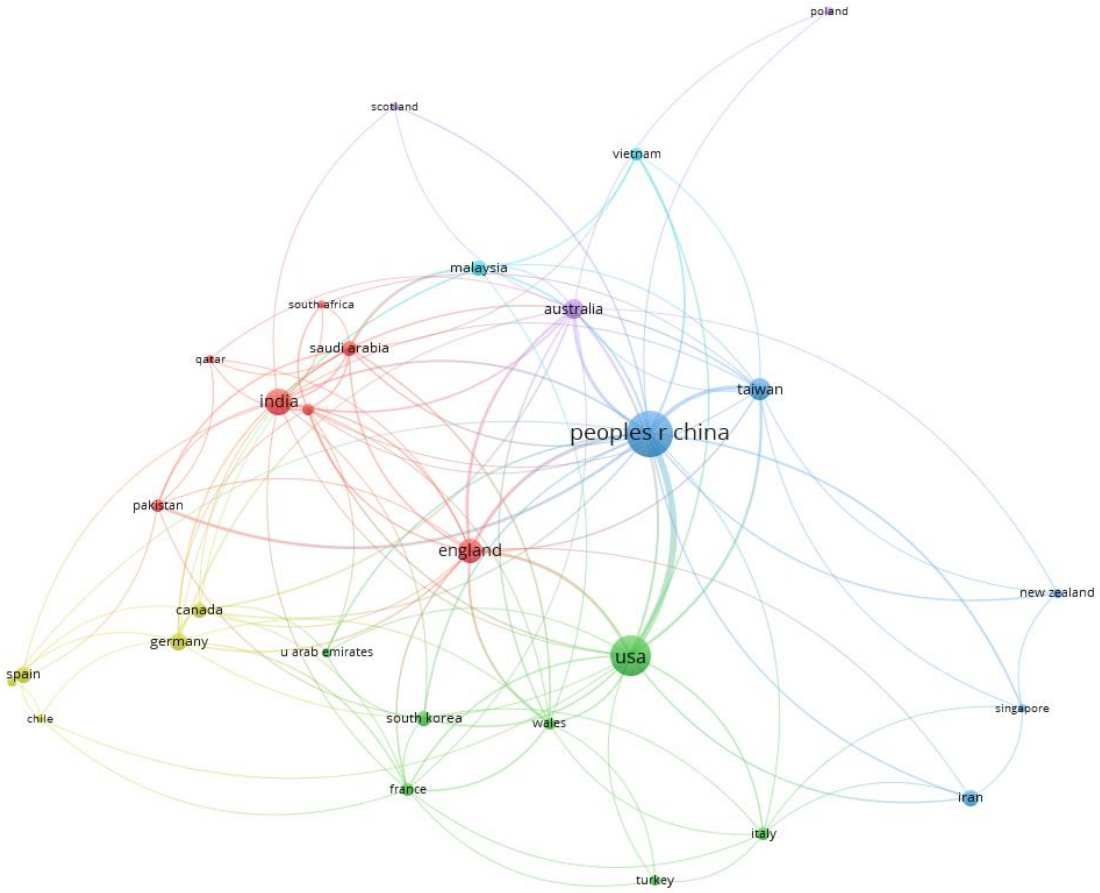
Table 4: Co-authorship of Countries

Country	Documents	Citations	Total Link Strength
People R China	142	157	95
USA	106	168	65
England	38	57	41
Australia	27	52	35
Taiwan	33	52	29
Saudi Arabia	16	21	26
India	45	39	19

Source: VOS viewer

Total link strength: Each link has strength, the total strength of the links of an item with other items is the total link strength.

Figure 57: The Network visualization map of country co-authorship in the research area of social commerce



Source: VOS viewer

The size of an item (Label or circle or frame) determined by the weight of the item. The higher the weight (importance) of an item, the larger the circle or frame of the item. *Item (Circles) = Country *Weight= In terms of productivity of a country (documents)

B) Citation of countries:

Table 5 and Figure 58 shows the most cited countries. The most cited countries are China and USA.

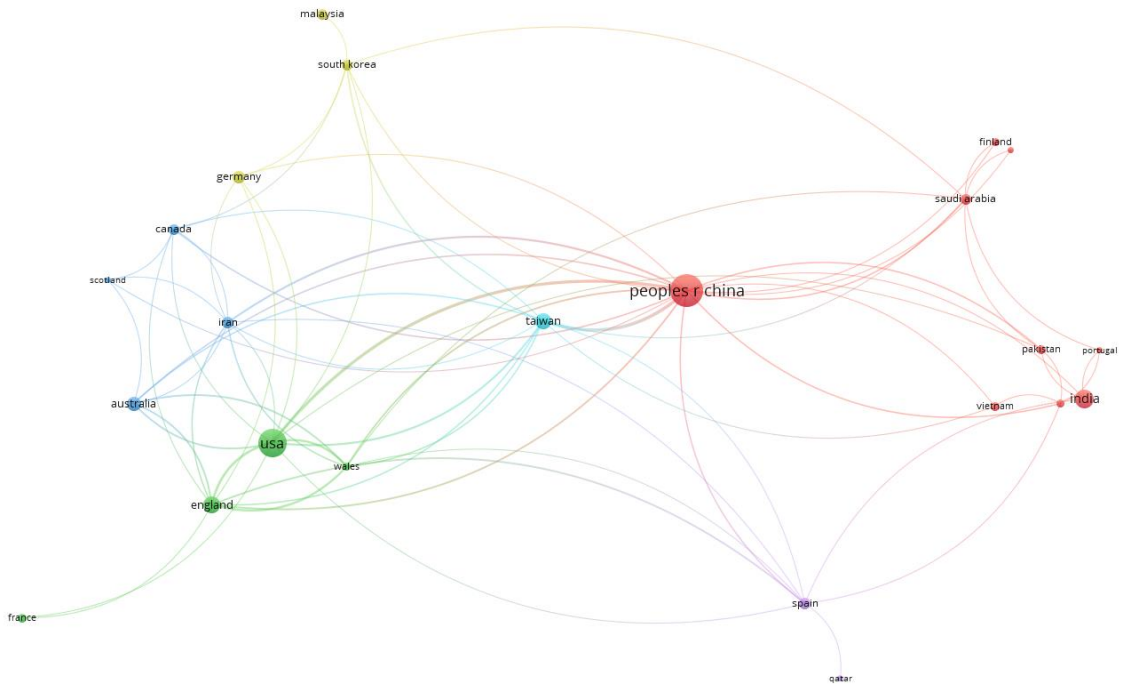
Table 5: Citation of countries

Country	Documents	Citations	Total Link Strength
People R China	142	157	49
USA	106	168	34
Taiwan	33	52	28
Wales	38	57	27
Australia	27	52	15
Iran	18	22	15
Spain	19	26	12

Source: VOS viewer

Total link strength: Each link has strength, the total strength of the links of an item with other items is the total link strength.

Figure 58: Citation countries



Source: VOS viewer

The size of an item (Label or circle or frame) determined by the weight of the item. The higher the weight (importance) of an item, the larger the circle or frame of the item. *Item (Circles) = Country *Weight= In terms of productivity of a country (documents)

As shown in Table 6, the research areas of social commerce with highest number of papers are business economics (217), computer science (190), information science library science (70), engineering (37), social sciences other topics (23), telecommunication (22) and psychology (17).

Table 6: Research areas

Research Area	Number
Business Economics	217
Computer Science	190
Information Science Library Science	70
Engineering	37
Social Sciences Other Topics	23
Telecommunications	22
Psychology	17
Operations Research Management Science	16
Public Administration	10

Source: Adapted by the authors.
Research areas with 10 or more articles published on social commerce have been selected.

4.3.2. Content analysis for the period 2008–2017

During the first period (2008–2017), a total of 204 papers were published by the community interested in social commerce. The 1970s established the basis for social commerce with the appearance of the Web 1.9 or Internet, which was commercialised in the 1990s and added increased understanding in our daily lives (e.g., Leiner *et al*. 1997; Investopia, 2018). With these changes, social commerce was born according to Curty and Zhang (2011) and Friedrich (2015), who have asserted that its origin can be taken back to the late 1990s. Improved investments in technology and the resultant infrastructure led to the formation of Web 2.0 and the growth of e-commerce opportunities (Leiner *et al*., 1997; Investopia, 2018), which permitted Amazon.com in 1995 to sell its first book online (Olenski, 2015). In a similar vein, research on social commerce also started in the late 1990s (Lin *et al*., 2017).

According to Lin *et al*. (2017) and based on a wide literature search, social commerce has continuously been an important subject of investigation in the extensive realm of social media research. The initial academic publication on social commerce that they found was published in 1999; since that time, the number of publications on social commerce has developed commensurate with those investigating social media. However, the explosive development of this field of study only started in 2004, the same year that Facebook and numerous other social media sites were launched (Lin *et al*., 2017). According to Zhang and Benyoucef (2016), the term social

commerce developed in 2005 among the rising commercial use of social networking sites and various other social media websites. The concept of social commerce was first announced by Yahoo in 2005 and was mentioned first as a feature that allowed online users to review products (Baethge *et al*., 2016). Studies on social commerce started to gain ground in 2005 within disciplines such as marketing and psychology, e-commerce and information systems (Nakayama and Wan, 2019). Since then, the applications of social commerce have extended in numerous directions, including team purchasing, product referrals, peer recommendations, common shopping lists, agreement of the day, or firm-controlled online communities (Liang and Turban, 2011). According to Lin *et al*. (2017), the initial academic publication on social commerce was written in 1999, while the word 'social commerce' was first used in 2007. Subsequently, the number of publications on social commerce has developed commensurate with those on social media. Zhou *et al*. (2013) indicated that there was a growing trend of publications on social commerce from 2003 to 2012. Over the past decade, the number of academic publications on social commerce has increased substantially (Zhang and Benyoucef, 2016; Lin *et al*., 2017). Besides, most of the research on social commerce has focused on information technology, such as in the studies of Wang and Zhang (2012), Zhou *et al*. (2013) and Shanmugan and Jusoh (2014); applications in marketing and management have been lacking. So far, previous research has mainly focused on customer behaviour, for instance on web design and client experiences (Busalim and Hussin 2016). Busalim and Hussin (2016) stated that investigations of social commerce are nearly always reinforced by social-related concepts, which underlines the essential role of social aspects brough about by the social nature of social commerce. This is relevant to clients and the influence of social interactions on buying intention or the decision-making process in social commerce. According to Lin *et al*. (2017), controlling issues in social commerce are word of mouth, organisation and advertisements. Even with the huge importance across the whole consumption process and decision-making, most publications on social commerce focus on the post-purchase stage (Zhang and Benyoucef, 2016). Lin *et al*. (2017) have stated that there is no doubt that social commerce has developed into an important research field that might have an important effect on business practices. In information systems (IS) punishment, academics have paid great attention to this new research area, with an emphasis on the acceptance and practice of social commerce (e.g., Liang *et al*., 2011; Zhang *et al*., 2014). The development of social commerce in practice involves cooperates on the part of management, technology, people and information dimensions (Wang and Zhang, 2012). Curty and Zhang (2013) gave a historical analysis of the transfer from e-commerce to social commerce. In the research conducted by Lin *et al*. (2017), latent semantic analysis (LSA) was adapted to investigate the abstracts of earlier social commerce research. Results from the LSA revealed that the previous literature on social commerce had predominantly concentrated on three topics: social commerce and electronic word of mouth (e-WOM), social commerce and advertisements, and social commerce and organisation. Further LSAs were conducted for each topic. The outcomes uncovered prominent topics in each one. They also revealed some interesting trends in social commerce research subjects, such as business reputation, innovation, and user-generated content persisting in the main research subjects, though they are experiencing a small decline, and trust, e-WOM, and online reviews are garnering the attention of other researchers.

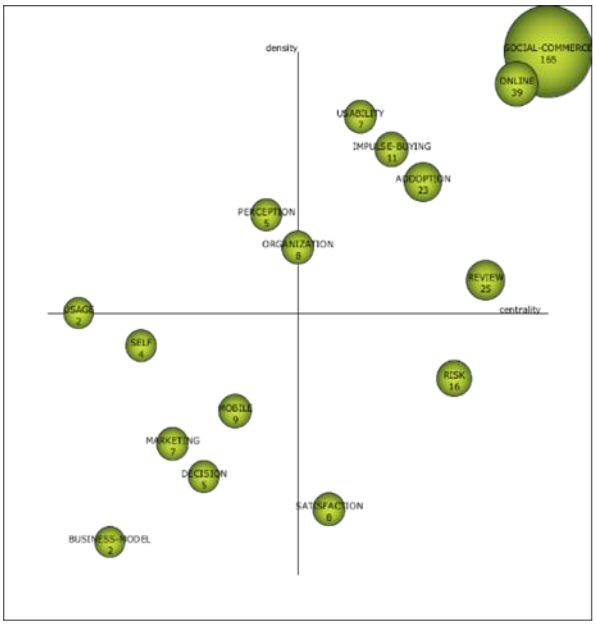
To analyse this period from a conceptual and aggregated point of view, two strategic diagrams are shown in Figure 59. Due to their strategic position in the diagram (high centrality and density; see Figure 59). Social commerce (165 papers), online (39 papers), usability (7 papers), impulse buying (11 papers), adoption (23 papers), review (25 papers) and risk and satisfaction appear in a position that indicates a great strength of external links to other topics, as well as a high number of appearances and citations. These are the topics that are important for the structuring of social commerce as a field of research.

Perception and organization show some strength in internal linkages or development among all keywords describing the research topic (density), with a higher number.

Usage, self, mobile, marketing, decision and business model are emerging issues, as demonstrated in the following periods.

Figure 59: Strategic diagrams based on the number of documents published (A) and times cited (B) during 2008–2017

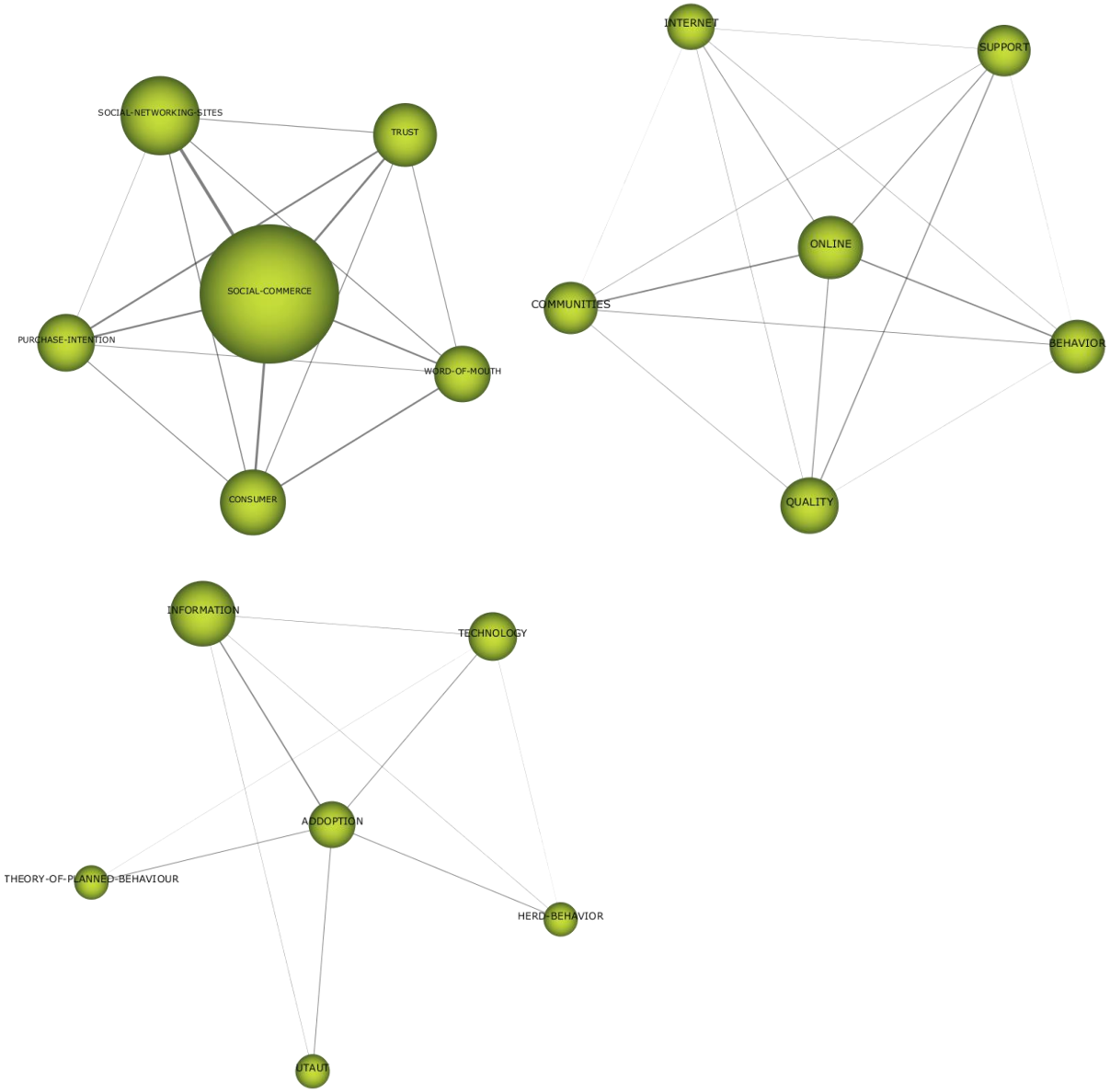
A:



B:

Regarding the principal themes showing the related thematic networks, we subsequently present the most frequent themes (with a frequency of more than 2) and their thematic networks (see Figure 60), whereby we can see that there are strong intrathematic links in these networks.

Figure 60: Thematic networks



4.3.3. Content analysis for the period 2018–2021

During the new period, the number of publications on social commerce increased, as did the diversity of topics addressed. In total, 241 indexed papers were included in the database.

Social commerce topics, such as value co-creation, brand loyalty, sharing of shopping experiences, recommendations and purchase intention, were studied (Yadav *et al*., 2013; Zhang and Benyoucef, 2016; Busalim et al., 2019).

There were also numerous special subjects in academic journals devoted to investigating diverse aspects of social commerce. These journals contain e-commerce research: *Journal of Theoretical and Applied Electronic Commerce Research, International Journal of Information Management* and *International Journal of Electronic Commerce, and Information and Management.* The subjects covered by such special topics comprised e-commerce in social networks, Social commerce and new development in e-commerce, the dark sides of social commerce, research framework for social commerce, and social commerce and social media (Mou and Benyoucef, 2021).

Zhang and Benyoucef (2016) examined customer behaviour in social commerce through a review of the associated literature. More precisely, they employed the stimulus–organism–response (SOR) model and the five phases of customer decision-making development to build a centralising framework for understanding how customers act on social commerce websites. Busalim and Hussin (2016) expanded upon the variances between social commerce and e-commerce and the features of social commerce. Han *et al*. (2018) concentrated on present social commerce research; they investigated approaches that have been used as well as future study potential and challenges. Cui *et al*. (2018) undertook a bibliometric study of present social commerce to investigate and plan a combined research framework. Grange *et al*. (2020) suggested a network-founded conceptualisation of social commerce and its value to support better recognition of the concept and its influence. In an additional study, Grange *et al*. (2020) established a typology of the main social commerce network constructions and planned a framework for showing the value that consultants can get from social commerce networks. Cui *et al*. (2018) and Esmaeili and Hashemi (2019) employed an information mapping method to study social commerce research themes, keywords and future research trends. Lastly, Busalim *et al*. (2019) reviewed the aspects influencing customer engagement on social commerce websites.

According to research by Mou and Benyoucef (2021), researchers frequently concentrated on examining the backgrounds and significance of customer behaviour in the background of social commerce. They specified that customers are involved in numerous activities on social commerce platforms. Their exact behaviours have been studied and comprise customer engagement behaviour, social shopping behaviour, Social commerce intention, impulsive buying behaviour, social sharing intention, e-WOM, buying behaviour and avoidance behaviour.

For the second interval (2018–2021), the following strategic diagrams have been extracted (Figure 61). A conceptual examination shows that social commerce, information, satisfaction, communities, moderating role, flow, internet and online reviews have been the focus of much attention in social commerce studies and are the driving themes of this discipline (with strong centrality and high density), as might be expected from the consultation carried out. Also, for this period, social commerce was a keyword with many citations (1321), followed only by information (798), then satisfaction (474), followed by communities (219).

Motivation and privacy concerns are important topics for marketing research, but they have not been sufficiently developed in this field, as they present a lower strength of internal linkages with the other keywords that co-occur with them. In reality, these would be basic or general cross-cutting themes for social commerce during this decade.

Business to Business (B2B) and Business to Customer (B2C) e-commerce have been well developed (internally given their high density), although they have irrelevant external relationships (in relative terms). Innovation has been present in social commerce studies; these topics are highly specialised and peripheral in terms of their character and therefore of marginal importance for the area.

Marketing, Facebook, system, website, mobile, and advertising are still marginal and also scarcely developed (low density and centrality) in this field of knowledge, and relatively little cited.

Figure 61: Strategic diagrams based on the number of documents published (a) and times cited (B) during 2018–2021

A: **B:**

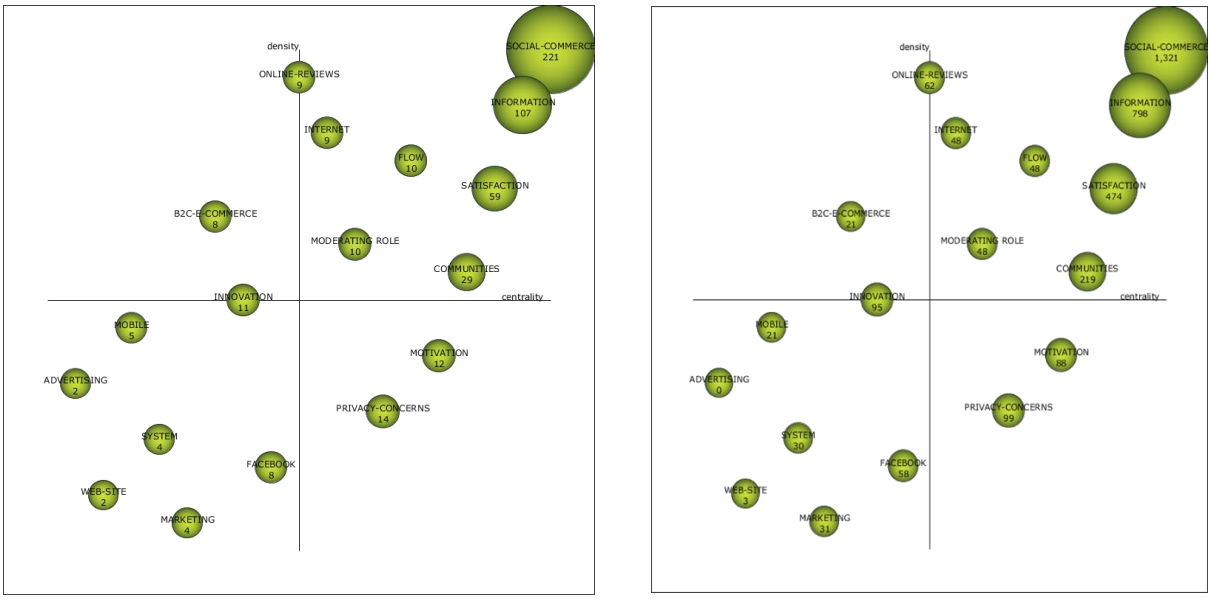
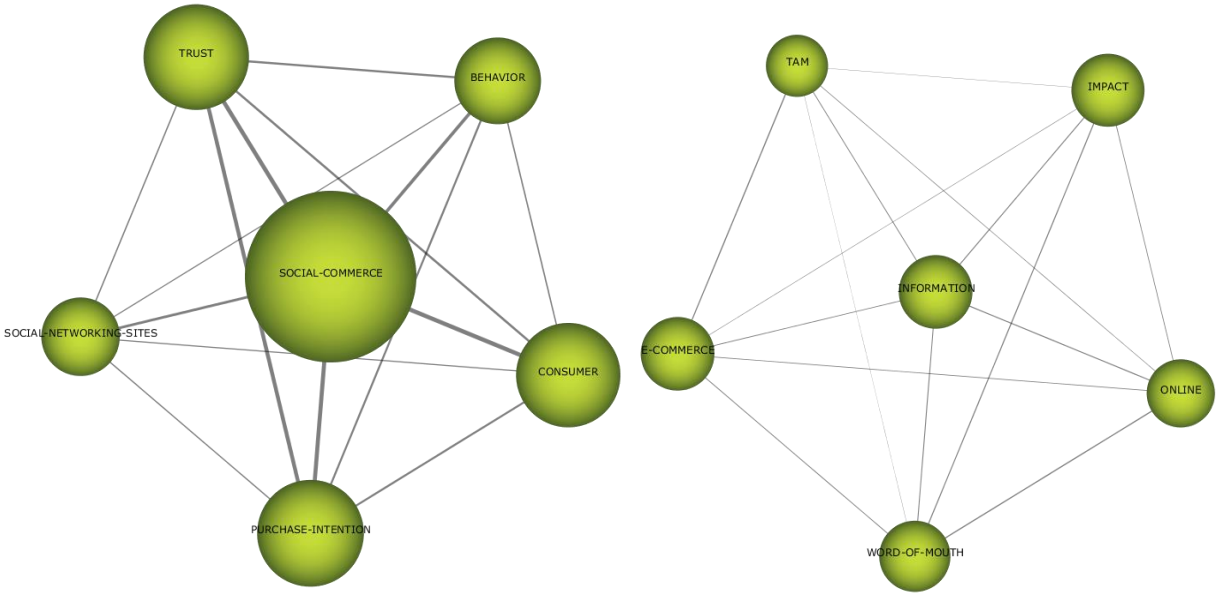


Figure 62: Thematic networks



Regarding the principal themes showing the related thematic networks, we subsequently present the most frequent themes (with a frequency of more than 2) and their thematic networks (see Figure 62), whereby we can see that there are strong intrathematic links in these networks.

4.3.4. Conceptual evolution of social commerce

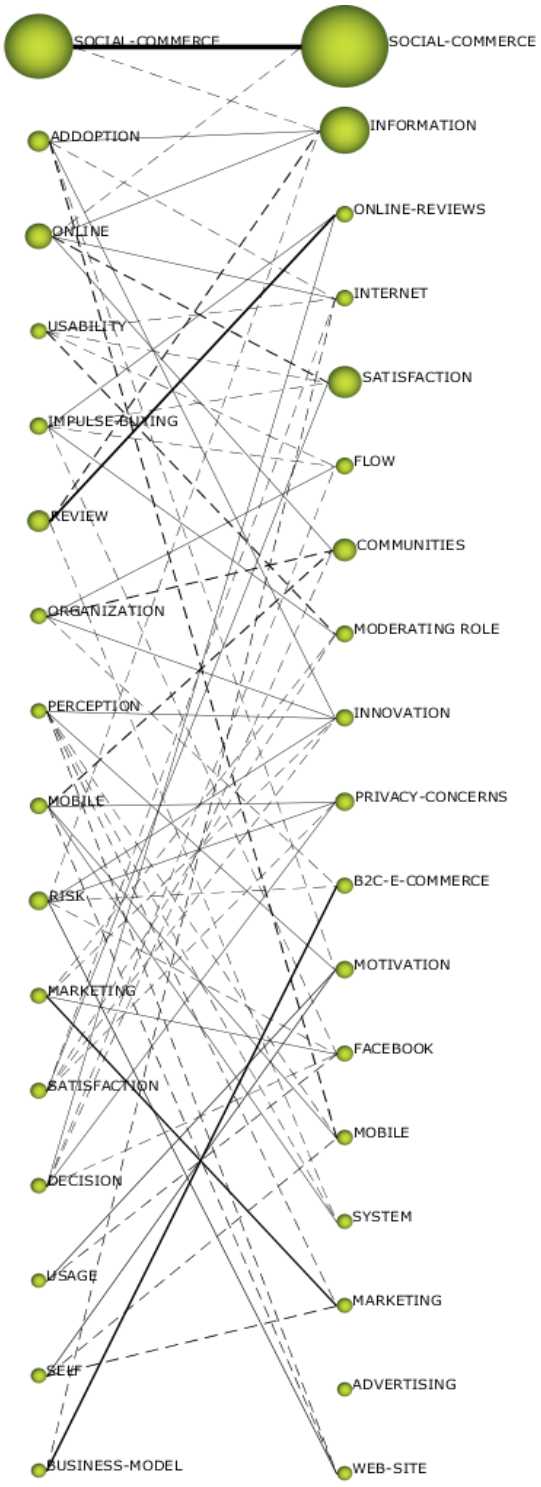
To analyze the conceptual evolution of more recurrent topics addressed by the community of scholars on this topic, the longitudinal map based on the number of publications in the periods studied is presented below. In this map, the volume of the spheres is proportional to the number of documents published and associated with each topic.

Although the first work on social commerce dates back to 1999, as can be seen in the following illustration (Figure 63), social commerce has been published on mainly in the new millennium, specifically since 2008. Other recurring terms used in articles published in the first period are review, adoption, online and impulse buying, which were cited in a large number of papers and have been associated more with the discipline of marketing in general and social commerce in particular. On the other hand, in the second period, the terms information, satisfaction, online reviews, motivation and moderating role were cited a large number of papers and have been linked more recently with the discipline of marketing in general and social commerce in particular. A topic that also had some presence during the two decades was the application of the fundamentals of social commerce to the case of mobile phones.

We have seen that the topic social commerce has been important topic in recent years. We have also seen that in the second period new themes and keywords appeared, which were not the same as in the first period; for example, Facebook is a type of social commerce, and in recent years, Facebook has been one of the platforms from which users buy their desired products. Also, there have been some studies related to Facebook and social commerce in the last few years.

Despite the diversity of recurring themes in each period, it can be concluded that there has not been a single, strongly cohesive theme, i.e., one that has endured throughout the two periods. This is a sign of the strong segmentation as well as the scarce centrality and therefore the scarce development of different themes in the development of the entire field of research that has been analysed.

Figure 63: Evolution map by number of documents for each topic (2008–2017 and 2018–2021)



Continuous line: both clusters (or topics) share the same central keyword (name used for the topic), or this word is included in the other cluster.
Dashed line: the clusters share a keyword. The width of the line is proportional to the Jaccard index.

4.4. Conclusions and future of social commerce research

This article presents the main results of a bibliometric analysis applied to the work of academic and professional community interested in the study of social commerce. After the corresponding review and elimination of papers that addressed different issues, some keywords had to be recorded or normalized according to a homogeneous classification criterion. Finally, 445 articles have been processed. The co-word analysis applied allows visualizing the conceptual structure of this area of knowledge from the keywords of the articles reviewed, with the results being very useful for empirical research on marketing in general and specifically on social commerce.

First, we found that over the period studied (2008–2021), the number of topics had grown due to the increase in the number of articles published (and the creation of new journals) in this field of knowledge. However, this fact has not followed a linear progression but rather an exponential one, especially during the second period. This fact has resulted in the articles being grouped into larger topics for the second period (2018–2021).

The result of the bibliometric analysis shows that in both periods the term social commerce had the greatest frequency in both the number of documents and citations, with the second period showing a larger number than the first. Likewise, during the first period, online, usability, impulse buying, adoption and review terms were heavily studied. However, information, satisfaction, communities, moderating role, flow, internet and online reviews terms were deeply studied in the second period.

Social commerce is an important topic, and we have seen that in recent years several authors from different countries around the world have investigated this topic for instance (Herzallah et al., 2021a, b; Wu et al., 2022), and we think that social commerce will not stop at this point. In the coming days and the distant future, we shall see several new topics appear because the technology and all the new situations that we are living nowadays will help to develop social commerce research. Similarly, we have reviewed the recent research future lines, and from these ideas, we have collected our thoughts and those of other researchers. These can be seen below, classified according to the groups (see Figure 64).

Internal future research ideas for social commerce:

1- Future lines could concentrate on additional new platforms for social commerce, such as Instagram, YouTube, Tik Tok, Snapchat, Pinterest, Verient, Taggbox, Zalora, AliExpress, Lazada, etc., and on the behavior and intention on buy through these platforms.
2- Future research should, for example, consider new features and characteristics of social commerce platforms, such as social activities, likes, comments, designs, followers, stories, feedback and product reviews or ratings, which may influence consumer intention and behavior.
3- Future research should explore the effect of customer motivation, live interaction and other behavior intentions (such as continuance intention and repurchase intention) on live shopping and streaming commerce, such as live broadcasting apps, Instagram, Facebook, Amazon live, Taobao, Tmall, JD.com, as we think that today this technique is strongly influencing users of social commerce platforms.
4- Future research might explore if coupons and discounts on social commerce facilitate or impact buyer behavior and purchase intention.

External future research ideas for social commerce:

1- Future research should examine different international and national companies and different sectors with Social commerce influence such as food, tourism, technology, fashion, education, also examining traditional and luxury brands.
2- Future research might investigate different social commerce platforms for influences on different countries and cultures to understand the differentiation in the behavior and intention to buy through social commerce platforms, identifying between collectivist cultures and individualistic cultures, classifying emerging and developing countries, country size and also identifying the laws and politics of social commerce in different countries since each country differs in their way of thinking and their political, economic, social, technological, environmental and legal situations regarding social commerce.
3- In the future, different statistical approaches could be used to conduct group analysis to generate different findings related to moderating effects (age, gender, experience, education, psychological contracts) that can influence consumers' behavior and purchase intention in social commerce, as these moderating effects have also played a big part in recent investigations and have shown how important it is to measure the moderating effects and see the differences in behavior and intention toward social commerce platforms, especially regarding the decision to purchase.
4- Future social commerce research will involve themes related to COVID-19 buying through studying social commerce before and after and the pandemic’s influence on social media platforms and online websites since COVID-19 has changed the behavior and intention to buy more on social commerce platforms. Also, the influence of COVID-19 allowed many companies to start selling their products on social commerce platforms.

Scientific future research ideas for social commerce:

1- Research could employ different modern qualitative methodologies or social media analytics approaches: neuromarketing (eye-tracking technique might be used to measure the attention that users pay to an exact post to better capture the way users browse content), text mining, interviewing, random sampling procedures, content analysis, A/B test (click-through rate (CTR) and real sales) of web crawlers or use field-scenario experiments or multiexperiment methods, focus groups, snowball, judgmental sampling, knowledge graphs and inductive logic programming techniques that allow researchers to analyze the data collected to understand consumer behavior and purchase intention on social commerce platforms.

2- Hence, we recommend that forthcoming studies integrate other theories or models, such as social bond theory, social network theory, big five model, elaboration likelihood model, behavioral theories, theory of social impact (number, tie strength and closeness), social presence theory and social influence theory to increase the predictive power of social commerce.

3- Future research might consider the effect of social commerce platforms factors, such as community, collaboration, self-efficacy, risk, social support, information dissemination, combination of technology, social attributes, emotional support, subjective norms, relationship quality, consumer brand engagement, interactivity, connectivity, socio-emotional communication, impulse-buying tendency, urge to buy impulsively, utilitarian motivation, service quality, past experiences, security, privacy concerns, seller's social influences, social presence, media richness or the personal characteristics of consumers, on the behavior and purchase intention, especially on the decision to purchase.

Figure 64: Social commerce future research

Source: Author

4.5. Limitations and future research

The present study has achieved the objective of identifying the network structure of social commerce research topics. However, the authors have encountered several difficulties due to the biases that arise from analyses of this type.

First, one of the limitations is that the resolution of the method applied depends on the criteria established in the data homogenization process as well as on the thresholds and measures for the reduction and normalization of the network or for the extraction of the strategic diagrams and thematic networks. Although the authors extended these previous thresholds without identifying significant changes in the conceptual structures identified, the final solutions are partially dependent on the technical decisions made. However, the analysis carried out permitted the discussion of general trends that are widely accepted by the scientific community to be legitimized since the procedure excluded issues of marginal importance and clarified the interpretation of the results.

The authors suggest extending future research through other procedures and the use of other bibliographic databases, such as the Web of Science, for a more exhaustive analysis. In addition, it could be interesting to take into account other types of documents, such as those generated in prestigious research centers, republished manuscripts only available online or conference papers.

In addition, the findings suggest that the existing research is not comprehensive, indicating that more research effort is needed in each of the recognized subdomains or research streams to gain a better understanding of the crucial aspects of social commerce. These results respond to the authors' call for further research aimed at clarifying the theoretical foundations of this field of study, which can still be considered to be developing.

Future lines of work have been explained in terms of the limitations recognized in the numerous articles studied, although these lines could be clarified, for example, through the creation of a panel of experts on the subject. Nevertheless, the ideas presented in this paper as well as the conceptual structure from a longitudinal perspective contribute to advancing knowledge and understanding of academic research on social commerce.

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Selling on Instagram: Factors that determine the adoption of Instagram commerce

Study 2

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Study 2: Selling on Instagram: Factors that determine the adoption of Instagram commerce

Abstract

The relevance of social networks in recent years has been demonstrated at the business level. However, selling through social networks and more specifically on Instagram constitutes an emerging field of knowledge. Instagram commerce is part of the new means of social commerce, in which various companies all over the world sell their products and services, and Instagram is the second most preferred social media platform globally. The aim of this research is twofold: on the one hand, to demonstrate the influence of social networks on the purchasing decisions of individuals by focusing more on Instagram commerce, and on the other hand, to analyse the factors that drive purchases in the context of the development of sales in social businesses, more specifically, on Instagram in Palestine. For this purpose, an experimental situation was developed in which users answered a survey after watching a video. From this survey, the present study obtained 200 valid responses. The research model is evaluated through structural equation modelling (SEM). Results reveal the huge impact of social networks on consumer purchase intention. In this sense, there are several factors that mediate the growth of sales in social commerce, particularly on Instagram. The research has important implications for the theory and practice of Instagram commerce.

Key words: Social commerce; Instagram commerce; social networks

5.1. Introduction

In recent years, the world has been dramatically affected by social media. Social networks play a key role in the economic and social life worldwide (Zeng and Gerritsen, 2014). The Internet in general and social media in particular are widespread technologies used by nearly half of the world's population, and the stats are on the rise (Jashari and Rrustemi, 2017). In this sense, Del Giudice (2016) suggested that the Internet has changed the management process inside and outside of the companies. Also, the Internet improves the competitiveness of global companies through information sharing and social worth in the long term, therefore impacting client relationship management and business performance. Moreover, with the rapid development of the Internet in addition to the development of Web 2.0 technologies, consumers are moving away from old-style media (TV, radio, and printed journals and magazines) to online social media (Oh et al., 2017).

The increased relevance of social media is nowadays instrumental to many fields associated with business (Liébana-Cabanillas and Alonso-Dos-Santos, 2017). In addition, the new social platforms have developed a crucial communication instrument for traders and dealers, significantly affecting customers' ideas, actions, and buying activities (Oh et al., 2017). The vast majority of companies use at least one social media platform to improve their advertising and marketing strategies (Cui et al., 2018). Along these lines, according to Ioanãs and Stoica (2014), most companies have pages on social media platforms to show and advertise their products in detail. Such platforms have reviews about the products and the companies.

Nowadays it seems difficult to live without smartphones, social media, and the Internet, with users all around the world usually online 24/7 (Bürklin, 2019). Social media offers new, improved ways for people to communicate with each other and with companies from all over the world (Khobzi, 2019). Moreover, social media platforms are especially significant for many companies and businesses since customers turn to the Internet to read, watch, and buy services and products (Pourkhani et al., 2019). Furthermore, social media manages to satisfy customer needs for self-actualization by providing them with ways to express their feelings and share their purchase experiences with regard to positive and negative attitudes toward brands (Kusumasondjaja and Tjiptono, 2019). Also, social media advertising is often customized to customers' profiles, online activities, and interests (Youn and Shin, 2019).

The purpose of the present study is twofold: firstly, to demonstrate the impact of social networks on purchasing decisions by focusing more on Instagram commerce, and secondly to analyse the factors determining purchase intention in the context of social commerce, more precisely on Instagram. Based on the data collected through an online survey with a sample of 200 social commerce customers, the proposed model is assessed using partial least squares structural equation modelling (PLS-SEM). The obtained results reveal the significant impact of social networks on purchasing decision and intention with regards to customers in Palestine. In this sense, there are many variables mediating purchase intention in the context of social commerce and more precisely on Instagram, such as perceived ease of use, perceived usefulness, attitude, reputation, like/share/comment, content, trust, and Instagram features. We have chosen these variables as these are the newest factors that researchers have studied before in other social commerce, as we were like to examine these variables with Instagram commerce and to check if the Palestinian users

of Instagram will be affected by these variables before buying a product on Instagram. We have applied three theories: TAM theory, which is used by many investigators in recent years, and trust commitment theory and reputation theory, used by few researchers related to social commerce, but in our research these two theories indicate an importance relation between the selected variables and social commerce. In addition, we have added a new variable—the features of Instagram—as no one has studied this variable before on Instagram commerce to check whether it has an impact on the purchase intention of Palestinian Instagram users. In addition, given that social commerce represents a new and auspicious theme for future business researchers, as well as in the fields of marketing, digital marketing, and consumer behaviour, we propose the following research question:

RQ1. Do Instagram features have an impact on the purchase intention of consumers?

This study contributes to the theory and practice of marketing by improving the understanding of the decision-making process when purchasing on social networks and the factors that determine purchase intention in the context of social commerce in general and Instagram commerce in particular, testing relationships that have not yet been assessed. Therefore, results from the present study are of interest to academics and to international and local companies.

The paper is divided into seven sections. The first section comprises the introduction and the motivations of the study. The second section carries out reviews of social commerce and Instagram commerce, and the third section establishes the theoretical framework and develops the hypotheses for the variables approached by the proposed model. The fourth section focuses on the methodological aspects of the research. The fifth section summarizes the main results of the investigation. Finally, the sixth section discusses the findings, limitations, managerial implications, and avenues for future research.

5.2. Social commerce and Instagram commerce

Digital marketing is defined as achieving marketing purposes through the use of technology, digital media, and data. Digital marketing focuses on online company presence, for example, firms' social media pages, websites, mobile applications, and email marketing, among others (Chaffey and Chadwick, 2019). Furthermore, most companies approach digital marketing to be able to notify consumers about new products or services, develop brand awareness, and support their place in the market. All of this may be realized through consumer conversation, brand strengthening, customer upsell, lead conversation and promotion, customer service, and companies' expansion of their own business (Bheekharry and Singh, 2019).

E-commerce can be described as an online business deal through the Internet to import or export goods or services. In this regard, online stores are at the heart of the business while Internet users are the buyers or customers. Moreover, e-commerce is often called Internet business (Qiu and Benbasat, 2005; Javid et al., 2019). Furthermore, online shopping appears to have had a financial and cultural influence on how procurements are made, with a collection of online-only offers and sales (Smith and Raymen, 2017).

Social commerce has become an important development model in the background of e-commerce of the future, especially in the business sector. This new type of social commerce creates high-cost active products to entice customers to share products through social platforms. There is no clear definition for social commerce, as it is a new method of e-commerce, which lets customers produce content via social communication to influence diverse product shoppers. In addition, social commerce is the use of social media, online media, and other communication networks in the background of social media. It is a new form of e-commerce that uses social media technology to conduct personal relationships and convey business information and communication, supporting the buying and selling of goods via social communication and satisfied users (Wang et al., 2015; Wang and Xie, 2020).

Social commerce has many definitions and emerges as a new type of online platform that allows customers to share experiences, opinions, and information about where, what, and from whom to buy (Xu and Liu, 2019). Social commerce has also been described as the amalgamation of social media, technology, and e-commerce (Yao et al., 2019). In addition, social commerce is being developed as social network platforms upgrade progressively to Web 2.0 and Web 3.0 technologies (Gibreel et al., 2018). Moreover, social commerce creates relationships between merchants and customers since it encourages trade, collaboration, and trust (Lin et al., 2019). Social commerce includes group purchasing, social shopping, collaborative consumption, and social bundling (Doha et al., 2019). Furthermore, in 2005 Yahoo introduced social commerce for the first time, which let consumers share, comment, and review products (Baethge et al., 2016). Social commerce indicates a 'social' dimension adopted from social media platforms, for example, Snapchat, Instagram, and Facebook (Henninger et al., 2019a). Additionally, the rapid advance of social commerce has provided new opportunity for companies and businesses (Othman et al., 2019). Many customers from all over the world now prefer to buy services and products through national and international online channels (Palos-Sanchez et al., 2019). By 2020, social commerce was expected to drive the growth of the business into a global 80-billion-dollar market (Shen et al., 2019). Finally, companies should focus on the perceptive and emotional dimensions with regard to customers interacting on social commerce websites (Herrando and Martinez, 2018).

Social commerce is becoming a significant hub for product sourcing, which supports firms in connecting through clients and gaining competitive advantages. Social commerce is measured as a subgroup of e-commerce, which supports social connections and user contributions. Furthermore, social commerce is a place where people can cooperate online and obtain advice from other trusted individuals, discover products and services, and buy them by social networks, using tagging, podcasts, blogs, chat rooms, ranking, and recommendation systems (Abed, 2020). Additionally, social commerce is useful for customers and companies, providing advantages such as selling through social media, improving e-commerce websites by adding social media tools, and combining social media to drive the overall commercial performance of brick-and-mortar retailers (offline) while improving their customer service (Bürklin et al., 2019). Likewise, on social commerce sites customers can like, comment, share, and review products and services (Henninger et al., 2019b). Additionally, social commerce helps customers obtain and compare information about products and services in order to make the best purchase decision (Blazquez et al., 2019). Finally, social commerce builds trust between customers and companies, improves the relationship

between customers, expands interpersonal collaboration among customers and brands, and provides brands with a unique chance to co-create value for customers (Jin and Ryu, 2019).

Instagram is a social network platform owned by Facebook that launched on the 6th of October in 2010. The co-founders of Instagram are Kevin Systrom and Mike Krieger, who worked for the company from 2010 until September 2018 before leaving. Today, Adam Mosseri is the head of the Instagram business, and he manages the operations, products, and engineering (Instagram About Us, 2019).

Instagram is one of the most relevant and innovative social media developments (Nedra et al., 2019). In August 2016 Instagram launched 'stories', a feature allowing users to upload photos, live streams, and short videos that expire after 24 hours (Belanche et al., 2019). Instagram has become a sort of alternative life since no matter what happens in the world, it is connected and reflected in Instagram (Kertamukti et al., 2019). Instagram users can message their friends or the pages that they are following and also react to their stories. Instagram has improved the chat features to compete with other social networks, where customers can upload photos, audios, GIF files, short stories, and video calls. The new features include posts, filters, hashtags, superzoom and boomerang visual effects, and live streaming (Alfonzo, 2019). Furthermore, Instagram stories enable new ways for companies to communicate with customers and advertise their products and services through full-screen, dynamic, short-lived interactive commercials with high performing value (Belanche et al., 2019). Also, Instagram has changed the attitudes of consumers toward the media they consume. Instagram users have the option to watch and like videos and photos uploaded by other users or ads of products or services of commercial brands. In this regard, companies should focus on publishing striking photos to grasp users' attention while scrolling through their feeds. The first impression is key in Instagram advertising and remains crucial to catch user interest (Kusumasondjaja and Tjiptono, 2019).

Instagram, Facebook, and Twitter have profoundly influenced the market. Instagram provides a massive selling channel for the vast majority of brands (Boardman et al., 2019) and constitutes a powerful tool for reaching younger audiences and building brand reputation (Belanche et al., 2019). Additionally, shopping on Instagram launched in June 2018, introducing new ways to purchase through the platform. In this sense, customers can find a shopping channel to explore the products and services from the brands that they follow. The shopping pages on Instagram provide customers with all the relevant information (name, description, pricing) about the products and services on sale (Introducing more ways to shop on Instagram, 2019). Furthermore, numerous small and medium-sized enterprises along with large companies approach social commerce and especially Instagram to improve their business performance (Dzulfikar et al., 2018). Instagram shopping allows businesses an immersive storefront for individuals to discover the best products. Through Instagram shopping, individuals can share featured products with organic posts and stories, or have individuals discover the products in the Search and Explore utility (Instagram Help Center, 2019). Additionally, Instagram shopping provides an opportunity to create a virtual showcase for publications. The main benefit of this new feature allows brands to highlight specific publications from their Instagram feeds and then label the products that they have made available. Moreover, this new feature makes it much easier for brands to sell the products they have included

in their Instagram content. These 'shopping' publications have their own characteristics for both customers and brands that publish their products. Also, Instagram shopping allows brands to convert customers or at least bring them closer to the desired goal (Bloo Media, 2019). There are other benefits for Instagram commerce: improving customer loyalty, attracting new customers and increasing sales, achieving wider brand recognition, and promoting product descriptions and prices (Rivera, 2020). Likewise, 83% of Instagram users globally discover new products and services on Instagram. Instagram can generate four times more engagement than Facebook, and 71% of companies use Instagram. Instagram helps 80% of Instagram users decide whether to buy a product or service (Mohsin, 2020). Additionally, 62% of Instagram users report that they have become more interested in a brand or product after seeing it on Instagram. Brands on Instagram post an average of 2.5 stories per week, and one-third of these are from businesses. Every month 60% of businesses on Instagram use interactive element. Brand stories have an 85% achievement rate, and this might because they use short stories now (Newberry, 2019). Additionally, 50% of Instagram users follow at least one business or brand (Mohsin, 2020). Also, 130 million Instagram users tap on shopping posts every month, meaning that there are many users around the world who are making purchases directly from Instagram commerce (Newberry, 2019).

5.3. Literature review: Research hypothesis

The scientific literature has established numerous theories and concepts of behavioural decision making and models of intention, most of which comprise social psychology studies (Pavlou, 2002), to examine the behaviour of individuals when approaching an innovation.

With regard to consumer behaviour on the Internet, in the present study we conducted a literature review focused on the most supported models and theories in the marketing and information technology (IT) field. Specifically, this review was based on the proposals of the technology acceptance model (TAM) (Davis et al., 1989), the trust commitment theory (TCT) of Morgan and Hunt (1994), and the reputation theory (RT) developed by Bromely (1993) and Emler (1990). Other variables related to the context in which this research was carried out were also incorporated.

5.3.1. Technology Acceptance Model

TAM (Davis et al., 1989) is an adaptation of the general theory of reasoned action (TRA) of Fishbein and Ajzen (1977), and it is specifically aimed at modelling the acceptance of information systems. Dass and Pal (2011) examined TAM to reveal that consumers' acceptance of technological innovations is predicted through their intention to use the innovation, which in turn is defined by a person's innate beliefs about the innovation. Moreover, TAM suggests that the intended behaviour of consumers in the use of an information system emerges from intention, which is created by customers' attitudes toward the use of new systems and the the system's perceived usefulness (Zhu, 2016). Also, numerous technology adoption models have confirmed that ease of use, usefulness, attitude, perceived trust, and subjective norms are the most significant factors impacting customer intention and eventually the continued usage of new technology (Dwivedi et al., 2019).

In this context, researchers who have assessed the determinants of intention have generally focused on the perceived usefulness and perceived ease of use examined in the TAM model. Moreover, TAM has been approached in several studies to evaluate the acceptance of innovative technology in numerous fields: email usage, acceptance of mobile shopping applications, acceptance of e-shopping, and acceptance of the use of social media (Nedra et al., 2019). Furthermore, numerous scholars have adopted TAM to examine online shopping (Zhu, 2016).

5.3.2. Trust Commitment Theory

TCT (Morgan and Hunt, 1994) was also chosen to meet the research objectives of the present study. This theory describes trust and commitment as two important factors instrumental to cultivate and sustain beneficial relational exchanges in marketing. In addition, Morgan and Hunt (1994) suggest that trust and commitment also play a key role in driving customer behaviour, inspiring sellers to maintain investment relationships by collaborating with exchange partners for valuable short-term advantages compared with the prospect of remaining with current partners. Nevertheless, there is little research on the application of TCT in studying the purchase intention of social commerce. Trust theory is used as a context to study the relationship between customers' trust in social commerce (Beyari and Abareshi, 2018). Trust should be measured as a priority for customer purchase intention afterward using social commerce, as trust plays a key role in online connections. In this sense, TCT has been commonly applied and used within diverse research backgrounds, for instance in an interpersonal relationship (Costa, 2003), buyer–seller relationship (Doney and Cannon, 1997), and inter-organizational relationship (Geyskens et al., 1996), and it occupies a dominant position in examining relationships established on the Internet (Wu et al., 2010). In this research model, trust is used as an aspect to test the elements affecting customer purchasing intention.

5.3.3. Reputation

Reputation Theory (Bromely, 1993; Emler, 1990) supports the ideas of the present study, suggesting that individuals and organizations are involved in many reputation-related processes. Furthermore, Bromely (1993) and Leuthesser (1988) posited that companies are interested in monitoring their own reputation. Moreover, Fishbein and Ajzen (1977) and Nisbett and Ross (1980) indicated that monitoring reputation leads to understanding the degree to which the reputation of an entity is good or bad. Furthermore, monitoring facilitates the growth of reputation-related opinions. Such opinions might be described as either descriptive (involving a set of relations tied to a social category) or causal (referring to the degree to which a specific action affects the reputation of a company). Additionally, this theory suggests that a community entity strives to achieve reputation (Bromely, 1993). Companies with a good reputation see improved sales compared to companies with a lower reputation (Bromley 1993; Yoon et al., 1993) In this sense, reputation management emerges in response to reputation issues. Usually, companies engage in actions that will cement and improve their reputational standing.

After an intensive search on the proposed theories (see Table 7), we can confirm that the most used model to analyse the intention of use in the case of SC is the TAM model. On the other hand, the other two theories incorporated do not have as much empirical support in this field, and we therefore consider it relevant to analyse their influence on this commercial activity.

Table 7: Frequently used theories/models in Social commerce

References	Theory	Country
Kwon et al. (2020)	TAM	Korea
Abed and Ezzi (2019)	TAM	Saudi Arabia
Cho and Son (2019)	TAM	US
Sarker et al. (2019)	TAM	China
Makmor et al. (2019)	TAM	Malaysia
Doha et al. (2019)	TAM	Canada
Samarasinghe and Silva (2019)	TAM	Sri lanka
Dashti et al. (2019)	TAM	Iran
Nedra et al. (2019)	TAM	Tunis
Athapaththu and Kulathunga (2018)	TAM	Sri Lanka
Wang et al. (2020)	Trust Commitment	US
Beyari and Abareshi (2018)	Trust Commitment	Saudi Arabia
Liang and Turban (2011)	Trust Commitment	US
Yan et al. (2015)	Reputation	China

5.4. *Research hypothesis*

Based on the aforementioned theories, a holistic model has been proposed to meet the objectives of the present study.

5.4.1. Perceived Ease of Use

Perceived ease of use is the degree to which an individual believes that using a specific system could be effortless (Davis, 1989). Along these lines, Al Khasawneh (2015) defined perceived ease of use as the degree to which a person believes that using a specific system will not involve any mental or physical effort. Moreover, perceived ease of use is one of the most significant factors affecting the decision to adopt a new technology. Davis et al. (1989) posited that the influence of perceived ease of use is twofold. On the one hand, it impacts attitudes such as self-efficacy, and on the other hand it also mediates usefulness, as the TAM revealed. Hu et al. (1999) suggested that perceived usefulness is more important than perceived ease of use and the most significant driver of the acceptance of new technology. Each social media application provides different services related to different fields and tools aimed to improve the value offered to their users (Alsaleh et al., 2019).

Innovation diffusion theory (IDT), developed in 1960 to clarify the critical factors affecting individual technology, has been often described as a theory focused on rational inspection and

seeking to explain how new technology, behaviours, and ideas spread and eventually come to fruition. In this sense, IDT can be considered as a theoretical model assessing the reasons why individuals choose to accept new technologies and attitudes (Robertson, 1967; Rogers, 2003). According to Venkatesh et al. (2003), IDT is associated with the following characteristics of technology that predict user acceptance: ease of use, values and preferences, compatibility with previous technology, reliable results, advantages over existing choices, and the opportunity to test the technology while avoiding a heavy investment in assets and resources. Furthermore, IDT has been proven useful in explaining usage of social network sites (Chiang, 2013).
Several researchers have explained empirically how ease of use technology directly affects customer attitude (Limayem et al., 2000, Ranganathan and Ganapathy, 2002; Ha et al.,2009; Bahri-Ammari and Mraidi, 2016). Additionally, the work of Shih (2004) indicated that, in an online shopping context, perceived usefulness shows the degree to which a consumer believes that online shopping will improve shopping effectiveness and convenience. Also, Nedra et al. (2019) found that perceived ease of use positively affects the attitude of social customers to use Instagram.
In light of the aforementioned findings, the following research hypothesis is put forward:

H1: *Perceived ease of use has a positive effect on attitude.*

Perceived ease of use and perceived usefulness are strong predictors across numerous forms of technologies such as Internet-based learning systems (Saadé and Bahli, 2005) and mobile learning (Althunibat, 2015). In the field representing the present research, different authors have already corroborated the importance of both variables. Baker et al. (2019) indicated that improving perceived ease of use positively influences perceived usefulness with regard to online shopping in a web-based e-commerce environment. Furthermore, research has consistently revealed that perceived ease of use affects perceived usefulness, which in turn impacts the shopping experience. However, other studies have found that improving perceived ease positively affects perceived usefulness in online shopping websites (Hassanein and Head, 2007; Alsaleh et al., 2019). Therefore, the following hypothesis is put forward:

H2*: Perceived ease of use has a positive effect on perceived usefulness.*

5.4.2. Perceived Usefulness

Perceived usefulness can also be regarded as the probability that technology can improve the way customers achieve their objectives. Moreover, in an online environment, usefulness is perceived as the degree to which a customer believes that online shopping will provide information while allowing a faster purchase process (Vijayasarathy, 2004). In the context of the present study, perceived usefulness positively affects customer attitude toward the use of Instagram commerce.

The TAM also defines perceived usefulness as the degree to which an individual believes that using a specific system could result in improved job performance. Also, perceived usefulness affects behavioural intention.

In the context of Instagram commerce, perceived usefulness positively impacts the intention to purchase and attitude to use Instagram commerce. Other researchers (Bruner and Kumar, 2005) have established a significant positive relationship between the perceived usefulness of new Internet applications and the attitudes toward services such as applications and information

systems (Oni et al., 2017; Mwiya et al., 2017), online shopping in a web-based e-commerce environment (Alsaleh et al., 2019; Baker et al., 2019), and mobile payment (Ramos de la Luna et al., 2019).

Nedra et al. (2019) revealed that perceived usefulness identifies the degree to which customers believe in the advantages of using Instagram commerce (i.e., saving time and money, suitability, and access to additional information). Additionally, their work suggests a relationship between perceived usefulness and the attitude to use Instagram. Furthermore, the study examines social customers who contemplate the advantages derived from the use of Instagram and suggests that its use positively affects the attitude to use Instagram. Also, their research also found that perceived usefulness positively influences the attitude to use Instagram.

In light of the aforementioned findings, the following hypothesis is put forward:

H3: *Perceived usefulness has a positive effect on attitude.*

Davis et al. (1989) differentiated the pre-adoption stage from the post-adoption stage. In this sense, they explained that perceived usefulness remains as a significant driver of intention to use the system during these two phases. Szajna (1996) empirically verified the aforementioned ideas and found that usefulness also mediates intention to use in these two phases. Nedra et al. (2019) assumed, however, that the intention to use the Internet to make purchases arises in individuals who perceive the benefits derived from the use of the Internet. In addition, if they can turn said usage into a business method, they will gain further competitive advantages. In short, perceived usefulness explains intention to purchase while interacting with Instagram commerce.

Previous research studies such as those of Ye et al. (2016), Zhang et al. (2016), and Yahia et al. (2018) show that the perceived usefulness facilitates social commerce. Moreover, Da Costa and Tanamal (2017) specified that perceived usefulness affects intention to use. Furthermore, perceived usefulness has a significant positive effect on intention to use mobile payment systems (Ramos de Luna et al., 2019). Finally, research from Ardiansah et al. (2020) suggests that perceived usefulness has a positive effect on intention to purchase.

Based on these findings, the following research hypothesis is put forward:

H4: *Perceived usefulness has a positive effect on purchase intention.*

5.4.3. Attitude

Attitude is the key driver of customer volitional behaviour (Eagly and Chaiken, 1993). According to MacKenzie and Lutz (1989, p. 49), ‘attitude toward advertising is defined as a learned predisposition to respond in a consistently favorable or unfavorable manner toward advertising in general.’ Attitude is one of the most studied concepts in behavioural sciences and psychology (Oni et al., 2017).

The theory of reasoned action has been extensively used to describe the relationship between purchase intention and behaviour. Based on TRA, previous research has revealed that attitude affects purchase intention (Kim et al., 2019; Shin et al., 2018).

In the context of technology acceptance, attitude toward the use of a new technology relates to the evaluative decision-making process associated with the acceptance of technology and/or the appeal of using it. Moreover, the positive effect of attitude on intention emerged in the background of customer acceptance of new technology. Furthermore, attitude has a positive and direct impact on intention to accept a diversity of innovations such as smartphones (Chen et al., 2009), handheld technology (Bruner and Kumar, 2005), self-service technology (Dabholkar and Bagozzi, 2002), the Internet of things (Narakorn and Seesupan, 2019), and social commerce (Yeon et al., 2019).

On the other hand, TRA according to Fishbein and Ajzen (1977) indicates a causal relationship between intention and attitude to perform a behaviour. Once customers develop a positive attitude toward performing a particular behaviour, they become willing to perform it. Similarly, a favourable attitude toward using a technology eventually leads to the acceptance and usage of said technology. In this research attitude is regarded as the degree to which the customer is willing to approach and use Instagram social commerce (Davis, 1989).

Several authors have posited that online customer behaviour is impacted through the overall attitude toward information technology (Gattiker et al., 2000; Chen et al., 2002). On the other hand, research from Alsaleh et al. (2019) indicates that customer attitude on social media is positively related to customers' intention to use. Moreover, the study by Nedra et al. (2019) explained that a positive attitude toward the use of Instagram might positively affect consumer intention. Additionally, Limayem et al. (2000) and Joey (2002) indicated that attitude mediates customer intention to purchase online. In the article by Ting et al. (2016), they considered that a positive attitude toward the use of Instagram might positively affect customer intention to use it. Also, Nedra et al. (2019) revealed that attitude toward the use of social networks positively influences intention to use Instagram.

Therefore, the following hypothesis is put forward:

H5: *Attitude has a positive effect on purchase intention.*

5.4.4. Reputation

Reputation is one of the most important factors driving the use of social commerce. Reputation is generally regarded as the degree to which consumers believe that a merchant is honest and concerned about its customers (Jarvenpaa et al.,2000). When Instagram and social commerce achieve a good reputation and recognition, consumers are expected to act favourably and buy through social commerce and Instagram while improving their attitude toward use.

Reputation is frequently measured as the valuation by which individuals and objects are usually apprehended (Gul, 2014). Previous research from Albaity and Rahman (2019) found that the effect of reputation on intention to use Islamic banking services is positively influenced by attitude toward Islamic banks.

In this light, the following research hypothesis is put forward:

H6: *Reputation has a positive effect on attitude.*

In the context of marketing, Quelch and Klein (1996) debated whether Internet customers will favour those sites that represent a merchant with which the customer is already familiar from old-style channels. Also, a positive perceived reputation has an encouraging effect on the social commerce side of businesses (Maia et al., 2018). When customers perceive reputation in social commerce, they will increase their level of trust in that commerce. Meanwhile, previous studies have pointed out that customers' trust in the reputation of a business allows for an assessment of its trustworthiness. In this way, reputation plays a critical role in business operations between companies (Grazioli and Jarvenpaa,2000; Teo and Liu, 2007). Kim and Park (2013) posited that the reputation of the social commerce side of a business has a positive effect on consumers' trust in the firm. Along these lines, the study by Hsiao et al. (2010) indicated that improving perceived web reputation also increased consumers' trust in a website. Moreover, reputation positively influences trust in third-party mobile payment platforms (Shao et al., 2019). Furthermore, previous research proved that reputation has a positive and significant impact on trust (Gul, 2014). In addition, (Mariano-Artigas and Barajas-Portas, 2020) revealed that the reputation of mobile commerce directly and positively affects trust in mobile commerce in general. In this sense, Instagram is well known in Palestine and has a good reputation; customers are familiar with the name of Instagram and believe that Instagram commerce has a very good reputation for being honest.

Therefore, the following hypothesis is put forward:

H7: *The reputation of Instagram has a positive effect on trust.*

5.4.5. Like, Share and Comment

Like, share, and comment are concepts related to the digital world, and they are approached to gauge how a user reacts and responds to published content. Like is a hugely common form of user engagement behaviour in numerous online platforms such as social media, social commerce, and websites (Xu and Liu, 2019). Demmers et al. (2020) found that informative posts generate more likes, shares, and comments in the pre-consumption stage. On the other hand, comments allow users to participate and respond to the content by writing what they feel about a photo or video posted on the brand pages that they follow on Instagram. The comments that users leave on Facebook brand pages affect trust in the brands. Therefore, the more positive the comments about a brand, the higher the trust in it (Ladhari et al., 2015). Sharing is mostly self-explanatory: users on Instagram are encouraged to share photos and videos with their followers (Kertamukti et al., 2019).

Customers will trust the companies and products on Instagram with numerous likes, positive comments, and a massive following. In this light, the following research hypothesis is put forward:

H8: *Likes, shares, and comments on Instagram have a positive effect on trust.*

In the field of digital marketing, social media has become a significant communication channel for business. The feedback provided by likes is especially useful for companies, leading to many applications to include this feature (Koroleva and Kane, 2017; Oh et al., 2017; Sedera et al., 2017).

Moreover, Hoffman and Fodor (2010) indicated that likes have been especially well regarded since they can make brands apparent on social media while raising positive word-of-mouth. On the other hand, the comments that users leave on Facebook affect the attitude toward the brands. In this sense, a significant number of positive comments about the brands leads to improved, positive attitudes toward them (Ladhari et al., 2015). Additionally, customers usually engage in further positive attitudes toward the participating brands that get the most likes (Seo et al., 2019). For these reasons, the following hypothesis is put forward:

H9: *Likes, shares, and comments have a positive effect on attitude.*

5.4.6. Content

Content is defined as the information structures and services designed in social commerce. Since content plays a key role in mediating online purchase intention, companies should focus on social commerce, website, and social media pages to attract new clients and improve sales (Athapaththu and Kulathunga, 2018). When customers are presented with complete, easy to understand, reliable, accurate, and relevant e-marketplace information, they are likely to believe that the information is trustworthy, valuable, sufficient, and useful for buying the product or service (Kong et al., 2019).

Content also affects customer confidence in the commerce experience. Also, as online commerce generates easier methods of buying and sharing, clients expect service providers to keep the high availability and quality of information in order to meet their demands. On the other hand, low-quality information hinders the assessment of the service offering (Kong et al., 2019). Previous studies have showed that sites providing high-quality information about products and services are usually regarded as trustworthy in online shopping websites (Kim et al., 2004; Liao et al., 2006). Moreover, information quality is positively associated with cognitive trust in those users who like and/or share content (Chen et al., 2019). For all these reasons, the present study puts forward the following hypothesis:

H10: *Instagram content has a positive effect on trust.*

5.4.7. Trust

Trust has many definitions by different authors (Athapaththu and Kulathunga, 2018). In the context of the present study, Granguly and Dash (2010) defined trust as the perceived honesty and kindness of online stores. Trust can also be regarded as the expectations, sentiments, confidence, and beliefs associated with online interactions, intentions, and behaviours. In this sense, trust has been found to be directly related to the purchasing process and indirectly associated with consumers' purchase attitudes. Furthermore, trust allows customers to have a sense of identification with the merchants (Teo et al., 2007).

In previous research studies, trust in commercial websites has been shown to positively affect customers' attitudes toward a business and eventually mediate the intention to purchase products or services offered by that company (Heijden et al., 2003; Mcknight and Chouldhury, 2006; Hassanein and Head, 2007; Bugshan and Attar, 2020). However, other studies have revealed that a significant level of trust will have a positive influence on the attitudes toward online shopping websites (Hassanein and Head, 2007; Alsaleh et al., 2019; Baker et al., 2019; Tan et al., 2020). In light of these findings, the present study puts forward the following hypothesis:

***H11**: Trust has a positive effect on attitude.*

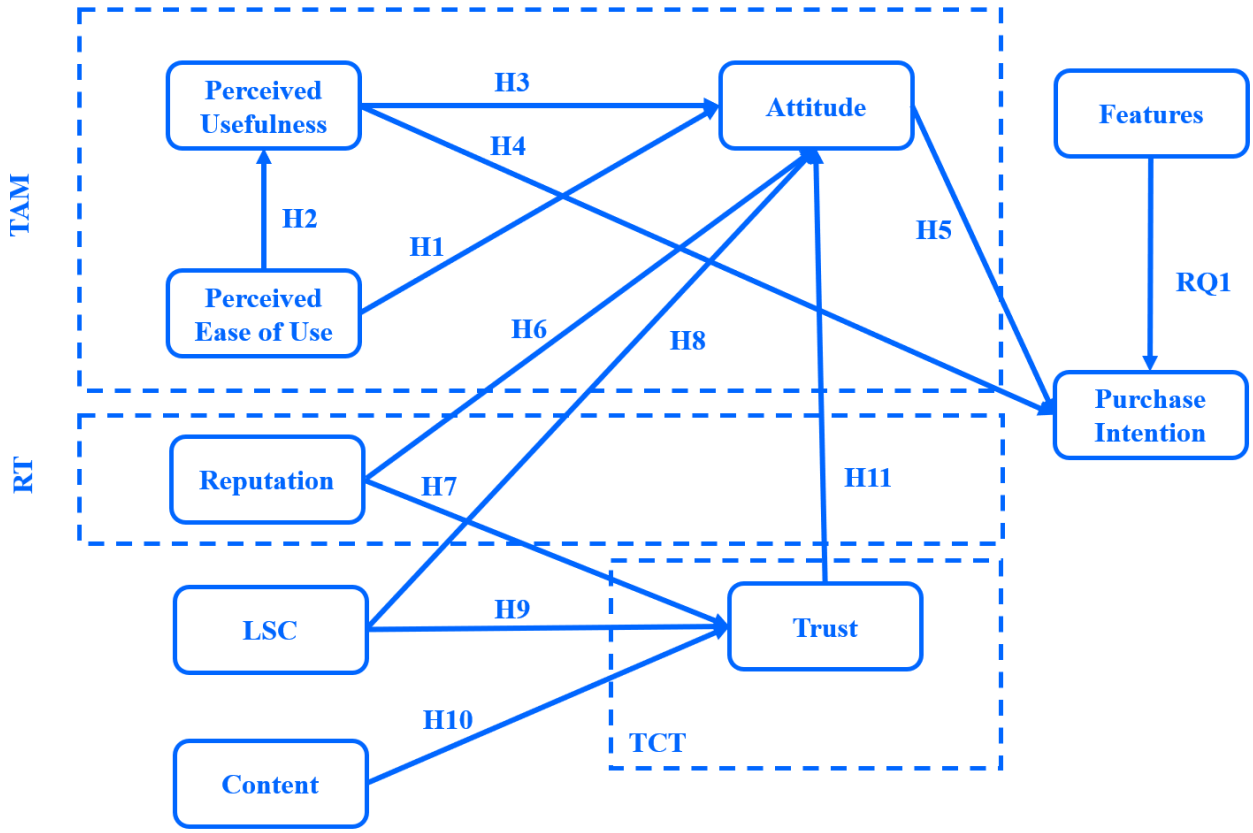
5.4.8. Instagram Features

In addition to the standard like, comment, share, follow, and shop features, Instagram allows users to post photos, videos, and stories created with the standard tools of the platform and the available plug-ins for special effects, calling them 'boomerang', 'superzoom', 'focus', 'rewind', and 'hands-free' (Huang and Benyoucef, 2013; Aydin, 2019). These features of Instagram are pioneering, and to this date there is no study in the extant literature assessing them. In this regard, the present study aims to examine the degree to which these features affect the purchase intention of the Palestinian users of Instagram. The present study focuses on the following use cases: a) consumers uploading photos and videos to the platform in the form of posts, stories, or live streaming; b) consumers using 'boomerang', 'superzoom', 'focus', 'rewind', and 'hands-free'; c) consumers following their favourite brands on Instagram; d) consumers liking their favourite brands' content on Instagram; e) consumers uploading content associated with their favourite brands on their stories; f) consumers enabling posts and story notifications for their favourite brands; g) consumers saving photos or videos posted by a brand to their collection; h) consumers using direct messages to ask questions to their favourite brands; i) consumers watching live videos streamed by their favourite brands**;** and j) consumers actually using the shopping features of Instagram. In addition, the following research question is proposed:

***RQ1:** Instagram features have a positive effect on Purchase Intention*

Based on the above discussion, figure 65 shows the research model approached in this research.

Figure 65: Proposed model



5.5. Methodology

An experiential research model was developed to examine the relationships between the proposed concepts, and a questionnaire was established to gather the required data.

5.5.1. Survey and measures and scales used

The research is based on primary data, collected through a survey questionnaire using Google Forms. The process involves showing participants a video explaining the process of buying through Instagram sent as a link (https://www.youtube.com/watch?v=CfVZ3u_rvXs) through Facebook, Instagram, WhatsApp, and email from June 2019 until August 2019. After viewing the video, participants completed the questionnaire. The questionnaire contains different question formats, including the provision of one option, filter, and yes/no questions, along with the possibility of adding more responses. In this sense, most of the questions were simple and clear. The database contained 200 records from people living in Palestine.

The questionnaire consisted of 61 items ranked and classified based on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree). The questions in the questionnaire are divided

into three sections: evaluation questions, questions related to the subject of this research, and questions concerning socio-demographic data. Moreover, all questions were drawn from the previously determined theoretical conceptual model based on relationships established by the hypotheses.

The measurement scales used in the questionnaire were adapted from previous studies. Trust was adapted from the scales used by Athapaththu and Kulathunga (2018). Reputation was adapted from Maia et al. (2018). Share, likes, and comments (ad engagement) were adapted from Youn and Shin (2019). Information search in the form of perceived usefulness, perceived ease of use, and content were measured through adapting the scales used by Athapaththu and Kulathunga (2018). Finally, attitude and purchase intention were adapted from Cho and Son (2019).

5.5.2. Data collection

The sample is mostly comprised of women (59.5%), while 40.5% of the respondents are men. The majority of the participants are aged 18 to 25 (39.5%), while 36% are aged 26 to 35, 12% between 36 and 45, 7.5% ranging from 46 to 55, 3% between 56 and 65, and only 1.5% aged over 65. Most participants have a university degree (57%), while 37% have a postgraduate degree, 5% high school studies, and 1% with just elementary education. In this sense, most of the participants are adult and know how to use technology and especially social media.

All of the participants are active on social media, with the most popular network being Facebook (95%). In addition, 87% of the participants use Instagram while 76.5% use YouTube and WhatsApp. On the other hand, only a minority use Twitter (30.5%). Most of the participants agreed that they access their favourite social networks through smartphones instead of desktop computers and tablets. The majority of the participants (55.5%) spend 2–5 hours a day browsing social media, while 27% spend up to 6–10 hours. Some of them (6.5%) spend more than 10 hours a day, in contrast to those participants (11%) who only spend 1 hour a day on social media. Of the participants, 49.5% are active on their favourite social networks from 20:30 to 00:30, and the majority use them to chat, watch videos, listen to music, acquire knowledge (cooking, make-up, DIY), follow accounts (media, news channels, political parties), post content (photos, videos, status updates, music links), find a job, or for professional or research purposes. Technology and fashion are the most followed interests on social media by the respondents in this research, followed by tourism, food, and education (Table 8).

Table 8: Demographic characteristics of the respondents

Demographics		**Frequency**	**Percentage**
Gender	Men	81	40.5%
	Women	119	59.5%
Age	18-25	79	39.5%
	26-35	72	36%

	36-45	25	12.5%
	46-55	15	7.5%
	56-65	6	3%
	Over 65	3	1.5%
Education Level	University	114	57%
	Postgraduate	74	37%
	High School	10	5%
	Elementary	2	1%
Employment Status	Employee	80	40%
	Student	63	31.5%
	Unemployed	28	14%
	Self-employed/ Businessman/women	26	13%
	Retired	3	1.5%
Monthly Income	Less than 1100 Euros	50	25%
	Between 1100-1800 Euros	38	19%
	Between 1800-2700 Euros	18	9%
	Over 2700 Euros	17	8.5%
	No Income	56	28%
	Don’t Know/No answer	21	10.5%
Which social network and media do you use?	Facebook	190	95%
	Instagram	174	87%
	Twitter	61	30.5%
	YouTube	153	76.5%
	WhatsApp	153	76.5%

5.5.2.1. Data analysis procedure

This research deployed structural equation modelling (SEM) to empirically test the proposed research model. SEM is a rather valuable statistical procedure in surveys using cross-sectional

data, bringing together numerous regression and factor analysis methods to evaluate the measurement instrument and test the hypotheses (Bagozzi and Yi, 2012).

5.5.2.2. Reliability and validity analysis

The collected data were examined through the SmartPLS 3 software suite using a partial least squares (PLS) technique to measure the model of structural equations (Henseler et al., 2014).

The individual reliability of each item is examined on the basis of the simple correlations of the indicators with their respective variables. The suggested threshold value is 0.7. This research examined the variance shared between the constructs and their indicators instead of the variance of the error term (Barclay et al., 1995). In addition, the present study also used Cronbach's alpha coefficient (Cronbach, 1951). The reliability of the scales was measured through the composite reliability (CR). The suggested minimum value is 0.7 (Nunnally, 1994). The reliability of the stringency variables was measured through the latent variable (internal consistency). In the case of this study, all values exceed the suggested thresholds in the literature.

Extracted variance was used to evaluate the convergent validity. Average variance extracted (AVE) reveals the quantity of variance that a construct gains from its indicators, in relation to the quantity of variance produced by measurement error. The minimum value suggested in the literature is 0.5 (Fornell and Larcker, 1981) and, in the case of this research, this condition is also met. Table 9 displays all the obtained results.

Table 9: Evaluation of the measurement model: Cronbach's Alpha, CR, and AVE

Variables	Cronbach's Alpha	CR	AVE
Attitude	0.981	0.981	0.897
Content	0.976	0.976	0.818
Features	0.953	0.953	0.648
LSC	0.934	0.934	0.780
PEOU	0.966	0.966	0.852
Purchase Intention	0.960	0.961	0.831
PU	0.962	0.962	0.835
Reputation	0.923	0.922	0.750
Trust	0.955	0.955	0.755

Lastly, discriminant validity was used to examine the different dimensions measured by each concept. Three approaches are used in PLS: a) a cross-loading analysis, testing whether the average variance shared among a dimension and its items is higher than the variance shared with the other dimensions in the model (Barclay et al., 1995); b) a Fornell-Larcker criterion, examining whether the correlations among the diverse dimensions are lower than the value of the square root of AVE

(Fornell and Larcker, 1981); and c) HTMT ratio analysis (heterotrait-monotrait), measuring whether the correlations among pairs of concepts yield a value below 0.9 (Henseler et al., 2014). Table 10 shows the results of approaches b) and c). In the case of the present research, the obtained values are close to those suggested in the literature. In light of these findings, the discriminant validity in the model is considered satisfactory.

Table 10: Discriminant validity. Fornell-Larcker criterion (below the main diagonal) and HTMT Ratio (Above the main diagonal)

	ATT	COT	FEAT	PI	LSC	PEOU	PU	REP	TRUST
ATT	**0.947**	0.779	0.635	0.835	0.697	0.709	0.803	0.728	0.744
COT	0.779	**0.904**	0.727	0.749	0.767	0.606	0.807	0.728	0.761
FEAT	0.639	0.731	**0.805**	0.713	0.807	0.614	0.723	0.554	0.610
PI	0.834	0.750	0.716	**0.911**	0.707	0.632	0.780	0.666	0.703
LSC	0.700	0.767	0.803	0.708	**0.883**	0.606	0.792	0.560	0.678
PEOU	0.709	0.903	0.623	0.633	0.610	**0.923**	0.835	0.736	0.687
PU	0.804	0.906	0.728	0.780	0.794	0.835	**0.914**	0.748	0.773
REP	0.730	0.732	0.571	0.671	0.575	0.728	0.752	**0.866**	0.863
TR	0.745	0.761	0.612	0.701	0.677	0.689	0.774	0.870	**0.869**

5.6. Results

The significance of the relationships between the constructs and their predictive performance was studied in the assessment of the structural model. First, to evaluate the relevance of the path coefficients, a bootstrapping procedure was run with 500 subsamples (Hair et al., 2016). As seen in Table 11, all model assumptions are supported, except H1.

The relationship between perceived ease of use and attitude was tested in Hypothesis 1. Obtained results did not support this relationship ($\beta = 0.103$, $p > 0.001$) and is consistent with previous research (Ramos de Luna et al., 2019). The relationship between perceived ease of use and perceived usefulness was tested in Hypothesis 2. Results from the present study support this relationship ($\beta = 0.806$, $p < 0.001$) and is consistent with previous studies (Althunibat, 2015; Alsaleh et al., 2019).

These results show that users are less involved in the relationship between perceived ease of use and attitude than the literature suggests (Romero et al., 2011). On the other hand, there is a greater emphasis placed on perceived usefulness as a moderator variable (Ramos de Luna et al., 2019). Additionally, the relationship between perceived usefulness and attitude was tested in Hypothesis 3. In this sense, results support this relationship ($\beta = 0.334$, $p < 0.001$), as recent research reported (Nedra et al., 2019). In addition, with regard to the relationship between perceived usefulness and

purchase intention in Hypothesis 4, results support this relationship (β = 0.167, p < 0.10), as found in recent research (Ardiansah et al., 2020). Moreover, the relationship between attitude and purchase intention was tested in Hypothesis 5. Results strongly support this relationship (β = 0.531, p < 0.001), as already suggested in the literature (Yeon et al., 2019). Furthermore, the relationship between reputation and attitude was tested in Hypothesis 6. Results support this relationship (β = 0.170, p < 0.05), as shown in the literature (Albaity and Rahman, 2019). Additionally, the relationship between reputation and trust was tested in Hypothesis 7, with the obtained results strongly supporting this relationship (β = 0.593, p < 0.001), as recent research revealed (Mariano-Artigas and Barajas-Portas, 2020). Also, the relationships between like, share, comment, and attitude were tested in Hypothesis 8. Obtained results support this relationship (β = 0.166, p < 0.05), as shown in Ladhari et al. (2015). Moreover, the relationships between like, share, comment, and trust were tested in Hypothesis 9. Results strongly support this relationship (β = 0.189, p < 0.001), as reported by previous research (Seo et al., 2019). The relationship between content and trust was tested in Hypothesis 10. Results support this relationship (β = 0183, p < 0.05), as shown in the literature (Chen et al., 2019). The relationship between trust and attitude was tested in Hypothesis 11. Results support this relationship (β = 0.159, p < 0.05), as a recent study revealed (Baker et al., 2019). Lastly, the relationship between the features of Instagram and purchase intention was tested in RQ1. Results strongly support this relationship (β = 0.241, p < 0.001).

Prior to assessing whether the hypotheses are supported, the measurement tools were tested to avoid random errors (assessing the reliability of indicators and variables) while also checking the particular variables for possible variations in the characteristics which are being assessed (such as discriminant and convergent validity).

Table 11: Evaluation of the structural model

Hypotheses	Relationships	Paths	P -Values	Supported	f^2	R^2	Q^2	SRMR
1	PEOU → ATT	0.103	n.s.	**No**	0.005			
2	PEOU → PU	0.806	0.000***	**Yes**	2.302			
3	PU → ATT	0.334	0.002***	**Yes**	0.069			
4	PU → PI	0.167	0.080*	**Yes**	0.028			
5	ATT → PI	0.531	0.000***	**Yes**	0.433			
6	REP → ATT	0.170	0.026**	**Yes**	0.026			
7	REP → TR	0.593	0.000***	**Yes**	1.078			
8	LSC → ATT	0.166	0.013**	**Yes**	0.030			
9	LSC → TR	0.189	0.002***	**Yes**	0.091			
10	COT → TR	0.183	0.007**	**Yes**	0.019			
11	TR → ATT	0.159	0.046**	**Yes**	0.011			
12	FET → PI	0.241	0.002***	**Yes**	0.122			

	ATT					0.700	0.575	
	PI					0.759	0.579	
	PU					0.697	0.526	
	TR					0.808	0.544	
	SRMR							0.060
	NFI							0.789

***$p \leq 0.001$; **$p \leq 0.05$; *$p \leq 0.10$; n.s. = not significant

5.6.1. Evaluation of the structural model

The assessment of the structural model was conducted following the guidelines suggested by Henseler et al. (2016) and Hair et al. (2014).

Moreover, this research applied the Stone (1974) and Geisser (1975) procedure, including the measurement of the R^2 and Q^2 coefficients, and also the evaluation of the size of effect (f^2) and the standardized root mean square residual (SRMR) coefficients. The present research examined R^2 in the first place, since this indicator yields the adjustment of the variables as defined by the model in Table 4. According to Falk and Miller (1992), R^2 should have a minimum value of 0.1. In this sense, the present study obtains values above 0.6.

After that a blindfolding technique was applied (omission distance = 7) for the purpose of calculating the value of the Stone-Geisser or Q^2 test (Stone, 1974; Geisser, 1975). This coefficient implies the predictive performance of the dependent variables and the endogenous variables. All the indicators yield values above 0.5. The model has a better analytical significance as Q^2 increases; thus, the alterations of a model might be assessed through the evaluation of the Q^2 values.

After that, the size of the effect (f^2) was calculated. Chin (1998) specifies that f^2 values between 0.02 and 0.15, between 0.15 and 0.35, and 0.35 or higher imply that an exogenous latent variable has a big, small, or medium effect, correspondingly. This coefficient measures whether an independent latent variable has a substantial effect on a dependent latent variable. In the case of the present research, f^2 yields a value between 0.005 and 2.302. Moreover, the relationship between PEOU, PU, reputation, and trust along with the relationship between attitude and attention have a significant effect, with the rest of the relationships revealing a smaller sized effect. In this sense, the smallest effect is shown by the relationship between PEOU and attitude.

Furthermore, this research examined the value of the SRMR coefficient in accordance with the suggestions from Henseler et al. (2015). This indicator allows the researcher to contrast the variance between the practical correlation and the predicted correlation as a means to fit the model. A value below 0.08 is acceptable**.** The model implies 0.060 as a fitting value. NFI values above 0.90 are considered as acceptable (Byrne, 2008) although, in general, the usage of the NFI is still rare (Ali et al., 2019). In our case, this index is slightly below this threshold.

Results from the different analyses indicate to which degree the proposed model (features, attitude, and perceived usefulness) is important to assess purchase intention. Content, reputation, and

like/share/comment have an impact on trust. On the other hand, reputation, like/share/comment, perceived ease of use, and trust play a significant role in mediating attitude. Likewise, perceived ease of use has a great effect on perceived usefulness. In this vein, this research tests whether the proposed hypotheses are supported based on the verification of their significance.

5.7. Discussions and conclusion

5.7.1. Theoretical implications

Social media and networks, digital marketing, e-commerce, and social commerce are catching the attention of researchers and companies. Because of the newness of this field, a significant line of scientific research has emerged with a focus on social media commerce, more specifically on Instagram.

Social commerce is becoming a significant hub for product sourcing, which supports firms in connecting through clients and gaining competitive advantages. Social commerce is measured as a subgroup of e-commerce, which supports social connections and user contributions. Furthermore, a social commerce site is a place where people can cooperate online and obtain advice from other trusted individuals, discover products and services, and buy them by means of social networks, tagging, podcasts, blogs, chat rooms, and ranking and recommendation systems (Abed, 2020). Additionally, Instagram shopping allows businesses an immersive storefront for individuals to discover the best products. Through this modality, individuals can share featured products with the organic posts and stories, or have individuals discover the products in the 'Search and Explore' utility (Instagram Help Center, 2019).

This research makes several contributions to the research of social commerce and more specifically to Instagram commerce. First, the results allow researchers to better understand the role of social networks in making purchasing decisions while identifying the factors that determine purchase in the context of social commerce sales, and specifically those focused on Instagram. To date, few researchers have analysed the importance of this new sales tool for companies with a significant online presence (Leong et al., 2020; Anaya-Sánchez et al., 2020). Also, research is scarce with regard to the importance of Instagram commerce at an academic level. This research examines the intention to use this tool from a holistic perspective, integrating different theories from other scientific fields with a new incorporated variable (Instagram features). This approach proposes that the characteristics of the social network will significantly impact purchase intention.

This study contributes to the body of knowledge in the context of the impact of trust, attitude, and perceived usefulness on purchase intention. All these variables are determinant and show a significant relationship with intention to use. Specifically, the most important variable in the adoption of the new purchasing tool is attitude, followed by features and perceived usefulness.

First, attitude is the key driver of customer volitional behaviour (Eagly and Chaiken, 1993). According to MacKenzie and Lutz (1989, p. 49), attitude toward advertising is defined as a learned predisposition to respond in a consistently favourable or unfavourable manner toward advertising in general. Attitude is one of the most studied concepts in the behavioural sciences and psychology (Oni et al., 2017). In this research, attitude was found to be the most significant variable with regard to the adoption of Instagram commerce, and it affects purchase intention along with other relevant variables such as perceived usefulness, like/share/comment, reputation, and trust.

Customers tend to purchase a product on Instagram commerce once they realize the usefulness of the platform to buy a product or service they want. Moreover, Instagram commerce allows them to browse and purchase products and services easily, discovering new products and obtaining shopping ideas and suggestions quickly. Results from this study show that there is a strong relation between perceived usefulness and attitude. Second, when customers notice a significant number of likes, shares, and comments for a product or service they feel encouraged to learn about that product. Our results show that customers interact on Instagram commerce by liking and commenting on newsfeed ads, sharing them with their contacts and following brands provided by the newsfeed ads. This is beneficial for the involved companies since the interactions increase sales and the brands become popular all over the world. Third, the reputation of Instagram shows that customers know the platform and are familiar with the name of the brand. Our results show that Instagram commerce has a good reputation and is well regarded for being honest. This means that customers tend to purchase products or services from a specific website or social commerce site once they achieve a sufficient reputation. In this sense, it is worth noting that Instagram is known globally and not only in Palestine. Finally, trust is a key factor for customers; when customers realize the loyalty between them and any social commerce or website, they keep purchasing products and services from that specific commerce site. Results prove that Instagram commerce usually fulfils the expected commitments. Thus, Instagram commerce does not make false statements and has sufficient experience in the marketing of the products and services that it offers. Moreover, most of what Instagram commerce articulates about the products and services on sale rings true. Results show that the information offered by Instagram commerce is sincere and honest. Additionally, Instagram commerce strives for honesty and keeping its promises and commitments. In the case of Palestinian customers, Instagram commerce is well trusted, and they tend to believe the content available on the platform. These findings reveal that Palestinian customers have a positive attitude toward purchasing products through this new technology innovation, encouraging companies in Palestine and all around the world to offer their products and services through Instagram commerce since the debut of the platform in 2019.

Obtained results show that attitude has a positive effect on purchase intention, as attitude plays a big role in the purchase intention of Palestinian customers, as explained by the abovementioned variables and the positive attitude of Palestinian customers toward Instagram commerce.

Instagram features comprise the second most important variable affecting purchase intention. In this regard, the characteristics of Instagram have played a big part in attracting and convincing Palestinian customers to buy through Instagram commerce. Instagram features include browsing and uploading photos, videos, posts, stories; using the ‘boomerang’, ‘superzoom’, ‘focus’, ‘rewind’, and ‘hands-free’ utilities; live stories; likes and comments; following brands and people; and using the shopping features (Huang and Benyoucef, 2013; Aydin, 2019). Customers today use Instagram daily to see their friends’ photos or stories, to upload personal photos and stories, or to use the features of the Instagram camera app. In this sense, Palestinians browse Instagram daily to follow their favourite brands, to like and leave comments on the posts of their favourite brands, to watch stories and live streaming, to post personal content, or to watch and save content from their favourite brands to their personal collection. Additionally, Palestinian customers prefer to receive push notifications on their devices whenever their favourite brands on Instagram post new stories related to their products and services. Most social commerce platforms allow merchants to enable messages and a chat option to let customers easily contact them to ask questions or solve a problem. This study found that Palestinian customers send messages through the direct messages app of

Instagram commerce by asking questions related to their favourite brands. Additionally, Instagram features a dedicated button for shopping, enabling customers to browse and follow many different brands while adding products to their wish list. In addition, they can see the prices and information for their desired product or service. This means that Palestinian customers are active on Instagram and are interested in knowing the updated information of their favourite brands. Also, Palestinian customers enjoy browsing and buying products and services through this new commerce. Results show that the new variable of Instagram features has a positive and strong effect on purchase intention by Palestinian Instagram users, and the research shows that this is an important variable.

Finally, perceived usefulness is the third variable in order of importance with regard to the impact on purchase intention. Perceived usefulness is defined as the possibility that technology can improve the way customers accomplish their objectives. Moreover, in online environments, usefulness is perceived as the degree to which a customer believes that online buying will enable access to useful information, and allow a faster purchase (Vijayasarathy, 2004). Perceived ease of use is affected by perceived usefulness, which in turn affects the outcome of the shopping experience. As for Palestinian customers, Instagram commerce is easy to learn, interact with, use, and master while being understandable. The same can be said for customers all over the world. Instagram focuses on accessibility and openness and allows companies to create business accounts for their products and services with clear and detailed information. When customers realize that Instagram commerce is easy to browse, they immediately begin to search, discover, and purchase products and services of their favourite brands. This indicates the applicability of the TAM to social commerce shopping and validates the method for considering the current influences of customer social commerce shopping intentions and theorizing social commerce shopping intention towards Instagram. This study has revealed that perceived usefulness has a positive and strong effect on purchase intention, indicating that Palestinian users of Instagram commerce are able to get shopping ideas quickly, improve their performance in assessing products, and increase their productivity while browsing and discovering products.

Additionally, these three variables show that Palestinian customers are willing to buy products and services through Instagram commerce. Moreover, Palestinian customers strive to urge their friends to buy products and services through this new social commerce platform and keep logging into Instagram to purchase products and services. These findings cement the favourable position of Instagram commerce in the field of social commerce. Also, due to the popularity of Instagram, the future of Palestinian and international companies and customers involved in social commerce looks bright, especially for young customers who are especially attached to social media and favour online shopping.

5.7.2. Managerial implications

This research has important implications for professionals. First, results show that social commerce and Instagram commerce are already quite important for customers. Nowadays many customers gravitate toward Instagram commerce in the first place when buying a product or service, as Instagram shows clear and reliable information such as price and other characteristics about the desired product or service. In this way, the loyalty and reputation of Instagram commerce is also increased. Second, results show that Instagram commerce improves the sales of companies in a way that big, medium, and small merchants must focus on Instagram commerce. Thanks to business accounts, customers can easily browse and buy through Instagram. Managers should pay

attention to Instagram commerce and other social commerce platforms, by providing attractive information and high-quality posts to attract customers. Managers should also keep the information of their products and services updated on a daily basis, by adding new stories, photos, or videos. Moreover, companies should place a major focus on advertising through social media and social networks since customers are leaning toward online shopping. Similarly, businesses should offer a superior and constantly improving quality of service while caring about the needs of their customers, solving their doubts, providing personalized attention, and ensuring the security of the transactions. Furthermore, social commerce and especially Instagram commerce as an emerging platform of commerce could apply discounts to some products or services to encourage customers to purchase through Instagram. To this end, the social commerce platform can facilitate product browsing, categorization, and classification with the help of numerous criteria (e.g. family, keyword, price) through different information channels (e.g. FAQ page, forums, chat, email, telephone) that would quickly answer customer queries. Browsing and search behaviour can also be assessed to offer products adapted to customer needs.

5.8. Limitations and avenues for future research

This research study presents a series of limitations that must be analysed, and which may lead to future lines of research. Firstly, the size of the sample and the context of our research is limited, meaning that results must carefully be evaluated when generalizing to larger populations. Secondly, the fact that the survey was conducted online means that future research could establish two different groups of respondents: one for people who do not know about or cannot complete online surveys and another group for respondents under 18 years of age.

With regard to the data collection method, a longitudinal approach would allow testing the strength of the relationships and the evolution of the moderating variables over time (especially age, employment situation, and educational level). Additionally, since there is not an established register of actual clients of the different social commerce sites, the use of non-probabilistic sampling techniques may introduce biases in the results. Finally, future research could contemplate the use of alternative sampling procedures, for example, asking for the collaboration of several social commerce sites to use their customer databases.

Appendix A. scale used

Perceived Ease of Use (PEOU) (Athapaththu and Kulathunga, 2018):

- Instagram is easy to use.
- It is easy to become skilful at using Instagram commerce.
- It is easy to learn to use Instagram commerce.
- It is easy to interact with Instagram commerce.
- Instagram commerce is clear and understandable.

Perceived Usefulness (PU) (Athapaththu and Kulathunga, 2018):

- Instagram commerce is useful to buy the products and services they sell.
- Instagram commerce makes it easier to search and purchase products.
- Instagram commerce improves my performance in assessing products.
- Instagram commerce enables me to discover new products and get shopping ideas quickly.
- Instagram commerce increases my productivity in discovering products and getting shopping ideas.

Attitude (ATT) (Cho and Son, 2019):

- Entertaining.
- Enjoyable.
- Interesting.
- Fun.
- Exciting.
- Appealing.

Reputation (REP) (Maia et al., 2018):

- Instagram is well known.
- Instagram commerce has a good reputation.
- Instagram commerce has a reputation for being honest.
- I am familiar with the name of Instagram.

Like, Share, and Comment (LSC) (Youn and Shin, 2019):

- I am interested in sharing newsfeed ads with my Instagram friends.
- I am willing to click the “like” button on Instagram newsfeed ads.
- I am interested in writing “comments” on Instagram newsfeed ads.
- I would like to follow brands by clicking on the links provided by newsfeed ads.

Content (COT) (Athapaththu and Kulathunga, 2018):

- I can quickly find the information I need on Instagram commerce.
- Instagram commerce carries products and services with reputable brand names.
- There is sufficient information to compare across alternatives.
- There are sufficient decision-making aids.

- Instagram commerce provides sufficient information about firms, products, and services.
- Instagram commerce provides options to communicate and interact with the firm.
- The information on Instagram commerce is well organized.
- Instagram commerce adequately met my information needs.
- Instagram commerce provides good shopping tips.

Trust (TR) (Athapaththu and Kulathunga, 2018):

- I think that Instagram commerce usually fulfils the commitments it assumes.
- Instagram commerce does not make false statements.
- I think that Instagram commerce has sufficient experience in the marketing of the products and services that it offers.
- Most of what Instagram commerce says about its products or services is true.
- I think that information offered by Instagram commerce is sincere and honest.
- Instagram commerce wants to be known as one who keeps its promises.
- Instagram commerce keeps promises and commitments.

Purchase Intention (PI) (Cho and Son, 2019):

- I intend to buy products/services through Instagram.
- I'd be willing to buy products/services through Instagram.
- I'd be willing to recommend my friends to buy products/services through Instagram.
- I would visit Instagram to buy products/services again.
- In the future, I would be very likely to shop using Instagram.

Instagram Features (FET):

- I browse Instagram daily.
- I upload photos on Instagram as posts.
- I always upload stories on Instagram.
- I put videos on my stories.
- I use Boomerang, Superzoom, Focus, Rewind, and Hands-free.
- I use the Live Story feature of Instagram.
- I follow my favourite brands on Instagram.
- I place likes on all the photos on Instagram from my favourite brands.
- I browse the stories of my favourite brands.
- I add posts of my favourite brands on my story.
- I turn on push notifications for my favourite brands.
- I save photos of brand posts to my personal collection.
- I send messages through Instagram to my favourite brands to ask questions.
- I watch live videos of my favourite brands.
- I use the shop button and shopping features of Instagram.

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Drivers of purchase intention in Instagram Commerce

Study 3

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Study 3: Drivers of purchase intention in Instagram commerce.

Abstract

Purpose: The aims of the present research are (i) to analyze the factors that drive purchases via Instagram and contribute to the growth of Instagram commerce and (ii) to examine the moderating role of gender, age, and experience in Instagram use on the proposed relationship between six variables derived from Commitment–Trust Theory, the TAM model, and Consumer Decision-making Theory.

Design/methodology/approach: A survey was completed by respondents after watching a video about Instagram commerce. A total of 404 valid responses were collected in Palestine. The research model was analyzed using partial least squares structural equation modeling.

Findings: The present study makes numerous contributions to Instagram commerce and holds significant implications for professionals in the social commerce field. Among other results, we found that trust, attitude, perceived usefulness, and alternative evaluation significantly affected consumers' purchase intentions. However, this study found no relationship between trust or ease of use and purchase intention. Finally, it demonstrates the moderating role of gender, age, and experience on some of these relationships.

Originality: This research centers on an analysis of consumer purchase behavior on Instagram commerce, taking a highly innovative approach. The particular originality of the work lies in the proposed model of adoption of social commerce via Instagram, based on a critical framework. The study also provides an original analysis of the moderating effect of the classification variables: gender, age, and experience in Instagram use.

Keywords: Social commerce, Instagram c ommerce, Purchase Intention, Gender, Age, Experience

6.1. Introduction

The use of social media has primarily become a mobile activity. eMarketer report (2020) exposed that more than 70% of mobile phone Internet users worldwide use their devices to use social media and more than 80% of social network users worldwide use a mobile device to use social media at least once per month. There are 8.28 billion mobiles connections, 4.95 billion are Internet users, and 4.62 billion users are active on social media. In 2022 data show that there was an increase in the use of the Internet and social media by the world population (Kemp, 2022).

The importance of image-based social networks has become widespread in recent years (Liao et al., 2022). Instagram is the fastest growing social network, with a forecast to reach 1.18 billion users by 2023 (Statista, 2022). Despite its growing relevance, academic research on Instagram is still scarce (Kim and Kim, 2019). In this regard, usage motivations (Sheldon and Bryant, 2016), user engagement (Casaló et al., 2017), promotions (Casaló et al., 2021), and the role of influencers (Casaló et al., 2020) have been analyzed. As social media platforms continue to develop rapidly, an increasing number of users are approaching them to support their business activities. Instagram is the social media platform of choice concerning company–consumer interactions, and Instagram commerce has been recognized by the literature as a worldwide business phenomenon (Casaló et al., 2021). Today, Instagram is considered the second-most interactive social media platform after Facebook (Mohsin, 2020). However, according to our research, few studies analyze the use of this social network as a sales channel (Djafarova and Bowes, 2021).

In recent years, e-commerce has successfully offered new ways to shop and purchase by means of, for example, social media platforms and websites. The impact of the COVID-19 pandemic has only accelerated the development of e-commerce as a new and fast-growing business model as more companies than ever around the world sell their products on social media and other websites or platforms. Even small and micro-sized firms are building a presence on social media with business pages that enable them to sell their products worldwide. In response, Instagram and Facebook have recently developed unique features to specifically support small businesses rather than focusing solely on major firms.

Along these lines, the social commerce arises based on the use of social networks (Busalim, 2016; Herzallah et al., 2021). Precisely this new type of commerce is defined as a new type of online platform that allows customers to share experiences, opinions, and information about where, what, and from whom to buy (Xu and Liu, 2019). On the other hand, it can also be defined as a new type of online platform that allows customers to share experiences, opinions, and information about where, what, and from whom to buy (Xu and Liu, 2019). While e-commerce focuses on exchange activities in digital environments, social commerce is characterized by exchange activities that have a clearly defined social element (Yadav et al., 2013).

The overall aim of the present research, then, is to analyze purchase intention on Instagram based on a set of antecedents derived from a literature review. The study can be considered innovative in five main respects. First, while research on social commerce has grown in recent years, research dealing with Instagram commerce is still in its infancy, due to the novelty and changeability of the purchasing system that this social network offers its users (Nedra et al., 2019). Second, according

to numerous authors, Instagram commerce is set to become the primary sales network of the future—hence, the scholarly interest in analyzing it (Assadam, 2020). Third, a review of the principal classical theories is undertaken in the present study, and new antecedents are added to define the theoretical frameworks within a broader and more integrated approach. Fourth, we analyze the moderating effect of age, gender, and experience on some of the proposed relationships. Finally, the study offers a series of recommendations to firms involved in managing sales via social networks.

6.2. Theoretical background

The scientific literature has identified various theories and concepts of purchase intention and models that analyze intention more generally, most of which are addressed in social psychology research to assess individuals' behavior when approaching an innovation. With regard to consumer behavior in an online context, the present research draws on a literature review focused on the most up-to-date models and theories in the marketing and information technology fields and based on: the technology acceptance model (TAM) from the work of Davis et al. (1989); commitment–trust theory (CTT), developed by Morgan and Hunt (1994); and Consumer Decision-making Theory (Engel et al., 1995). Additional variables pertinent to the context of the study are also incorporated.

6.2.1. Technology Acceptance Model

The TAM is considered one of the most effective theories for predicting consumer intention to use a system. The TAM was developed by Davis et al. (1989) to hypothesize the usage behavior relating to computer technology and was adapted from Fishbein and Ajzen's (1975) theory of reasoned action. According to the TAM, technology use intention can lead to the adoption or rejection of new technology. The TAM is widely considered a foundational theory.

6.2.2. Commitment–Trust Theory

According to Moorman et al. (1992), Commitment–Trust Theory explains the development of long-term relationships between exchange parties. Commitment means a 'stable desire' between parties to sustain an important and valued relationship. Trust is a multi-disciplinary concept that arises once one party has confidence in an exchange partner's honesty and reliability. The main principle of CTT is that founding and supporting business relationships between exchange parties requires the simultaneous adoption of relationship commitment and trust as essential—and inseparable—variables (Wang et al., 2016). The CTT of relationship marketing cites trust and a sense of commitment as the two fundamental building blocks on which to base powerful relationship marketing (Morgan and Hunt, 1994).

6.2.3. Consumer Decision-making Theory

To better understand the decision-making process and in our case, the purchase on Instagram, the implication of the Consumer Decision-making Theory is proposed. This theoretical approach considers the consumption decision as a problem-solving task aimed at a specific consumption choice (Olson and Reynolds, 2001). This theory affirms that when consumers search for information from their own sources, they will evaluate their choices by purchasing from a variety of products (Hennig-Thurau et al., 2004).

6.3. Research hypotheses

6.3.1. The impact of trust

Trust has numerous definitions (Athapaththu and Kulathunga, 2018; Liébana-Cabanillas et al., 2022). Granguly et al. (2010), for example, defined trust as the consumer perceived credibility and benevolence of online stores. In the context of the present study, trust is linked to the feelings, expectations, promises fulfilled, and beliefs associated with online interactions, intentions, and behaviors.

Trust is a key predictor of positive attitudes toward purchase behavior, which, in turn, can positively impact on purchase intention. Therefore, trust in a company's website positively affects customer attitudes toward the business and ultimately improves intention to purchase its products or services (Bugshan and Attar, 2020). This is particularly salient in the context of social commerce because the degree of uncertainty is higher online as a consequence of the lack of face-to-face communications and the massive volume of user-generated content (Featherman and Hajli, 2016). Furthermore, some studies have shown a significant relationship between trust and social commerce use intention (e.g., Beyari and Abareshi, 2016). Moreover, trust encourages users to approach social commerce and overcome any potential challenge or barrier in the process of purchasing products and services online. Recent studies have confirmed that purchase intention is significantly and positively affected by trust in the context of social commerce adoption (Dabbous et al., 2020). Therefore, the greater the trust, the stronger the social commerce purchase intention (Sharma et al., 2019).

In light of the aforementioned findings, the following hypotheses are proposed:

H1: *Trust positively impacts on purchase intention in the context of Instagram commerce.*

H2: *Trust positively impacts on attitudes toward Instagram commerce.*

6.3.2. The impact of attitude

MacKenzie and Lutz (1989, p. 49) indicated that attitude toward advertising can be defined as 'a learned predisposition to respond in a consistently favorable or unfavorable manner toward advertising in general'. According to classical customer behavior theory, a person's behavioral intention is mainly affected by attitude (Fishbein and Ajzen, 1975).

In the context of social commerce, customer loyalty has a positive impact on attitude toward social commerce platforms, resulting in an improved intention to continue purchasing from such

platforms in the future. Attitude toward an social commerce site has also been found to have a significant effect on behavioral intention (Martínez-López et al., 2020).

Attitude can also function as a predictor of behavior. For instance, if a Facebook user gives a 'like' to a particular advertisement on the social media platform, there may be a much greater likelihood that they will go on to make a purchase because the 'like' will redirect them to pages related to commercial activities on the site (Martínez-López et al., 2020). Suraworachet et al. (2012) found that an individual's attitude toward online purchasing on Facebook has a positive influence on their purchase intentions within the site. Additionally, Nedra et al. (2019) agreed that attitude toward the use of Instagram has a positive impact on intention to use Instagram.

In light of the above, the following hypothesis is proposed:

H3: *Attitude toward Instagram commerce positively impacts on purchase intention on the platform.*

6.3.3. The impact of perceived ease of use

Davis (1989) stated that perceived ease of use is the degree to which a user believes that using a given system will be effortless. Easy-to-use commercial websites are now made widely available on mobile devices, and customers can readily understand the technology and use it frequently. As they do so, they will start to discover and learn additional ways to use the applications while overcoming any potential technological barriers to the products and services on sale.

According to Martínez-López et al. (2020), in the context of purchasing via social commerce, perceived ease of use relies on an individual's particular assessment of the effort likely involved in purchasing from social commerce platforms by clicking on the purchase buttons, as such buttons on social commerce sites are still relatively new.

In light of the aforementioned findings, the following research hypothesis is proposed:

H4: *The perceived ease of use of Instagram commerce positively impacts on purchase intention on the platform.*

Perceived ease of use and perceived usefulness are strong predictors of the use of numerous technological advancements. In this regard, Hu et al. (1999) asserted that perceived usefulness is a stronger driver of new-technology acceptance than perceived ease of use. Davis (1989) reported that perceived usefulness is a key predictor of the intention to use innovative technology. Most studies dealing with small- and medium-sized enterprises seeking to build an social commerce presence have corroborated the significant impact of perceived usefulness on purchase intention. This is consistent with the TAM (Davis, 1989). In addition, many authors have already demonstrated the importance of both perceived ease of use and perceived usefulness. Baker et al. (2019) posited that improved perceived ease of use would positively impact perceived usefulness with regard to online shopping in a web-based e-commerce environment. Therefore, the following hypothesis is proposed:

H5: *The perceived ease of use of Instagram commerce positively impacts on the perceived usefulness of the platform.*

6.3.4. The impact of perceived usefulness

Nkoyi et al. (2019) defined perceived usefulness as the degree to which an individual believes that using a particular system will improve their job performance—for example, that using a specific technology will facilitate their work. Rauniar et al. (2014) described perceived usefulness as the degree to which social media users believe that the social media platforms on which they interact help them achieve their goals.

Perceived usefulness positively influences intention to use e-commerce websites for shopping (Sawitri and Giantari, 2020). Recent studies have also shown that perceived usefulness positively impacts on intention to adopt social commerce (Abed, 2020). Similarly, Herzallah et al. (2021) found that perceived usefulness has a significant influence on intention to use Instagram.

In light of the aforementioned findings, the following hypothesis is proposed:

H6: *The perceived usefulness of Instagram commerce positively impacts on purchase intention on the platform.*

6.3.5. The impact of Alternative Evaluation

Alternative Evaluation is one of the six stages in the Consumer Decision-making Theory purchase decision-making process proposed by Engel et al. (1995). The model consists of six sequential phases that define how customers approach the consumption process in order to meet their expectations: (1) need recognition, (2) information search (both internally and externally), (3) pre-purchase Alternative Evaluation, (4) purchase and consumption, (5) post-purchase evaluation, and, finally, (6) divestment. Engel et al. (1995) described pre-purchase Alternative Evaluation as a four-stage process: (1) purpose of evaluative principles, (2) choice alternatives, (3) assessment of performance alternatives and (4) application of the decision rule.

Hettiarachchi et al. (2018) found a significant and positive relationship between Alternative Evaluation and purchase intention. The fact that Instagram commerce provides information on numerous brands leads users to use it as a tool for evaluating alternatives before making a purchase.

As a consequence of the above, the following hypothesis is proposed:

H7: *Alternative Evaluation positively impacts on purchase intention in Instagram commerce.*

6.3.6. The moderating role of gender

The scientific literature has examined the significant impact of gender, age, and experience on the adoption of innovations (Chong, 2013).

First of all, previous research has analyzed the moderating effect of gender with regard to the acceptance of e-commerce and has identified behavioral variances in online purchasing between users according to their gender (Liébana-Cabanillas et al., 2021). In general terms, men are more willing to use e-commerce than women and are more likely to adopt planned purchase behavior (e.g., purchasing computer hardware with software), whereas women are more inclined to purchase from a wider range of products and services and are also more likely to engage in impulse buying (e.g., for food, drinks, and clothes) (Zhou et al., 2007).

The moderating effect of gender with regard to e-commerce acceptance has been extensively investigated in previous studies (Liébana-Cabanillas et al., 2018). However, when the perceived effort associated with understanding and learning how to use a new technology is low, both female and male customers present a greater intention to adopt and use that technology. Moreover, smartphones are accessible to both genders around the clock, and both are able to buy products and services with one simple click (Curtis et al., 2010).

Xie (2009) examined mobile commerce acceptance among Singaporean citizens and found that men, in general, perceived it more favorably than women. Chong (2013) also asserted that men are more likely to engage in mobile commerce activities compared to women. Jackson et al. (2001) examined gender variances with regard to Internet usage and discovered that women used e-mail more frequently than men, while men used the Internet to search for information more often than women.

In the case of social commerce, as the technology becomes easier to adopt and use, we predict that it will see a significant boost in the number of female users, especially in the context of Instagram commerce. Women are known to engage in shopping more often than men, and they seek quick, effortless ways to source their desired products and services. In light of the aforementioned findings, the following hypotheses are proposed:

H8a: *The impact of perceived ease of use on the perceived usefulness of Instagram commerce is significantly higher among women than among men.*

H8b: *The impact of perceived ease of use on purchase intention in the context of Instagram commerce is significantly higher among women than among men.*

6.3.7. The moderating effect of age

Age also has a major impact on consumer behavior (Hubona and Kennick, 1996). Some researchers have identified a positive relationship between customer age and the probability of purchasing products online (Stafford et al., 2004), whereas others have found a negative impact (Joines et al., 2003) or no relationship at all (Dabholkar et al., 2003). Some studies have sought to determine whether age can be considered a core variable in assessing customer attitude and behavior through the analysis of age-related consumer characteristics (Li et al., 2008).

In the case of young consumers and new technology, a significant level of perceived ease of use along with fewer detected difficulties or barriers will lead them to use and consume technology

more than adults, especially with regard to Instagram commerce. The vast majority of its users are young, as they find the platform easy to use while discovering the multiple ways that Instagram offers to swiftly purchase products and services. The present study therefore proposes the following hypotheses:

H9a: *The impact of the perceived ease of use of Instagram commerce on its perceived usefulness is higher among younger users.*

H9b: *The impact of the perceived ease of use of Instagram commerce on purchase intention on the platform is higher among younger users.*

6.3.8. The impact of experience in using Instagram

Customers' positive past experiences of making purchases are a key influence on their future purchase behavior (Fishbein and Ajzen, 1975). According to O'cass and French (2003), consumers with technological experience will sense negligible perceived risk when adopting new or different information systems, which improves their perceived usefulness and encourages continuance intention over time. Some authors (e.g., Hsu et al., 2007) have detected that consumers with previous experiences in online purchasing are more likely to purchase products online based on expectations of further benefits and fewer problems related to the purchasing platform. Additionally, when users are in the early stages of using a new technology, they tend to focus more on the hedonic advantages and resource suitability of the innovation (i.e., user interface design and functionality). It has also been found that the relationship between usefulness and intention to visit a website is influenced by the moderating effect of customer experience of the Internet (Liébana-Cabanillas et al., 2018). Consequently, perceived usefulness is significantly greater among experienced users with regard to their intention to use pioneering technologies in the future (San José, 2007).

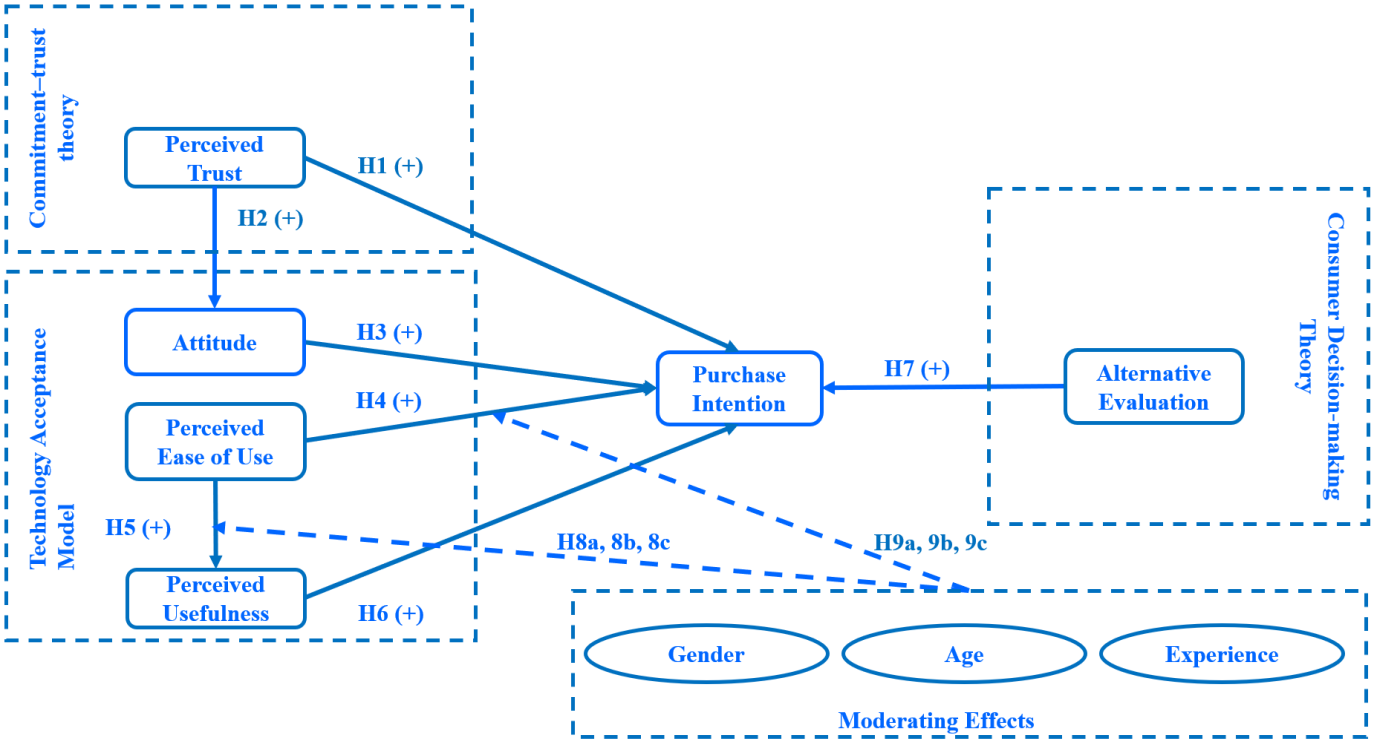
Regarding the moderating effect of experience, based on a review of the scientific literature, Liébana-Cabanillas et al. (2018) identified that it has been established that perceived ease of use is especially important for less experienced consumers to improve their future intention to use an innovation. Nevertheless, experienced consumers usually perform an additional in-depth assessment of the website. Thus, a lack of experience may cause users to focus more on the user interface than on the purpose of their visit to the website. In the case of Instagram commerce, thanks to the variety of purchasing options it offers, users can choose from different shopping experiences. Hence, younger users are regarded as fast learners when it comes to using new technology, whereas adults are more likely to need help with learning to use innovations. In addition, active users spend between one and ten hours or more a day on Instagram. The typical Instagram user only browses the site for a few hours a week. However, this is on the increase, as the perceived ease of use and perceived usefulness of the platform are improving and users are becoming more familiar with the online purchasing of products and services on this network. Users presenting a low level of perceived ease of use of Instagram commerce will usually ask others with more experience to help them learn how to use this technology. In light of the above, the following hypotheses are proposed:

H10a: *The impact of perceived ease of use on the perceived usefulness of Instagram commerce is significantly higher among experienced users of this platform.*

H10b: *The impact of perceived ease of use on purchase intention in the context of Instagram commerce is higher among experienced users of this platform.*

Based on the above discussion, Figure 66 shows the proposed research model.

Figure 66: Research model



6.4. Research methodology

6.4.1. Scale operationalization

To estimate the proposed model, we adopted the measurement scales from relevant previous studies, evaluated the constructs of interest and modified slightly the original items to adapt them to the present research context.

The present research also captured values for the three moderating demographic variables of gender, age, and experience. Gender was measured by respondents' selection of 'male' or 'female'. Age was measured after collecting the data from all respondents and then dividing the sample by

the mean (under 25 years for 'young users' and 25 years or over for 'adults'). Finally, experience in Instagram use was measured according to the average number of hours per day devoted to Instagram, as reported by respondents (classified into 'between 1 and 5 hours' and '6 hours or more').

6.4.2. Data collection

The research is based on primary data, collected through a survey questionnaire using Google Forms. The process involves showing participants a video explaining the process of buying through Instagram sent as a link (https://forms.gle/pudaqa4iY7t1PVtt7) through Facebook, Instagram, WhatsApp, and e-mail from December 2019 until February 2020. After viewing the video, participants completed the questionnaire.

This research followed three steps: a qualitative review of the scales by experts; a first validation of the scales for a sample of university graduates; and the implementation of a questionnaire. The final sample comprised 404 valid responses. The sociodemographic and economic characteristics of the individuals are shown in Table 12.

Table 12: Demographic characteristics of the respondents

Variable	**Cases (%)**	**Variable**	**Cases (%)**
Gender		**Monthly Income**	
Men	164 (40.6%)	Less than 1,100 Euros	81 (20.0%)
Women	240 (59.4%)	Between 1,100-1,800 Euros	67 (16.6%)
Age		Between 1,800-2,700 Euros	31 (7.7%)
18-25	215 (53.2%)	Over 2,700 Euros	30 (7.4%)
26-35	95 (23.5%)	No Income	164 (40.6%)
36-45	38 (9.4%)	Don't Know/No answer	31 (7.7%)
46-55	30 (7.4%)		
56-60	18 (4.5%)	**Active on social media platforms**	
Over 60	8 (2%)	Facebook	350 (86.6%)
Education Level		Instagram	344 (85.1%)
University	250 (61.9%)	WhatsApp	304 (75.2%)
Postgraduate	102 (25.2%)	YouTube	293 (72.5%)
High School	34 (8.4%)	Twitter	157 (38.9%)
Elementary	18 (4.5%)		

Variable	Cases (%)	Variable	Cases (%)
Employment Status		**Time spent on Instagram (per day)**	
Employee	115 (28.5%)	No more than 1 hour a day	48 (11.9%)
Student	178 (44.1%)	2-5 hours a day	205 (50.7%)
Unemployed	65 (16.1%)	6-10 hours a day	121 (30.0%)
Self-employed/ Businessman/women	35 (8.7%)	More than 10 hours a day	30 (7.4%)
Retired	11 (2.7%)		

6.5. *Results*

The responses were analyzed using partial least squares structural equation modeling (PLS-SEM). This is a causal–predictive approach suitable for predicting statistical models whose structures are designed to provide causal explanations (Sarstedt et al., 2017). The PLS model is analyzed in two stages: first, by assessing the reliability and validity of the measurement model, and second, by assessing the structural model (Anderson and Gerbing, 1988).

6.5.1. Reliability and validity analysis

Prior to testing whether the hypotheses were supported, the consistency and validity of the measurement tools and scales were checked. The study also examined specific variables for possible variations in the dimensions measured, such as discriminant and convergent validity. First, to assess the reliability of the scales, the Cronbach's alpha indicator was applied while analyzing composite reliability (CR). The minimum acceptable value proposed in the literature is 0.7 (Nunnally, 1994). The reliability of each item was examined by focusing on the relationships between the indicators and their respective variables. The threshold value proposed by the literature is 0.7 (Barclay et al., 1995). Confirmatory factor analysis (CFA) was also performed to measure the different analyses of convergent validity of the scales, and the items that contributed the least to explaining the influence of the model were removed ($R^2 > 0.5$). Convergent validity was estimated by means of the factor loadings of the indicators. The coefficients were significantly different from zero, and the loadings among the latent and observed variables were large in all cases ($\beta > 0.7$). Table 13 shows that all of the proposed loadings were significant. Second, variance extracted (AVE) was used to estimate convergent validity. The AVE revealed the variance that factors gain from their indicators in relation to the amount of variance explained by measurement error. The minimum value suggested in the literature is 0.5 (Fornell and Larcker, 1981). In the present case, the parameters recommended by the literature were also met since the composite reliability (CR) value for each factor and the values from the AVE exceeded the reference threshold values of 0.7 and 0.5, respectively.

Table 13: Scale refinement

Alternative Evaluation (AE). Adapted from Hettiarachchi et al. (2018)→ α = 0.964, CR = 0.962, AVE = 0.867	**Loadings**
I check related IC about alternatives before purchasing	0.949
I consider related IC when evaluating the alternatives	0.957
IC enables me to evaluate the alternatives in mind	0.956
I don't stop evaluating alternatives without checking Instagram commerce	0.933
Attitude (ATT). Adapted from Cho and Son (2019)→ α = 0.981, CR = 0.981, AVE = 0.894	
Entertaining	0.948
Enjoyable	0.957
Interesting	0.959
Fun	0.960
Exciting	0.962
Appealing	0.944
Purchase Intention (PI). Adapted from Cho and Son (2019)→ α = 0.969, CR = 0.969, AVE = 0.864	
I intend to buy products/services through Instagram	0.906
I'd be willing to buy products/services through Instagram	0.958
I'd be willing to recommend buying products/services through Instagram to my friends	0.966
I would visit Instagram to buy products/services again	0.958
In the future, I would be very likely to shop via Instagram	0.931
Perceived Ease of Use (PEOU). Adapted from Athapaththu and Kulathunga (2018)→ α = 0.970, CR = 0.970, AVE = 0.867	
Instagram is easy to use	0.921
It is easy to become skillful at using IC	0.946
It is easy to learn to use IC	0.961
It is easy to interact with IC	0.953
IC is clear and easy to understand	0.945

Perceived Usefulness (PU). Adapted from Athapaththu and Kulathunga (2018)→ α = 0.972, CR = 0.972, AVE = 0.874	
IC is useful to buy the products and services on sale	0.936
IC makes it easier to search for and purchase products	0.953
IC improves my performance in evaluating products	0.961
IC allows me to discover new products and get shopping ideas quickly	0.945
Instagram commerce increases my productivity in discovering products and getting shopping ideas	0.946
Trust (TRUST). Adapted from Athapaththu and Kulathunga (2018) → α = 0.968, CR = 0.966, AVE = 0.811	
I think IC usually fulfills the commitments it makes	0.930
IC does not make false statements	0.893
I think IC has adequate experience in the marketing of the products and services that it offers	0.906
Most of what IC says about its products or services is true.	0.918
I think the information offered by IC is truthful and honest	0.919
IC wants to be known for keeping its promises	0.915
IC keeps its promises and fulfills its commitments	0.927

Note: Instagram commerce=IC

Third, the present study measured discernment validity for the different dimensions associated with each variable, using PLS software. Three methods were applied: a) a cross-loading analysis to test whether the average variance shared between a scale and its measurements was higher than the variance shared with other measurements in the model (Barclay et al., 1995); b) the Fornell-Larcker criterion to examine whether the correlations between the various dimensions had lower values than the value of the square root of the AVE (Fornell and Larcker, 1981); and c) the Heterotrait–Monotrait (HTMT) ratio analysis to measure whether the relationships between pairs of concepts yielded a value lower than 0.9 (Henseler et al., 2014). The results (Table 3) show an appropriate amount of discriminant validity throughout the research model.

The significance of the relationships between the hypotheses and their analytical performance was calculated through the assessment of the structural model. All the hypotheses were supported except for H1 and H4, as shown in Table 14. A bootstrapping procedure (Hair et al., 2016) based on 5,000 subsamples was used to evaluate the relevance of the path coefficients.

Table 14: Discriminant validity

	AE	ATT	PEOU	TR	PU	PI
AE	**0.931**	0.821	0.849	0.832	0.893	0.839
ATT	0.822	**0.946**	0.797	0.792	0.848	0.878
PEOU	0.849	0.797	**0.931**	0.783	0.923	0.730
TR	0.832	0.792	0.783	**0.900**	0.844	0.777
PU	0.893	0.848	0.923	0.844	**0.935**	0.817
PI	0.839	0.878	0.730	0.777	0.817	**0.930**

Note: Fornell-Larcker criterion (below the main diagonal) and Heterotrait-Monotrait Ratio (HTMT) (above the main diagonal). Main diagonal: in bold square root of the AVE. AE= Alternative Evaluation, ATT=Attitude, PEOU= Perceived Ease of Use, TR=Trust, PU=Perceived Usefulness, PI=Purchase Intention.

6.5.2. Estimation and evaluation of the structural model

Hypothesis 1 proposed a relationship between trust and purchase intention. The findings from the present study support this relationship ($\beta = 0.079$, $p < 0.10$), and the obtained values are in line with recent research. The relationship between trust and attitude was tested under Hypothesis 2. In this case, the results provide adequate support for the existence of such a relationship ($\beta = 0.772$, $p < 0.001$), which is also in consonance with recent research. With regard to the relationship between attitude and purchase intention (Hypothesis 3), the results from this study strongly support the existence of such a relationship ($\beta = 0.547$, $p < 0.001$), as already suggested by the literature. Turning to the relationship between perceived ease of use and purchase intention (Hypothesis 4), despite obtaining empirical support ($\beta = -0.198$, $p < 0.001$), the proposed relationship presented in the opposite direction to that which we expected. Hence, H4 did not receive support. However, other studies, such as Kasilingam (2020) and Yang et al. (2020), found a negative relationship between the two variables. In an online context, this may perhaps be explained by the lack of motivation the user associates with making a purchase on the social network. If the user believes that the purchase system in question is extremely easy to use and that they can readily use it anytime, anywhere—as in the present case—they may experience less incentive to familiarize themselves with the system straight away. Hence, they may be inclined to defer the process, even to the extent that they ultimately never complete the purchase. In other words, the ability to perform certain tasks does not necessarily lead to actual performance or intention to perform them. Meanwhile, a relationship between ease of use and usefulness was proposed under Hypothesis 5. The results strongly support this hypothesis ($\beta = 0.897$, $p < 0.001$), as has already been suggested in the literature. Regarding the relationship between usefulness and purchase intention (Hypothesis 6), the results also support the existence of this relationship ($\beta = 0.176$, $p < 0.05$), validating other recent studies. Finally, the relationship between Alternative Evaluation and purchase intention proposed under Hypothesis 7 was tested, and the results also mirror those of recent studies, thereby supporting this hypothesis ($\beta = 0.321$, $p < 0.001$).

Table 15: Evaluation of the structural model

Hypotheses	Relationships	Paths	f^2	R^2	Q^2	Supported
H1	TR→ PI	0.079*	0.004			**Yes**
H2	TR→ ATT	0.772***	1.685			**Yes**
H3	ATT→PI	0.547***	0.467			**Yes**
H4	PEOU→PI	-0.198***	0.064			No
H5	PEOU→PU	0.897***	5.769			**Yes**
H6	PU→PI	0.176**	0.023			**Yes**
H7	AE→PI	0.321***	0.134			**Yes**
	ATT			0.596	0.540	
	PU			0.804	0.719	
	PI			0.787	0.696	

Note: ***p ≤ 0.001; **p ≤ 0.05; *p ≤ 0.10; n.s.= not significant.

Hair et al. (2014) and Henseler et al. (2016) established overall goodness-of-fit as a basis for the evaluation of structural models, hence this procedure was applied in the present study. Procedures from Stone (1974) and Geisser (1975) were also implemented to measure R^2 and Q^2 along with effect size (f^2) and the Standardised Root Mean Square Residual (SRMR) coefficients, with R^2 achieving a value of 0.596 with regard to the variables under study (see Table 15). Falk and Miller (1992) suggested a minimum threshold value of 0.1 for R^2.

Chin (1998) classified f^2 values of between 0.02 and 0.15, 0.15 and 0.35, and 0.35 or higher, indicating that an exogenous latent variable has a substantial, moderate, or weak influence, respectively. This coefficient measures whether an independent latent variable has a significant influence on a dependent latent variable. In the present study, f^2 yields a value of 0.004–5.769. Furthermore, the relationship between the variables has a significant effect, and the lowest value found in this study with regard to f^2 pertained to the relationship between trust and purchase intention.

In addition, the blindfolding techniques developed by Stone (1974) and Geisser (1975) were applied to obtain the value for the predictive relevance test (Q^2). This coefficient indicates the analytical performance of the dependent and endogenous variables. All the indicators in the present research yielded values above 0.5. In this sense, the analytical significance of our structural model improves as Q^2 rises.

Furthermore, as mentioned above, the present research also measured the value of the SRMR coefficient (Henseler et al., 2015). SRMR is the difference between the observed or practical correlation and the predicted correlation, which serves as a measure of model fit. Typically, a value below 0.08 is considered acceptable, and the present model presented precisely this value.

6.5.3. The moderating effect of gender, age, and experience in the use of social media.

To analyze the moderating effect of the proposed variables, first, the MICOM procedure (Henseler et al., 2016) was applied. This determines 'whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute' (Henseler et al., 2015). It is a three-step procedure to assess the invariance of measures: configural invariance, compositional invariance, and equality of composite mean values and variances. Configural invariance is a prerequisite for compositional invariance, which is a prerequisite for a meaningful assessment of the composite mean.

According to Henseler et al. (2016), if configural (step 1) and compositional (step 2) invariance are established, this indicates partial measurement invariance. Otherwise, measurement invariance cannot be established. In the present case, partial invariance was confirmed because steps 1 and 2 were in line with the thresholds established in the literature, while step 3 did not produce optimal values for all of the variables. However, in practical applications, full measurement invariance is often not fulfilled.

Once measurement invariance had been verified, the structural model was estimated using the PLS multigroup analysis method (Henseler et al., 2009). The main purpose of this analysis is to test whether the path coefficients differ significantly between the two groups. Table 16 shows the results of the test of differences between groups for the proposed hypotheses.

According to the results of the multigroup analysis, we observed differences in five of the six proposed relationships (H8a, H9a, H9b, H10a, and H10b). With regard to gender, only the hypothesis proposing a positive relationship between PEOU → PU (H8a) obtained empirical support. Specifically, women present a higher loading than men in this relationship (β_{WOMEN} = 0.925; β_{MEN} = 0.855). This suggests that women (vs. men) prefer Instagram commerce apps that are simpler to use, which enhances their use intention. Yapp et al. (2018) found that the amount of time, money, and effort that women invest in new technology increases, the more familiar they become with the innovation; and the perceived level of effort required to learn how to use the technology decreases, even if the women in question are innovative. Our results corroborate this finding. They also suggest that women attach more importance than men to the Instagram application's ease of use, which ultimately improves their intention to use this social network to make purchases.

Second, the two hypotheses relating to the moderating effect of age found empirical support. The first one proposed a positive relationship between PEOU → PU (H9a and H9b), and this was much higher among younger users than adults (β_{YOUNG} = 0.922; β_{ADULT} = 0.851). The second hypothesis proposed a positive relationship between PEOU → PI (H10a and H10b), and this was negative in both cases, albeit more negative in the case of younger users (β_{YOUNG} = -0.343; β_{ADULT} = -0.074). These results suggest that users in both age ranges do not consider this purchasing channel to be difficult to manage—even presenting an opposite effect to that identified in the previous literature, which found a positive relationship. There seems to be a general agreement in society today that

older people are not convinced of the benefits of modern technology and that they are resistant to change and unwilling to adopt new approaches. The adoption of a new technology involves acquiring new knowledge and is consequently affected by the degree of flexibility of a person's cognitive capacity. In a recent study (Hauk et al., 2018), age was negatively related to perceived ease of use. Other studies (Chong, 2013) found a negative correlation between age and technology acceptance.

Finally, regarding the individual's experience in the use of Instagram, both hypotheses received empirical support as significant differences were found between the two groups. In the case of the first of the proposed relationships (a positive relationship between PEOU → PU), those users who spent more time on this platform showed a higher use intention, based on the greater perceived ease of use thanks to the experience effect, compared to those who devoted fewer hours to it ($\beta_{1–5\ hours} = 0.879$; $\beta_{\geq 6\ hours} = 0.931$). The proposed relationship between PEOU → PI also presented a negative relationship between both variables ($\beta_{1–5\ hours} = -0.258$; $\beta_{\geq 6\ hours} = -0.026$). This result suggests that ease of use is not a determinant variable in use intention and that it has a negative influence regardless of the individual's experience in the use of the platform. The impact of critical incidents on perceived ease of use is greater among less experienced users of Instagram commerce, compared to more experienced users. According to Lin (2011), the frequency of critical incidents that users experience negatively has a direct and negative effect on perceived ease of use of an e-learning service in both groups.

Table 16: Multigroup analysis of Gender, Age and Experience

Gender	**Men**			**Women**			**Differences**	
	Path	**SD**	**P-value**	**Path**	**SD**	**P-value**	**Difference**	**P-Value**
H8a: PEOU→ PU	0.855	0.028	0.000	0.925	0.012	0.000	-0.07	**0.018**
H8b: PEOU→PI	-0.200	0.099	0.043	-0.216	0.08	0.007	0.016	0.899
Age	**Young**			**Adults**			**Differences**	
	Path	**SD**	**P-Value**	**Path**	**SD**	**P-Value**	**Difference**	**P-Value**
H9a: PEOU→ PU	0.922	0.014	0.000	0.851	0.027	0.000	0.071	**0.024**
H9b: PEOU→PI	-0.343	0.072	0.000	-0.074	0.085	0.388	-0.269	**0.011**
Experience in social media	**1h–5h**			**≥ 6 h**			**Differences**	
	Path	**SD**	**P-Value**	**Path**	**SD**	**P-Value**	**Difference**	**P-Value**
H10a: PEOU→PU	0.879	0.02	0.000	0.931	0.017	0.000	-0.052	**0.046**
H10b: PEOU→PI	-0.258	0.074	0.001	-0.026	0.115	0.821	-0.232	**0.074**

6.6. Conclusions and practical findings

Numerous authors concur that Instagram commerce is the principal sales network of the future (Assadam, 2020). Against this backdrop, the present study makes a number of contributions to social commerce and to the literature dealing with Instagram commerce. First, the results enable us to better understand the role of purchase intention in the success of social commerce platforms. It is the first study to propose and empirically examine a model based on variables of social commerce derived from three theories: the TAM, Commitment–Trust Theory, and Consumer Decision-making Theory. As such, the study contributes to expanding the scientific knowledge-base and the literature relating to consumer behavior on this new social commerce platform.

Second, this study found that attitude, perceived usefulness, trust and alternative evaluation significantly affected purchase intention toward Instagram commerce. However, it found no relationship between perceived ease of use and purchase intention. The latter finding may be explained by the lack of motivation that Instagram commerce's ease of use may generate among some users. That is, the very fact that users can so easily make purchases at their convenience on this platform may lead them to defer the purchasing process and, ultimately, fail to instigate it altogether.

The results also highlighted the impact of perceived ease of use on perceived usefulness—that is, the greater the perceived ease of use of Instagram commerce, the greater its perceived usefulness, and, consequently, the stronger the use intention toward this platform.

Third, this study showed the moderating role of gender, age, and experience on the aforementioned relationships. With regard to the moderating effect of gender, the results show that women present a higher loading than men in the relationship between perceived ease of use and perceived usefulness. Women also prefer easier-to-use Instagram commerce apps, which enhance their use intention. The results suggest that women attach more importance than men to the ease of use of the Instagram application, which ultimately improves their intention to use this social network to make purchases.

Fourth, the results show that the influence of ease of use on usefulness was much higher among younger users than adults; however, the relationship between ease of use and purchase intention was negative in both groups, albeit more negative in the case of younger users. Behaviors and intentions in relation to new technology differ between individuals who approach a given innovation for the first time as adults and those who were born when the technology was already well established, meaning that younger people do not find it such a struggle to use some of the latest technologies. However, as adults grow more familiar with the innovations, they use them more often and with increased proficiency for personal or professional reasons.

Finally, this study also contributes to the literature by identifying the moderating effect of experience in the use of Instagram commerce on the impact of ease of use on usefulness and the impact of perceived ease of use on purchase intention. The results show that those users who spent more time connected to the platform presented a stronger use intention than those who connected less often, based on the effect of experience, which improves perceived ease of use. When users perceive Instagram as easy to use, they are more likely to spend longer periods of time on it and

purchase from Instagram commerce. In turn, consumers that perceive Instagram commerce as effortless to use are more likely to spend longer sessions logged onto their profiles and purchase products and services from the platform. The proposed relationship between perceived ease of use and purchase intention also presented a negative relationship in both groups, while the impact of negatively-experienced critical incidents on perceived ease of use was greater among consumers who were less familiar with the use of Instagram commerce.

6.7. Managerial implications

The present study holds a number of significant implications for professionals in this particular field of knowledge. First of all, this research contributes to helping firms to develop and manage Instagram commerce as a social commerce platform. The results show that Instagram commerce is one of the social commerce platforms that help companies to improve sales and create a positive image. Second, managers in the social commerce field (and especially Instagram commerce) can improve purchase intention by building favorable consumer attitudes. In this sense, sales can also be driven by keeping product and service information up-to-date, creating colorful, creative designs for websites to attract consumers, and uploading high-quality stories and posts for products and services. Third, the ease of use of Instagram commerce enables merchants to sell effortlessly while offering several purchasing methods and providing regularly updated product information. Digital marketing managers can also create greater transparency on the social commerce platform by providing more extensive permissions for firms to customize their profiles, interact with the content, and access valuable information, such as sales numbers. Professionals in the field can also further customize the social commerce experience on the basis of personal characteristics, such as age, gender, profession, and nationality, among others. Furthermore, companies could do well to enhance the usability of their social commerce platforms by making the entire process much easier to use, particularly on mobile devices. However, despite the enormous boom in the business use of technology, trust continues to drive the bridge that consumers cross to the secure side of online shopping. Transparency in social commerce could create the consumer trust on the platform and it looks more relevant in the context of developing countries where people are considered to be more sensitive and influenced by stories of fraud and lack of credibility, and so constructing trust in such societies is very hard and takes a long time. Besides, the changing regulatory framework such as GDPR and its replication in many countries is changing the business landscape and the same should be reflected in the managerial implications of this article such that how companies should ensure the protection of the consumer sensitive data in order to build and retail the consumer trust on the platform. Also, how recent developments in the field of wearable could transform the social commerce field. Lastly, the government can provide security protection for mobile-commerce transactions by providing a certification authority (to verify buyer and seller identities, evaluate security measures, assess transactions, and deliver digital certificates to those who meet the established security criteria). Therefore, the government can build and enforce a legal and judicial environment that provides minimum standards and obligations for transparency, fairness, and timeliness.

6.8. Limitations and avenues for future research

The present study has certain limitations that may constitute potential avenues for future research. First, the sample comprises exclusively Palestinian users, when this particular country presents a relatively low penetration of the mainstream social networks—specifically, Instagram—due to its culture and socio-economic barriers. Future studies could analyze different countries to examine the degree to which the proposed theoretical model could be generalized. Second, as the survey involved only participants aged 18 years or older, future research could approach different groups of participants—for instance, platform users under 18 years of age. Future studies could also seek to develop a more comprehensive model by including additional variables (Casaló et al., 2017). With regard to the data-collection process, a longitudinal method could enable the strength of the relationships and the evolution of these or other moderating variables to be tested over time (especially income, employment status, and educational level). Additionally, research involving a larger number of countries would enable different consumer attitudes toward Instagram commerce to be compared according to nationality. On the other hand, the invariance could not be established for the pooled data and therefore the results should be taken with caution. Finally, neuromarketing methodologies (such as FMRI, eye tracking, or EEG) could be applied to social commerce and Instagram commerce to measure users' visual attention, brain reactions, or recall on social commerce platforms in different sectors, such as fashion, technology, food, and education.

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Chapter 6

To buy or not to buy, that is the question:

Understanding the determinants of the urge to buy impulsively on Instagram commerce

Study 4

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Study 4: To buy or not to buy, that is the question: Understanding the determinants of the urge to buy impulsively on Instagram commerce

Abstract

Purpose: Throughout 2020, especially under the lockdown measures, there was a significant surge in e-commerce and social commerce, with numerous people all over the world adopting and using commerce platforms on social media and other websites to buy desired products and services quickly and easily. Instagram commerce is a new, cutting-edge social commerce platform. This research aims to explore the positive influence of the measures adopted during summer 2020 on Spanish social commerce users' urge to buy impulsively.

Design/methodology/approach: Drawing on the stimulus–organism–response (S-O-R) theoretical framework, this study postulates and tests a model to help understand the behaviour of Spanish users towards social commerce, specifically Instagram commerce. To accomplish this purpose, an SEM analysis is performed using a sample of 251 respondents.

Findings: Generally speaking, the findings obtained in the present study serve to expand and enhance the scientific literature on one of the latest determinants affecting social networks and online commerce.

Originality/value: This research is innovative due to the research background study that is carried out to analyse the urge to buy impulsively.

Keywords: Instagram commerce; S-O-R; urge to buy impulsively.

7.1. Introduction

The socio-economic implications of technology have greatly affected society in general and the business sector in particular. Since the early 2020s, numerous companies have changed the way in which they commercialize their products and services, while customers have also switched to different methods of buying them. Technology has played a key role in this transformation.

Consequently, smartphones have become an essential part of modern life. On the one hand, alongside mobile commerce, social networks have presented new business opportunities for companies willing to engage in the latest trends of interaction between retailers and customers. On the other hand, social commerce has many definitions and emerges as a new type of online platform that permits clients to share experiences, opinions and information about where, what and from whom to buy (Xu and Liu, 2019). Social commerce leads to an extension of e-commerce sites, combined with Web 2.0 and social media technology, to inspire online purchases and connections with clients before, during and after buying (Meilatinova, 2021). Social commerce is an innovative, fast-growing platform on which to buy and sell products and services online (Pandolph, 2018). Research on social commerce has often focused on the transactional variables related to the purchase intention (Molinillo et al., 2020). In this sense, social commerce adopts a relevant social dimension from the most significant social media platforms, namely Instagram, Snapchat and Facebook (Henninger et al., 2019). Social commerce is beneficial for both companies and their clients since it offers a series of advantages with regard to purchases made through social media. In this vein, social commerce enhances e-commerce websites by adding social media tools, which help to improve the overall commercial performance of brick-and-mortar retailers and their customer service (Bürklin et al., 2019).

There are two core types of social commerce websites: on the one hand, e-commerce sites based on Web 2.0 concepts and technologies (for example, www.amazon.com) and, on the other hand, e-commerce platforms based on the foundations laid by the Web 2.0 technologies that later upgraded to the most up-to-date e-commerce technologies (for example, www.facebook.com/Starbucks). The first type does not especially consider social features, such as content sharing and communication between users. However, the second type of social commerce websites features a distinct purchasing method that leverages data from the user purchase pricing and purchase history, among other factors. Thus, the aforementioned factors are especially relevant when examining this particular type of social commerce (Esmaeili et al., 2020). In addition, social commerce activities may establish a common identity and bonds between customers. In this sense, community identification is developed over a comprehensive range of behaviours, such as commitment to the purpose of the community, the achievement of objectives, widespread mutuality, the satisfaction of common needs, the acceptance of guidelines on participation and the welcoming of new members. Furthermore, bonds among social commerce customers can be established through continuous interactions among those who are more active in the community as well as the less experienced users, who value the information provided by the platform connoisseurs, to whom they feel emotionally attached through gratitude (Molinillo et al., 2020). Precisely this line of research is one of the proposed future research lines of Wang (2021) in the *Journal of Interactive Marketing*.

In recent years, Instagram has shifted to a new e-commerce paradigm called social commerce (Prasertsith et al., 2015). It rapidly recognized the huge potential of social networks to advance e-commerce, and it is continuously developing and launching new social commerce features and tools (Marketing Team Magento Commerce, 2018), turning the social network into an instrumental marketing platform for brands and retailers worldwide (Copeland and Zhao, 2020).

The general objective of this investigation is to analyse the determinants of the urge to buy impulsively on Instagram commerce following the principles of social commerce. First, this research will contribute to expanding the scientific literature on one of the most recent concepts related to social networks and online sales (Molinillo et al., 2020). Second, it focuses on the interest generated by Instagram as a social network since it has been considered by numerous authors as the main social commerce platform with regard to the promotion of products and services (Sihombing et al., 2020), surpassing competitors like Facebook and Twitter. Third, the authors propose to analyse the antecedents of impulse buying on Instagram commerce using the stimulus–organism–response model. The aforementioned antecedents are discussed based on the purchase intention and impulse buying tendency following the recent findings of Zafar et al. (2020). Finally, considering the results obtained, the present study identifies key theoretical business policies and implications with regard to the development and implementation of sales strategies on the main social networks and specifically on Instagram.

7.2. Background Literature

7.2.1. The Stimulus–Organism–Response (S-O-R) Framework

The S-O-R model essentially posits that human behaviour (action and reaction) and stimulation are connected and affect each other through the human organism. In the early days of environmental psychology, Mehrabian and Russell (1974) proposed the stimulus–organism–response (S-O-R) model. This framework comprises three distinct dimensions: the environment or stimulus (S) that creates behaviours and responses, the organism (O) that responds and the actual response (R). In addition, the S-O-R model aims to combine individuals' responses to clarify common emotions and perceptions with regard to external stimuli along with the positive or negative behaviours that are subsequently generated. In this regard, the S-O-R model theorizes about the connections between people and the environments in which they live. In this sense, stimuli are parts of the environment felt by a person. In the context of the S-O-R model, organism refers to the processes within people's mind that drive the impact of stimuli on their probable responses or actions. Response is theorized as people's acceptance or avoidance of their environment (Mehrabian and Russell, 1974).

In addition, the relevance of the S-O-R framework can mostly be explained by its holistic approach to the emotional, cognitive and affective developments that a person experiences while considering the acceptance or avoidance of a specific behaviour. The S-O-R framework has been used by numerous researchers to describe alterations in the purchase-making processes in a variety of

contexts, including tourism (Kim et al., 2020), and service encounters (Gupta et al., 2019) and online shopping environment (Animesh et al., 2011).

7.3. Development of the Hypotheses

7.3.1. Environmental Stimuli: Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment, Electronic Word of Mouth, Perceived Risk and Security

7.3.1.1. Perceived Ease of Use

Davis (1989) defined perceived ease of use as the degree to which a person believes that using a specific system might be effortless. With regard to social commerce contexts, Martínez-López et al. (2020) posited that perceived ease of use can be defined as the degree to which a customer believes that buying through a social commerce platform might also be effortless.

Previous research has shown that perceived ease of use also plays a key role in determining the use of e-government services and mobile government services (Mensah, 2020). In this sense, the recent research by Tahar et al. (2020) found a positive impact of perceived ease of use on the intention to use e-filling. In addition, Chen and Aklikokou (2020) described the positive and significant influence of perceived ease of use on the behavioural intention to use e-government services. Besides, perceived ease of use has a positive influence on the behavioural intention to use an e-wallet (Karim et al., 2020).

On the other hand, numerous authors have already indicated the importance of both perceived ease of use and perceived usefulness, which are connected to each other. Several recent studies have found a relationship between perceived ease of use and perceived usefulness. Furthermore, Liébana-Cabanillas et al. (2020) postulated that perceived ease of use has a positive influence on the perceived usefulness of mobile payment services. The previous research by Alsaleh et al. (2019) and Hassanein and Head (2007) found that the higher the level of perceived ease of use, the more likely it is to have a positive influence on perceived usefulness with regard to online shopping websites.

In light of the aforementioned findings, the following hypotheses are put forward:

H1: *Perceived ease of use has a positive effect on purchase intentions towards Instagram commerce.*

H2: *Perceived ease of use has a positive effect on the perceived usefulness of Instagram commerce.*

7.3.1.2. Perceived Usefulness

Perceived usefulness is defined as the degree to which a particular system helps to enhance job performance. Hence, perceived usefulness constitutes the main reason for most people to adopt a new technology (Davis, 1989). Likewise, there is a positive relationship between perceived

usefulness and purchase intention. In addition, Nkoyi et al. (2019) described perceived usefulness as the degree to which individuals believe that engaging in a particular work routine will enhance their job performance, for instance choosing a technology that will make their work easier. Instead, Rauniar et al. (2014) defined perceived usefulness as the degree to which social media users believe that the social media platforms on which they are interacting will help them to accomplish their objectives.

Perceived usefulness also positively influences the intention to use mobile payment technologies (Liébana-Cabanillas et al., 2020). Recent research on social commerce has revealed that perceived usefulness positively influences the intention to adopt social commerce (Abed, 2020).

In light of the aforementioned findings, the following hypothesis is proposed:

H3: *Perceived usefulness has a positive effect on purchase intentions towards Instagram commerce.*

7.3.1.3. Perceived Enjoyment

Perceived enjoyment refers to the emotion-related experiences acquired through the practice of a process (Groß, 2018). In this sense, a high level of perceived enjoyment associated with a particular technology encourages individuals to adopt and use it. Previous research studies have corroborated the positive influence of perceived enjoyment on purchase intention (Patel et al., 2020). In this sense, consumers who enjoy using a particular technology (Instagram commerce in the case of the present study) are more likely to purchase products and services offered on that platform.

Shopping enjoyment is measured as a motivational factor affecting purchase intentions (Hashmi et al., 2020). Accordingly, hedonic motivation can be described as a human tendency to move towards pleasure and is frequently associated with customers whose purchases are mostly driven by entertainment, joy and self-pleasure reasons (Faisal et al., 2020). In this context, shopping value is a concept that covers the hedonic and utilitarian experiences in the purchase-making process. Therefore, shopping value is associated with customers' feelings and emotions, such as joy (hedonic), or is a way to fulfil their needs (utilitarian). Through a thorough assessment of hedonic and utilitarian shopping values, merchants can adapt their selling strategies to satisfy customers' requirements. As previously stated, customers who seek the hedonic component of shopping value experience positive emotions, such as joy, happiness and interest. Furthermore, hedonic motivation is responsible for the excitement and anticipation that customers feel while browsing for sales and discounts (Babin et al., 1994).

Based on this discussion, the present study puts forward the following hypothesis:

H4: *Perceived enjoyment has a positive effect on purchase intentions towards Instagram commerce.*

7.3.1.4. Electronic Word of Mouth

Electronic word of mouth plays a significant part in defining customers' attitudes and behaviours (Brown and Reingen, 1987). Besides, electronic word of mouth can be considered as person-to-person, informal communication between business partners and parties with regard to a product, service or brand (Harrison-Walker, 2001). Electronic word of mouth is the most common communication method, which naturally happens when making a purchase while significantly affecting the purchase decision. In this context, when a close person uses word of mouth to communicate positive feedback about a company, the receivers of such information will show signs of early trust in the company, resulting in an increased intention to buy its products and services (San-Martin et al., 2015). Previous research studies have found a positive effect of electronic word of mouth on purchase intentions in social commerce (Ikhsan and Ohliati, 2020) and especially with regard to Instagram (Adila et al., 2020).

In light of the aforementioned findings, the following hypothesis is suggested:

H5: *Electronic word of mouth has a positive effect on purchase intentions towards Instagram commerce.*

7.3.1.5. Perceived Risk

The extant literature in the field of marketing and customer behaviour explains perceived risk as an insight into the adverse consequences derived from a particular behaviour and the perception of uncertainty (Rehman et al., 2020). Bauer (1960) was the first to theorize about perceived risk in the marketing literature. Perceived risk has been defined as the customer's uncertainty associated with the purchase of a product or service and the negative consequences derived from it (Dowling and Staelin, 1994).

Prior research has also highlighted the importance of perceived risk with regard to customers' acceptance of innovative technology along with its significant and negative influence on the intention to adopt it (Wu and Wang, 2005). In addition, prior research has found a significant and negative impact of perceived risk on purchase intention in mobile payment systems (Liébana-Cabanillas et al., 2020) and in online shopping in general (Han and Li, 2020), among others.

In light of these findings, the present study puts forward the following hypothesis:

H6: *Perceived risk has a strong negative effect on purchase intentions towards Instagram commerce.*

7.3.1.6. Security

Security is associated with users' need to control and manage their personal data and information details that are stored remotely in an online system. Security involves dealing with threats that create conditions, circumstances or events capable of causing economic hardship to network or

data resources in the form of data modification, manipulation, disclosure, breaches, denial of service attacks and/or fraud, data destruction, waste and misuse (Kalakota and Whinston, 1997).

Many authors have explored the aforementioned security issues, specifically hacking, viruses, data interception and data theft, hindering the operation of leading businesses over the Internet. Recent research (Kasuma et al., 2020) has also corroborated the significant relationship between security and customers' intention to purchase online.

Consequently, the following hypothesis is put forward:

H7: *Security has a positive effect on purchase intentions towards Instagram commerce.*

7.3.2. Organism (O): Purchase Intention and Impulse Buying Tendency

7.3.2.1. Purchase Intention

Purchase intention is central for companies as it directly affects customers' likelihood of buying their products and services. The present study posits that users with a significant level of purchase intention are more likely to show impulse buying tendencies associated with the environment in which they are browsing. On the other hand, many research studies have taken a different approach to this subject and pondered the platform with which customers are interacting as a key factor affecting their purchase intention (Chen and Yao, 2018). However, the present study considers that prospective buyers already have a specific level of purchase intention and, consequently, the characteristics of the platforms and websites that customers use to browse products and services are responsible for their impulse purchases. In this sense, prior research (Xiang et al., 2016) has found that social commerce platforms are designed and developed around customers' social interactions. Therefore, customers' experience in the aforementioned context is a primary driver of impulse buying behaviour.

In this light, the present study proposes the following hypothesis:

H8: *Purchase intention has a positive effect on the impulse buying tendency towards Instagram commerce.*

7.3.2.2. Impulse Buying Tendency

An impulse buying tendency is easier to detect than other customer behaviours and can be used as a key determinant of impulse buying (Beatty and Ferrell, 1998). In this regard, Iyer et al. (2020) indicated that an impulse buying tendency comprises the attribute of impulsivity, which reproduces a constant disposition to act impulsively in a particular consumption context.

Compared with others, a customer showing an impulse buying tendency is more likely to develop and engage in impulse buying behaviour (Chen and Yao, 2018) as customers with a high level of impulse buying tendency have been found to adopt unreasonable purchase behaviours due to their

poor impulse control. Consequently, these customers are especially likely to engage in impulse buying activities compared with individuals who do not show this tendency (Chang, 2017).

According to Chen et al. (2020), impulse buying has a positive impact on the urge to buy impulsively, showing that customers with impulsiveness as a key personal attribute have the urge to buy immediately and own a certain apparel product while browsing for clothes. Due to a strong urge to buy impulsively, customers struggle to keep their self-control, consequently leading to impulse buying. Previous research studies, such as those by Chen and Yao (2018), Xiang et al. (2016) and Zafar et al. (2020), have also agreed that the relationship between the impulse buying tendency and the urge to buy impulsively is positive.

In light of the aforementioned findings, the following hypothesis is proposed:

H9: *The impulse buying tendency has a positive effect on the urge to buy impulsively through Instagram commerce.*

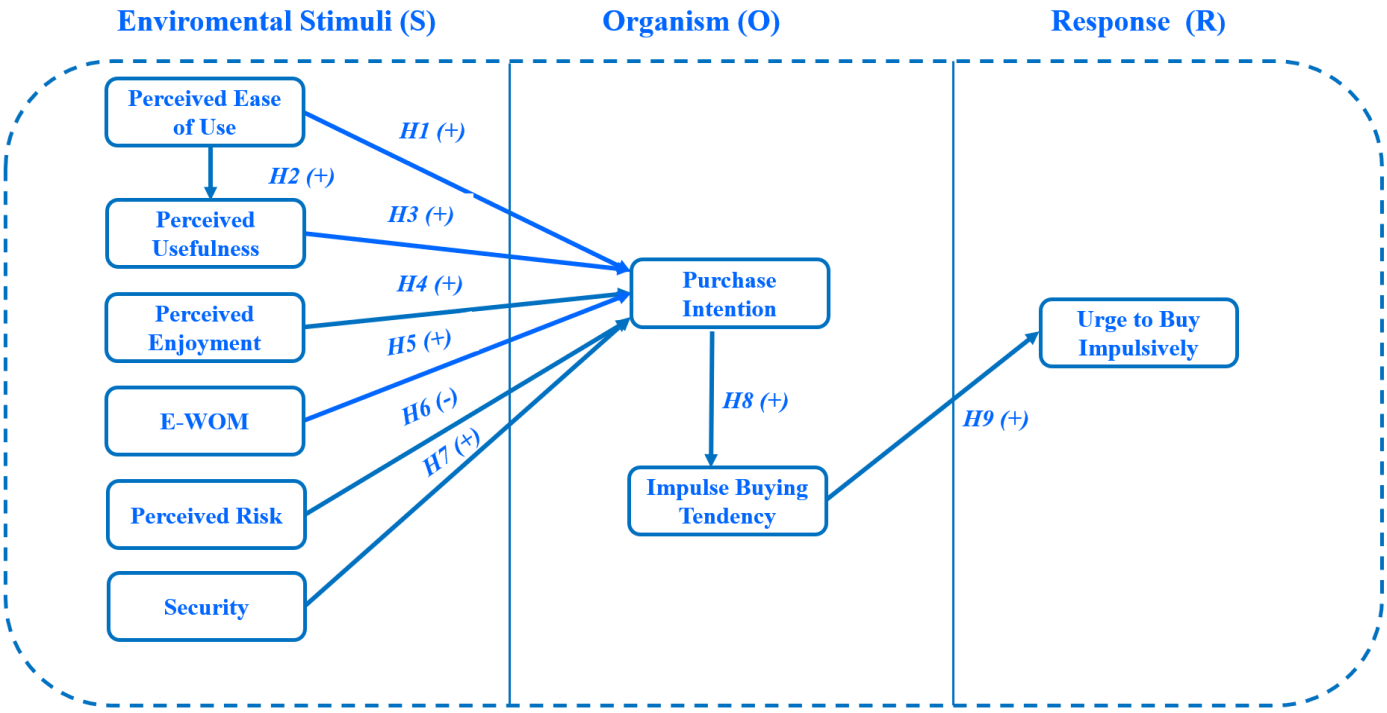
7.3.3. Response (R): Urge to Buy Impulsively

According to Beatty and Ferrell (1998), the urge to buy impulsively can be described as a motivational state of craving triggered after the discovery of a particular item in the environment. They found that the urge to buy impulsively reflected a significantly stronger measure of impulsivity than actual impulsive behaviour. In this sense, the UTBI ultimately leads to impulse buying and is therefore likely to be positively related to it. Previous research studies have posited that, as customers browse for their next purchase, they tend to experience an increased urge to buy, with the probability of engaging in impulsive purchase behaviour also rising (Beatty and Ferrell, 1998).

Wells et al. (2011), along with many other researchers, paid extensive attention to customers' impulsiveness or impulse buying traits, both in online shopping and in traditional retail contexts. In this regard, even though several traits affect the purchasing process in online shopping contexts, impulsiveness is the most significant factor positively affecting the intention to buy online.

In the context of impulse buying, the responses are affected by two significant factors: the urge to buy impulsively and the actual impulse buying behaviour (Rook, 1987). Precisely, the model proposed by Parboteeah et al. (2009) only incorporates the urge to buy impulsively response. Likewise, the present study focuses on the urge to buy impulsively as a response among users of Instagram commerce.

Figure 67: Research model



7.4. Research Methodology

The present study performed an experiential research analysis to examine the relationships between the proposed variables. Accordingly, a questionnaire was developed to collect the required data.

7.4.1. Survey and Measurement Scales

An online survey was conducted via a questionnaire constructed in Google Forms to gather data from participants in Spain. In the first place, respondents were asked to watch a video explaining three different methods to buy from Instagram commerce; the video is still available online (https://www.youtube.com/watch?v=jVdYwCEOVeA). The link to the survey was distributed by email and published on social media platforms in summer 2020. In addition, to measure the research model's concepts, the present study employed a seven-point Likert scale with answer choices ranging from "strongly disagree" to "strongly agree" (https://bit.ly/Measurementscales). The original scales were in English, so they were translated into the language of the target population (Spanish) to obtain accurate answers. Furthermore, a group of five experts in the field was approached by the researchers to review the methodology and the measurement scales to confirm the validity of the content while ensuring that all the questions were worded properly. Subsequently, a pre-test was conducted using a sample of 10 participants who were experienced

with Instagram commerce. The finalized version of the questionnaire included three screening questions and one behavioural question (concerning the frequency of buying through Instagram commerce).

7.4.2. Data Collection

The data were collected in September 2020, initially from 290 respondents. After a validation process, the final sample consisted of 251 valid users. Table 17 presents the details of these Spanish users.

Table 17: Respondents' demographic characteristics

Demographics		**Frequency**	**Percentage**
Gender	Men	68	27%
	Women	183	73%
Age	18-25	147	59%
	26-35	78	31%
	36-45	13	5%
	46-55	11	4%
	56-65	2	1%
	Over 65	0	0%
Education Level	University	134	53%
	Postgraduate	87	35%
	High School	18	7%
	Elementary	12	5%
Employment Status	Employee	75	30%
	Student	148	59%
	Unemployed	13	5%
	Self-employed/ Businessmen/women	14	6%
	Retired	1	1%
Monthly Income	Less than 1100 Euros	49	19%
	Between 1100-1800 Euros	58	23%
	Between 1800-2700 Euros	7	3%
	Over 2700 Euros	5	2%

	No Income	113	45%
	Don’t Know/No answer	19	8%

7.5. Results

7.5.1. Assessing Reliability and Validity

The present study tested the collected data through the Smart PLS 3 software, aiming to measure the structural equation model. The fit of the measurement scales was evaluated through different indices of reliability and validity, such as Cronbach’s alpha (α), composite reliability (CR) and average variance extracted (AVE). All the constructs proved to be reliable, with all the obtained values exceeding the recommended thresholds: 0.7 in the case of Cronbach’s alpha (Nunnally, 1994), 0.8 for CR (Nunnally, 1994) and 0.5 with regard to AVE (Fornell and Larcker, 1981).

A confirmatory factor analysis (CFA) was used to verify the convergent and discriminant validity of the scales. The convergent validity was evaluated through the factorial loads of the indicators. The study found that the coefficients were significantly different from zero and that the loadings were above 0.8 in all cases. Concerning the discriminant validity, the modifications were significantly different from zero and the correlation of each pair of scales was not higher than 0.9 (Hair et al., 2014). Consequently, all the constructs had acceptable measurement properties.

Finally, three methods were used to measure the discernment validity through the PLS software package: a) according to Barclay et al. (1995), the loading coefficients must be greater than the cross-loadings; b) as suggested by Fornell and Larcker (1981), the number of inter-construct correlations should be lower than the value of the square root of the AVEs in the model; and c) Henseler et al. (2015) indicated that the heterotrait–monotrait (HTMT) ratio should be lower than 0.9. Besides, in the present research, all the obtained values were fairly close to those proposed in the scientific literature. Furthermore, this study detected an adequate amount of discriminant validity throughout the research model.

Table 18: Evaluation of the measurement model: Loadings, Cronbach’s alpha, Rho_A, composite reliability (CR) and average variance extracted (AVE)

Items	Loadings	Cronbach's Alpha	Rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
PE1	0.936	0.963	0.964	0.973	0.901
PE2	0.944				
PE3	0.962				
PE4	0.955				
EWOM1	0.964	0.934	0.941	0.959	0.885

EWOM2	0.971				
EWOM3	0.886				
IBT1	0.945	0.973	0.974	0.980	0.925
IBT2	0.984				
IBT3	0.970				
IBT4	0.948				
UTBI1	0.961	0.964	0.965	0.977	0.933
UTBI2	0.974				
UTBI3	0.962				
PEOU1	0.942	0.974	0.974	0.979	0.905
PEOU2	0.955				
PEOU3	0.975				
PEOU4	0.963				
PEOU5	0.921				
PU1	0.870	0.940	0.940	0.954	0.806
PU2	0.912				
PU3	0.913				
PU4	0.891				
PU5	0.902				
PI1	0.948	0.976	0.977	0.981	0.912
PI2	0.964				
PI3	0.963				
PI4	0.962				
PI5	0.936				
PU1	0.873	0.940	0.942	0.954	0.806
PU2	0.911				
PU3	0.916				
PU4	0.886				
PU5	0.900				
PR1	0.949	0.841	0.895	0.925	0.860

PR2	0.905				
SEC1	0.865	0.968	0.968	0.974	0.863
SEC2	0.936				
SEC3	0.946				
SEC4	0.933				
SEC5	0.951				
SEC6	0.939				

Table 19: Discriminant validity: Fornell–Larcker criterion (below the main diagonal) and heterotrait–monotrait ratio (HTMT) (above the main diagonal)

	EWOM	IBT	PE	PEOU	PU	SEC	UTBI	PI	PR
EWOM	**0.941**	0.694	0.686	0.617	0.788	0.817	0.648	0.826	0.398
IBT	0.663	**0.962**	0.664	0.428	0.580	0.623	0.850	0.636	0.395
PE	0.833	0.664	**0.949**	0.665	0.818	0.768	0.635	0.838	0.388
PEOU	0.617	0.428	0.665	**0.951**	0.762	0.591	0.462	0.656	0.444
PU	0.788	0.580	0.818	0.762	**0.898**	0.737	0.604	0.805	0.400
SEC	0.817	0.623	0.768	0.591	0.737	**0.929**	0.572	0.793	0.312
UTBI	0.648	0.850	0.635	0.462	0.604	0.572	**0.966**	0.604	0.396
PI	0.826	0.636	0.838	0.656	0.805	0.793	0.604	**0.955**	0.303
PR	0.398	0.395	0.388	0.444	0.400	0.312	0.396	0.303	**0.927**

The hypotheses were evaluated through structural equation modelling (SEM). In this regard, a bootstrapping procedure with 500 subsamples was employed to measure the relevance of the coefficient paths (Hair et al., 2016). In this manner, the significance of the relationships between the hypotheses and their analytical performance was measured through the assessment of the structural model. As Table 20 shows, all the hypotheses were supported except for H1.

The results obtained did not support the relationship between perceived ease of use and purchase intention (H1) ($\beta = 0.075$, $p > 0.10$), a result that is consistent with previous research (Kasilingam, 2020; Wang et al., 2020). On the other hand, Hypothesis 2 proposes a relationship between perceived ease of use and perceived usefulness. The findings from the present study strongly support this relationship ($\beta = 0.763$, $p < 0.001$), and all the values obtained were in line with recent research (Chen and Aklikokou, 2020). Besides, the results obtained supported the relationship between perceived usefulness and purchase intention that Hypothesis 3 suggests ($\beta = 0.188$, $p < 0.05$), validating other recent studies in the literature (Tcheuffa et al., 2020). With regard to the

relationship between perceived enjoyment and purchase intention put forward by Hypothesis 4, the results from this study are strongly supportive ($\beta = 0.315$, $p < 0.001$), as already suggested in the literature (Patel et al., 2020; Pillai et al., 2020). Furthermore, the results obtained support the relationship between E-WOM and purchase intention (H5) ($\beta = 0.243$, $p < 0.05$), as suggested in the literature (Ikhsan and Ohliati, 2020; Wajdi et al., 2020). Moreover, in the case of H6, the results support the relationship between perceived risk and purchase intention ($\beta = -0.087$, $p < 0.05$), as a recent research study revealed (Han and Li, 2020). The relationships between security and purchase intention (H7) were also strongly supported ($\beta = 0.197$, $p < 0.05$), as reported by previous research (Kasuma et al., 2020; Othman et al., 2019). The results obtained also supported the relationship between purchase intention and impulse buying tendency (H8) ($\beta = 0.636$, $p < 0.001$). Finally, the relationship between impulse buying tendency and urge to buy impulsively proposed in Hypothesis 9 was tested, and the results also mirrored those of recent research studies (Zafar et al., 2020), supporting such a relationship ($\beta = 0.850$, $p < 0.001$).

The present research followed the procedure established by Geisser (1975) and Stone (1974) to measure the R^2 and Q^2 along with the effect size (f^2) and the standardized root mean square residual (SRMR) constants. According to Falk and Miller (1992), R^2 values should exceed the minimum threshold of 0.1. Table 20 shows that the R^2 achieved values above 0.404, meaning that the R^2 in the present study exceeds the aforementioned threshold.

In addition, the present research measured the effect of the f^2 and found that it yielded a value between 0.011 and 2.608. This indicates that the relationship between the variables has a significant effect, considering that Chin (1998) agreed that f^2 values between 0.02 and 0.15, 0.15 and 0.35, and 0.35 and higher provide evidence that an exogenous latent variable has a correspondingly significant, moderate or trivial effect.

Furthermore, the present study conducted a Q^2 test following the method suggested by Geisser (1975) and Stone (1974), who developed the blindfolding techniques applied (omission distance = 7) to obtain the value for the predictive relevance test (Q^2). The results obtained in this study were different from zero, verifying the predictive relevance of the model.

The present research also measured the value of the standardized root mean square residual (SRMR) (Henseler et al., 2015) and obtained a result of 0.039, which is less than the maximum acceptable value of 0.08, showing that the research model had adequate goodness of fit.

Table 20: Evaluation of the structural model

Hypotheses	Relationships	Paths	P -Values	Supported	f^2	R^2	Q^2	SRMR
1	PEOU→PI	0.075	0.114	NO	0.011			
2	PEOU→PU	0.763	**0.000*** **	YES	1.392			
3	PU→PI	0.188	**0.003** **	YES	0.038			
4	PE→PI	0.315	**0.000*** **	YES	0.111			
5	EWOM→PI	0.243	**0.003** **	YES	0.061			
6	PR→PI	-0.087	**0.004** **	YES	0.028			
7	SEC→PI	0.197	**0.003** **	YES	0.057			
8	PI→IBT	0.636	**0.000*** **	YES	0.679			
9	IBT→UTBI	0.850	**0.000*** **	YES	2.608			
	IBT					0.404	0.369	
	PI					0.796	0.719	
	UTBI					0.723	0.669	
	PU					0.582		
								0.39

7.6. Final discussion and conclusion

7.6.1. Theoretical implications

The present study makes several contributions to social commerce research and more specifically to scientific research on Instagram commerce. The results obtained show that determinants such as perceived ease of use, perceived usefulness, perceived enjoyment, electronic word of mouth, perceived risk, security, purchase intention, impulse buying tendency and urge to buy impulsively are entirely associated with research on social networks and the performance of online sales. The present study also revealed that all the aforementioned concepts have strong relationships that affect each other except for the relationship between perceived ease of use and purchase intention, which can be explained by the recent emergence of social commerce and especially Instagram commerce in Spain. In this sense, Spanish users have not yet leveraged all the different buying options on Instagram commerce. Instagram is continuing to add new purchasing avenues, meaning that Spanish users will shortly become familiar with the use of Instagram commerce. In this regard, the results corroborated those Spanish users who strongly agreed with the satisfaction and security associated with the use of the platform. Spanish users stated that Instagram is especially valuable

for searching for and purchasing products, improving their performance in assessing products while allowing them to discover products and gain shopping ideas rapidly.

In addition, the results from the analysis of the impact of electronic word of mouth on the research model show that it encourages Spanish customers to share highly positive feedback and recommend Instagram commerce's products and services to their family and friends. Moreover, the aforementioned concepts significantly influence the purchase intention of Spanish users on Instagram commerce. In this sense, first-time buyers are willing to recommend this particular social commerce platform to others while becoming repeat customers who will undoubtedly use Instagram commerce again to buy products and services. In this context, the present study posits that Instagram commerce has become a significant social commerce platform in Spain. On the other hand, the results obtained with regard to the impulse buying tendency and the urge to buy impulsively reveal that they both affect Spanish users' purchase intention towards Instagram commerce. When users are browsing Instagram commerce, they often make unplanned purchases spontaneously, without conducting a previous assessment. Therefore, the moment they find a product they desire, they buy it directly. In this manner, Spanish users of Instagram commerce are induced to make quick and unplanned purchases, lured by products that are different from those that they were originally seeking.

Furthermore, the present research applied the stimulus–organism–response (S-O-R) framework to the aforementioned concepts implemented in the research model. The present study used purchase intention, perceived ease of use, perceived usefulness, perceived enjoyment, electronic word of mouth, perceived risk and security as environmental stimuli. Besides, organism and consumer response are considered as mediating variables affecting purchase intention and impulse buying tendency. In this manner, the consumer response in the proposed model was explained through the urge to buy impulsively. Generally speaking, all the concepts in the S-O-R model had strong relationships.

7.6.2. Managerial implications

The present research contributes to the expansion of Instagram commerce as a leading social commerce platform under the restrictions imposed during the COVID-19 pandemic. In this sense, it is worth nothing that marketing professionals are being held back by the scarcity of research in this field of knowledge. In the first place, the results obtained reveal that purchase intention, impulse buying tendency and urge to buy impulsively are critical determinants of the success of social commerce companies such as Instagram commerce. Moreover, Instagram commerce has established itself as one of the top social commerce platforms during the COVID-19 pandemic in terms of marketing and sales. In this manner, in its bid to support both small and large businesses, Instagram has continued to develop multiple easy avenues for buying through its platform. Most business sectors and brands have engaged with Instagram commerce during the COVID-19 pandemic.

The ease of use and usefulness of Instagram commerce allow companies to sell effortlessly while offering multiple buying methods and enabling features such as sharing posts and stories in relation

to their products and services and using hashtags and all the tools that Instagram has developed for businesses. Moreover, customers feel compelled to buy directly from Instagram commerce and disregard other platforms or brand choices since Instagram keeps providing updated information about products and services through an easy-to-understand shopping interface. In addition, the sense of enjoyment is crucial in the context of social commerce and especially in Instagram commerce. Accordingly, managers should focus on providing a pleasing shopping experience for their social commerce customers on Instagram, on which they can upload high-quality, colourful and creative posts and stories about products and services to retain their current customers and attract new prospective buyers. Likewise, these features encourage customers to make direct purchases.

In addition, positive electronic word of mouth communication among users of Instagram commerce helps the platform to grow in terms of new users and companies. In this manner, Instagram's electronic word of mouth helps companies by attracting new followers and customers (Belanche et al., 2020). In this sense, managers should focus on their company's profile on Instagram, reviewing the posts, shares and comments left by users of the platform to remove inappropriate contributions infringing the terms of service. In addition, social commerce managers should concentrate on users' negative feedback about their products and services to mitigate issues and avoid customer dissatisfaction. On the other hand, positive reviews should encourage professionals to keep developing the original idea. Social commerce managers should also respond as quickly as possible to users' questions and feedback. As the present study revealed, perceived risk and security are central for companies and customers with an active Instagram commerce profile. In this regard, Instagram commerce can be considered to be secure, except for the occasional unknown profiles that happen to arise and are systematically reviewed and removed by the platform managers and algorithms. Managers should focus on developing a real account with actual company details, such as location, email, phone numbers, feedback ratings and selling purposes, to improve customers' confidence and allow their users to buy without the fear of risking sensitive information or engaging in shady business interactions. In this manner, companies should keep developing creative selling strategies and campaigns that are different from those of the competition to attract more customers and increase their sales. In this light, the COVID-19 pandemic has taught many businesses the impending necessity of approaching digital marketing as a key driver of sales performance. Companies with no e-commerce presence whatsoever have lost a considerable number of employees and clients and, in some cases, have been forced to cease trading. In this sense, digital marketing is fundamental for any company, independent of its size, to remain operational under the serious challenge that the world is facing nowadays.

7.7. Limitations and avenues for future research

The present study has several limitations that can be viewed from the perspective of avenues for future research. Firstly, the sample contains data limited to Spanish users. Future studies in this field of knowledge can examine different countries to assess the generalization performance of the theoretical model. Secondly, the fact that the study took place in an online environment and involved participants aged 18 and older suggests that future research can study participants with

contrasting characteristics, for example a group of users with no means to complete online surveys and another group of people under 18 years of age, and discuss the results obtained.

Future research can also advance an additional, comprehensive model by including more variables in the one proposed by the present study. With regard to the data collection method, a longitudinal approach would allow the assessment of the strength of the relationships and the evolution of the moderating variables over time (especially age, gender, employment situation and educational level). Future researchers might assess user-produced content analysis techniques, for instance text regression and sentiment analysis (e.g., lexicon-based methods, machine learning, etc.), text mining (e.g., latent semantic analysis) and focus groups, among others. Besides, this research concentrated on one social commerce platform (Instagram), but consumer behaviour can differ depending on the features of the social network. Consequently, future works could estimate the validity of the proposed model using data collected from users of other platforms and networks, for instance Pinterest, Twitter and Facebook. Furthermore, research focusing on multiple countries would allow a comparison of the different levels of purchase intention, impulse buying tendency and urge to buy impulsively through Instagram commerce according to nationality. Finally, new research related to COVID-19's influence on social commerce platforms such as Instagram can become a significant subject with regard to e-commerce and many other fields of knowledge.

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Surprise me with the visual representation Of the brand in the social commerce! An eye- tracking study based on the characteristics of users

Study 5

Journal under review: Journal of Interactive Marketing

Study 5: Surprise me with the visual representation of the brand in the social commerce! An eye-tracking study based on the characteristics of users

Structured abstract

This research emphasizes the role played by the letter marks, combination marks and brandmarks that firms use for social commerce purposes on their online platforms. The study examines these main areas of visual representation of the brand, considered an area of outstanding attention, as it can help advance the purchase process related to social commerce profiles and, in turn, increase brand sales. First and more specifically, the different elements of a brand's visual representation are studied via different social commerce tools, that may have a more important effect on the attention of a group of users of Instagram. Second, these differences are assessed by considering different classification variables (users' gender, age, and experience level with social commerce tools). With this goal, a mixed experimental design is applied, based on eye-tracking analysis and a self-administered questionnaire. The results indicate that visual attention, gender, age, and experience determine users' recall of the brand logo they are exposed to. The findings also point to promising and interesting future research directions on the effectiveness of branding strategies, and can help improve fashion businesses for enhancing their advertising campaigns, such as the characteristics of the customers that visit these social commerce platforms.

Keywords: Eye-tracking, gender, age, social commerce user's experience, banner position, attention and recall, visual representation of the brand

8.1. Introduction

8.1.1. Online advertising in social commerce

Social commerce sales in the US are likely to rise by around 36% to $36.6 billion in 2021, according to new data from eMarketer. Besides, US social commerce sales were significantly below those of China at a predictable $351.6 billion in 2021 of sales (Freer, 2021). In the European context, Spain is one of the foremost e-commerce markets in Southern Europe; it also ranks 4th as a B2C e-commerce market, just behind Germany and France (Kulach, 2021). The Spanish e-commerce market has an enormous range of opportunities, as there are about 46 million Internet users in the country, with Spanish consumers, on average, spending 460 euros online in 2021 (Edwards, 2021). In Spain during 2020 social media became favored by customers for online shopping (Pasquali, 2021). Furthermore, the biggest segment in Spanish e-commerce is fashion, accounting for 29% of e-commerce income. It is followed by electronics and media, with 26%; toys, hobbies, and DIY, with 18%; and food and personal care with 15%. Finally, furniture and appliances accounts for 11% of e-commerce income (Edwards, 2021).

According to McLachlan (2020), 60% of individuals discover new products on Instagram. Instagram has the highest average order value ($65) of the four largest social commerce platforms (rivalling Facebook, Pinterest, and Twitter) (Barnhart, 2021). Besides, Advertising inhabits the center phase of social commerce. One of the main alterations between social commerce and e-commerce is that social commerce depends on social media to transmit advertisements. In reality, businesses are allocating a greater share of their advertising budget to social networks to achieve a global interactive platform and greater reach. Also, Social media advertising can use the strength of social effect to enhance ad uptake and serve suitable ads to clients based on their user profiles. An additional advantage of social media advertising lies in its capability to influence online groups to create communities brand loyal clients (Lin et al., 2017).

According to Kemp (2021), recently, there have been some interesting variations in the statistics that its parent company (Facebook) has reported for Instagram's advertising reach. Global, Facebook's tools indicate that Instagram's advertising reach enlarged by 100 million users over months toward 2021, performing quarter-on-quarter increase of more than 7.5 percent. In addition, Instagram's advertising reach has released by during 2021 5 million users (14.7 percent) in the United Kingdom and by 3 million users in Italy, Germany, and Spain.

The main income stream for numerous social commerce businesses is advertising. Seeking to leverage the huge amount of followers and users on social networks and the amount of time they spend there, advertisers have been willing to pay prime fees to book online ad space and run promotions. Similar to other social commerce activities, advertising is conducted in both public and private (company-owned) social networks. Numerous promoters are placing advertisements on Instagram, Twitter, LinkedIn, Facebook, Pinterest, MySpace, and YouTube. While social media campaigns may have a minor influence on actual online retail sales, they can deliver enormous advantages in terms of raising *brand awareness*. On the other hand, using videos for advertising is becoming a primary strategy, with vendors announcing new products or promoting

a brand image by attributing video clips to their product pages on social networks or their business portal. Product images or videos of products can be active in generating sales. Numerous sellers can assist in the use of video clips. The main motivation for this type of advertising is the potential viral effect. (Turban et al., 2015). The rise of social media advertising has led social media managers to advance in the growth of different advertising forms, which not only allows for advertising campaigns, nonetheless also enables the role of marketers to reach their target audience (Barreto, 2013).

Regarding to Burns and Lutz (2006) The six main well-known forms of online advertising are: large rectangles, pop-ups, interstitials, floating ads, banners, and skyscrapers. These forms have several advantages, such as cost reduction, the presence of several tracking tools for analyzing the views, the ability to segment the audience etcetera. All these forms are then combined with various kinds of logos (such as combined marks, trademarks, letter marks etcetera) as a part of the visual representation of the brand in question.

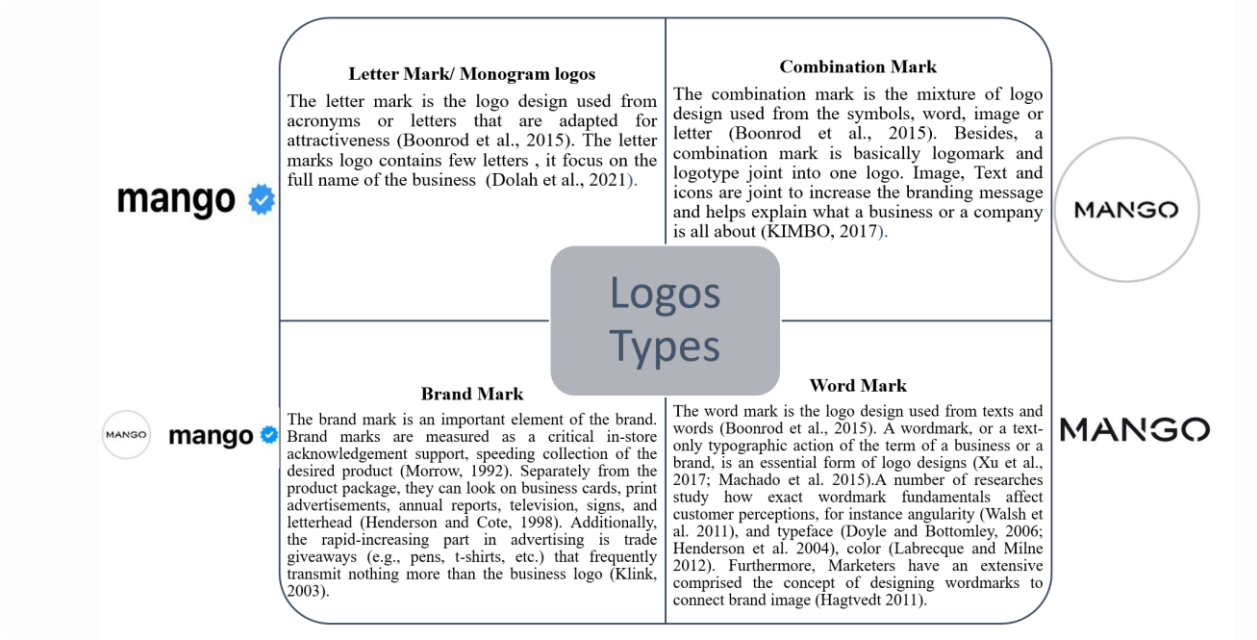
8.1.2. Types of visual representation used in branding

There are several types of advertising representations commonly used on the Internet. While the single term “logo” is often used in a generic sense, there are actually several different formats that identify a company or a brand online, each one with its own specific characteristics, as summarized in Figure 68.

In social networks, such as Facebook or Instagram, all companies promote their brands using some form of visual representation, which can be classified into a typology, including lettermark/monogram logos, wordmarks, brandmarks, and the combination mark.

A growing number of brands are now using social networks to promote their business and sell their products (Molina-Prados et al., 2021), and social network-based marketing is becoming progressively more important in the fashion industry in particular. In this context, then, we find several types of visual representation.

Figure 68: Types of logo



8.1.3. Research problem, objectives and structure

It is progressively important to measure the effectiveness of social network-based advertising, in general, and the visual representation of the brand, taking into account the degree of saturation among online channels and the competition for users' attention. This measurement enables programmers and advertisers to create app/advertisement designs that are appealing to users and stand out from the crowd.

After the appearance of the new applications generation, few academic studies have been carried out to measure the effectiveness of advertising on social commerce tools. Therefore, the aim of the present article is to address this gap by: a) providing a deeper and more comprehensive insight into the effectiveness of advertising according to the main types of visual representation of a brand for two specific social commerce tools (the brand profile on the Instagram "shop" and on Instagram stories) in terms of attention and recall; and b) exploring the influence of certain socio-demographic variables (gender and age) and experience level in using these new social commerce systems (based on frequency of use).

In particular, the present work examines the different patterns of fixation presented by users when browsing these social commerce tools, according to their personal characteristics (gender, age, and experience level) in relation to a fashion textile brand's profile on Instagram.

To do so, an experiment was conducted using an eye-tracking methodology in addition to a self-administered questionnaire, applied to 100 adults and potential users of these two social commerce apps.

Before introducing the methodology and results of this research, an in-depth review of the scientific literature was carried out in relation to the aforementioned research objectives.

8.2. Theoretical background: Justification of the hypotheses

8.2.1. The importance of measuring social commerce application design and advertising effectiveness

Today, social networks are the main fact of contact for users and the public face of the brand/business. These interactions became the online storefront of the online store, and consumers' perceptions of the brand are driven by this storefront (Zha et al., 2022). According to Lăzăroiu et al. (2020) users issue instantaneous judgments on the company/brand based on their first perceptions, and often choose to remain or abandon the firm's page in the first few seconds. Thus, developers should devote most of their efforts to a user-oriented approach to design to order to satisfy the possible requirements of users and make them remain on the site for a longer duration of time.

Burke et al. (2005) state that the same occurs with the design of banners or logos. The goal of the marketer is to establish a positive and lasting impression of the online ads on visitors, i.e., to affect users to have a favorable impression of these elements (e.g., by clicking on it) and to remember the advertised brand/company throughout the visit.

To remain on the social network for the longest time, it is essential to have well-constructed and accessible information that is not just simple to search for, but also provides chances to engage with the brand and, ultimately, buy it (Al-Adwan et al., 2019; Taividi et al., 2020). Consequently, before publishing a logo on a website, in-depth research of the social network profile should be performed based on focused queries about who and how they are searching. In this sense, the effectiveness of the visual representation of the brand enhances if it is published with content that is relevant and the right positioning approach is selected (He et al., 2021).

8.2.2. Impact of visual attention on self-reported memory

Meanwhile the early days of e-commerce, regarding Homburg et al. (2012) there has been an important debate on how to measure the effectiveness of banner advertising, which incorporates): 1) consumer processing of information (e.g., recall, recognition, attention), 2) consumer behavior (e.g., click-through rate), and 3) characteristics related to the communication that will create a particular attitude toward the ad, or impact buying intention (Naidoo and Hollebeek, 2016). Whereas several authors argue for the use of different heuristic metrics to assess user behavior, other authors choose to use experimental data by targeting the cognitive processing of viewers after banner advertising exposure (Manchanda et al., 2006), eye-tracking meta-logic (Li et al., 2016) or self-assessment tools comprising questionnaires, among others. Nevertheless, given that only a very small percentage of views result in an effective purchase (Moe and Fader, 2004), the adoption of consumer choice intentions is not optimal for assessing the effectiveness of banner advertising (Manchanda et al., 2006; Drèze and Hussherr, 2003).

In addition, investigations relying on self-report tools (e.g., Baack et al., 2008; Putrevu, 2008) find the necessity of a detailed research on the impact of memory in the decision-making process of consumers in the framework of advertising effectiveness. The challenge of the study is to truly establish how advertisements are subsequently processed, stored and encoded in people's memory and subsequently recalled, as these variables have a significant direct influence on buying choices (Krishnan and Chakravarti, 1999).

Consequently, this research uses participants' exposure to advertisements employing eye-tracking and the traditional recall-based measure of efficacy (Drèze and Hussherr, 2003). Particularly, we examine of how closely task-related selective attention is interrupted by the visual representation of the brand when users are in buying mode, and participant classification variables impact self-report recall measures of the visual representation of the brand. The attention raises to a phase of processing immediate short-term answers. As a matter of fact, one of the major objectives of advertising is to catch the audience's attention. Attracting the viewer's attention to an advertising message starts with active information processing (Fishbein and Ajzen, 1975). Therefore, attention is a core mechanism linked to the recognition of the stimulus (e.g., the advertisement).

Various psychophysical investigations of object discovery, localization, and acknowledgement in the visual domain point to a two-stage concept of visual perception in humans. The first phase is named the "preattentive" mode, in that simple features are rapidly processed in parallel throughout the visual field; in the second phase, referred to as the "attentive" mode, a focus of specialized processing, often described as the attentional focus, is targeted to specific locations in the visual field. Complex shape analysis and object recognition are related to this second phase (Koch and Ullman, 1987). In the present situation, visual attention is concentrated in the second phase; and focus, concentration, and awareness must be at its core.

Many theoretical justifications have been suggested to account for the effect of attention on recall (e.g., Bakalash and Reimer, 2013). Sanbonmatsu and Kardes (1988) state that high stages of stimulation drive people to engage in focusing on outlying cues, as distinguished from core cues, because the previous are simpler for the human mind to handle. Furthermore, the significance level of the given task at hand further impacts the attention paid to it, and thus memory.

In this theoretical line, visual attention and memory have been related empirically in numerous researches such as Wedel and Pieters (2000), Brasel and Gips (2008) and Hernandez et al. (2017). And once the advertising message and the brand have captured the user's attention, information thinking will produce information storage devices for the shown information that will influence memory (Lee and Ahn, 2012).

Numerous studies have been carried out in the background of psychology in this regard, claiming that cognitive response is highly dependent on the degree of attention paid to the stimulus (e.g., Shen and Chen, 2007). This strongly indicates a positive relationship between the degree of visual attention the user pays to various kinds of advertisements and self-reported memory in different research contexts (Gidlöf et al., 2012; Simola et al., 2013; Scott et al., 2016; Muñoz-Leiva, et al., 2021). Consequently, we suggest the following hypothesis within the context of social commerce:

***H1**: Visual attention has a positive effect on self-reported recall of the visual representation of the brand displayed in social commerce profiles.*

8.2.3. Variables for classifying social commerce: Demographic characteristics and user experience

8.2.3.1. Gender

With regard to the impact of gender on the effectiveness of Internet advertising, research by San Jose et al. (2004) found that men are more likely to contact an advertised business and to purchase an advertised product than women. Nevertheless, Grubbs and Milne (2010) showed that, while both genders dislike the use of online social network profiles for behavioral advertising, women dislike it even more. Therefore, regarding Wolin (2003) it would be desirable for marketers to devise two kinds of ads, one targeting men and one targeting women; for instance, high-risk products might be advertised to women through both objective and subjective advertising, whereas only impartial advertising is encouraged for men.

Furthermore, men and women appear to engage in a similar behavior with respect to banner ads on websites (Drèze and Hussherr, 2003). Research by Barreto (2013) found that women look at more banners than men, however, statistically there are no significant differences between men and women in terms of the ads they have seen and/or clicked on. In this line are the works of Goodrich (2014), when analyzing attitudes about online advertising, or Delen and Ílter (2021), applied to the use of human images in online advertising with the help of eye-tracking methodology).

However, several other authors have shown the contrary. Wells and Chen (1999) demonstrated that men display a higher positive attitude towards advertising than women. In addition, findings gathered by Goodrich (2014) found that men pay greater attention to advertising than women.

Following these last assumptions and hypothesis H1, the following research hypothesis is suggested:

***H2:** Gender has an effect or determine recall the visual representation of the brand displayed in social commerce profiles.*

8.2.3.2. Age

Normally, when advertising and text control the content of a website, viewers tend to have shorter visits to the website; nevertheless, this is not the case over older users, who remain on websites with advertising for a greater length of time. Hence, advertising on websites is likely to be more suitable for adult people than for younger users Similarly, Drèze, and Hussherr (2003) approve that adult people look at the same number of zones or positions as younger people, though, they look at a better number of positions and it takes them longer fixation.

Hence, younger users are more effective than older users. Recent studies have also found an effect of the age variable on visual attention). Specifically, they have established that adult people stay

longer on sites with advertising content such as in Danaher et al. (2006), Drèze and Hussherr (2003), Hernández-Méndez and Muñoz-Leiva (2015), Yu et al., (2021) or Joseph et al. (2021).

In this case, the following research hypothesis is proposed:

H3: *Age has an effect or determine recall the visual representation of the brand displayed in social commerce profiles.*

8.2.3.3. Shopping Experience

In the last years, the online advertising saturation has had a bad influence on the emotional effectiveness of ads, the attitude towards a brand, and furthermore as the users' frequency of use on a website rises. Nonetheless, the frequency of use of blog websites does not have an effect on the effectiveness of ads, as these kinds of sites have not yet been cluttered with advertising (Beerli and Martin, 2010).

It has also been found that expert Internet users tend to be more effective at information processing on a website, as they perform less fixations, look at less sections and stay shorter time on each section than beginners; nevertheless, this does not imply that they see less advertising stimuli (Drèze and Hussher, 2003). It has been shown that less experienced Internet users are more likely to click on banners than more experienced users (Dahlen, 2001). In addition to the mentioned research, Thorbjørnsen et al. (2002) showed that new users are also less likely to engage with advertising, as they focus more attention on components that are supplementary to the advertisement, for example the environment of the website. Thus, it has been demonstrated that users with more experience on the Internet are much more proactive with advertising ads than newer users (Crespo, 2011). Previous studies such as Alkan and Cagiltay (2007) analyzing computer games with eye-tracking technology; Arenas et al. (2021) analyzing Microsoft Word user interface with eye-tracking; Guo et al. (2021) studying the mobile new apps with eye-tracking; Joseph et al. (2021) examining the mobile phone applications, have found this relationship. Generally, users with more experience in using technology services and products find it easier than users who do not have such an experience. Therefore, the following research hypotheses are proposed:

H4: *Shopping experience in social networks has an effect or determine recall the visual representation of the brand displayed in social commerce profiles.*

All these hypotheses have been considered based on theoretical background and outcomes of researches mostly focused on the website environment. Even though there are generally very few eye-tracking studies focused on attention and recall of social commerce applications (e.g., Menon et al., 2016; Wang et al., 2020). The current paper will confirm whether the same factors influence the recall to these tools among their potential users.

8.3. Methodology

8.3.1. Data collection and validity of the experiment

An eye tracking experiment was carried out from April 26th - May 25th at a laboratory at the University of Granada. The participants were engaged by means of the quota sampling technique by phone or by e-mail from an original list of subjects and remunerated €10 for their time. The final sample consisted of total 100 participants. Ages from 16 to 65 years (mean age = 35.01 years). Participants were drawn randomly into one of four contingents based on gender and age ranges. Thus, the final sample was representative of the characteristics of the Instagram user population, where there are more women than men, and the majority of users are young (We are social, 2021).

The sample was also divided according to representative age ranges, with 41 participants between 16 and 34 years old, 31 participants between 35 and 44 years old, 15 participants between 45 and 55 years old, and 13 participants aged 56 years or older; thus, having a balanced design in terms of gender and age. Also, in this design, randomization was assured for the allocation of the test items for the experimental groups and the treatment of the control groups (Malhotra, 1997). The randomization allows the effects of the independent factors or variables to be equally distributed in all conditions (Zikmund, 2003) and guarantees that the overall number of replications of the experiment in the same conditions will reveal the true conditions, if they occur (Luque, 1997: 157; Zikmund, 2003).

In the initial stage of data collection, interviewees accomplished an online survey on the Google forms (pretesting and sampling) to record their motivational orientation and their recall and intention towards both social commerce and organic results once buying through social commerce.

The participation in this experiment was conducted, one participant at a time, in an isolated-sound room, under ambient light of 200 Lux, as suggested by ITU (2002) to provide a simulation of a "home environment". This Lab has a laptop computer linked to a Tobii Pro Nano eye tracker. Specifically, this system has an accurate level of 0.3° and an accuracy of 0.10° RMS (utilizing a constructed-in filter) under optimal conditions, through a sampling rate of 60 Hz.

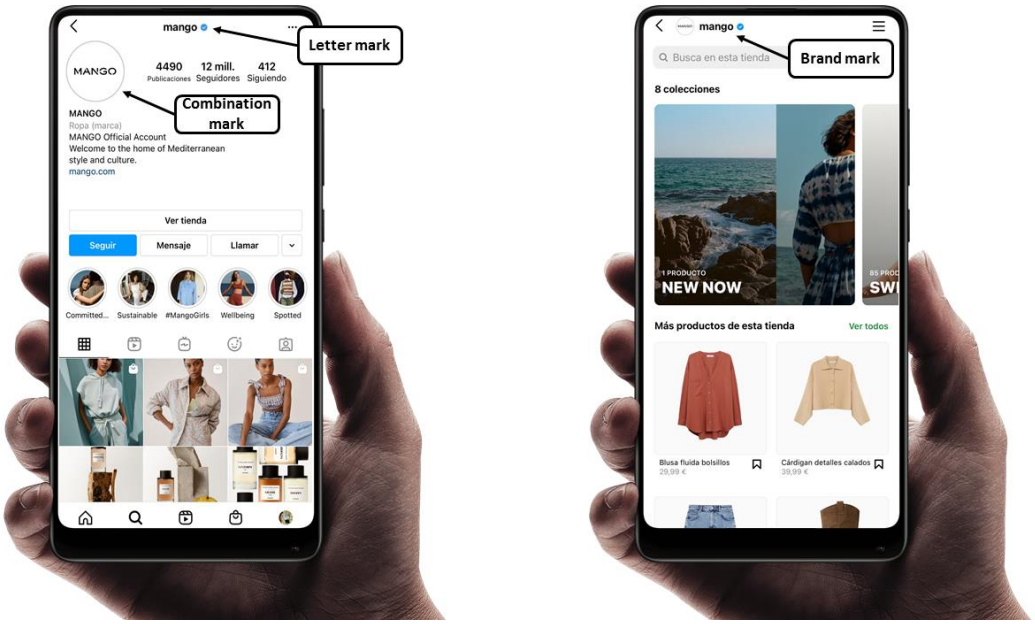
Some experiments in the laboratory have suitable internal validity, as a consequence of the ability to check the impact of independent and confounding factors and of a higher control over the conditions of the investigation (Zikmund, 2003). Nevertheless, there can be mistakes caused by the artificial nature of the environment, thus resulting in external validity lower than that of field experiments. But we have considered two different social commerce profiles on Instagram (in the profile and in the brand stories), and a sufficient sample size for this type of experiments, in order to rise the generalizability of the results to the whole industry and, therefore, the validity.

8.3.2. Experimental design

The experimental design mixed between groups (comparison by groups of subjects) and among subject (gaze metrics of repeated stimuli from different purchase process steps) was based on a simulation of the process Instagram profile in store and stories and the payment gateway. The layout involved the following presentation forms for Instagram's social commerce tools (see Figure 72). Specifically, we focused on visual attention indicators on 3 different elements (letter marks, combination marks and brand marks) that include the Mango brand and are repeated a few times

throughout the process of choosing the item of clothing and the payment gateway. The difference between one and another brand mark for example was the size (and position in which it appears).

Figure 69: Areas of interest in some steps of Instagram store and stories



Eye tracking studies examine fixations to measure the attention spent on an exact part of awareness (AOI). In our research after demarcating the AOI in all the versions of the social network, after demarcating the AOI in all versions of the social network, several different oculomotor parameters were drawn for each AOI. Incidentally, the most widely used fixation metrics in the scientific academic literature in the marketing area were chosen, such as Hernández-Méndez and Muñoz-Leiva (2015), Muñoz-Leiva and Gómez-Carmona (2019) and Espigares-Jurado et al. (2020). Therefore, visual attention was put through fixation indicators, such as fixation count (FC), total fixation duration (TFD), fixation duration (FD) and time to the first fixation (TFF). Below is a brief description of each of them.

In their research on scene perception, Henderson and Hollingworth (1999) found that significantly more fixations landed on semantically informative areas. Many researchers argue that the general importance or noticeability of an object increases the number of fixations (FC) in the AOI allocated to that object (Jacob and Karn, 2003). FC within a given AOI was measured in our study, however, as this measurement is very general, it must be complemented with others more directly related to information processing (Holmqvist et al., 2011; Jacob and Karn, 2003). Therefore, in addition to these measurements, the other metrics of fixation and duration included the TFF on the AOI, measured in seconds; the length of the fixation (FD, in milliseconds); and TFD.

The TFD is calculated as the total fixation length on an AOI, measured in milliseconds. Buswell (1935) observed that earlier fixations in an image are lower (around 210 ms) than later fixations (around 360 ms). According to Unema et al. (2005), this was later construed as a time of early fixation followed by a closer examination of informational features, which might explain a division of fixations along environmental and focus processing modes.

TFF, as a measure of attractiveness, is sensible to the size of AOIs, task clarity, foreground/background visual goal contrast, and other factors (Holmqvist et al., 2011). For instance, higher task visual complexity is observed to be linked to a greater early time to look at the predicted visual goals. This time suggests the ability of a given stimulus to engage attention and involves a high level of automatic processing with a low level of awareness (Colorado et al., 2015).

Effective advertising must attract the audience's attention and stay in their short- and long-term memory (Barreto, 2013). Hence, marketers are not just interested in whether people pay attention to ads, but also in whether they remember them. Ad effectiveness recall measures are still being used in advertising tracking evaluations and in decisions to cancel or switch advertising campaigns, regardless of criticisms regarding the use of these intermediate metrics (Newstead et al., 2009).

In our research, the banner recall was tested using a technique adapted from past studies (Danaher and Mullarkey 2003; Hernández-Méndez and Muñoz-Leiva 2015; Muñoz-Leiva and Gómez-Carmona 2019a) based on an open-ended question for unaided recall (“Please list the name of the brands you remember during the visit on Instagram or Facebook?”) and then an aided recall item (“What brands do you remember during the entire previous visit” –Mango, and other fictitious brands: Polo Club, Lacoste). The open-ended question was marked by adding 1 point for each item recalled correctly. Therefore, the overall recall scores ranged from "1 - I don't remember anything" to "3– the complete recall of the brand”).

The analysis conducted to test the research hypotheses was a multinomial regression model. In both cases, gender, age and experience level with social commerce tools was considered as independent variables or classification covariates in the models extracted. In particular, was based on these categories of frequency of use (“never”, “never during the last year, but yes in the past” and “yes, I usually buy through social networks”).

In particular, analysis of fixation metrics and recall was conducted using IBM SPSS Statistics version 25, based on the processed gaze data derived from Tobii Pro Lab v.1.130 software. Several multinomial regression libraries of R 4.1.1 computational software were used to test the hypotheses.

8.3.3. Data collection and recording process detailed

The process carried out with each participant is described in more detail below:

First - process of information search

Once the participants arrived at the place in which the research was accomplished, the procedure was clarified to them. It involved filling up a pre-test questionnaire and a post-test questionnaire at the end of the experiment. Furthermore, before the participants start the experiment, they were given written agreement forms for conducting the experiment, which they had to sign and give it back to the research team.

Once the questionnaire was completed, the participants were advised to assume a comfortable position in front of the laptop computer to continue with the eye-tracking standardization and consequently start the experiment. The participants were placed in front of a laptop computer and were given an overview of how to accomplish the specific task. They had to navigate by the profile and the Instagram store and stories and see the views offered by different product features of Mango, as well as the payment methods. The aim of this methodology is to obtain a high level of engagement in the experiment and a target-oriented navigation as would happen in a typical situation of using this kind of social commerce tools. While some authors endorse goal-focused navigation versus exploratory navigation, the creates fewer advertisement recognition in a browsing environment (Danaher and Mullarkey, 2003). Moreover, in this particular case, the task was not closely aligned with the display of advertising, so relatively low effectiveness rates were expected. However, the impact of targeting on task performance should not preclude recall or recognition of advertising messages.

Second - Calibration phase

The participant's fixation trajectory was then recorded to confirm that he or she might continue the experiment smoothly (calibration). During the experiment, the eye tracker was sizing using nine points of calibration displayed on a calibration matrix on the similar computer used in the eye-tracking experiment. Particularly, for the process of calibration, the topic was directed to fixate on the middle of nine successively spaced red dots (with a radius of 1 cm) on a 3x3 grid fixed on a wall at a viewing range of approximately 80 cm typical viewing distance. A manual check was then carried out to confirm that the acquired center positions were both correct and precise. Any severe deviation (greater than one degree of visual angle) from the actual placement, highlighted in red, was utilized as an indicator of de-calibration (accuracy and completeness). This enabled us to recall the system in case of any de-calibration or to remove the topic from the experiment.

Third - Navigation on social commerce tools

Next, the investigator had the topic behavior a navigation through the purchase process in the social commerce profiles for a total time of 10 minutes. The order of the presentation of the profiles was random.

Fourth - Post-test

After the experiment was completed, the participants were moved to a different room and were assumed an online questionnaire (post- test) about their recall and intention towards the various types and ways of buying through social commerce and the organic results. Additionally, as measures of perceived variables or opinions, precisely, items regarding the recall the stimuli

located on the social networks. As in the pre-test they filled an online questionnaire including questions about socio-demographic data (for instance gender or age), behavioral variables (such as Internet and social media experience).

8.4. Results

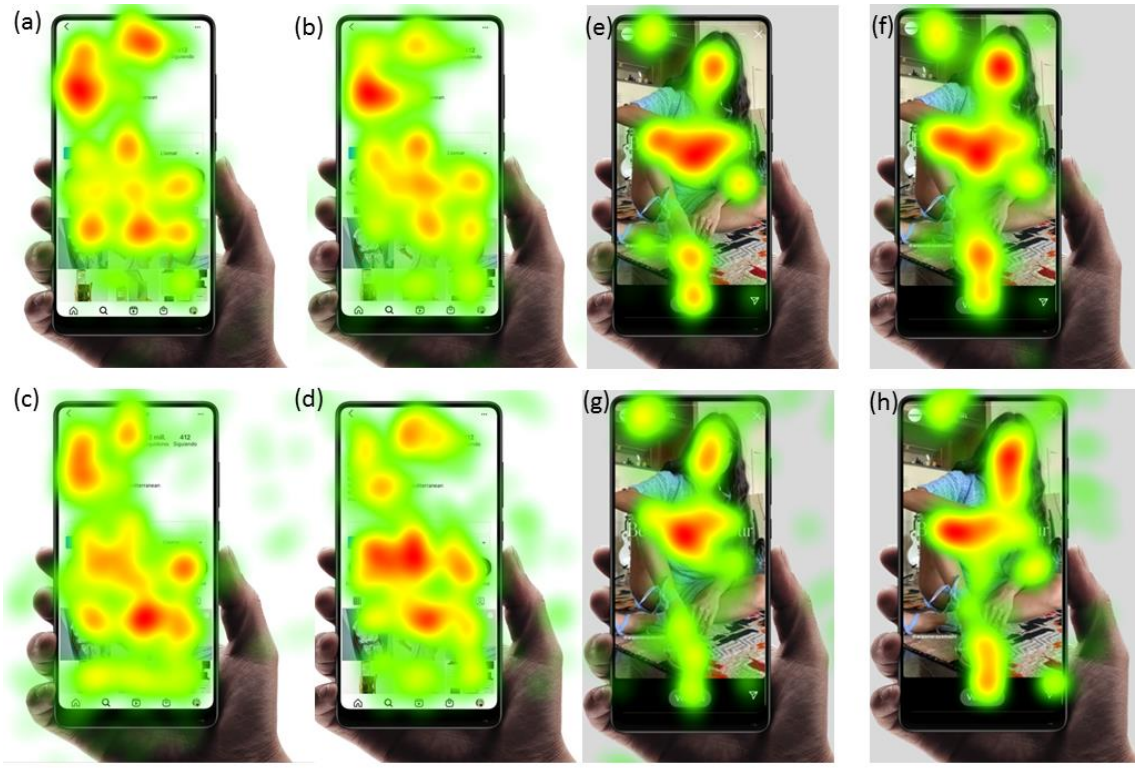
8.4.1. Heat maps classified by experimental groups (qualitative approach)

In the first case the gender (Figures 70a and 70b), the shop of the brand profile on Instagram show that men focus more on both types of brands the combination mark and letter mark, while women focus more on the combination mark. According to the other method of buying, the Instagram stories (Figures 70c and 70d) show that men focus more on the brand mark more than women, and both men and women were focusing on the products (this last finding is due mainly due to the larger size of the garment on the screen).

Figure 70: Examples of heat maps for the shop of the brand profile on Instagram, and Instagram stories, based on gender: male (a and c) and female (b and d)

In the case of age (Figures 71a, 71b, 71c and 71d), the shop of the brand profile on Instagram shows that the ages from 16-34 focus more and deeply on both types of brands, while ages from 35-44 focus more on the combination mark, however, ages from 45-55 focus on both types' brands, and ages more than 55 focus on the letter mark brand and were focusing deeply on the products. Although, in buying through Instagram stories (figures 71e, 71f, 71g and 71h), all the groups are the same on focusing on the brand type, and they focus more on the garments.

Figure 71: Examples of heat maps for the shop of the brand profile on Instagram, and Instagram stories, based on age: 16-34 (a and e), 35-44 (b and f), 45-55 (c and g) and above 56 years (d and h)



Based on the experience, (Figures 72a and 72b), the shop of the brand profile on Instagram show that experienced users focus deeply on both types of brands, while novel users focus more on products and less focus on the brands types. However, in buying through Instagram stories (Figures 72c and 72d) show that both experience and novel again focus more on the products than the brand type.

Figure 72: Examples of heat maps for the shop of the brand profile on Instagram, and Instagram stories, based on experience (a and c) and novel (b and d)

8.4.1. Testing hypotheses (quantitative approach)

According to the multinomial regression applied for the hypothesis test, first of all, Table 21 shows the independent variables used to study the self-reported recall of the logo of a brand. Table 22 summarizes the extracted models and research hypotheses. Multinomial regression methods are used in models 1-3. Model 2 involves visual-attention independent variables, such as total duration of visual fixations (TDF), number of visual fixations (FC) and time of first visual fixation (TFF) and we consider in model 3 classification covariates (gender, age group and experience). Model 1 includes all the above-mentioned independent variables.

Table 21: Independent variables divided into two groups: visual attention and classification variables. Descriptive statistics and reference categories are noted with 'ref'. Dependent variable: Recall of Mango brand in social commerce

Variables			**Name and categories**
		TFD	Total duration of visual fixations
	(1) Visual-attention variables	FC TFF	Number of visual fixations Time of first visual fixation
Independent variables		Gender	Male (44.6%) Female (55.4%) (ref)
	(2) Classification variables	Age group	16-34 (40.6%) (ref) 35-44 (31.7%) 45-55 (14.9%) Over 56 (12.9%)
		Experience	Do you buy online at least two times a year? Yes (92.7%) (ref)

			No (7.3%)

Table 22: Multinomial regression models and hypotheses

Model	**Independent variables**	**Hypotheses**
Model 1	Visual-attention variables Classification variables	H1, H2, H3, H4
Model 2	Visual-attention variables	H1
Model 3	Classification variables	H2, H3, H4

Tables 23, and Table A2 and A3 (in appendix) represent the regression results for models 1-3 respectively. To test the model fit, we have carried out the likelihood ratio tests and computed the unexplained variance and some Pseudo R^2 scores. Model 1 (in Table 23), is the most appropriate as it considers more significant independent variables than the other models and it explains a larger amount of the original variability than the others. More details in Table A1 in Appendix.

H1 considers that visual attention has a positive influence on self-reported recall on the brand logo displayed. Keeping all the variables constant, every time a participant is looking at the brand logo (variable FC), the respondent is 1.647 and 1.693 times more likely to partially and completely recall the brand, respectively, than not recalling it, according to the first model (Table 3). Similar outcomes are obtained for second model (Odds ratio=1.628, $p<0.001$; Odds ratio=1.687, $p<0.001$) and Table A2. Nevertheless, there are limited effects on the recall of the logo of covariate TFF for the partial recall of the Mango brand ($p = 0.46$) for one unit increase in TFF, but they are significant when it comes to complete recalling the brand ($p = 0.0366$). The effects of TFD were not significant in the extracted models, so this variable was discarded. Therefore, H1 is partially validated.

H2 proposes that Gender determines the recall of the brand logo. Keeping the rest of the covariates constant, Table 3 shows that men recall better the logo than women as they are more likely to recall it partially (Odds ratio=7.838 and $p<0.001$) than not recalling it, and they are more likely to recall it completely than not doing it (Odds ratio=4.811 and $p<0.001$). Therefore, H2 is supported. These results are consistent with those obtained with model 3 and reported in Table A3, even though coefficients are not significant.

H3 proposes that users' age has an effect on recalling the brand logo. Table 23 shows an important effect of age groups (35-44 and 45-55) compared with reference age group (15-34) on the recall of the brand, given that the other variables remain constant. For participants with age ranging from 35 to 44, we have a higher likelihood of recalling it partially than not recalling it (Odds ratio=5.289

and p<0.001). The same works for recalling it completely rather than not doing it (Odds ratio=2.055 and p<0.001). In particular, participants within age group (45-55), are more likely to recall the logo, compared to the reference age group (15-34). Nevertheless, there is an inverse effect for those with age over 55 on the recall of the brand logo, compared with reference age group (15-34). Hypothesis H3 is therefore overall validated.

H4 claims that shopping experience has an effect on recalling the brand logo. Table 23 shows that those participants with experience buying online have recalled the brand logo better than those with no experience, given that the rest of the variables are constant. They are more likely to recall it partially (Odds ratio=0.000, p<0.001) or completely (Odds ratio=0.000, p<0.001). Table A3 shows similar regression estimates for experience. Therefore, H4 is supported.

Table 23: Logit coefficients, odds ratios and results of tests of hypothesis for model 1

Category	**Partial recall of the brand (2)**			**Complete recall of the brand (3)**		
Variables	**Logit coeff.**	**Odds ratios**	**p**	**Logit coeff.**	**Odds ratios**	**p**
Intercept	8.435	4607.4	<0.001	9.425	12397.6	<0.001
TFD	-0.001	0.999	<0.001	-0.001	0.999	<0.001
FC	0.499	1.647	<0.001	0.527	1.693	<0.001
TFF	-0.000	1.000	0.4600	-0.000	1.000	0.0366
Gender (Female)[a]	2.059	7.838	<0.001	1.571	4.811	<0.001
Age group (35-44)[a]	1.666	5.289	<0.001	0.720	2.055	<0.001
Age group (45-55)[a]	19.705	$361x10^6$	<0.001	19.365	$257x10^6$	<0.001
Age group (Over 55)[a]	-16.451	0.000	<0.001	0.617	1.853	<0.001
Experience (Yes)[a]	-9.977	0.000	<0.001	-8.016	0.000	<0.001

[a]Category under reference

8.5. Conclusions and recommendations

The review of the academic literature showed the rapid development of social commerce in recent years. In particular, the studies consulted showed that social media applications became popular platforms for cooperating with clients. Building a reliable client experience in social commerce has involved the interest of numerous experts and academics. The movement to create and manage client experience in social commerce has become an important topic that will carry new challenges for businesses (Pour et al., 2021). Social commerce nowadays develops numerous different business forms, for instance combining online and offline business models. Besides, social commerce connects sellers and customers through social platforms and websites (Liao et al., 2021).

However, the review of the scientific literature did not yield definitive results and some of them are indeed mixed, which demonstrates that the outcomes are very much spec by the context of the research. Therefore, it can be deduced from previous studies conducted in the website and mobile environment that the effectiveness of advertising is influenced more by the nature and the quality of the content of the advertisement than by the display format. Thus, advertisements would offer broad content, which should be rational and informative (San José et al., 2004).

Limited investigations have concentrated their interest, nevertheless, on the attention on the social commerce tools, Therefore, our work aims to test if the same factors can apply to these tools as to websites or mobile devices. This is also applicable to the various ranking variables of different categories of potential users. Whilst there is a limited amount of investigation on this topic, a number of research studies have considered these variables in the Web site environment. Therefore, we aim to examine the influence of these variables in the context of social commerce tools. In particular, the goal of this research is to specify the effectiveness of visual representation of the name of the company (Mango) in different social network tools (The shop of the brand profile on Instagram and the Instagram stories), over a diverse experimental design using the eye-tracking technology in order to measure the participants' attention-based or experimental seeking behaviors. In particular, letter marks, combination marks and brand marks were used as visual representation of the brand.

We have used multinomial regression to study the recall of a brand logo. We have considered three different models for representing the variable of interest, according to different types of independent variables. In particular, we have shown that the final model is effective in estimating the brand logo by incorporating both visual attention and classification variables. Both groups of explanatory covariates seem to play a significant role in explaining the recall of the brand visual representation.

Regarding the heats map we have seen that there were differences between all the groups for the method of buying through the shop of the brand profile on Instagram by focusing on the types of the brands, however, for the Instagram stories, there were few differences between the groups.

In previous studies such as Rayner et al., 2001; Hughes et al., 2003; Pieters and Wedel, 2004, was discovered that the outcomes from the first part of this research indicate that somewhat fewer fixations are made on the recall of the logo of variables duration of the fixations and time to the first fixation. But the duration of the total fixations and number of fixations strongly explain the recall of the different logotypes.

Concerning the classification variables, first, participants' recall of the logotypes does reproduce important differences when comparing gender, age, and experience level.

In this regard, men recall and behave better the logo than women on paying attention to the banner. These outcomes are consistent with the outcomes of previous studies applied to other research contexts (Goodrich, 2014 [attitudes about online ad]; Delen and İLTER, 2021 [human images in online ads through eye-tracking]).

Regarding age, it was found that older people remember the logos better than young people. These results are in line with other studies, which has established that older users spend more time on sites with advertisement content for instance Danaher et al., 2006, Drèze and Hussherr, 2003, Hernández-Méndez and Muñoz-Leiva, 2015; Yu et al., 2021; Joseph et al., 2021, and through the strong relationship identified between attention and recall in this and previous studies (e.g., Simola et al. (2013) [attention and recall of ads and logos in a newspaper]; Muñoz-Leiva et al., 2021 [banners on tourism websites]).

Besides it is established that experience level did affect the attention paid to the banner either (such as Beerli and Martin's, 2010). The study found that those participants with experience buying online recall the brand logo better than those without such an experience, either partially or completely. As also found in previous study (such as Alkan and Cagiltay, 2007 [Computer games]; Arenas et al., 2021 [Microsoft Word user interface]; Guo et al., 2021[Mobile new apps]; Joseph et al., 2021[Mobile phone applications]).

The results point to an interesting avenue for future research on the effectiveness of visual brand representation in the developed social commerce tools and may assist in enhancing business processes to optimize advertising campaigns, considering the characteristics of the customers who visit these social commerce platform tools.

8.6. Limitations and future lines of research

The present research has investigated the attention or fixation behavior of participants by measuring the effectiveness of visual representation of the brand. For future research, it could be beneficial and interesting to complement this research with other advertising effectiveness measures, for example, click-through rate (CTR). In this regard, it showed which subjects are voluntarily accessing the social networks of the targeted marketer.

In addition, the research has only considered three independent variables during the analysis of the effectiveness of logotypes on social commerce tools. Accordingly, other categorization variables may be added to the research to provide a deeper analysis (e.g., employment status, level of education, etc.).

We also recommend extending the research to other regions in order to obtain a more transnational or cross-cultural perspective, considering additional European countries or countries in other continents.

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Appendix

Table A1: Model effectiveness comparison

	Model 1	Model 2	Model 3
R^2 (Mc Fadden)	0.1929	0.0694	0.0751
R^2 (Cox & Snell)	0.1889	0.0726	0.0826
R^2 (Nagelkerke)	0.2852	0.1096	0.1210
Residual Dev.	86.7323	99.9996	107.2374
AIC	122.7323	115.9995	131.2374

Table A2: Logit coefficients, odds ratios and results of tests of hypothesis for model 2

Category	**Partial recall of the brand (2)**			**Complete recall of the brand (3)**		
Variables	Logit coeff.	Odds ratios	p	Logit coeff.	Odds ratios	p
Intercept	1.623	5.071	<0.001	2.998	20.038	<0.001
TFD	-0.001	0.999	<0.001	-0.001	0.999	<0.001
FC	0.487	1.628	<0.001	0.523	1.687	<0.001
TFF	-0.000	1.000	0.027	-0.000	1.000	0.009

Table A3: Logit coefficients, odds ratios and results of tests of hypothesis for model 3

Category	**Partial recall of the brand (2)**			**Complete recall of the brand (3)**		
Variables	Logit coeff.	Odds ratios	p	Logit coeff.	Odds ratios	p
Intercept	6.979	1074.2	0.430	8.104	3306.6	0.419
Gender (Female[a])	1.614	5.021	0.102	1.773	5.891	0.061
Age group (35-44[a])	1.362	3.904	0.155	0.739	2.094	0.269
Age group (45-55[a])	9.566	14275.3	0.458	9.369	11720.7	0.459
Age group (Over 55[a])	-0.705	0.494	0.338	-0.162	0.851	0.448
Experience (Yes[a])	-7.357	0.001	0.426	-6.403	0.002	0.436

[a]Category under reference

'' The Internet is becoming the town square for the global village of tomorrow.''- Bill Gates

Conclusiones

Instagram es una de las redes sociales más importantes e innovadoras. A partir de ella surgen nuevas oportunidades comerciales para as empresas. Es este sentido, Instagram commerce es una de las nuevas formas de social commerce, en la que las empresas de todo el mundo venden sus productos y servicios. En los primeros capítulos de este trabajo de investigación se ha justificado la importancia de las redes sociales, el social commerce y especialmente Instagram commerce. Además, se ha analizado práctica esta temática en España y Palestina. A continuación, se explicaron los métodos y softwares utilizados para las diferentes investigaciones propuestas. En los siguientes capítulos se presentan cinco interesantes estudios centrados en la intención de compra en el comercio a través de Instagram, la compra por impulso a través de Instagram mediante el uso de diferentes técnicas y aplicaciones, y la aplicación de la neurociencia del consumidor (eye tracking) como disciplina emergente. En este capítulo se incluyen interesantes conclusiones y futuras investigaciones que se centran en este nuevo canal de venta, así como se presentan de forma global y unificada las aportaciones académicas fundamentales generadas. Además, se presentan las implicaciones más importantes para el canal de venta de Instagram, la publicidad, el comercio electrónico y el social commerce. Por último, se indican algunas limitaciones de los estudios realizados, así como posibles vías de investigación futura en el ámbito de la neurociencia del consumidor y otros.

9.1. Conclusiones principales

Instagram es una de las redes sociales más relevantes e innovadoras. Instagram commerce forma parte del nuevo medio social commerce en el que varias empresas de todo el mundo venden sus productos y servicios.

Esta tesis doctoral se presenta como un compendio de investigaciones que demuestran el potencial del social commerce, ya que el objetivo principal de esta tesis es analizar la intención de compra que los usuarios pueden realizar en las redes sociales y concretamente en el caso de Instagram.

En los **capítulos 1 y 2** se ha tratado con detalle la importancia de las redes sociales, la situación del marketing digital en España y Palestina, la importancia del social commerce y especialmente de Instagram explicando las teorías, técnicas y aplicaciones utilizadas en esta tesis. Por otro lado, en la tesis doctoral hemos podido aplicar diferentes técnicas estadísticas, desde las más tradicionales, utilizando cuestionarios sobre paneles de consumidores, hasta las más modernas, utilizando técnicas de neurociencia aplicada al consumidor. A partir del objetivo general se determinan otras cuestiones relevantes, en el **capítulo 3** hemos analizado la importancia del social commerce en la literatura científica a través de un análisis bibliométrico. Del **capítulo 4 al 6**, hemos analizado y modelizado el comportamiento de compra en Instagram commerce en Palestina y España. Además, hemos analizado el efecto moderador de otros factores sociodemográficos y de comportamiento de los usuarios en la adopción de este tipo de comercio en Palestina. Asimismo, hemos analizado los antecedentes de la adopción de este tipo de comercio en Palestina y España. De forma paralela, hemos identificado los determinantes de la compra por impulso en este nuevo tipo de comercio en España. Adicionalmente, en el **capítulo 7** hemos analizado el comportamiento de compra de los usuarios a través de técnicas psicofisiológicas, concretamente utilizando el Eye tracking.

Las principales conclusiones de los **capítulos 1 y 2** se resumen a continuación:

- El marketing digital incluye todas las actividades de marketing realizadas en Internet. Las empresas y los negocios aprovechan los canales digitales, como las redes sociales, los sitios web, los motores de búsqueda, los textos, los mensajes multimedia y el correo electrónico, para comunicarse con sus clientes actuales y con los potenciales.

- El marketing digital permite a las empresas llegar a un público más amplio que el que podrían alcanzar con los métodos tradicionales, y dirigirse a clientes potenciales que tienen más probabilidades de comprar su producto o servicio. Además, suele ser más rentable que la publicidad tradicional y permite a las empresas medir el éxito día a día y cambiar el rumbo según sea necesario.

- A finales de 1989 de 1989, Tim Burners-Lee descubrió la web (Kamel Bouls y Wheeler, 2007). Además, las redes sociales son un grupo de aplicaciones basadas en Internet que se basan en los fundamentos tecnológicos de la Web 2.0, que permiten el intercambio y la construcción de contenidos generados por los usuarios (Kaplan y Haenlein, 2010; Olanrewaju, 2020).

Instagram es una de las plataformas de redes sociales gratuitas ideada para compartir fotos y vídeos. Desde su lanzamiento, Instagram se ha transformado en una forma popular de conectar con amigos, familiares, marcas y personas influyentes, entre otros (Antonelli, 2020).

- Con el tiempo se ha producido un aumento en el número de usuarios de Instagram (Statista, 2022a). En octubre de 2020 las previsiones estimaban que puede haber unos 1.200 millones de usuarios de Instagram en todo el mundo para 2023. En la actualidad esta red cuenta con más de 120 millones de usuarios activos (Statista, 2022b). Además, Instagram tiene más usuarios que Facebook en España. El número de usuarios de Instagram ha crecido un 20% en el último año en España. Esto significa que ya tiene más usuarios que Facebook -también propiedad de Meta- según la VIII edición del estudio sobre el uso de las redes sociales en España elaborado por The Social Media Family (Moreno, 2022). Por otro lado, Instagram es la plataforma de social commerce más utilizada para el comercio electrónico en Palestina (Ipoke, 2022).

- El social commerce tiene muchas definiciones y surge como un nuevo tipo de plataforma de comercio electrónico en línea que permite a los clientes compartir experiencias, opiniones e información sobre el lugar, el producto y la persona a la que comprar. Asimismo, el social commerce también se ha descrito como la combinación de las redes sociales, la tecnología y el comercio electrónico. Además, el social commerce crea relaciones entre los minoristas y los clientes, ya que fomenta el comercio, la colaboración y la confianza. El social commerce incluye la compra en grupo, la compra social, el consumo colaborativo y la agrupación social.

- Hay diferentes formas de comprar en Instagram: comprar a través de la tienda principal, comprar a través de la historia (en la página del perfil del usuario), comprar a través del anuncio (post) en el perfil del usuario, comprar a través de la tienda del perfil, comprar a través de la tienda de visualización en el perfil de la marca y comprar a través de la página web de la empresa accediendo desde la historia, y el chekout (que está disponible en EEUU). Cada mes, hay 130 millones de usuarios de Instagram que interactúan y participan en las ventas en esta popular e importante red social.

En el **capítulo 3** se presenta un análisis bibliométrico de las investigaciones realizadas en el ámbito del social commerce utilizando las herramientas SciMAT y Vos Viewer. Los artículos se tomaron de la base de datos ISI WOS. Utilizando numerosos análisis bibliométricos, se analiza una revisión temática exhaustiva de la investigación sobre el social commerce para dos períodos, de 2008 a 2017 y de 2018 a 2021. Los principales resultados en los que se fundamenta este capítulo se resumen como sigue:

- En el estudio se encontró que durante el periodo estudiado (2008-2021), el número de temas ha crecido debido al aumento del número de artículos publicados y la creación de nuevas revistas en este campo del conocimiento. Sin embargo, este hecho no ha seguido una progresión lineal sino exponencial, especialmente durante el segundo periodo analizado. Esta circunstancia ha hecho que los artículos se agrupen en temas más amplios para el segundo periodo (2018-2021).

- El resultado del análisis bibliométrico muestra que en ambos periodos el término social commerce tuvo la mayor frecuencia tanto en número de documentos como de citas, siendo el segundo periodo el que presenta un mayor número que el primero.

- En el estudio se identificaron los siguientes temas relacionados con el social commerce durante el primer periodo: online, usabilidad, compra por impulso, adopción y términos de revisión fueron estudiados en profundidad. Sin embargo, en el segundo periodo se estudiaron en profundidad los términos información, satisfacción, comunidades, papel moderador, flujo, Internet y reseñas online.

- Los investigadores como Hajli, Benyoucef, Turel, Wang, Huang, Lin, Tajvidi y Shanmugam son los autores con mayor número de publicaciones sobre social commerce.

- Los investigadores de social commerce publican sus investigaciones en revistas como Business, Computer Science Information Systems, Information Science Library Science, Management, Computer Science Interdisciplinary Application y Computer Science Theory Methods. Por lo tanto, se puede concluir que sus publicaciones son fundamentales e interdisciplinarias.

- Las áreas de investigación del social commerce con mayor número de artículos son la economía de la empresa, la informática, la biblioteconomía, la ingeniería, las ciencias sociales y otros temas, las telecomunicaciones y la psicología.

- Los primeros trabajos sobre social commerce se remontan a 1999. Los artículos sobre social commerce se han publicado sobre todo en el nuevo milenio, concretamente desde 2008. Otros términos recurrentes en los artículos publicados en el primer periodo son revisión, adopción, online y compra por impulso, que fueron citados en un gran número de trabajos y se han asociado más a la disciplina del marketing en general y al social commerce en particular. Por otro lado, en el segundo periodo, los términos información, satisfacción, reseñas online, motivación el papel moderador fueron citados en un gran número de trabajos y se han vinculado más recientemente con la disciplina del marketing en general y el social commerce en particular. Un tema que también tuvo cierta presencia durante las dos décadas fue la aplicación de los fundamentos del social commerce al caso de los teléfonos móviles.

- El social commerce es un tema importante, y hemos visto que en los últimos años varios autores de diferentes países del mundo han investigado sobre este tema. Desde nuestro punto de vista no se detendrá en este punto. En un futuro próximo, veremos aparecer varios temas nuevos porque la tecnología y todas las nuevas situaciones que estamos viviendo hoy en día ayudarán a desarrollar la investigación del social commerce. Asimismo, hemos revisado las líneas de futuro de la investigación reciente, y a partir de estas ideas, hemos recogido nuestras reflexiones y las de otros investigadores.

Los medios y redes sociales, el marketing digital, el comercio electrónico y el social commerce están captando la atención de investigadores y empresas. Debido a la novedad de este campo, ha surgido una importante línea de investigación científica centrada en el comercio en las redes sociales, más concretamente en Instagram. El social commerce se está convirtiendo en un importante centro de abastecimiento de productos, que ayuda a las empresas a conectarse a través de los clientes y a obtener ventajas competitivas. El social commerce se mide como un subgrupo del comercio electrónico, que apoya las conexiones sociales y las contribuciones de los usuarios. Además, un sitio de social commerce es un lugar en el que las personas pueden cooperar en línea y obtener consejos de otras personas de confianza, descubrir productos y servicios y comprarlos mediante redes sociales, etiquetado, podcasts, blogs, salas de chat y sistemas de clasificación y recomendación (Abed, 2020). El capítulo 4 presenta un estudio de investigación que demuestra la influencia de las redes sociales en las decisiones de compra de las personas centrándose más en Instagram commerce, y para analizar los factores que impulsan las compras en el contexto del desarrollo de las ventas en los negocios sociales, más concretamente, Instagram en Palestina. Para ello, se desarrolló un escenario cuasi experimental en la que los usuarios respondieron a una encuesta después de ver un vídeo. De esta encuesta, el presente estudio obtuvo 200 respuestas válidas. El modelo de investigación se evalúa mediante un modelo de ecuaciones estructurales. Los principales resultados subyacentes a este capítulo se resumen como sigue:

- Los resultados permiten a los investigadores comprender mejor el papel de las redes sociales en la toma de decisiones de compra, al tiempo que se identifican los factores que determinan la compra en el contexto de las ventas de social commerce, y específicamente las centradas en Instagram. Asimismo, la investigación es escasa en cuanto a la importancia del Instagram commerce a nivel académico. Esta investigación examina la intención de uso de esta herramienta desde una perspectiva holística, integrando diferentes teorías de otros campos científicos con una nueva variable incorporada (las características de Instagram). Este enfoque propone que las características de la red social impactarán significativamente en la intención de compra.

- La actitud es uno de los conceptos más estudiados en las ciencias del comportamiento y la psicología (Oni et al., 2017). En esta investigación, se encontró que la actitud es la variable más significativa con respecto a la adopción de Instagram commerce, y afecta a la intención de compra junto con otras variables relevantes como la utilidad percibida, los me gusta/compartir/comentar, la reputación y la confianza. Los clientes tienen tendencia a comprar un producto en Instagram commerce una vez que se dan cuenta de la utilidad de la plataforma para comprar un producto o servicio que desean. Además, Instagram commerce les permite navegar y comprar productos y servicios fácilmente, descubriendo nuevos productos y obteniendo ideas y sugerencias de compra rápidamente. Los resultados de este estudio muestran que existe una fuerte relación entre la utilidad percibida y la actitud.

- Cuando los clientes observan un número significativo de "me gusta", "compartidos" y "comentarios" de un producto o servicio, se sienten animados a conocer ese producto. Nuestros resultados demuestran que los clientes interactúan en Instagram commerce dando "me gusta"

y comentando los anuncios de la sección de noticias, compartiéndolos con sus contactos y siguiendo a las marcas proporcionadas por los anuncios de la sección de noticias. Esto es beneficioso para las empresas implicadas, ya que las interacciones aumentan las ventas y las marcas se hacen populares en todo el mundo.

- La reputación de Instagram demuestra que los clientes conocen la plataforma y están familiarizados con el nombre de la marca. Nuestros resultados muestran que Instagram commerce tiene una buena reputación y está bien considerado por ser honesto. Esto significa que los clientes tienden a comprar productos o servicios de un sitio web o de social commerce específico una vez que éste alcanza una reputación suficiente. En este sentido, cabe destacar que Instagram es conocido a nivel mundial y no solo en Palestina.

- La confianza es un factor clave para los clientes; cuando los clientes se dan cuenta de la lealtad entre ellos y cualquier social commerce o sitio web, siguen comprando productos y servicios de ese sitio de comercio específico.

- Los resultados demuestran que Instagram commerce suele cumplir con los compromisos esperados. Así, Instagram commerce no hace declaraciones falsas y tiene suficiente experiencia en la comercialización de los productos y servicios que ofrece. Además, la mayor parte de lo que Instagram commerce articula sobre los productos y servicios a la venta es cierto. Los resultados muestran que la información ofrecida por Instagram commerce es sincera y honesta. Además, Instagram commerce se esfuerza por ser honesto y mantener sus promesas y compromisos. En el caso de los clientes palestinos, Instagram commerce inspira confianza y tiende a creer en el contenido disponible en la plataforma. Estos resultados revelan que los clientes palestinos tienen una actitud positiva hacia la compra de productos a través de esta nueva innovación tecnológica, lo que anima a las empresas de Palestina y de todo el mundo a ofrecer sus productos y servicios a través de Instagram commerce desde el debut de la plataforma en 2019. Los resultados obtenidos muestran que la actitud tiene un efecto positivo en la intención de compra, ya que la actitud juega un gran papel en la intención de compra de los clientes palestinos, como se explica por las variables mencionadas y la actitud positiva de los clientes palestinos hacia el Instagram commerce.

- Las características de Instagram constituyen la segunda variable más importante que afecta a la intención de compra. En este sentido, las características de Instagram han desempeñado un papel importante a la hora de atraer y convencer a los clientes palestinos para que compren a través del Instagram commerce. Las características de Instagram incluyen la navegación y la carga de fotos, vídeos, publicaciones, historias, el uso de las utilidades "boomerang", "superzoom", "enfoque", "rebobinado" y "manos libres", las historias en directo, los "me gusta" y los comentarios, el seguimiento de marcas y personas, y el uso de las funciones de compra (Aydın, 2019; Huang y Benyoucef, 2013). Los clientes de hoy en día utilizan Instagram a diario para ver las fotos o historias de sus amigos, para subir fotos e historias personales o para utilizar las funciones de la aplicación de cámara de Instagram. En este sentido, los palestinos navegan a diario por Instagram para seguir a sus marcas favoritas, para dar "me gusta" y dejar

comentarios en las publicaciones de sus marcas favoritas, para ver historias y retransmisiones en directo, para publicar contenidos personales o para ver y guardar contenidos de sus marcas favoritas en su colección personal. Además, los clientes palestinos prefieren recibir notificaciones push en sus dispositivos cada vez que sus marcas favoritas en Instagram publican nuevas historias relacionadas con sus productos y servicios. La mayoría de las plataformas de social commerce permiten a los comerciantes habilitar mensajes y una opción de chat para que los clientes puedan ponerse en contacto fácilmente con ellos para hacer preguntas o resolver un problema. Este estudio descubrió que los clientes palestinos envían mensajes a través de la aplicación de mensajes directos de Instagram commerce haciendo preguntas relacionadas con sus marcas favoritas. Adicionalmente, Instagram cuenta con un botón dedicado a las compras, que permite a los clientes navegar y seguir a muchas marcas diferentes mientras añaden productos a su lista de deseos. Incluso pueden ver los precios y la información de su producto o servicio deseado. Esto significa que los clientes palestinos son activos en Instagram y están interesados en conocer la información actualizada de sus marcas favoritas. También los clientes palestinos disfrutan navegando y comprando productos y servicios a través de este nuevo comercio. Los resultados muestran que la nueva variable de las características de Instagram tiene un efecto positivo y fuerte en la intención de compra de los usuarios palestinos de Instagram, y la investigación muestra que se trata de una variable importante.

- Por último, la utilidad percibida es la tercera variable en orden de importancia con respecto al impacto en la intención de compra. La utilidad percibida se define como la posibilidad de que la tecnología pueda mejorar el modo en que los clientes cumplen sus objetivos. Además, en los entornos en línea, la utilidad se percibe como el grado en que el cliente cree que la compra en línea le permitirá acceder a información útil y realizar una compra más rápida (Vijayasarathy, 2004). La facilidad de uso percibida se ve afectada por la utilidad percibida, que a su vez afecta al resultado de la experiencia de compra. En cuanto a los clientes palestinos, el Instagram commerce es fácil de aprender, interactuar, utilizar y dominar, a la vez que es comprensible. Lo mismo puede decirse de los clientes de todo el mundo. Instagram se centra en la accesibilidad y la apertura y permite a las empresas crear cuentas comerciales para sus productos y servicios con información clara y detallada. Cuando los clientes se dan cuenta de que el comercio en Instagram es fácil de navegar, inmediatamente empiezan a buscar, descubrir y comprar productos y servicios de sus marcas favoritas. Esto indica la aplicabilidad del TAM a las compras de social commerce y valida el método para considerar las influencias actuales de las intenciones de compra de social commerce de los clientes y teorizar la intención de compra de social commerce hacia Instagram. Este estudio ha revelado que la utilidad percibida tiene un efecto positivo y fuerte sobre la intención de compra, lo que indica que los usuarios palestinos de Instagram commerce son capaces de obtener ideas de compra rápidamente, mejorar su rendimiento en la evaluación de los productos y aumentar su productividad mientras navegan y descubren productos.

Numerosos autores coinciden en que el Instagram commerce es la principal red de ventas del futuro (Assadam, 2020). Teniendo en cuenta los buenos resultados del estudio en el capítulo 4, se decidió ampliar la muestra y analizar otros factores que impulsan las compras a través de Instagram y que contribuyen al crecimiento del Instagram commerce y examinar el papel moderador del género, la edad y la experiencia en Instagram en el capítulo 5. Y para ello, los encuestados completaron una encuesta después de ver un vídeo sobre Instagram commerce. Se recogieron un total de 404 respuestas válidas. El modelo de investigación se analizó mediante un modelo de ecuaciones estructurales. Los principales resultados subyacentes a este capítulo se resumen como sigue:

- Los resultados permiten comprender mejor el papel de la intención de compra en el éxito de las plataformas de social commerce. Es el primer estudio que propone y examina empíricamente un modelo basado en variables de social commerce derivadas de tres teorías: el TAM, la teoría del compromiso y la confianza, y la teoría de la toma de decisiones del consumidor. De este modo, el estudio contribuye a ampliar la base de conocimientos científicos y la literatura relativa al comportamiento del consumidor en esta nueva plataforma de social commerce.

- Este estudio descubrió que la actitud, la utilidad percibida, la confianza y la evaluación alternativa afectaban significativamente a la intención de compra hacia Instagram commerce. Sin embargo, no encontró ninguna relación entre la facilidad de uso percibida y la intención de compra. Este último hallazgo puede explicarse por la falta de motivación que la facilidad de uso de Instagram commerce puede generar entre algunos usuarios. Es decir, el hecho mismo de que los usuarios puedan realizar compras tan fácilmente y a su conveniencia en esta plataforma puede llevarlos a aplazar el proceso de compra y, en última instancia, a no emplearlo del todo.

- Los resultados también destacaron el impacto de la facilidad de uso percibida en la utilidad percibida, es decir, cuanto mayor es la facilidad de uso percibida de Instagram commerce, mayor es su utilidad percibida y, en consecuencia, mayor es la intención de uso hacia esta plataforma.

- Este estudio mostró el papel moderador del género, la edad y la experiencia en las relaciones mencionadas. En cuanto al efecto moderador del género, los resultados muestran que las mujeres presentan una mayor carga que los hombres en la relación entre la facilidad de uso percibida y la utilidad percibida. Las mujeres también prefieren aplicaciones de Instagram commerce más fáciles de usar, lo que aumenta su intención de uso. Los resultados sugieren que las mujeres dan más importancia que los hombres a la facilidad de uso de la aplicación de Instagram, lo que finalmente mejora su intención de uso de esta red social para realizar compras.

- Los resultados muestran que la influencia de la facilidad de uso sobre la utilidad fue mucho mayor entre los usuarios más jóvenes que entre los adultos; sin embargo, la relación entre la facilidad de uso y la intención de compra fue negativa en ambos grupos, aunque más negativa

en el caso de los usuarios más jóvenes. Los comportamientos e intenciones en relación con las nuevas tecnologías difieren entre los individuos que se acercan a una determinada innovación por primera vez como adultos y los que nacieron cuando la tecnología ya estaba bien establecida, lo que significa que a los más jóvenes no les resulta tan difícil utilizar algunas de las últimas tecnologías. Sin embargo, a medida que los adultos se familiarizan con las innovaciones, las utilizan con más frecuencia y con mayor destreza por motivos personales o profesionales.

- Por último, este estudio también contribuye a la literatura al identificar el efecto moderador de la experiencia en el uso de Instagram commerce sobre el impacto de la facilidad de uso en la utilidad y el impacto de la facilidad de uso percibida en la intención de compra. Los resultados muestran que aquellos usuarios que pasaron más tiempo conectados a la plataforma presentaron una intención de uso más fuerte que los que se conectaron con menos frecuencia, basándose en el efecto de la experiencia, que mejora la facilidad de uso percibida. Cuando los usuarios perciben que Instagram es fácil de usar, es más probable que pasen más tiempo en ella y compren en Instagram commerce. A su vez, los consumidores que perciben que Instagram commerce es fácil de usar son más propensos a pasar más tiempo conectados a sus perfiles y a comprar productos y servicios de la plataforma. La relación propuesta entre la facilidad de uso percibida y la intención de compra también presentó una relación negativa en ambos grupos, mientras que el impacto de los incidentes críticos experimentados negativamente en la facilidad de uso percibida fue mayor entre los consumidores que estaban menos familiarizados con el uso de Instagram commerce.

A lo largo de 2020, especialmente en el periodo de las medidas de restricciones, se produjo un aumento significativo del comercio electrónico y del social commerce, con numerosas personas de todo el mundo que adoptaron y utilizaron plataformas de comercio en las redes sociales y otros sitios web para comprar los productos y servicios deseados de forma rápida y sencilla. Instagram commerce es una nueva y vanguardista plataforma de social commerce. El **capítulo 5** pretende explorar la influencia positiva de las medidas adoptadas durante el verano de 2020 en el impulso de compra impulsiva de los usuarios españoles de social commerce. Basándose en el marco teórico estímulo-organismo-respuesta, este estudio postula y pone a prueba un modelo que ayude a comprender el comportamiento de los usuarios españoles hacia el social commerce, concretamente hacia Instagram commerce. Para ello, se realiza un análisis de ecuaciones estructurales con una muestra de 251 encuestados. Los principales resultados que subyacen en este capítulo se resumen como sigue:

- El estudio ha revelado que todos los conceptos mencionados tienen fuertes relaciones que se afectan mutuamente, excepto la relación entre la facilidad de uso percibida y la intención de compra, que se explica por la reciente aparición del social commerce y especialmente de Instagram commerce en España. En este sentido, los usuarios españoles aún no han aprovechado todas las diferentes opciones de compra de Instagram commerce. Instagram sigue añadiendo nuevas vías de compra, por lo que los usuarios españoles se familiarizarán en breve

con el uso de Instagram commerce. En este sentido, los resultados corroboran a los usuarios españoles que están muy de acuerdo con la satisfacción y la seguridad asociadas al uso de la plataforma. Los usuarios españoles afirmaron que Instagram es especialmente valioso para la búsqueda y compra de productos, mejorando su rendimiento en la valoración de los mismos y permitiéndoles descubrir productos y obtener ideas de compra rápidamente.

- Los resultados del análisis del impacto del boca a boca electrónico en el modelo de investigación muestran que éste anima a los clientes españoles a compartir comentarios muy positivos y a recomendar los productos y servicios de Instagram commerce a sus familiares y amigos. Además, los conceptos mencionados influyen significativamente en la intención de compra de los usuarios españoles en Instagram commerce. En este sentido, los que compran por primera vez están dispuestos a recomendar esta plataforma de social commerce a otras personas, al tiempo que se convierten en clientes recurrentes que, sin duda, volverán a utilizar Instagram commerce para comprar productos y servicios. En este contexto, el presente estudio postula que Instagram commerce se ha convertido en una importante plataforma de social commerce en España.

- Los resultados obtenidos con respecto a la tendencia de compra impulsiva y el impulso de compra impulsiva revelan que ambos afectan a la intención de compra de los usuarios españoles hacia Instagram commerce. Cuando los usuarios navegan por Instagram commerce, suelen realizar compras no planificadas de forma espontánea, sin realizar una valoración previa. Por tanto, en el momento en que encuentran un producto que desean, lo compran directamente. De este modo, los usuarios españoles de Instagram commerce se ven inducidos a realizar compras rápidas y no planificadas, atraídos por productos diferentes a los que buscaban en un principio.

- Por último, la investigación aplicó el marco estímulo-organismo-respuesta a los conceptos antes mencionados implementados en el modelo de investigación. El presente estudio utilizó la intención de compra, la facilidad de uso percibida, la utilidad percibida, el disfrute percibido, el boca a boca electrónico, el riesgo percibido y la seguridad como estímulos del entorno. Aparte, el organismo y la respuesta del consumidor se consideran variables mediadoras que afectan a la intención de compra y a la tendencia a la compra por impulso. De este modo, la respuesta del consumidor en el modelo propuesto se explicaba a través de la tendencia a la compra impulsiva. En general, todos los conceptos del modelo S-O-R presentaban fuertes relaciones.

La revisión de la literatura académica mostró el rápido desarrollo del social commerce en los últimos años. En particular, los estudios consultados mostraron que las aplicaciones de las redes sociales se convirtieron en plataformas populares para cooperar con los clientes. La creación de una experiencia de cliente fiable en el social commerce ha suscitado el interés de numerosos expertos y académicos. El movimiento para crear y gestionar la experiencia del cliente en el social commerce se ha convertido en un tema importante que conllevará nuevos retos para las empresas (Pour et al., 2021). El social commerce desarrolla hoy en día numerosas formas de negocio diferentes, por ejemplo, combinando modelos de negocio online y offline. Además, el social

commerce conecta a vendedores y clientes a través de plataformas sociales y sitios web (Liao et al., 2021). Por estos motivos, se decidió aplicar la metodología de seguimiento ocular en el capítulo 6. Cada vez es más importante medir la eficacia de la publicidad basada en las redes sociales, en general, y la representación visual de la marca, teniendo en cuenta el grado de saturación entre los canales online y la competencia por la atención de los usuarios. Esta medición permite a los programadores y anunciantes crear diseños de aplicaciones/anuncios que resulten atractivos para los usuarios y que destaquen entre los demás. Tras la aparición de la nueva generación de aplicaciones, se han realizado pocos estudios académicos para medir la eficacia de la publicidad en las herramientas de social commerce. El capítulo 6 pretende examinar la influencia de estas variables en el contexto de las herramientas de social commerce. En concreto, el objetivo de esta investigación es precisar la eficacia de la representación visual del nombre de la empresa (Mango) en diferentes herramientas de redes sociales, la tienda del perfil de la marca en Instagram y las historias de Instagram, sobre un diseño experimental utilizando la tecnología de seguimiento ocular para medir los comportamientos de búsqueda atencional o experimental de los participantes. En particular, se utilizaron marcas de imagotipos, marcas de logotipo y logos de marca como representación visual de la misma. Los principales resultados subyacentes a este capítulo se resumen como sigue:

- En el caso del género, la tienda del perfil de la marca en Instagram muestra que los hombres se centran más en ambos tipos de marcas la marca logotipo y la marca de imagotipo, mientras que las mujeres se centran más en la marca imagotipos. Según el otro método de compra, las historias de Instagram muestran que los hombres se centran más en la marca que las mujeres, y tanto los hombres como las mujeres se centran en los productos (este último hallazgo se debe principalmente al mayor tamaño de la prenda en la pantalla).

- En el caso de la edad, la tienda del perfil de la marca en Instagram muestra que las edades de 16-34 se centran más y profundamente en ambos tipos de marcas, mientras que las edades de 35-44 se centran más en la marca imagotipos, sin embargo, las edades de 45-55 se centran en ambos tipos de marcas, y las edades más de 55 se centran en la marca de logotipo y se centraban profundamente en los productos. Aunque, en la compra a través de las historias de Instagram, todos los grupos coinciden en centrarse en el tipo de marca, y se centran más en las prendas.

- Basándose en la experiencia, la tienda del perfil de la marca en Instagram muestra que los usuarios experimentados se centran profundamente en ambos tipos de marcas, mientras que los usuarios noveles se centran más en los productos y menos en los tipos de marcas. Sin embargo, en la compra a través de las historias de Instagram, muestran que tanto la experiencia y la novedad de nuevo se centran más en los productos que el tipo de marca.

- En cuanto al mapa de calores hemos visto que había diferencias entre todos los grupos para el método de compra a través de la tienda del perfil de la marca en Instagram centrándose en los tipos de las marcas, sin embargo, para las historias de Instagram, había pocas diferencias entre los grupos.

- La duración de las fijaciones totales y el número de fijaciones explican en gran medida el recuerdo de los diferentes logotipos.

- En cuanto a las variables de clasificación, en primer lugar, el recuerdo de los logotipos por parte de los participantes sí reproduce diferencias importantes al comparar el género, la edad y el nivel de experiencia.

- Los hombres se acuerdan y comportan mejor el logotipo que las mujeres al prestar atención a la pancarta.

- En cuanto a la edad, se comprobó que las personas mayores se acuerdan mejor los logotipos que los jóvenes. Los usuarios de más edad pasan más tiempo en sitios con contenido publicitario.

- Para concluir, esta investigación estableció que el nivel de experiencia sí afectaba a la atención prestada al banner. El estudio constató que los participantes con experiencia en la compra por Internet recuerdan mejor el logotipo de la marca que los que no tienen esa experiencia, ya sea parcial o totalmente.

El resumen de los estudios de la tesis se resume en la Tabla 24.

Tabla 24: Resumen de los 5 estudios de la tesis

Research Study	Objetivos	Hallazos
Study 1 (S1): A review of social commerce research from 2008–2021: Thematic and citation analyses	Esta investigación tiene como objetivo categorizar, evaluar y mapear la literatura sobre el social commerce, revelando así sus creaciones intelectuales y teóricas, así como proporcionando y revisando el estado del arte de la investigación en el campo y estableciendo de forma fiable las oportunidades para futuras investigaciones.	Los principales hallazgos de esta investigación mostraron que el social commerce es uno de los conceptos más clave en las investigaciones de marketing digital. Este estudio identificó los siguientes temas relacionados con el social commerce durante el primer periodo: los términos online, usabilidad, compra por impulso, adopción y reseñas se estudiaron en profundidad. Sin embargo, los términos información, satisfacción, comunidades, papel moderador, flujo, Internet y reseñas online se estudiaron en profundidad en el segundo periodo.

Study 2 (S2): Selling on Instagram: Factors that determine the adoption of Instagram commerce	El objetivo de esta investigación es doble: por un lado, demostrar la influencia de las redes sociales en las decisiones de compra de los individuos centrándose más en Instagram commerce, y, por otro lado, analizar los factores que impulsan las compras en el contexto del desarrollo de las ventas en los negocios sociales, más concretamente, en Instagram en Palestina. Nos proponemos la siguiente pregunta de investigación: ¿Tienen las características de Instagram un impacto en la intención de compra de los consumidores?	Los resultados revelan el enorme impacto de las redes sociales en la intención de compra de los consumidores. En este sentido, existen varios factores que median en el crecimiento de las ventas en social commerce y particularmente en Instagram. Los resultados obtenidos revelan el impacto significativo de las redes sociales en la decisión e intención de compra de los clientes en Palestina. En este sentido, hay muchas variables que median en la intención de compra en el contexto del social commerce y más concretamente en Instagram, como la facilidad de uso percibida, la utilidad percibida, la actitud, la reputación, los me gusta/compartir/comentar, el contenido, la confianza y las características de Instagram. Este estudio contribuye al conocimiento en el contexto del análisis del impacto de la confianza, la actitud y la utilidad percibida en la intención de compra. Todas estas variables son determinantes y muestran una relación significativa con la intención de uso. En concreto, la variable más importante en la adopción de la nueva herramienta de compra es la actitud, seguida de las características y la utilidad percibida. Adicionalmente, estas tres variables muestran que los clientes palestinos están dispuestos a comprar productos y servicios a través de Instagram commerce. Además, los clientes palestinos se esfuerzan por instar a sus amigos a comprar productos y servicios a través de esta nueva plataforma de social commerce y siguen entrando en Instagram para comprar productos y servicios. Estos resultados consolidan la

		posición favorable del Instagram commerce en el ámbito del social commerce. También, debido a la popularidad de Instagram, el futuro de las empresas y los clientes palestinos e internacionales que participan en el social commerce parece brillante, especialmente para los clientes jóvenes que están especialmente apegados a las redes sociales y favorecen las compras en línea.
Study 3 (S3): Drivers of purchase intention in Instagram commerce.	Los objetivos de la presente investigación son analizar los factores que impulsan las compras a través de Instagram y que contribuyen al crecimiento del Instagram commerce y examinar el papel moderador del género, la edad y la experiencia en el uso de Instagram sobre la relación propuesta entre seis variables derivadas de la Teoría del Compromiso-Confianza, el modelo TAM y la Teoría de la Toma de Decisiones del Consumidor. El objetivo general de la presente investigación, por tanto, es analizar la intención de compra en Instagram a partir de un conjunto de antecedentes derivados de una revisión bibliográfica. El estudio puede considerarse innovador en cinco aspectos principales. En primer lugar, mientras que la investigación sobre el social commerce ha crecido en los últimos años, la investigación que trata sobre Instagram commerce que es todavía incipiente, debido a lo novedoso y cambiante del sistema de compra que esta red social ofrece a sus usuarios (Nedra et al., 2019). En segundo lugar, según numerosos autores, Instagram commerce está llamado a convertirse en la principal red de ventas del futuro, de ahí el interés académico por analizarlo (Assadam, 2020). En tercer lugar, en el presente estudio se realiza una revisión de las	El presente estudio realiza numerosas aportaciones sobre Instagram commerce y tiene importantes implicaciones para los profesionales del ámbito del social commerce. Entre otros resultados, encontramos que la confianza, la actitud, la utilidad percibida y la evaluación alternativa afectan significativamente a la intención de compra de los consumidores. Sin embargo, este estudio no encontró ninguna relación entre la confianza o la facilidad de uso y la intención de compra. Por último, se demuestra el papel moderador del género, la edad y la experiencia en algunas de estas relaciones.

	principales teorías clásicas y se añaden nuevos antecedentes para definir los marcos teóricos dentro de un enfoque más amplio e integrado. En cuarto lugar, se analiza el efecto moderador de la edad, el género y la experiencia en algunas de las relaciones propuestas. Por último, el estudio ofrece una serie de recomendaciones a las empresas implicadas en la gestión de las ventas a través de las redes sociales.	
Study 4 (S4): To buy or not to buy, that is the question: understanding the determinants of the urge to buy impulsively on Instagram commerce	Esta investigación pretende explorar la influencia positiva de las medidas adoptadas durante el verano de 2020 en el desarrollo de la compra impulsiva de los usuarios españoles de social commerce. El objetivo general de esta investigación es analizar los determinantes de la compra impulsiva en Instagram commerce siguiendo los principios del social commerce. En primer lugar, esta investigación contribuirá a ampliar la literatura científica sobre uno de los conceptos más recientes relacionados con las redes sociales y las ventas online (Molinillo et al., 2020). En segundo lugar, se centra en el interés que genera Instagram como red social ya que ha sido considerada por numerosos autores como la principal plataforma de social commerce en cuanto a la promoción de productos y servicios (Sihombing et al., 2020), superando a competidores como Facebook y Twitter. En tercer lugar, los autores proponen analizar los antecedentes de la compra por impulso en Instagram commerce mediante el modelo estímulo-organismo-respuesta. Dichos antecedentes se analizan a partir de la intención de compra y la tendencia a la compra por impulso siguiendo los recientes hallazgos de Zafar et al. (2021).	Los resultados obtenidos muestran que determinantes como la facilidad de uso percibida, la utilidad percibida, el disfrute percibido, el boca a boca electrónico, el riesgo percibido, la seguridad, la intención de compra, la tendencia a la compra impulsiva y el impulso de compra impulsiva están totalmente asociados a la investigación en redes sociales y al rendimiento de las ventas online.

Study 5 (S5): Surprise me with the visual representation of the brand in the social commerce! An eye-tracking study based on the characteristics of users	Esta investigación hace hincapié en el papel que desempeñan las marcas de logotipo, las marcas imagotipos y las marcas de comercio que las empresas utilizan para el social commerce en sus plataformas online. El estudio examina estas principales áreas de representación visual de la marca, consideradas un área de atención destacada, ya que puede ayudar a avanzar en el proceso de compra relacionado con los perfiles de social commerce y, a su vez, aumentar las ventas de la marca. El objetivo del presente artículo es abordar esta carencia: a) proporcionando una visión más profunda y completa de la eficacia de la publicidad según los principales tipos de representación visual de una marca para dos herramientas específicas de social commerce (el perfil de la marca en la "tienda" de Instagram y en las historias de Instagram) en términos de atención y recuerdo; y b) explorando la influencia de ciertas variables sociodemográficas (género y edad) y el nivel de experiencia en el uso de estos nuevos sistemas de social commerce (basado en la frecuencia de uso). En concreto, el presente trabajo examina los diferentes patrones de fijación que presentan los usuarios al navegar por estas herramientas de social commerce, según sus características personales (género, edad y nivel de experiencia) en relación con el perfil de una marca textil de moda en Instagram.	Los resultados indican que la atención visual, el género, la edad y la experiencia determinan el recuerdo de los usuarios del logotipo de la marca a la que están expuestos. Las conclusiones también apuntan a futuras direcciones de investigación prometedoras e interesantes sobre la eficacia de las estrategias de marca, y pueden ayudar a mejorar las empresas de moda para mejorar sus campañas publicitarias, como las características de los clientes que visitan estas plataformas de social commerce.

Source: Own colaboration

9.2. Implicaciones para la gestión

En cuanto a la importancia de los medios y redes sociales para las empresas, el social commerce es un nuevo canal de venta para las empresas que está jugando un papel importante en el marketing digital. En particular, las redes sociales y, más concretamente, Instagram es un medio esencial, y relevante en el Social Commerce. Esta plataforma, en la cual se observan diferentes formas de comprar, es muy determinante en cuanto a ventas y atracción de nuevos clientes se refiere. De hecho, la mayoría de las empresas internacionales, nacionales, grandes, medianas y pequeñas siempre tratan de emplear herramientas eficaces con el objetivo de llamar la atención de los clientes y aumentar sus ventas. La mayoría de las empresas internacionales y nacionales, pequeñas, medianas y grandes, siempre tratan de encontrar la mejor herramienta para atraer clientes y aumentar sus ventas.

El social commerce surge como un nuevo tipo de plataforma de comercio online que permite a los clientes compartir experiencias, opiniones e información sobre el lugar, el producto y la persona a quien comprar.

S2 tiene importantes implicaciones para los profesionales. En primer lugar, los resultados muestran que el social commerce e Instagram commerce son ya bastante importantes para los clientes. En la actualidad, muchos clientes se inclinan por Instagram commerce en primer lugar a la hora de comprar un producto o servicio, ya que Instagram muestra información clara y fiable, como el precio y otras características sobre el producto o servicio deseado. De este modo, también aumenta la fidelidad y la reputación de Instagram commerce. En segundo lugar, los resultados demuestran que Instagram commerce mejora las ventas de las empresas de manera que los grandes, medianos y pequeños comerciantes deben centrarse en Instagram commerce. Gracias a las cuentas comerciales, los clientes pueden navegar y comprar fácilmente a través de Instagram. Los gerentes deben prestar atención a Instagram commerce y a otras plataformas de social commerce, proporcionando información atractiva y publicaciones de alta calidad para atraer a los clientes. Los gestores también deben mantener la información de sus productos y servicios actualizada a diario, añadiendo nuevas historias, fotos o vídeos. Por otra parte, las empresas deberían hacer hincapié en la publicidad a través de los medios de comunicación social y las redes sociales, ya que los clientes se inclinan por las compras en línea. Igualmente, los negocios deben ofrecer una calidad de servicio superior y en constante mejora, al tiempo que se preocupan por las necesidades de sus clientes, resolviendo sus dudas, proporcionando una atención personalizada y garantizando la seguridad de las transacciones. Adicionalmente, el social commerce y especialmente Instagram commerce como plataforma emergente de comercio, podrían aplicar descuentos a algunos productos o servicios para incentivar a los clientes a comprar a través de Instagram. Para ello, la plataforma de social commerce puede facilitar la navegación, categorización y clasificación de productos con la ayuda de numerosos criterios (por ejemplo, familia, palabra clave o precio) a través de diferentes canales de información (por ejemplo, página de preguntas frecuentes, foros, chat, correo electrónico o teléfono) que responderían rápidamente a las consultas de los clientes. También se puede evaluar el comportamiento de navegación y búsqueda para ofrecer productos adaptados a las necesidades del cliente.

S3 tiene una serie de implicaciones significativas para los profesionales de este campo de conocimiento. En primer lugar, esta investigación contribuye a ayudar a las empresas a desarrollar y gestionar Instagram commerce como plataforma de social commerce. Los resultados muestran que Instagram commerce es una de las plataformas de social commerce que ayudan a las empresas a mejorar sus ventas y a crear una imagen positiva. En segundo lugar, los gestores del ámbito del social commerce (y especialmente de Instagram commerce) pueden mejorar la intención de compra mediante la creación de actitudes favorables del consumidor. En este sentido, también se pueden impulsar las ventas manteniendo actualizada la información de los productos y servicios, creando diseños coloridos y creativos para los sitios web con el fin de atraer a los consumidores, y subiendo historias y publicaciones de alta calidad para los productos y servicios. En tercer lugar, la facilidad de uso de Instagram commerce permite a los comerciantes vender sin esfuerzo a la vez que ofrecen varios métodos de compra y proporcionan información sobre los productos actualizada regularmente. Los responsables de marketing digital también pueden crear una mayor transparencia en la plataforma de social commerce proporcionando permisos más amplios para que las empresas personalicen sus perfiles, interactúen con el contenido y accedan a información valiosa, como las cifras de ventas. Los profesionales del sector también pueden personalizar aún más la experiencia de social commerce en función de las características personales, como la edad, el sexo, la profesión y la nacionalidad, entre otras. Asimismo, las empresas podrían hacer bien en mejorar la usabilidad de sus plataformas de social commerce haciendo que todo el proceso sea mucho más fácil de usar, sobre todo en los dispositivos móviles. Sin embargo, a pesar del enorme auge del uso de la tecnología por parte de las empresas, la confianza sigue siendo el puente que los consumidores cruzan hacia el lado seguro de las compras en línea. La transparencia en el social commerce podría crear la confianza del consumidor en la plataforma y parece más relevante en el contexto de los países en desarrollo, donde se considera que la gente es más sensible y está más influenciada por las historias de fraude y falta de credibilidad, por lo que construir la confianza en estas sociedades es muy difícil y lleva mucho tiempo. Además, el cambiante marco normativo, como el Reglamento General de Protección de Datos (GDPR), y su réplica en muchos países, está cambiando el panorama empresarial y lo mismo debería reflejarse en las implicaciones de gestión de este artículo, como, por ejemplo, cómo las empresas deben garantizar la protección de los datos sensibles de los consumidores para construir y vender la confianza de los consumidores en la plataforma. También, cómo los recientes desarrollos en el campo de los wearables podrían transformar el campo del social commerce. Por último, el gobierno puede proporcionar protección de seguridad para las transacciones de comercio móvil proporcionando una autoridad de certificación para verificar las identidades de los compradores y vendedores, evaluar las medidas de seguridad, evaluar las transacciones y entregar certificados digitales a aquellos que cumplan con los criterios de seguridad establecidos. Por lo tanto, el gobierno puede construir y hacer cumplir un entorno legal y judicial que proporcione normas y obligaciones mínimas de transparencia, equidad y puntualidad.

S4 contribuye a la expansión de Instagram commerce como plataforma líder de social commerce bajo las restricciones impuestas durante la pandemia de COVID-19. En este sentido, no hay que olvidar que los profesionales del marketing se ven frenados por la escasez de investigaciones en este campo de conocimiento. En primer lugar, los resultados obtenidos revelan que la intención de compra, la tendencia a la compra impulsiva y el impulso de compra son determinantes del éxito

de empresas de social commerce como Instagram commerce. Asimismo, Instagram commerce se ha consolidado como una de las principales plataformas de social commerce durante la pandemia de COVID-19 en términos de marketing y ventas. De este modo, en su apuesta por apoyar tanto a las pequeñas como a las grandes empresas, Instagram ha seguido desarrollando múltiples y sencillas vías de compra a través de su plataforma. La mayoría de los sectores empresariales y las marcas han recurrido a Instagram commerce durante la pandemia del COVID-19. La facilidad de uso y la utilidad de Instagram commerce permiten a las empresas vender sin esfuerzo a la vez que ofrecen múltiples métodos de compra y habilitan funciones como compartir publicaciones e historias en relación con sus productos y servicios y utilizar hashtags y todas las herramientas que Instagram ha desarrollado para las empresas. Además, los clientes se sienten obligados a comprar directamente en Instagram commerce y a prescindir de otras plataformas u opciones de marca, ya que Instagram sigue ofreciendo información actualizada sobre los productos y servicios a través de una interfaz de compra fácil de entender. Adicionalmente, la sensación de disfrute es crucial en el contexto del social commerce y especialmente en Instagram commerce. En consecuencia, los gestores deben centrarse en ofrecer una experiencia de compra agradable a sus clientes de social commerce en Instagram, en la que puedan subir publicaciones e historias de alta calidad, coloridas y creativas sobre productos y servicios para retener a sus clientes actuales y atraer a nuevos posibles compradores. Asimismo, estas características animan a los clientes a realizar compras directas. También, la comunicación electrónica positiva de boca en boca entre los usuarios de Instagram commerce ayuda a la plataforma a crecer en términos de nuevos usuarios y empresas. De esta manera, el boca a boca electrónico de Instagram ayuda a las empresas atrayendo nuevos seguidores y clientes (Belanche et al., 2020). En este sentido, los gestores deben centrarse en el perfil de su empresa en Instagram, revisando las publicaciones, comparticiones y comentarios que dejan los usuarios de la plataforma para eliminar las aportaciones inapropiadas que infrinjan los términos del servicio. Además, los responsables de social commerce deben concentrarse en los comentarios negativos de los usuarios sobre sus productos y servicios para mitigar los problemas y evitar la insatisfacción de los clientes. Por otro lado, las críticas positivas deberían animar a los profesionales a seguir desarrollando la idea original. Los gestores del social commerce también deberían responder lo más rápidamente posible a las preguntas y comentarios de los usuarios. Como ha revelado el presente estudio, el riesgo percibido y la seguridad son fundamentales para las empresas y los clientes con un perfil activo de Instagram commerce. En este sentido, se puede considerar que Instagram commerce es seguro, salvo por los perfiles desconocidos que surgen ocasionalmente y que son revisados y eliminados sistemáticamente por los gestores y algoritmos de la plataforma. Los gestores deberían centrarse en desarrollar una cuenta real con detalles reales de la empresa, como la ubicación, el correo electrónico, los números de teléfono, las valoraciones de los comentarios y los propósitos de venta, para mejorar la confianza de los clientes y permitir que sus usuarios compren sin el temor de arriesgar información sensible o participar en interacciones comerciales turbias. De este modo, las empresas deben seguir desarrollando estrategias de venta creativas y campañas diferentes a las de la competencia para atraer a más clientes y aumentar sus ventas. En este sentido, la pandemia de la COVID-19 ha enseñado a muchas empresas la necesidad inminente de enfocar el marketing digital como un motor clave del rendimiento de las ventas. Las empresas que no tienen ningún tipo de presencia en el comercio electrónico han perdido un número considerable de empleados y clientes y, en algunos casos, se

han visto obligadas a cesar su actividad. En este sentido, el marketing digital es fundamental para que cualquier empresa, independientemente de su tamaño, siga siendo operativa ante el grave desafío al que se enfrenta el mundo en la actualidad.

S5 los resultados apuntan a una interesante vía de investigación futura sobre la eficacia de la representación visual de la marca en las herramientas de social commerce desarrolladas y pueden ayudar a mejorar los procesos empresariales para optimizar las campañas publicitarias, teniendo en cuenta las características de los clientes que visitan estas herramientas de plataformas de social commerce.

9.3. Limitaciones y futuras investigaciones

El trabajo de investigación contribuye con valiosas aportaciones teóricas y prácticas al campo de la tesis, pero no está exento de limitaciones. A continuación, se resumen las principales limitaciones encontradas en el desarrollo de la investigación, que deben ser observadas a la hora de generalizar los resultados. Estas limitaciones deberán ser tenidas en cuenta en futuros estudios para avanzar adecuadamente en la investigación del comportamiento del consumidor de social commerce.

- El hecho de que las encuestas **S2, S3** y **S4** hayan tenido lugar en un entorno online y hayan contado con participantes mayores de 18 años sugiere que en futuras investigaciones se puedan estudiar participantes con características contrastadas, por ejemplo, un grupo de usuarios sin medios para completar encuestas online y otro grupo de menores de 18 años, y discutir los resultados obtenidos.

- Los estudios futuros también podrían tratar de desarrollar un modelo más completo incluyendo variables adicionales (Casaló et al., 2017). En cuanto al proceso de recogida de datos (**S2, S3** y **S4**), un método longitudinal podría permitir comprobar la fuerza de las relaciones y la evolución de estas u otras variables moderadoras a lo largo del tiempo (especialmente los ingresos, la situación laboral y el nivel educativo).

- Adicionalmente, **S5** sólo ha considerado tres variables independientes durante el análisis de la eficacia de los logotipos en las herramientas de social commerce. En consecuencia, pueden añadirse a la investigación otras variables de categorización para proporcionar un análisis más profundo (por ejemplo, situación laboral, nivel de educación, etc.).

- En **S2** y **S3** las investigaciones con un mayor número de países permitirían comparar las diferentes actitudes de los consumidores hacia Instagram commerce según la nacionalidad. Además, en **S4** la investigación centrada en múltiples países permitiría comparar los diferentes niveles de intención de compra, tendencia a la compra impulsiva y el impulso de compra a través de Instagram commerce según la nacionalidad. En cuanto a **S5**, se recomienda ampliar la investigación a otras regiones para obtener una perspectiva más transnacional o transcultural, considerando otros países europeos o de otros continentes.

- En **S3** las metodologías de neuromarketing (como FMRI [figura 73] y EEG [figura 74]) podrían aplicarse al social commerce e Instagram commerce para medir la atención visual de los usuarios, las reacciones cerebrales o el recuerdo en las plataformas de social commerce en diferentes sectores, como la moda, la tecnología, la alimentación y la educación.

- En **S5** se ha investigado el comportamiento de atención o fijación de los participantes midiendo la eficacia de la representación visual de la marca. Para futuras investigaciones, podría ser beneficioso e interesante complementar esta investigación con otras medidas de eficacia publicitaria, por ejemplo, la tasa de clics (CTR). En este sentido, los sujetos accedieron voluntariamente a las redes sociales del vendedor objetivo.

- En **S2**, dado que no existe un registro establecido de clientes reales de los diferentes sitios de social commerce, el uso de técnicas de muestreo no probabilísticas puede introducir sesgos en los resultados. Además, en **S3** no se pudo establecer la invariabilidad para los datos agrupados y, por tanto, los resultados deben tomarse con precaución. Por otra parte, en **S4** los futuros investigadores podrían evaluar las técnicas de análisis de contenido producidas por el usuario, por ejemplo, la regresión de textos y el análisis de sentimientos (por ejemplo, métodos basados en léxicos, aprendizaje automático, etc.), la minería de textos (por ejemplo análisis semántico latente) y grupos de discusión, entrevistas, procedimientos de muestreo aleatorio, pruebas A/B (tasa de clics y ventas reales) de rastreadores web o utilizar experimentos de campo o métodos multiexperimentales, bola de nieve, gráficos de conocimiento y técnicas de programación de lógica inductiva que permitan a los investigadores analizar los datos recogidos para comprender el comportamiento del consumidor y la intención de compra en las plataformas de social commerce.

- En **S4** nos centramos en una plataforma de social commerce (Instagram), pero el comportamiento de los consumidores puede variar en función de las características de la red social. En consecuencia, los trabajos futuros podrían estimar la validez del modelo propuesto utilizando datos recogidos de usuarios de otras plataformas y redes, por ejemplo, Pinterest, Twitter y Facebook.

- En **S2** la investigación futura podría contemplar el uso de otros procedimientos de muestreo, por ejemplo, solicitando la colaboración de varios sitios de social commerce para utilizar sus bases de datos de clientes.

- En **S4** las nuevas investigaciones relacionadas con la influencia de COVID-19 en las plataformas de social commerce como Instagram pueden convertirse en un tema importante en relación con el comercio electrónico y muchos otros campos del conocimiento. Por otra parte, la crisis sanitaria de la COVID-19 ha tenido un efecto muy relevante en el consumidor, no solo en su intención de compra sino también en su comportamiento. En este sentido, en futuras investigaciones sobre comercio social se deben de incluir temas relacionados con la forma de comprar antes y después del COVID-19, además de estudiar la influencia de la pandemia tanto

en las plataformas sociales como en los sitios web. También, la influencia de la COVID-19 permitió que muchas empresas comenzaran a vender sus productos en las plataformas de social commerce.

La tesis tiene varias limitaciones que pueden considerarse desde la perspectiva de las vías de investigación futura que se mencionan en **S1**, y que no se mencionan en los otros estudios:

- La investigación futura debería, por ejemplo, tener en cuenta las nuevas funciones y características de las plataformas de social commerce, como las actividades sociales, los "me gusta", los comentarios, los diseños, los seguidores, las historias, los comentarios y las revisiones o valoraciones de productos, que pueden influir en la intención y el comportamiento de los consumidores.

- Las investigaciones futuras deberían explorar el efecto de la motivación del cliente, la interacción en directo y otras intenciones de comportamiento (como la intención de permanencia y la intención de recompra) en las compras en directo y el comercio en streaming, como las aplicaciones de transmisión en directo, Instagram, Facebook, Amazon live, Taobao, Tmall, JD.com, ya que creemos que hoy en día esta técnica está influyendo mucho en los usuarios de las plataformas de social commerce.

- La investigación futura podría explorar si los cupones y descuentos en el social commerce facilitan o afectan al comportamiento del comprador y a la intención de compra.

- Las investigaciones futuras deberían examinar diferentes empresas internacionales y nacionales y diferentes sectores con influencia del social commerce como la alimentación, el turismo, la tecnología, la moda, la educación, examinando también las marcas tradicionales y de lujo.

- Por lo tanto, recomendamos que los próximos estudios integren otras teorías o modelos, como la teoría del vínculo social, la teoría de la red social, el modelo de los cinco grandes, el modelo de probabilidad de elaboración, las teorías del comportamiento, la teoría del impacto social (número, fuerza del vínculo y cercanía), la teoría de la presencia social y la teoría de la influencia social para aumentar el poder predictivo del social commerce.

- Futuras investigaciones podrían considerar el efecto de los factores de las plataformas de social commerce, como la comunidad, la colaboración, la autoeficacia, el apoyo social, la difusión de información, la combinación de tecnología, los atributos sociales, el apoyo emocional, las normas subjetivas, la calidad de las relaciones, el compromiso de los consumidores con la marca, la interactividad, la conectividad, la comunicación socioemocional, la motivación utilitaria, la calidad del servicio, las influencias sociales del vendedor, la presencia social, la

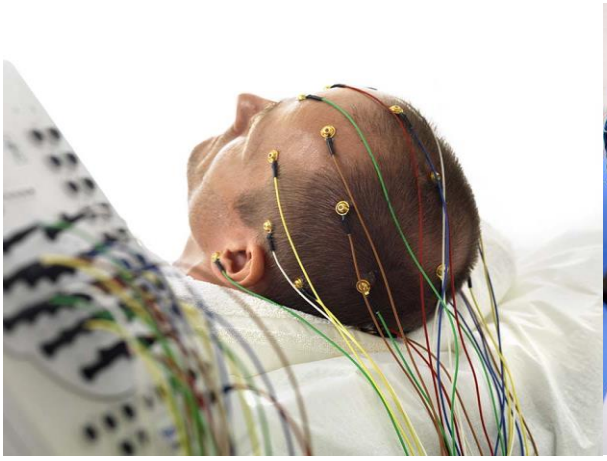
riqueza de los medios de comunicación o las características personales de los consumidores, sobre el comportamiento y la intención de compra, especialmente sobre la decisión de compra.

- La investigación futura podría investigar las diferentes plataformas de social commerce para conocer las influencias en los diferentes países y culturas para entender la diferenciación en el comportamiento y la intención de compra a través de las plataformas de social commerce, identificando entre las culturas colectivistas y las culturas individualistas, clasificando los países emergentes y en desarrollo, el tamaño del país y también identificando las leyes y la política del social commerce en los diferentes países, ya que cada país difiere en su forma de pensar y sus situaciones políticas, económicas, sociales, tecnológicas, ambientales y legales en relación con el social commerce.

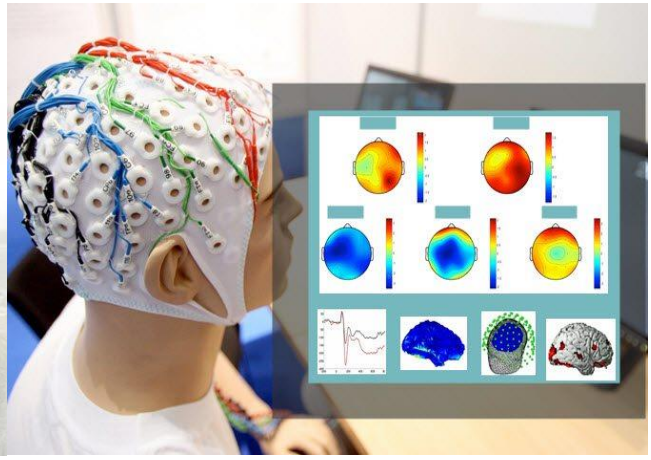
Figura 73: FMRI Ejemplos

Fuente: Centre for Psychedelic Research

Figura 74: EEG Ejemplos

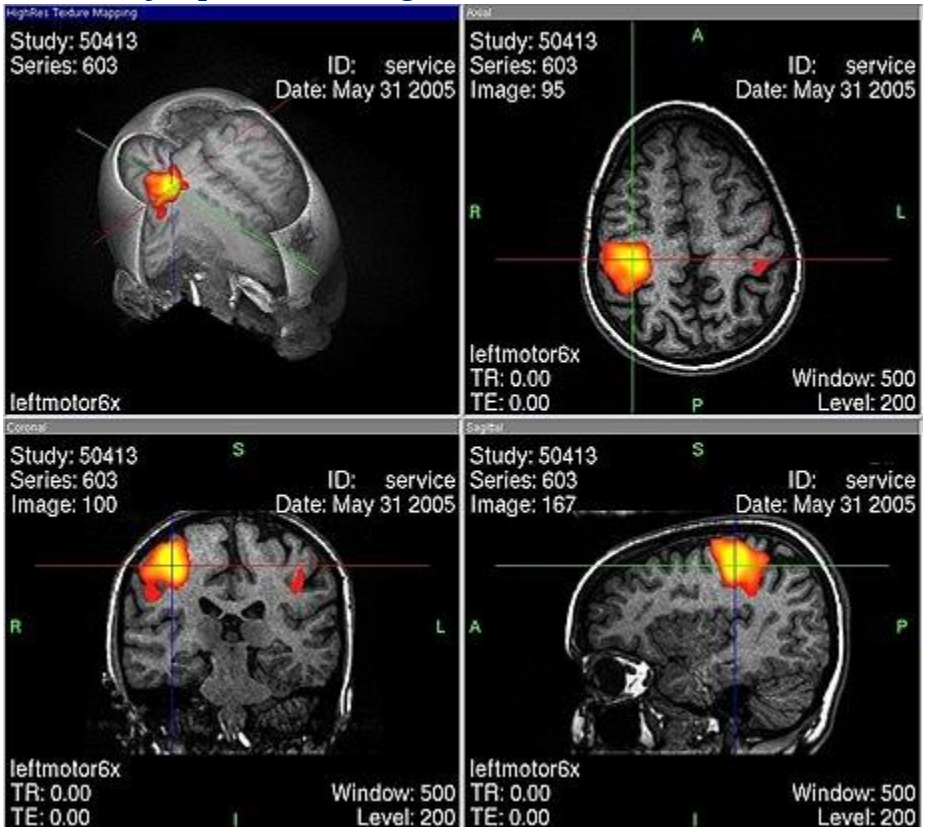


Source: Interferenciales (2017)



Source: Sales Brain (2022)

Ejemplo de una imagen de resonancia 3D / FMRI



Fuente: Centre for Psychedelic Research

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