



Information and Communication Technologies exclusively for consumer behavior from a theoretical perspective

Tecnologías de la Información y Comunicación exclusivo para el comportamiento del consumidor desde una perspectiva teórica

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Abstract

The objective of this study, focuses on carrying out a literature review of Information and Communication Technologies (ICT) as an exclusive factor affecting consumer behavior. The methodology has a descriptive scope of a bibliographic type, studies were selected that have been published in the most important indexes worldwide, in the following order: Web of Science, Scopus, Ebsco and ProQuest, from 2009 to 2020, with a total of 62 publications among scientific articles, books and thesis, which discussed the development of ICT exclusively focused on the modern consumer. A considerable scientific production found between 2013 and 2017 with 47,00% of the documents analyzed. Likewise, in these publications key words such as ICT, digital consumers and consumer behavior are highlighted with 27,00%, 19,00% and 10,00% respectively. Regarding the origin of the documents, it is highlighted that most of them come from Latin America with a percentage of 53,00%. As main conclusions it is highlighted that the intervention of the TIC is immersed in almost all the phases of the decision making that the consumer makes, in addition to it, the present consumers are permanently connected, having greater alternatives of election according to the information that the company develops to reach the final purchase of the product and/or service.

Resumen

El objetivo de este estudio se centra en realizar una revisión de literatura de las Tecnologías de la Información y Comunicación (TIC) como un factor exclusivo que incide en el comportamiento del consumidor; la metodología tiene un alcance descriptivo de tipo bibliográfico, se seleccionaron estudios que han sido publicados en los índices más importantes a nivel mundial, en el siguiente orden: Web of Science, Scopus, Ebsco y ProQuest, desde el año 2009 hasta el 2020, con un total de 62 publicaciones entre artículos científicos, libros y tesis, que discutieron el desarrollo de las TIC exclusivamente enfocado hacia el consumidor moderno. Se encontró una considerable producción científica entre los años 2013 y 2017 con un 47,00% de los documentos analizados. Asimismo, en dichas publicaciones se resaltan palabras clave como TIC, consumidores digitales y comportamiento de consumidor con el 27,00%, 19,00% y 10,00% respectivamente, en cuanto a la procedencia de los documentos se destaca que la mayoría de estos provienen de América Latina con un porcentaje del 53,00%. Como principales conclusiones se destaca que la intervención de las TIC está inmersa en casi todas las fases de la toma de decisiones que realiza el consumidor, adicional a ello, los consumidores actuales se encuentran permanentemente conectados, disponiendo mayores alternativas de elección según la información que la empresa desarrolla para alcanzar la compra final del producto y/o servicio.

Keywords | palabras clave

E-commerce, consumer behavior, digital consumers, digital environment, internet, social media, Information and Communication Technologies (ICT).

Comercio electrónico, comportamiento del consumidor, consumidores digitales, entorno digital, internet, social media, Tecnologías de la Información y Comunicación (TIC).

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1. Introduction

The impact that the Internet has had in recent years has led to a great change in consumer behavior. Today, both companies and consumers take advantage of all the benefits generated by buying and selling operations facilitated by it. A good number of consumers, depending on the new cultural and social patterns that have arisen on the occasion of a change in lifestyle, find a good option to acquire practically any product and/or service to satisfy their different needs through new information technologies. In this sense, the registered technological progress allowed the Information and Communication Technologies (ICT) to play an important role, especially during the last year, where, as a result of COVID-19, the planet experienced a radical change in relation to the development of the different activities.

The contribution of this study is to generate knowledge so that organizations understand the consumer behavior that is being formed by the development of ICT, where through a literature review, elements and factors that must be taken into account by the senior management of the company were identified, and at the same time answering many questions that business people ask about who are the consumers? What are their demographic and psychographic characteristics? What information is relevant to attract these consumers? What do they buy? How often do they buy? By what means do they buy? Is everyone attracted to the same thing? And all the questions that influence market research. In addition to this, the conclusions of this study generate value in the information, on which products and/or services must be designed, with specific strategies in consumer behavior to maximize sales through ICT and, at the same time, identify groups of reference with which the opportunities that appear indistinctly are taken advantage of.

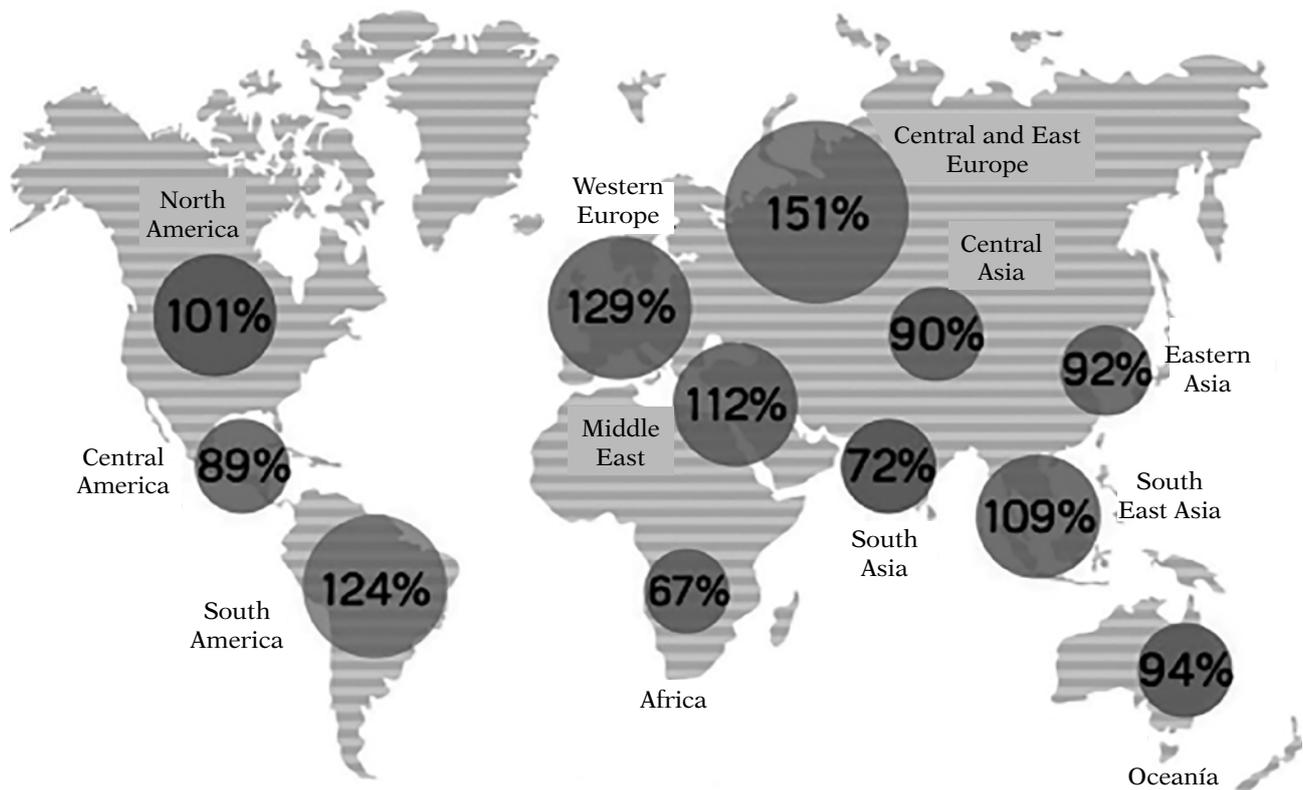
The companies of the 21st century continue to transform due to the globalization of the internet and with it, the vertiginous growth of social networks and different mobile applications, an event that has generated different changes in the internal and external spheres of organizations. In this sense, they must necessarily adapt to scenarios that are becoming more competitive and complex every day, where administrators must possess sufficient skill, ingenuity, and expertise to design value strategies to satisfy a new behavior and lifestyle of different consumers of products and/or services that, influenced to a great extent by those publications presented through the different virtual media, find themselves increasingly seduced (Aucay & Herrera, 2017).

Today, in the middle of the information age, or as other theorists call it the era of the ICT revolution (Restrepo, 2011), they are rapidly altering the way people do business around the world. In the business-to-consumer segment, sales via the web have increased dramatically in recent years. Given that, customers, not only from developed countries but also from developing countries, are adopting a new purchasing channel (Barrientos, 2017). As such, ICT has an important role to play not only in companies but also in people's daily activities. Internet-based services continue to grow in the "business-to-consumer" and "business-to-business" environments (OECD, 2019). From this point of view, every year, the number of organizations that use the internet for marketing purposes increases greatly. As well as the number of consumers who use the internet, not only to collect information but also to purchase goods (Rivera, 2015).

In a general context, a total population of 7,676,000,000 people is estimated, of which 75.00% are considered active Internet users (Arribas et al., 2019). While, in relation to the number of active users in social networks, an amount close to 3,484,000,000 is estimated, corresponding to 45.00% of the global population, with Facebook being the social network with the highest number of subscribers (Kutchera et al., 2014),

followed by YouTube and WhatsApp respectively. On the other hand, in the American continent, specifically in the South American area, a general population of close to 430,000,000 people is estimated, of which 73.00% are permanent Internet users; that is, compared to the percentage worldwide, this indicator increases significantly in this region (Islas et al., 2018) (See Figure 1).

Figure 1. Use and connectivity in the world



Source: Adapted from Campos, 2015.

With these important statistics, today, in the world context, it is very common to see or hear that most sales are made online; that is, a type of commerce where a website or an application connected to the internet is used as the main means to carry out said transactions (Roman, 2016). In the last decade, customer buying practice has changed dramatically, as the use of digital technology to browse, research and buy has moved from a sporadic or specific segment to the mainstream. Faced with this reality, different studies reveal information on how customers use technology and their expectations about companies in this new environment (Cano, 2018; Encalada et al., 2019; Linero & Botero, 2020; Matute et al., 2012; Millat, 2011; Vera et al., 2011). Based on this reasoning, different organizations are currently forced to propose and use new strategies that mainly involve the use of technology as an indispensable factor in their companies, to provide a timely response to both the needs and expectations of their customers. In other words, as they provide innovations to improve the shopping experience, customer expectations will change, which is why, at present, investment in digital technology is becoming a significant strategic imperative for the consolidation and development of many companies worldwide (Yasav, 2015).

Today's society is exposed to continuous changes in the technological field, where the digital aspect takes a significant advantage and people constitute the central point of the experienced digital development, it is thus that the practices of digital life go hand in hand with evolution technological (Santos, 2019). In this sense, the evolution of ICT has brought with it a series of mechanisms and tools for interconnectivity and intermediation (Díaz et al., 2011; Madrigal et al., 2015). Today's world is conquered by a large number of mobile devices that are immersed in each of the daily activities that people carry out, technological devices that are used by them in order to inform themselves, analyze reality, activate relationships with others. and mainly communicate (Ureña et al., 2014). This scenario has mainly brought about the readjustment in relation to the forms of communication between peers, at the same time that it has been in charge of imposing a new scale of values and exchange channels whose main characteristic is given by the existence of a greater interaction in the relationship company/client (Barrios, 2014).

In the commercial field, the use of ICT leads to a greater number of markets, these being local, national, and international, at the same time, that they contribute to greater transparency in relation to information, thus allowing the rationalization of operating costs, as well as lower prices (Saavedra & Tapia, 2013). From this point of view, its application facilitates access to global supply chains where both buyers and sellers share information, specifications, and processes, which cross borders. Thus, both the network of buyers and sellers as well as the different research tools electronically provide a rapid, appropriate, and economic evaluation of the offer between different suppliers, with an efficient realization and completion of all the transactions implicit in the process of promotion and acquisition (Mihajlovi et al., 2014).

Likewise, it can be mentioned that the current behavior presented by the client greatly affects all those involved in the marketing chain who focus on the acquisition of either goods or services, which are intended to satisfy existing needs (Virgüez et al., 2020). Given that, with the passing of the years, the basic production in which individuals only produced what was just and necessary that allowed their subsistence to mass production at present, the same that allows serving a highly competitive market where high impact advertising is the one that most attracts the attention of customers (Díaz & Vicente, 2011).

For their part, customers who have ventured into the digital field have developed new consumer practices, a situation that is generated due to the constant advancement of ICT, this evolution has given rise to the appearance of new applications that have caused constant development in the products (Guaña et al., 2015); However, despite this, not everything is good, as this constant development brings with it a serious problem associated especially with how to understand the needs of the so-called "new consumer", given that, by nature, they change their actions unexpectedly. This change can be attributed to the fact that currently, "the user is connected to the internet 24 hours a day, seven days a week and 365 days a year" (Lagos et al., 2018), and this, without doubt, has created a constant disturbance in the user, who is exposed to an infinity of information, products and/or services and promotions (Guaña et al., 2017).

Faced with this scenario, these new consumers, called digital clients, usually use different tools associated with the digital environment as a means of sharing information, which allows new technologies to play an important role in the lives of each of the individuals (Apolo et al., 2015). In a general context, these types of clients increase considerably, an increase that is mainly associated with the different benefits that the use of the internet provides, which is why organizations are forced to modify their business structure, as well as Customers necessarily have to adapt to the new processes that are

carried out effectively, establishing electronic commerce as a fundamental alternative for the sustainable growth of different organizations.

In this same order of things, the term consumer 2.0 appears, which can be defined as:

A well-informed person, who gets bored quickly and is quite immune to obvious publicity, seeks out innovative information and different experiences. On this basis, new consumers are permanently connected, have greater decision-making power, more choice, and are more demanding of information than ever. (Cáceres, et al., 2017, p. 15)

Under the aforementioned parameters, a 2.0 consumer constitutes the current target audience for any type of organization; that is, if it is possible to capture their interest and even more so their consumption; there are great chances of being successful in an increasingly competitive market full of brands that market an infinite number of products and/or services. In short, it takes advantage of the possibilities offered by the web to improve your shopping experience (Burgos et al., 2009). Unlike the traditional consumer, they have an immense variety of resources and tools that allow them to have an advantageous position when making purchases, either online or offline. In addition to the above, it is necessary to emphasize that they do not simply make a purchase, on the contrary, they want a positive experience in the purchase process, they want information, transparency, communication, advice, personalized attention, practical content, as well as quality to a low cost (Ferrer, 2018).

With the requirements stated in the previous paragraph, the development of ICT supports the interaction between consumers and intermediation, as a result, it leads to the reengineering of the business, the development of processes, as well as the forms of communication (López et al., 2018). In addition to this, innovative technologies improve efficiency for customers and suppliers, as well as promote interoperability, personalization, and the creation of permanent networks of the participants in the process (Travaglini, 2016). At present, ICTs have gained a significant role in different activities such as education, the health sector, and the economy in general. Since, in recent years, its inclusion in people's daily lives is undeniable, since its use is immersed in the different activities that are developed day after day (Guaña et al., 2017).

ICTs represent one of the main driving forces behind economic, social, and cultural changes from modern to postmodern, from local to global markets, from production to consumption, and from industrial to informational economies. With the availability of ICTs practically all over the world, consumer experiences and marketing are increasingly represented through the concept of data. In other words, information, today more than ever, has become the essential part of the market (Ferreirós, 2016). Consumers are often overwhelmed and intimidated by the sheer volume of information available for consumption (Rivera, 2015). However, and in response to such information overload, marketers have responded with possible solutions that somehow seem to mimic the posed problem; to the avalanche of information available there is the same amount of search tools accompanied by buying guides where highly specific summaries are offered for the convenience of those who use it.

On the other hand, from a marketing and consumer point of view, the impact of high technology and ICT has been the transformation of physical market spaces into data landscapes that encompass not only a growing percentage of customer transactions but also, for example, the real-time monitoring of the global movement of merchandise (Capellan et al., 2015). The technology adoption processes have gradually attracted the attention of scholars in marketing and social sciences for several decades, since technology has been recognized as a key factor that drives strategy, not only in

the research and development aspects (R&D) but also the marketing and product or service portfolios of many organizations (Dholakia et al., 2009).

In general, organizations use ICT for internal and external communication, for the easy and fast updating and exchange of information and to increase their competitiveness through the creation of websites, portals, discussion forums, electronic stores, among others. (Gaile, 2009). In this same order of things, ICTs in a short time have become a key factor in obtaining an important competitive advantage in organizations. Thus, the popularization in relation to its use has generated an evident transformation in a considerable number of areas of the different companies, since with its application today it is easier to perform order processing, effective stock management, and obviously storage and transportation if it is a production company. In addition to the above, with the correct application of ICT in the business context, several additional benefits can be derived for an organization, such as saving time, unnecessary expenses in personnel, higher productivity, better inventory management, reduction of errors, accuracy, and reliability (Gil et al., 2009).

Today, through the use of ICT, customers have greater access to information than before (Barinas, 2013). That is, they search the web for information related to the goods and/or services they need to satisfy their existing needs. This process of customer sophistication forces business managers to innovate with greater precision and speed in the solutions offered by their companies in response to user requirements. As such, fortunately, the information that is captured through ICT can help the different administrators in the difficult process of understanding consumer behavior and the solutions available in the market (Barrio, 2017).

Consequently, the information in the profiles of the people who inquire on the web about what they are looking for, the channels they used, and the type of device used to make said queries, is offered by large organizations such as Google and Facebook, which focus on providing information regarding the client and also helping the different companies to be visible to real and potential clients. In particular, Google Analytics is responsible for offering solutions to understand customer interaction with different online marketing channels. For example, it has specialized tools that provide useful information to recognize how customers use mobile technologies and measure the success of social media campaigns. Likewise, one more service that provides data and offers tools to analyze what people search for on the web; develop market research projects and understand trends in the sector is Google Insight (Piñeros & Gómez, 2017). For its part, Facebook is another organization that provides customer information. Given that, this company created one of the social networks with the highest traffic on the planet, offering marketing services for companies from different segments (Blanes, 2017). As there is a large amount of data, this company is in charge of analyzing it in order to design advertising campaigns for specific sets of potential customers that achieve a high impact in the advertising field. In this sense, the quality of the information obtained allows us to geographically locate clients and offer a comprehensive interpretation of clients' needs and interests.

In short, both Google and Facebook use the information generated through the use of ICT to help managers and their teams make more accurate decisions. However, to carry out a more reliable analysis and, consequently, make more rational decisions, companies can use the information recorded in their daily interaction with real and potential clients (Piñeros & Gómez, 2017). The widespread adoption of ICTs, as well as their continued use, regardless of time and place, reinforces the rise of digital commerce (Rivera et al., 2012). Consequently, this emerging way of conducting business transactions refers to the unidirectional or bidirectional exchange of value facilitated

by an electronic device, which is enabled by wireless technologies and communication networks (Golovina, 2014). Consumer decision-making has changed dramatically since the prevalence of these devices in the consumer's everyday life (Pelet & Papadopoulou, 2013). With easy access to user reviews, expert opinions, price comparisons, and other emerging facilities, consumers can conduct comprehensive evaluations of the products and services available in an increasing number of categories. For marketers, this suggests the need for a whole new way of thinking about influencing consumers. The challenge is also valid for information systems developers, as mobile commerce web-sites and social networks must be carefully implemented and used to become effective marketing tools (Pelet, 2014).

Regardless of the means of communication used, their relationship with the client is bidirectional. That is to say, in the first instance, the means have a great influence on consumer behavior because it generates certain affective, cognitive, and attitudinal effects in them (Vega, 2015). While, the other way determines that customers are no longer considered only as passive actors of the information, but become active users who become expert communicators since they are in charge of disseminating information, issuing evaluations, and even issuing personal comments (Golovina, 2014). Likewise, the current dynamic environment that combines the digital age and the changing economic context, forces different companies to investigate consumer preferences, conducting market studies, and learning about the activities carried out by competing companies in order to have a real panorama that allows launching a product and/or service that provides significant economic returns to the market. On this basis, the information available from the market helps the administrative and marketing departments in making decisions, given that the approach is not limited only to gathering data, but seeks the most suitable way to submit them to an exhaustive analysis in order to identify trends and statistical data that allow the delineation of timely actions within organizational management (Ortiz et al., 2016). That is why, below, a descriptive analysis is made through a literature review on ICT and consumer behavior, starting from the previously established antecedents.

2. Materials and method

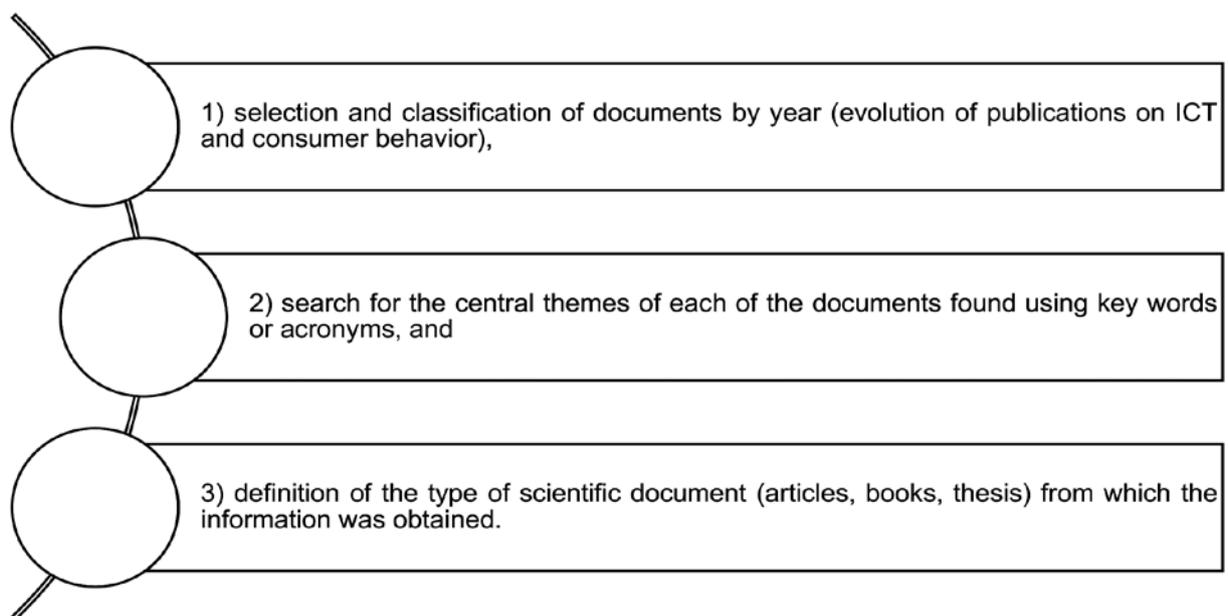
In order to verify the interest in the academic scientific field on this issue (ICT and consumer behavior) during the last years, a bibliographic study was developed, the same one that focused on the review of literature from different sources of information from a secondary level (scientific articles, books, previously carried out research). For this, scientific documents that have been published and whose texts can be retrieved from databases such as Scopus, ProQuest, Ebsco, Web of Science have been analyzed.

Based on the above, the multiple purposes involved in a review of the literature are then proposed, since it constitutes one of the most important parts of the genesis of a study, this perspective allows the researcher to know the results of other studies similar to the one being carried out, it also provides a frame of reference to justify the importance of the study, likewise, it allows to have a point of reference to compare the results obtained with others that have been derived from previous investigations within a context similar to that established (Creswell, 2014). On this basis, it is scientifically proven that review articles are responsible for compacting and synthesizing fragmented knowledge, updating and reporting on the status of a particular topic, knowing the trend of research, comparing information from different sources, evaluating the literature published, among others (Cué et al., 2008).

Under this context and seeing the importance of a bibliographic review, in the first instance those works that have been disseminated, either through a physical distribution or through the use of electronic platforms such as indexed journals or digital repositories, during the last decade were taken into consideration. In relation to the words that made the search possible, the key words or acronyms used were as highlighted by Bonilla et al. (2019) these for example: ICT, consumer behavior, consumer 2.0, digital age, internet, digital marketing. These highlighted terms form the basis for the corresponding search for information in relation to the issue raised. Based on the above, for the investigation of information, it was necessary to delimit the years of search (2009-2020) so that very old information that could distort the current context of the established topic is not presented, in addition to that, it is necessary to clarify that the choice of these years is mainly due to the advances made in ICT during that period. Finally, as regards the language of publication, there are no restrictions on the selection of documents. On this basis, the works that complied with the established requirements and from which the information was obtained were from a total of 62 reliable sources and with a very good quality of information.

In addition to the above, the processing of the information obtained after the search was carried out as follows:

Figure 2. Information processing



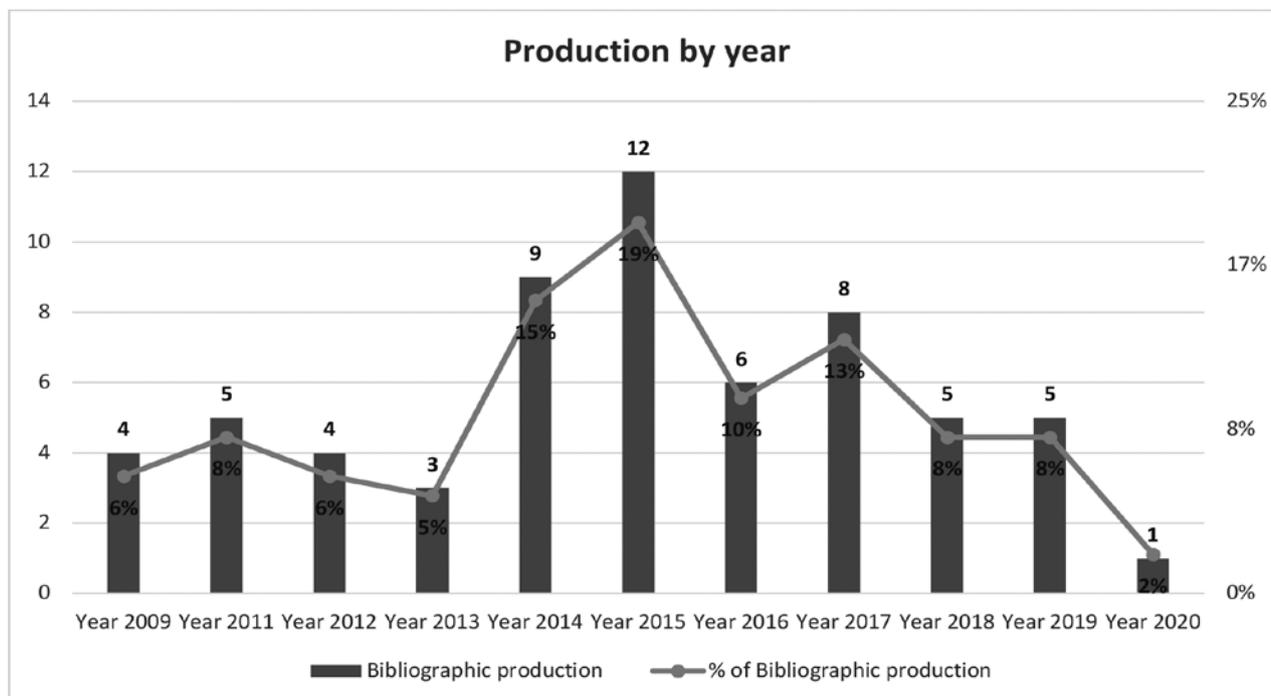
Source: own elaboration

Finally, the analyzes have focused on grouping the different elements of this sampling unit of sources, which are expected to be representative due to the way they are selected, into categories that group the studies in the most relevant classifications for evaluating scientific production. In this way, the production relative to the years, the thematic areas in which the studies have focused, the type of scientific document, and the countries of publication have been categorized; this procedure was similar to that presented in the study developed by Sánchez et al. (2019).

3. Results

Within this section, we begin by presenting the scientific production (documents) by year around the issue, the temporal range of analysis was those publications made between 2009 and 2020, since the development that the ICT have experienced during this period of time and how this has influenced the modus vivendi of different people is evident.

Figure 3. Evolution of publications on ICT and consumer behavior

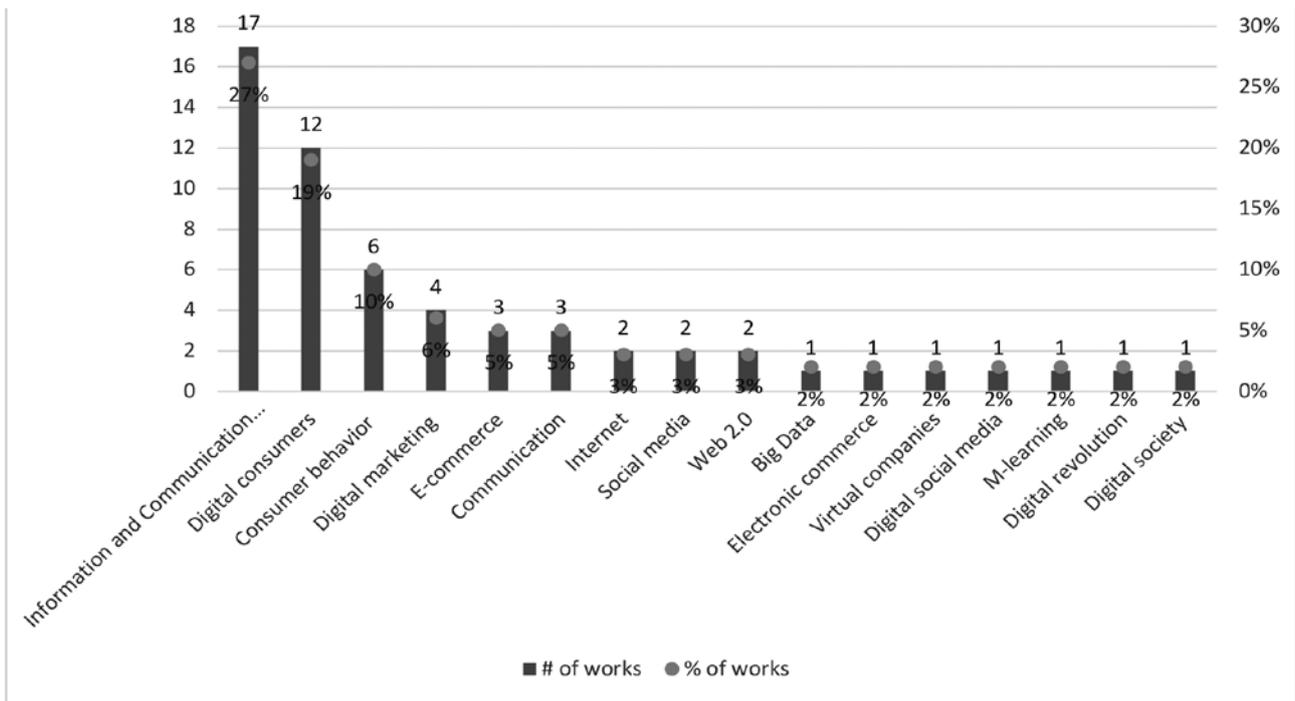


Source: own elaboration

In percentage terms, the years with the highest scientific production in this field were 2014, 2015, and 2017 with percentages of 15.00%, 19.00%, and 13.00% respectively, while 2013, according to the statistics, would be the year with less scientific production with only 5.00% of total production. Likewise, it is necessary to make a special mention of the year 2020 that, although it is true, has a low scientific production, it could not be considered since the records obtained in this period only constitute the production during the first quarter of this year.

On the other hand, in relation to the thematic areas addressed by the analyzed scientific production, those that have been studied the most in recent years are ICT (27.00%) and digital consumers (19.00%). Next, areas such as: Consumer behavior (10.00%), Digital marketing (6.00%), digital environment (6.00%), e-commerce (5.00%) and communication (5, 00%). Likewise, with minimum percentages (3.00%), other studies stand out that have been in charge of analyzing aspects such as the internet, social media, and web 2.0. Finally, there is also a small group of writings (2.00%) that focus on aspects such as big data, Electronic commerce, virtual companies, digital social media, M-learning, the Digital revolution, and Digital society (see Figure 4).

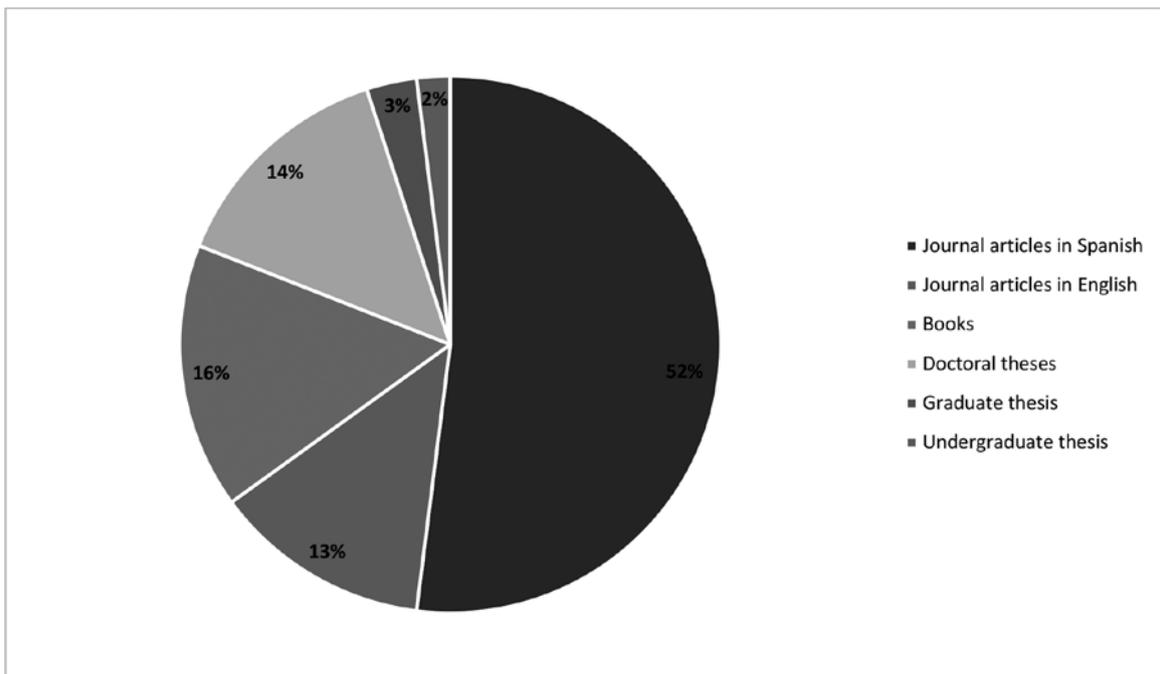
Figure 4. Central themes of scientific production



Source: own elaboration

As the next point within the results, we present the information corresponding to the type of document we investigated, finding that the articles in Spanish/English (65.00%) are the ones with greater presence. Very distant from this percentage are theses (19.00%) and books (16.00%).

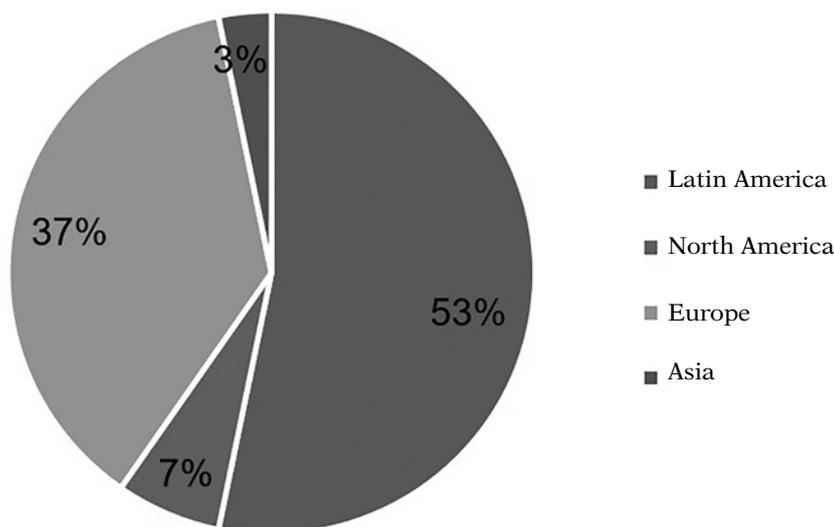
Figure 5. Type of document



Source: own elaboration

In addition to what has already been presented, it is important to highlight the origin of the cited works. The vast majority of them come from Latin America with 53%, being the places of origin countries such as Argentina, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Peru, and Venezuela; 37% were developed in Europe (Croatia, Spain, France, and Portugal), 7% took place in North America (Canada and the USA), and the remaining 3% in Asia (China and India), remembering that for the search for information there were no restrictions in regard to language (Figure 6).

Figure 6. Origin of the documents



Source: own elaboration

Based on what is stated in the previous section, the main findings regarding the analyzed documents are presented below. In general, it was possible to obtain information from 62 reliable sources and with a very good quality of information to process the information through a comprehensive reading process and subsequent analysis by the researchers. As can be seen in Figure 5, the information comes from different bibliographic sources from which both categories and subcategories implicit in the variables under study (ICT and consumer behavior) were detailed, which were timely used in each one of the investigations taken into consideration.

4. Conclusions and discussion

The review of all these documents shows the importance of the issue at hand; given that the results allow us to visualize the interests of the scientific community around these lines of research. In this sense, according to the obtained records, there is a high scientific production, especially between 2014 and 2017, the results of which have been mostly published in indexed journals.

As a result, the great and profound transformations generated in the technological field have had several important repercussions on public opinion and on social life, in general. Nowadays, it could be said that distances have been greatly reduced, where technology has allowed for countries to come together regardless of the distances, taking advantage, in a certain way, of the access that technology offers (Bonilla et al., 2020). Then, from this criterion, it is understandable that the technological develop-

ment experienced, especially in recent years, has greatly influenced the behavior of each of the individuals since they are currently receiving an infinity of information at every moment, which affects their behavior (Molina et al., 2015). The high traffic of Internet users on the web allows the formation of large virtual communities, whose members share similar interests. Consequently, the interactivity that ICTs have breaks the traditional scheme that manages communication. In this scenario, users not only consume the content made available to them by the different media, but they are also in charge of sharing the content with other people (Álvarez & Rodríguez, 2012).

With the incursion of the internet in the commercial sphere, purchasing procedures have changed significantly, given that, today, the client handles a lot of information in relation to the offer of products and/or services, and as an additional plus, he/she can handle different alternatives to carry out the acquisition that the local, national and even international offers, since with technology, distances are now a myth (Millat, 2011). Likewise, its application reduces the problems generated by the lack of information between manufacturers and buyers; which does not happen with the incursion of technology, since the interaction is permanent, providing the market with information such as product availability, characteristics, prices, among others (García, 2014). In the same way, it happens with ICT, which over the years have been proliferating, consumers who currently make use of the web to buy products and/or services are constantly increasing, therefore there are few people that once they have used this method, reject it (Martí et al., 2015).

ICTs have gradually become a key element in economic growth and in the performance of a company. For a time, the impact of ICT shifted from the mere digitization of manual processes using computers to fully digital companies (Berthon et al., 2012). This is not unusual, as academics have proposed models in which new technologies lead to a long period of incremental innovation, followed by radical disruption by other technology. Disruption occurs when products or services based on new technologies make existing products or services obsolete (Kumar & Thirumoorthi, 2019). The incursion of ICT has generated an evident transformation in relation to consumer behavior. In other words, the current commercial scenario suggests that: "a new consumer who is more informed than before, where thanks to the presence of the internet and social networks, has access to a variety of options, in regard to products that he/she might want to acquire" (Millat, 2011, p. 628) and in this way, the options can influence the purchase decision (Rinaldi & Garmendia, 2015).

Based on the above, the increase in the use of ICT means that both companies and people make most of the decisions within a digital environment; because at present it is very common to execute a series of activities, either through web pages or mobile applications, for example, from the acquisition of clothes to the opening of a bank account. However, despite the enormous facilities provided by ICT, it is important to take into account that, sometimes, the user can make wrong decisions due to the excess of available information that can be easily ignored or not paid attention to (Weinmann et al., 2016).

The increase in relation to the number of e-commerce users is becoming more and more significant, which is why the increase in people who require products from anywhere in the world, at any time of the day, and with complete product information to consume is growing day after day, which means a paradigm shift in terms of the commercial management for most organizations (Salvi, 2014). With the onset of the digital era, both companies and consumers are forced to adapt to this scenario; In this sense, for the specific case of companies, it is necessary that they develop short-term activities that allow them to consolidate their performance in the market in which they

compete. Based on this, one of the main actions to be developed focuses on planning their commercial activities more effectively, that is, making the most of the availability of these new technologies, expanding as far as possible the range of products they offer and ensuring the loyalty and trust of their clients (Coloma & Martín, 2014).

The new digital consumers have developed new routines within the purchasing process, an aspect that has been achieved, particularly due to the progress made in relation to the newly available applications accompanied by communicational development, which has made it possible to understand, in some way, the behavior of the new consumer, due to the fact that he/she is exposed to a continuous, abrupt and quick transformation process (Bárcena et al., 2016). This constant change is generated because the user is connected to the web 24 hours a day and this causes a disturbance in their way of acting because he/she is bombarded with an infinity of information and promotions that many times ends influencing their purchase decision (Alvear, 2017).

At present, ICT have gained a significant role in different areas, since it has become part of the daily life of most human beings, where their use is immersed in the different activities that are developed day after day. In addition to this, today, the consumer is making purchasing decisions in a participatory digital culture. The old consumer behavior no longer fits within this digital age. This leads to an important conclusion; ICT is immersed in almost all phases of consumer decision-making. On this basis, there are several factors that influence this behavior and it becomes very important for a seller to understand consumer preferences, his/her online purchase intentions, and his/her behavior towards a certain brand, service, company, or institution.

Today's consumers are permanently connected, have high decision-making power, greater choice alternatives, and require extensive information, this situation forces different organizations to adapt to this new context through the paradigm shift in relation to their management or the rethinking of actions that allow permanent interaction with users; that is, direct their efforts to grant ease of purchase to customers who are more demanding with each passing day because, as has been seen throughout this study, they present a different culture in relation to the purchase and acquisition of products where technology plays a fundamental role for the achievement of said action.

Finally, the new commercial scenario proposes the substitution of physical currency for electronic transactions with the support of smart cards, allowing companies to offer an additional plus in the commercialization process that in recent years is seen in a good way by customers, who at the time of making their purchases, seek comfort and above all other things. In addition to this, this study is left open to the academic community to continue investigating the consumer behavior variable in the public context, because, today, the emergence of new digital platforms has represented a change in social behavior. To such a degree that some public institutions have had to adapt to this technological revolution, obtaining good results in the processes of attention to citizens and a vision of consumer behavior as an opportunity for innovation.

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