

Technology and its Role in the Generation of the Value Proposal

Luis Enrique David Tenorio¹, Alexis Rojas Ospina², Luz Karina García Contreras³

¹*Master's Degree in Marketing, Professor at Escuela Nacional del Deporte, IU Escuela Nacional del Deporte, Carrera 49 A # 12 B 39 Cali – Colombia.*

ORCID 0000-0002-5326-7353

Email: luis.david@endeporte.edu.co

²*Master's Degree in Marketing, Professor at Universidad del Valle, Carrera 3 A # 18 144 casa 4 Jamundí – Colombia.*

ORCID 0000-0003-4803-4915

Email: rojas.alexis@correounivalle.edu.co

³*Masters Degree in Business Administration, Professor at Universidad del Valle, Calle 5 sur #17-25 Buga – Colombia.*

ORCID 0000-0002-3262-6409

Email: karina.garcia@correounivalle.edu.co

ABSTRACT

Objective: This investigation aimed to identify how undertakings involve technology in their operation to increase their relationship with their market. **Method:** a descriptive approach was used and a survey of closed questions was used as an information collection instrument, applied to 200 companies and 367 clients and/or users of the same, for the information processing the statistical software SPSS version 26 was used. **Results and arguments:** Similarities were found between generations regarding the value offer by each of the companies and their preference, being the customer experience in terms of facilitating operations what generations X, Z, and Millennials value most, differing in aspects regarding price between generation X and Millennials and generation Z. **Conclusions:** Technology ceased to be distant both for companies and for users, phenomena such as the restrictive measures taken by governments, impulse in the population an approach to technology and allowed companies to identify the above as an opportunity, having to restructure their proposal of value from the generational need differentiated with technological immersion.

Keywords: communication, company, market, technology.

JEL Classification: M13; L1; O33

INTRODUCTION

Referring to technology as a mediator in the commercial processes of companies leads to remembering the times of confinement based on the restrictive measures of governments, a preventive measure against the massive contagion of COVID 19, it can be affirmed that for a certain type of companies, an opportunity was generated and for others, a calamity, analyzed from the resilient feeling of the entrepreneur and his attitude to face challenges (Guachimposa et al,

2019), some managed to adapt, leading to the incorporation of technological factors, promoters of innovation (Kantis and Angelelli, 2020), an effect that appeared from the same market, which interpreted new ways of relating to their service providers and products, characterized as the new economy (Dans and Allen, 2002), consumers who needed new ways to carry out their commercial actions, turning to a clear opportunity to undertake (Bosma and Kelley, 2018), the foregoing became a transforming determinant of business models, a

vital aspect in business survival (Blasco, 2015), process that the company must understand in search of which one suits its needs and capabilities (Garcés et al, 2017).

The companies defined a new challenge, added to the need to generate income, the function of the previous ones in society is identified as an economic entity on which people and families depend, the primary reason for not stopping their activity, leading to the identification of new products and forms of commercialization of the same, being virtuality an ally, in response to the needs of the market, configuring a way of generating value to it (Castro and Rufino 2015), a construction that starts from the relationship between the company and its market (Osterwalder y Pigneur, 2010).

The independent company cannot be isolated from its size and the incorporation of technology into its business model, taking into account aspects such as the millennial generation and the intensive use of social networks (Helal et al, 2018) configures a new vision of communication, being necessary to identify the technological incorporation and its use in vital aspects such as the relationship with the consumer and the value proposition, a basic aspect in a successful relationship between the two, due to the above, the research focused on the relationship of the use of technology in the value proposition is a topic of great interest today (Giones et al. ,2016).

Theoretical Foundation

Technology and its Use

Technology has become part of human life in each of the activities carried out daily, generating its evolution in favor of generating benefits in areas such as work and business (Moya et al., 2016), identifying as objectives of the same the improvement of the quality of human life (Meshur, 2016), impacting different areas (Gisbert and Esteve, 2016), without leaving aside their contribution to the dynamism of communication, allowing greater immediacy and quantity in less time and at lower cost, as occurs in digital businesses (Del Pino and Romero, 2010),

supported by the constant flow of data between people (Obasany and Soyebó, 2016).

The improper use of a large amount of information available can inconvenience people such as isolation (Normand & Sallafranque-St-Louis, 2016), or the consumption of unreliable or false information (Salmerón et al., 2016), evidencing the large consumption of data, news, or recommendations that it can access, social interaction from social networks (Caton & Chapman, 2016), driven by technologies such as smartphones (Lancioni et al., 2017), generating changes in the consumer around their needs concerning the products or services, at this point companies must adapt their strategies around these new consumer requirements (Cueva et al., 2013), starting from a closer consumer to technology, which takes a more relevant role in their day to day (Relaño, 2011), with more frequent and growing use both locally and globally (Moya et al., 2015).

Among the new needs of this consumer, their constant technological updating is identified (Pérez et al., 2016), causing differences between those who have access to it and those who do not (Arhipova and Sergeeva, 2015), in aspects such as the employability, in companies compared to terms such as competitiveness, technology being a generator of this (Santos, 2018), the incorporation into processes such as commercial and administrative processes and their generation of value, evidence of the above (Quispe et al., 2017), as mentioned above, the information constitutes a business need, in which it must incorporate more tools that facilitate the control and centralization of information, (Calderón and Rodríguez, 2012), storage and processing (Solokolova et al, 2011), an ally in the alignment and development of corporate strategies (Díaz, 2011), generating the best decision-making, without leaving aside the incorporation of hardware such as 3D printers, which allow the printing of a design from a program such as CAD (Moreno et al., 2016), or modeling software virtual reality and technologies around augmented reality (Moreno et al., 2018), the possibilities are endless for the company, making it necessary to analyze its business use.

Companies and Technology

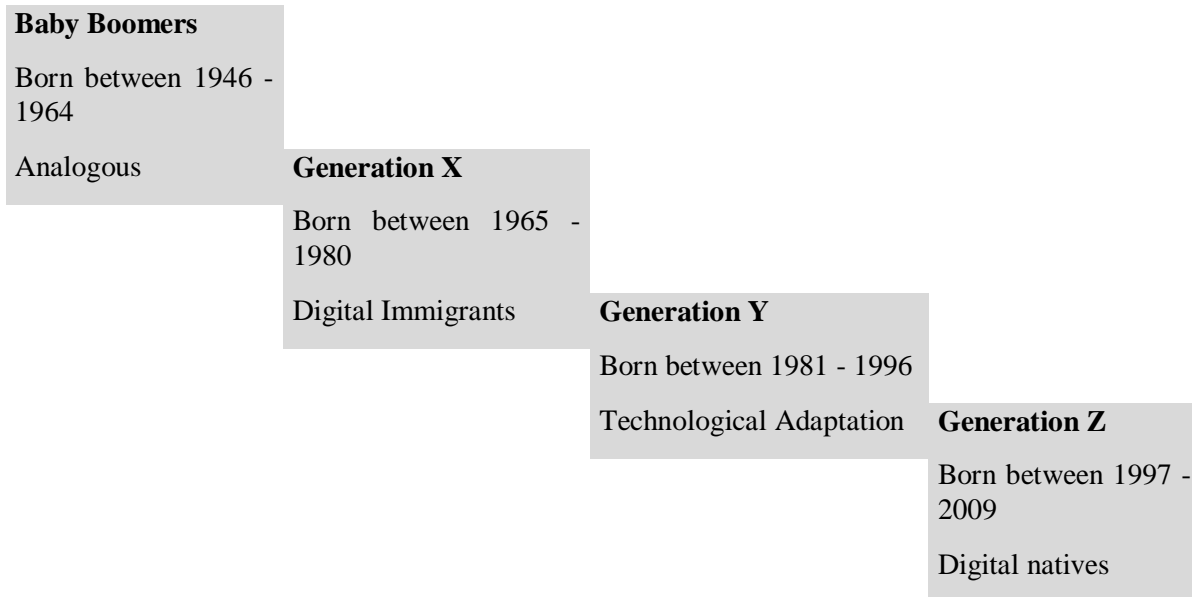
Currently, companies are closer to technology, regardless of their size, they make investments in this aspect thinking about innovation (Todaro and Stirpe, 2017), integrating business processes technologically, and turning the above into determining factors for their growth (Escandón et al, 2017), facilitating the development of competitive advantages around new forms of relationship with the market (Dada and Fogg, 2016), with a correct circulation of information to it (Pita, 2018), which requires new forms of relationship, a phenomenon that is evidenced by the cultural changes in society generated by the

appropriation of technology (Meneu, 2020), allowing a new form of segmentation based on the age of the consumer and other aspects associated with the above, such as its initiation facing the incorporation of technology in their daily work (Castro et al, 2018), transformative aspect of various elements such as attitudes (Vázquez and Duque, 2017), a clear example is evident among millennials (Digital Natives) regarding consumption and spending (Kurz et al, 2019), clearly mediated by the use of technology.

Image 1. It shows how consumers can be segmented based on their age or date of birth and technological insertion.

Image 1.

Generations from Technology



Source: Own elaboration based on (Kotler et al 2021)

The previous panorama shows the need for the company to adapt, starting from understanding its market, and becoming a continuous process in the organization (Bolicci et al, 2016), a clear example is evident in the tourism sector, the previous one was very affected by the restrictions around COVID 19, assuming the need to generate distribution and sales processes from online intermediaries (Stangl et al, 2016), entrepreneurship is not far from the above, aspects

such as the aforementioned converge in opportunities that strengthen it (Zapata et al, 2018), to a certain degree the great incorporation of technology generates dynamism in the market from the generation of wealth, a primary factor for promoting the creation of companies and the diversification of the productive fabric, the result of the development and inclusion of products with great high added value to it (Torrecilla et al, 2018), identifying companies with characteristics linked

to knowledge and its development (Zapata et al, 2019), a contribution that is also reflected in aspects related to innovation (Jensen y Clausen, 2017).

Creation of the Value Proposition

Identifying the market to which the company should address facilitates the structuring of the value proposition that it requires, a process that starts from the definition of its interest groups, a fundamental element for the relationship with its environment, elements linked to the capacity of the achieving its goals (Másip, 2018), bearing in mind the technological incorporation according to the generations and its easy adaptation leads to understanding a new form of communication, changing the way of doing marketing, which is incorporated into the new digital environments (Dorta and Armás, 2019), consumers increasingly informed and demanding, leads to the search for new ways of recognizing and satisfying their needs (González y Araque, 2018), this identification is based on closer communication between the company and its consumers, facilitating a joint creation of value (Camilleri and Neuhofer, 2017), changing its role from only receiver to co-creator of value (Chuang, 2018), companies work together with its consumers, strengthening aspects such as online communication, a process of continuous improvement and co-creation of value (Condi et al, 2018).

Technology, in addition to facilitating business processes, has promoted entrepreneurship, the search to satisfy the needs of consumers converges in people who manage to influence their decision (Soto et al, 2022), the use of technology in processes such as marketing, sales, logistics, and customer service, converge in digital environments, characteristic of 21st-century entrepreneurship, where products with process management according to the product are required (Campo et al, 2019), conjuring up new companies that contribute to the development of the economy, promoting innovation and competitiveness (Morales et al, 2016)

Generations and Value Proposition

Talking about technology and its necessary use in the relationship with the consumer and the generation of value should not go back to the times of restricted mobility, most people currently use smartphones and computers, allowing easier access to information (Taricco, 2020), becoming consumers of technology, exponential growth market, configuring a new vision of the environment and relationships, can be affirmed in the birth of a new culture (Benavidez et al, 2018), from a different form of social interaction mediated by technology, a clear example is the USA, young people between the ages of 18 and 29 spend a minimum of 6.19 hours of their time on social networks (Casey, 2017), compared to an eight-hour workday in countries like Colombia, denotes a large amount of time dedicated to this work, this age range includes the segment of millennials, therefore digital natives and the new workforce, an aspect to take into account facing how we should approach this future consumer (Nawaz, 2020).

Method

Type of Study

According to the problem raised, a theoretical-empirical investigation was used whose type of study is descriptive, where the frequency and the most important characteristics of the problem are described, for this, two important elements were taken into account, which are a sample and an instrument.

Descriptive studies seek to specify the important properties of persons, groups, communities, or any other phenomenon that is subjected to analysis (Dankhe, 1986). They measure or evaluate various aspects, dimensions, or components of the phenomenon or phenomena to be investigated. From a scientific point of view, to describe is to measure. That is, in a descriptive study, a series of questions is selected and each one of them is measured independently, in order to describe what is being investigated.

Research Design

It was an applied investigation that was developed under a non-experimental approach, bearing in mind that no variables were manipulated, and the object of study was observed as it happens in its natural environment for its subsequent analysis.

This research is a cross-descriptive type because the information was taken at a single point in time, that is, a data collection instrument applied once was used and its variables were analyzed according to their characteristics and attributes.

The analysis of the information was done applying a qualitative-quantitative or mixed method since logical-mathematical (quantitative) and logical-semantic (qualitative) operations will be used and it is of an inductive nature, based on it to establish general conclusions from particular premises, from the use of SPSS version 26 software.

Population and Sample

A fundamental part of the research was developed from an infinite population, made up of organizations and/or companies from the city Santiago de Cali and their clients and/or users; As a sample, those that had implemented the use of technology in their business models were

included, additionally, the clients of these organizations and/or companies were investigated.

Bearing in mind that there is no information on how many organizations in the city of Cali have some inclusion of technology in the business model and how many are the clients or users of the same, a non-probabilistic sampling was carried out for convenience and as an instrument a survey of closed questions was used based on (Ansong, & Boateng, 2019) and (Osterwalder and Pigneur, 2010), achieving a sample of 200 companies and 367 clients of the same.

Results

Characterization Participating Undertakings

To achieve a characterization of the undertakings, the classification by (Ansong, & Boateng, 2019) was used, identifying eight business activities, under the previous ones it was visualized as greater participation in the companies under study, the sale of assets that have suffered some transformation with 27% of the total sample. Figure 1 shows the different business activities and their participation.

Figure 1.

Participation by Activities							
Activities related to content development	Asset dealer with limited transformation	Platform that facilitates lease of good	Platform that connects buyers and sellers	Provision of services	Financial services focused on the sale of financial assets with the right to future flows of profits	Sale of intangible assets (licenses, trademarks, or similar)	Sale of assets that have undergone some transformation
5%	21%	1%	16%	21%	3%	7%	27%

Source: Own elaboration from the research results

Characterization of Consumers by Generations

In the same way, a market characterization of each of these undertakings was carried out, for the above the generation scale of (Kotler et al, 2021)

was used, having generation z and millennials as the large group of clients who prefer this type of companies.

Figure 2.

Market Characterization

Baby Boomers (Born between 1946 and 1965)	Generation X (Born between 1965 and 1982)	Generation Z (Born between 1996 and 2012)	Millennials (Born between 1982 and 1996)
1%	12%	45%	43%

Source: Own elaboration from the research results

Value Proposition Identification

Bearing in mind the initial need for the survival of any undertaking to present its market with a value offer that is easy for it to assimilate and generates competitiveness, it was necessary to inquire of the entrepreneurs about which one they believed was

the one they were presenting, the responses to the above focused on the customer. The customer experience focused on facilitating their processes with the company and the experience that they live in contact with it, represents the responses with the greatest participation, Figure 3 shows the above with greater clarity.

Figure 3.

Value Proposal

Access to exclusive content	Connection between communities	Creation of community	Economy in terms of price	Delivering additional value based on its loyalty	Experience for the user or client	Ease to the user or client	Personalization	Possibility of generating income
4%	1%	3%	15%	6%	20%	29%	6%	17%

Source: Own elaboration from the research results

Relationship consumers by generations

The foregoing leads to analyzing how the company manages to generate this experience, the communication with its clients was investigated as an initial step, identifying social networks as the preferred medium for the market, their participation reaches 63% of the sample, followed

by the chats with 23%, means such as personal contact only achieved 9%, telephone calls 3% and the web page 2%, a trend that has been found in recent years, from the above it was sought to identify as was the use of these channels by different generations. Figure 4 shows the means of communication used by each generation.

Figure 4.

Communication by Generations

	Baby Boomers (Born between 1946 and 1965)	Generation X (Born between 1965 and 1982)	Generation Z (Born between 1996 and 2012)	Millennials (Born between 1982 and 1996)
Social Networks	100%	42%	71%	60%
Chats		8%	25%	26%
Personal Contact		17%	4%	12%
Web Page		17%		0%
Phone Calls		16%		2%

Source: Own elaboration from the research results

Needs vs. Value Proposition

Finally, it was necessary to identify how this value proposition was accepted by each of the generations, in this regard the market was consulted about how it perceived the value

proposition based on its preference, the above is valid to clarify that each generation has a different perspective, a necessary aspect that each entrepreneur identifies to have a successful approach to it. Figure 5 shows the differences between generations.

Figure 5.

Acceptance of the Value Proposition by Generations

	Baby Boomers (Born between 1946 and 1965)	Generation X (Born between 1965 and 1982)	Generation Z (Born between 1996 and 2012)	Millennials (Born between 1982 and 1996)
Access to exclusive content			7%	2%
Connection between communities	100%			
Creation of community			4%	3%
Economy in terms of price		25%	9%	19%

Delivering additional value based on its loyalty	9%	5%	7%
Experience for the user or client	25%	16%	23%
Ease to the user or client	33%	33%	23%
Personalization		4%	9%
Possibility of generating income	8%	22%	14%

Source: Own elaboration from the research results

Bearing in mind the large presence of generation Z and millennials in the market, it is necessary to understand what the most important thing for the previous ones was, identifying the ease of interaction with the company as the one with the highest participation, the above due to the great penetration of the technology that is presented in the previous ones, differentiating itself from generation X that values the economy in terms of price.

Arguments

Entrepreneurship is configured through the response to a market need, therefore there will always be a need to investigate and learn about it (Soto et al, 2022), affirming that the irruption of technology in daily life generated changes in the market, cannot be considered far from reality, in this aspect we are facing new generations with different attitudes and ways of thinking about consumption (Pita, 2018), challenge that companies have in mind in the generation of new offers to them, the above was reflected in the need for a value proposition between generations such as baby boomers (analog) and millennials (digital natives) (Másip, 2018), these the latter are focused more on aspects such as experience in the commercial process, differing from the former that they only found it as a means of communication between the community.

Communication is an aspect of great importance today, structuring a value proposition is not the responsibility of the company only, consumers participate in it as creators of it (Camilleri and Neuhofer, 2017), needing to communicate more closely with them, technology becomes a key

element for the above (Escandón, 2017), the use of tools such as social networks and their preference for all generations, constitutes a determining factor for incorporating technology in processes around the value proposal.

Referring to the value proposition leads to identifying what the person can value at the time of deciding on a product or service, identifying in the previous one a solution according to this, as each human being is different, their perception around the value proposition is the same (González and Araque, 2018), the above analyzed from the generations and their technological immersion leads to understanding how the most contemporary generations focus on aspects of experience (Dorta and Armás, 2019), a starting point for the development of new products or forms of promotion.

Entrepreneurs identify the above as a way to create value, presenting it as their offer, however, aspects such as economy in terms of price continue to be presented, a negative aspect compared to the real competitiveness that an undertaking must have when it enters the market (Campo et al, 2019), which may be undermined by companies with a higher position or with a greater presence in it, making it necessary to focus on aspects beyond the price of the product or service.

The generation of companies from the incorporation of technology was carried out (Ansong and Boateng, 2019), in which a great concentration was identified in the provision of services and the sale of assets that have undergone some transformation, showing a vocation of companies towards commercialization and service is an interesting factor to analyze by region or

against the total participation of the economic sectors in total, allowing to identify business vocations that are transferred or complemented with technology.

Conclusions

The value proposition is based on the real need that the consumer has for the product or service provided, the above leads the company to create processes to facilitate communication, currently, this must be two-way with the consumer, he listens to the company and the company listens to it, the use of technological platforms focused on generating participation becomes a primary factor in the construction of value.

The incorporation of new ways of seeing and analyzing the market leads to identifying new ways of segmenting it, aspects associated with attitude and technological rapport, leading companies to begin to understand the customer more, and in this way, they can generate pleasant experiences in terms of communication or sales, according to the real needs of each segment.

Entrepreneurship is a process that involves identifying an unsatisfied need in the market and from the previous generating a product or service, leading to the creation of a company and its entry into the market, which in most cases is very competitive, with companies already positioned among consumers or with large participation in their purchases, generating the need in the entrepreneur to find an advantage that facilitates their survival, the bet focuses on the creation of a value proposition according to their market, being technology a determining factor for the construction of the same from generating aspects highly valued by the consumer, such as the experience or the ease in the processes, having the incorporation of technology as an ally in this sense.

Currently, Market segmentation requires focusing on the customer and their attitudes, the need for a better experience, and greater contact with the company, which leads to a closer consumer that we can identify beyond general aspects, as observed in the research, the use of generations made it possible to identify market segments

based on the involvement of technology, generating differences and approximations based on the previous item.

Therefore, companies must understand that they must work on the construction of the value proposition based on the needs of the consumer, generational differences lead to understanding that each one has a different need regarding the product or service offered, an aspect that the company must analyze and be able to deliver differentiated value offers based on understanding the use of technology for each new segment identified.

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