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TITLE

“Development of a Customer Relationship Management (CRM) model for productivity optimization and sales increase applied to the company UCEM S.A.”

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Cuenca – Ecuador

2021 - 2022

Dedication

I dedicate this article to my grandparents José Ortega and Jaime Gomescoello, who have been my inspiration and strength to keep moving forward. Their memory, which is always present, will be the example that will be with me throughout my life.

To my father, José Ortega, my mother, Tatiana Gomescoello and my brother, Francisco Ortega, who are the fundamental pillars in my life and have always given me the unconditional support and love to obtain the motivation that has helped me to achieve all my goals.

Acknowledgments

I sincerely thank my tutor, María Inés Acosta, for her vocation as a teacher and above all for her amazing personality. A true inspiration for the academic community.

I also thank the Universidad del Azuay and its authorities for having given me their support during this process in my academic and personal formation.

Finally, I thank my friends for all the experiences shared during these four years; undoubtedly, exceptional people who leave me with fond memories.

Table of contents

Dedication	ii
Acknowledgments	iii
Table of contents	iv
Table of figures	v
Abstract	vi
Resumen	vii
1. Introduction	1
1.1 Objectives.....	1
1.2 Theoretical framework	1
2. Literature review.....	4
3. Methodology	7
4. Results	9
4.1 Interview with the national marketing manager	18
4.2 Interview with the commercial manager.....	19
4.3 Interview with the purchasing and logistics manager.....	19
5. Discussion.....	20
6. Conclusion.....	20
7. References	21

Table of figures

Figure 1 Online shopping in Ecuador before and after the Covid-19 outbreak.....	2
Figure 2 CRM model structuring	4
Figure 3 Adaptation of Gorschek's methodology	8
Figure 4 Age range	10
Figure 5 Gender.....	10
Figure 6 Educational level	11
Figure 7 Relationship that participants have with UCEM S.A.....	11
Figure 8 Knowledge about Customer Relationship Management (CRM).....	12
Figure 9 Consideration of the importance of customer service management.....	12
Figure 10 Importance of the customer's shopping experience in establishing trust and brand loyalty	13
Figure 11 Promotion of teleworking and productivity of the company during confinement	13
Figure 12 Technological development of UCEM S.A. before, during and after the pandemic	14
Figure 13 Use of social networks, mobile applications and virtual platforms in the commercial relationship with the client	14
Figure 14 Opinion on the digitization of business processes for customer communication	15
Figure 15 Relevance of electronic sales channels in the commercial relationship with the customer	15
Figure 16 Opinion on the impact of electronic channels on increasing sales and productivity in the long term.....	16
Figure 17 Consideration of the quality of training of UCEM S.A. personnel in the use of electronic tools	16
Figure 18 Customer perception of the implementation of virtual channels	17
Figure 19 Opinion on the importance of implementing the CRM model in UCEM S.A....	17
Figure 20 Consideration of the contribution of the CRM model in terms of productivity, efficiency and company reputation.....	18

“Development of a Customer Relationship Management (CRM) model for productivity optimization and sales increase applied to the company UCEM S.A.”

Abstract

The COVID 19 pandemic has demonstrated the resilience of human beings and their capacity to search ways to develop their daily activities in a different way, especially through digital resources. However, the use of these tools has been stimulated, due to generational changes as well as changes in consumer habits. New generations are developing in a world where immediacy, convenience and digital communication have become commonplace and necessary. In the business environment, these factors are decisive for the competitiveness of their products in a market. This article analyzes the use of the Customer Relationship Management (CRM) model from a digital approach, as an integrative tool in terms of speed, personalization, interest, attraction, commitment and communication with the customer. For this purpose, the case of Unión Cementera Nacional UCEM S.A. is presented. This cement company, whose technological development is still in process -due to the factors mentioned above-, has had to optimize certain areas such as customer service by digital methods. This is the reason why the adoption of the CRM model is proposed considering certain factors and analyzing similar cases to identify how viable this project is.

Key words

CRM, COVID 19, consumer habits, generational changes, digitalization

“Desarrollo de un modelo de Customer Relationship Management (CRM) para la optimización en la productividad y el incremento de las ventas aplicado a la empresa UCEM S.A.”

Resumen

En un contexto actual, la pandemia por COVID 19 ha puesto en evidencia la capacidad de resiliencia del ser humano y su búsqueda de medios para desarrollar sus actividades cotidianas de una manera distinta, sobre todo por medios digitales. No obstante, el uso de estos medios sólo se ha estimulado, ya que, gracias a los cambios generacionales y los cambios en el hábito del consumidor, las nuevas generaciones se desarrollan en un mundo donde la inmediatez, la comodidad o la comunicación digital llegan a ser algo común e incluso necesario. En el ámbito empresarial, estos factores son determinantes para la competitividad de sus productos en un mercado. Este artículo, analiza el uso del modelo Customer Relationship Management (CRM) desde un enfoque digital, como una herramienta integradora en cuanto a la rapidez, la personalización, el interés, la atracción, el compromiso y la comunicación con el cliente. Para ello se expone el caso de la Unión Cementera Nacional UCEM S.A., que es una compañía cementera cuyo desarrollo tecnológico se mantienen en proceso, y debido a los factores antes mencionados, ha tenido que optimizar ciertas áreas como el servicio al cliente por medios digitales, es por ello que se propone la adopción del modelo CRM considerando ciertos factores y además se analizan casos similares para conocer qué tan viable es esta propuesta.

Palabras clave

CRM, COVID 19, hábitos del consumidor, cambios generacionales, digitalización

1. Introduction

The COVID 19 pandemic has been a problem that has undoubtedly paralyzed the world economy, having its greatest impact in the year 2020. Among its multiple effects, unemployment has undoubtedly increased, international trade has been affected, and the world has had to adapt to a new reality, in which technological and digital media have played a leading role. Ecuador has not been the exception, since new technologies have been the means for the reactivation of the labor sector, education, business productivity, and the economy in general (Haro-Sarango, 2021). Not only the context of the pandemic should be taken into account, but also the generational transition of recent years, since has driven the evolution of digital media such as mobile applications, digital communication platforms, and social networks in general (Stein et al., 2016). In addition, digital strategies such as digital marketing or electronic sales channels, have been the engines for companies to maintain their productivity, increase sales and even low costs (Villacis, 2021).

Although this digital evolution continues in parallel with human life, it is necessary to understand the dynamics in terms of the interaction that exists between companies with customers, taking into account the current context with the pandemic, as well as consumer habits based on their adaptation to new generations. For these reasons, probably these tools besides have helped the Ecuadorian economy during the pandemic, have come to stay and be implemented more efficiently in future companies in the country, so it is necessary to reflect on future projections in terms of business evolution in a world focus on the digitalization of business processes.

In this sense, we can talk about a digital economy, which gives way to great opportunities to counteract the crisis produced by the pandemic and not stagnate in a globalized world (Mejía et al., 2020). We can consider it appropriate to understand how the use of digital tools is of utmost importance, which we want to demonstrate through the case study proposed in this article, and the importance of the evolution of a digital economy in Ecuador taking into account an uncertain future in a context of pandemic and changes in terms of interaction with people, workers, and customers, along with the implementation of digital strategies that ensure an adequate and constant approach with the public and especially with consumers who have interest in a particular product, as this can be decisive in labor sustainability and economic reactivation.

The following article aims to demonstrate the importance of the application of a CRM (Customer Relationship Management) model based on the determining factors of the economy in the current context, such as the COVID 19 pandemic, the generational transition, and the digitalization of business processes, thus showing an improvement in terms of customer management, taking as a case for the proposed implementation of this model the Ecuadorian company "Unión Cementera Nacional (UCEM S.A.)". Also, through this investigation people could reflect, so that our future decisions will be mostly accurate, reinventing business strategies to keep us on the sidelines in the face of future demands (Rodríguez et al., 2020).

1.1 Objectives

To develop a Customer Relationship Management (CRM) model to promote productivity and increase sales at UCEM S.A.

- a) To analyze the "CRM" model
- b) To determine the technological, economic, and commercial development of UCEM S.A.
- c) To propose the development of a "CRM" model in UCEM S.A.

1.2 Theoretical framework

The management of the pandemic has led to a simultaneous social, environmental and economic crisis. Consumption has been reduced, and countries dependent on raw materials such as Ecuador have been harmed due to the fall in the prices of their main exported products, making them less competitive (Oyarvide-Ramírez et al., 2021). The turning point was in 2020, due to low production. It is estimated that this decrease was 3.8% with a loss of 335,413 commercial employments, and about USD 24.500 billion (Cañarte et al., 2021). In fact, the largest decrease in the Human Development Index (HDI) is projected since 2008 (Oyarvide-Ramírez et al., 2021).

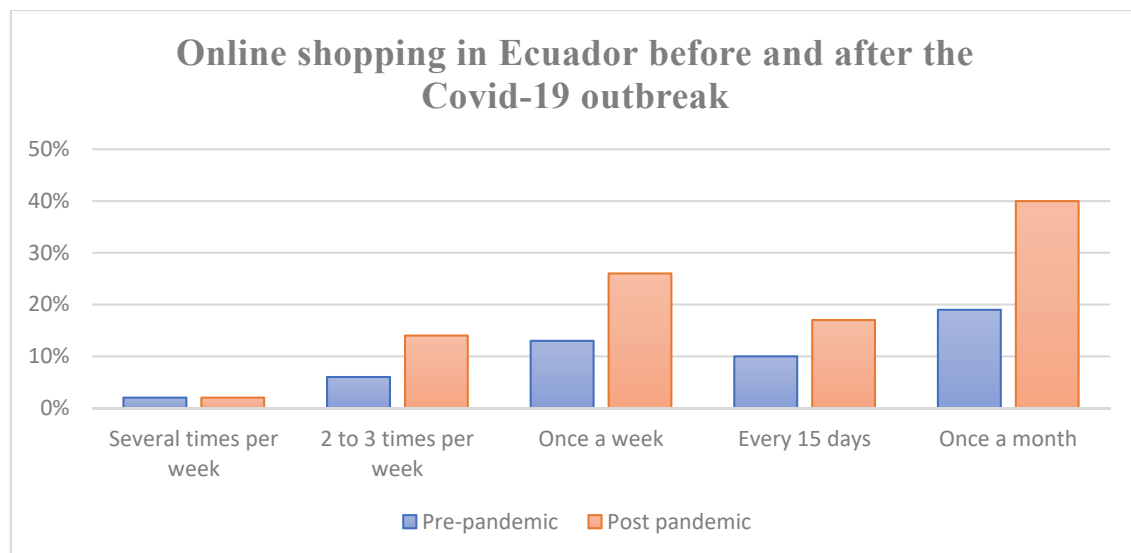
Now, if the pandemic has caused a global economic crisis, it has also marked a dynamism in competitiveness to reach the customer, especially in a globalized era where web traffic, electronic channels, consumer profiling, and digital marketing are the fundamental pillars to transmit information to the

customer and improve their perception of a company (Marín & Gómez, 2022). Likewise, despite the restrictions that affected business productivity, e-commerce played a crucial role for companies. In the Ecuadorian context, a clear example has been companies such as Pacari, Pintulac, and Deprati, since they opted for virtual modalities as sales and teleworking strategies to maintain productivity (Vera-Ruiz et al., 2021).

The future of Ecuador generates uncertainty in long-term economic matters, so seeking economic stability in the coming years is latent, especially in strategic production sectors such as industry. A great resource is the "Reactivate Ecuador" program promoted by the law of humanitarian support, which provides economic facilities to these companies for investment (Huilca & Baño, 2021). In this sense, reinventing oneself as a company is the best alternative, regarding innovation as the main link, since it is an opportunity that opens up possibilities for development.

To mention an example, e-commerce has come to facilitate the purchase and sale of goods and services globally, however, the Ecuadorian culture is still in a process of adaptation due to distrust and possible lack of knowledge in some cases. During the pandemic, the consumption of goods and services through digital platforms has increased (Oyarvide-Ramírez et al., 2021).

Figure 1 Online shopping in Ecuador before and after the Covid-19 outbreak



Source: Based on CECE, 2020

In the same way, the purchase channels have been tools to generate "engagement", since they facilitate direct contact due to the automatization of processes, giving greater convenience to the user (Zambrano et al., 2021). The resilience of human beings to a digitalized era should be highlighted (Álvarez & Biurrún, 2022).

For these reasons, it is imperative that companies maintain on focus on digitalization, since it speeds up the growth processes in the market, the advance against the competition by reducing the gaps in both demand and supply, and reduces costs in intermediaries in the distribution chain (Rodríguez et al., 2020). This long-term process redirects the different productive axes of a company. In Ecuador, this has been the case from MSMEs to large industries and also in other economic areas such as education or health (Villacis, 2021).

From another perspective, although the pandemic crisis has driven the reinvention of the business model of many companies towards digitalization, it is also important to take into account the change in consumer habits. This entails a modification in sales channels, logistics, transactions, knowledge development, and socialization both within the company and customers (Scutariu et al., 2022). This is because consumers tend to be mostly connected through social networks, because this generates engagement with broader segments, since today even older people use digital media (Fernández De Bordóns & Niño González, 2021). E-commerce has increased during the pandemic as seen above, and consumer behavior may continue to change, which is why investment in digital advertising and communication is essential (Cruz et al., 2021).

Generally, large companies prefer to have a close relationship with customers to build loyalty. Based on experts, the value created with the customer is the basis for generating value in different pillars of the company, that is, the interaction with the customer creates value, since the work is mostly personalized and bidirectional, in other words, the digital consumer experience is improved (Mawson, 2018). Likewise, loyalty is created through constant communication (Rodríguez-Peña & Gamboa-Salinas, 2021).

Under these characteristics, it can be said that the perception of the company from the consumer is paramount, as it helps it to last over time. Offering the best experience either remotely or physically helps to generate a new purchase intention in the consumer (Forero-Casas et al., 2021).

At the same time, it helps with a better insertion in the market. In fact, according to Cedeño & Real (2020), to generate greater competitiveness, three fundamental elements must be optimized: customer outreach, operational efficiency, and service quality. Understanding consumer needs and adapting to them will pave the path to success. Digital demands are growing in parallel with technological development and the pandemic, as mentioned above, has enhanced this process (Bajdor, 2021).

Also, companies develop at the margin of technological evolution and events that modify the daily life of people such as the pandemic. In this sense, when adapting to certain conditions, some factors must be considered when promoting electronic sales channels, such as the age of people, the perceived risk of doing business electronically, market segmentation, investment, among others (Arce-Urriza & Cebollada-Calvo, 2011).

However, we must consider that this change in consumer habits is influenced by another important factor that has to do with generational changes. For example, millennials have developed trends where speed and convenience are fundamental when opting for a product or service, and this trend, in a cultural context, is adopted even by people of different ages, ethnicities, and cultures.

The new generations can be considered digital natives since they have very early access to digital interaction devices and media. This in turn has generated a habit of immediacy, due to the convenience that digitalization has provided them, therefore, the demand is tough (Stein et al., 2016). It should be understood that the user's purchase decision has changed, assuming the need to seek means that adapt to customer demands. In this sense, the operation of the Internet is taken into account to redirect the company's promotional plan, the electronic sales channels, and the monitoring of customer satisfaction through the fulfillment of certain important elements such as consumer interests, percentage of a product purchase, number of visits, among other metrics (Zemborain, 2020).

In the same way, the digital promotion chain has revolutionized the traditional methods of disseminating novel products among the public. To do this, it is better to be noticed and provide information to customers to create loyalty. Service must be sold, but it has to provide user convenience, time savings, and obviously satisfaction (Ferrándiz et al., 2010). On the other hand, although technology has evolved the contact with the customer, it should be noted that traditional media are complementary to digital media, so they should also be taken into consideration. However, the use of the Internet and digital tools should be taken advantage of; by establishing the target segment to be precise with sales channels that contribute to these objectives (Zemborain, 2020).

Based on the above information, one of the tools that allows the convergence of the various factors mentioned previously is the digitalization of business processes in the context of pandemic and generational changes, as well as the evolution in marketing or the approach to the customer by digital media, is the Customer Relationship Management (CRM) model, which will be detailed below but not before outlining a brief conceptualization based on the criteria of different authors.

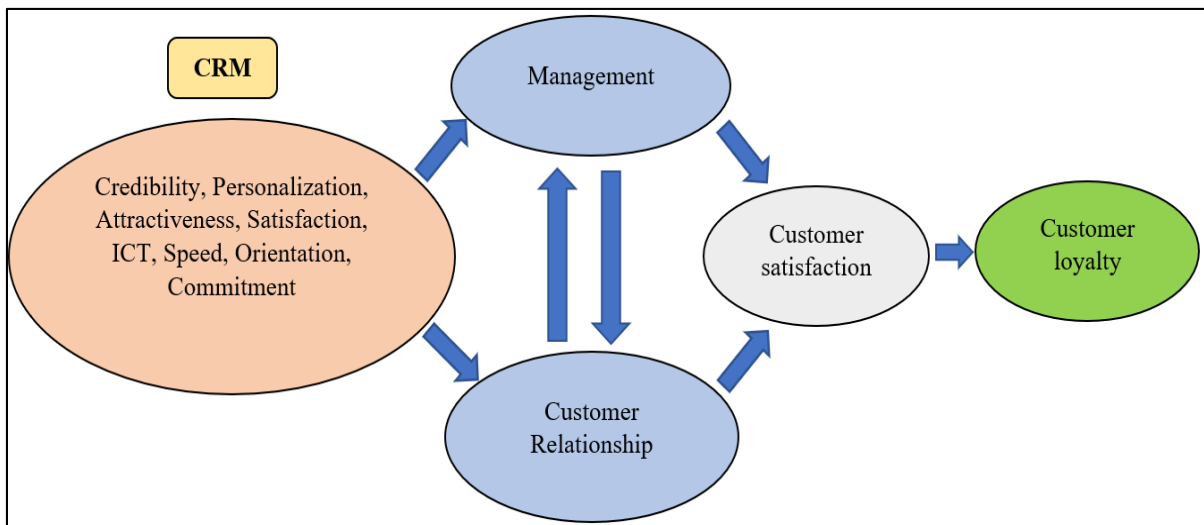
CRM is a tool that aims to increase the benefits of a company, not only by increasing sales but also by reducing costs through the implementation of digital resources to improve the approach with the customer. That is, it seeks to satisfy needs, regarding the customer as the priority of the company (Moser, 2021). In addition, the customer experience is improved, taking into account factors such as security, functionality, and regulation (Fatouretchi, 2019).

Regarding the evolution of CRM, some authors state that this tool emerged in the 80s, to optimize the relationships between a company and customers (Shaon & Rahman, 2015). On the other hand, according to Guerola-Navarro et al., (2021), its origin dates back to the 70s. Anyway, currently this tool, through technology, studies the purchasing behavior, satisfaction, and socialization of the consumer to create value (Shaon & Rahman, 2015).

Continuing with some definitions, CRM is also considered a multifunctional strategy, developed from marketing, which can maximize business relationships between institutions and customers. It optimizes communication, collects data, and improves the distribution chain as well as the supplier's one (Chen & Popovich, 2003). In this sense, the emergence of CRM, through marketing, has led to innovation, differentiation, and maximization of brand value (Sicilia, 2019).

In this way, CRM contributes to interaction by the automatization of business processes and understanding the behavior of each consumer (Anshari et al., 2019). In other words, it contributes to differentiating customers and being able to interact differently with each one of them (Kumar & Reinartz, 2018). Therefore, the value of the customer increases, either because he/she becomes loyal to the brand and has a new purchase intention or even because the costs of attention decrease. However, the fact that there are new work processes requires the adaptation of both the company's personnel and the consumer. This is how the company's know-how is developed at a general level (Renart & Parés, 2004).

Figure 2 CRM model structuring



Source: Based on Shaon & Rahman, 2015

2. Literature review

Based on different research on the application of the CRM model, the following are different cases of the application of this model in companies and their correct development taking into account the automatization and digitalization of business processes in areas such as marketing, sales, customer contact, among others.

As mentioned above, the CRM model can increase the value of stakeholders through an appropriate relationship with the target segment. On the other hand, this model involves the use of technology for the optimization of the company and for the contact between the customer and the salesperson, making it a resource of utmost importance (Chatterjee et al., 2021). In fact, Agudelo et al., (2013), consider that, in the absence of investment in technology, customer data do not have the proper organization for good monitoring and adaptation to the new demands of consumers.

On the other hand, there are other important factors that affect the development of this model. For example, the behavior and mentality of the consumer, since the fit between the company and its target can influence the effectiveness of CRM. According to Yucel-Aybat & Hsieh (2021), management and advertising through the CRM model imply a higher repurchase intention by the user compared to campaigns that do not yet apply this model. In addition, consumer attention can be obtained not only by satisfying their needs but also by generating an indirect impact on other aspects, for example, in the social cause. This works because it appeals to people's feelings as they have the perception that the company from which they purchase a product or service helps a cause outside its main objective.

It is necessary to take into account that this whole process takes a series of steps, which must be updated from time to time. Adapting to new trends can be a defense technique for any company. It should be noted that nowadays SMEs are considered excellent mediators or examples of drivers of CRM-related techniques since they manage to understand the consumer and his behavior (Ebrahimi et al., 2021). According to this,

we must add the support of companies in "social media", since connectivity with the user can be boosted, creating value and business sustainability (Harrigan et al., 2015). Indeed, social networks, being one of the most popular tools of communication for people, have also been one of the main advertising channels for companies. This facilitates communication and feedback exchange between customers and the company generating greater ease of insertion in a given market, besides lowering costs for companies (Guha et al., 2018). However, the more elements the model integrates the more beneficial it is, for example, in Malaysia, SMEs have opted for the development of a CRM model, because their perception is that of a holistic integration model, based on factors such as technology, organization, and production processes (Ahani et al., 2017).

Next, it is possible to review some cases in which the CRM model has been applied considering various factors, obviously, depending on each company.

In a case applied to the telecommunications industry in Indonesia, the CRM model is positioned as an integrative tool between marketing, sales, customer service, and technology. The company "Telkom Indonesia", to know the viability of the model, was based on four important factors, starting with the strategy as a means to build customer loyalty and the analytical component, which seeks to process customer information to customize their service. In the same way the operational component, which focuses on process automation and finally the collaborative component, which focuses on creating value by optimizing the relationship between the company, employees and the customer. Also, for the execution of this model, analyses were performed using a management service known as ITIL and a business management process known as eTOMS, which are computer systems for business development, obtaining feedback to optimize priority operational areas to improve the competitiveness and positioning of the company (Saptura et al., 2019).

In another example, two companies were analyzed through 19 employees, considering the application of this model to personnel from different areas and hierarchies to know their perception, decision, and conception of CRM systems regarding the optimization of weak areas, where these instruments can improve the performance of the company. Now, company personnel must understand and develop the knowledge provided by the CRM model, especially in the technological aspect (Chatterjee et al., 2021).

In another scenario, healthcare organizations in Iraq are another good example of CRM adoption, as they understand that, with the evolution of Web 2.0, even traditional CRM models have been transformed to adapt to a new era, which offers greater closeness and intimacy with customers, better customizing queries based on their data and needs. About 70% of businesses in Iraq have focused on adapting their business models based on digitized communication. To achieve this, it is denoted that the adoption of these models encompasses three essential characteristics: the selection of methods, identification of viable networks, and collective support for employee empowerment (Jalal et al., 2019). The application of the CRM model, in this case, had an impact on the improved organization in 90% of the companies, 80% in customer loyalty, 80% in strengthening customer trust, and 70% in increased communication. In addition, this case study showed that 80% of organizations who adopted the CRM model, increased user loyalty and trust (Jalal et al., 2019).

On the other hand, a cloud-based intelligent customer relationship management system (ICRMS) has also been considered to formulate sales and marketing strategies on flexible pricing in the supply chain. The system aims to manage sales and order data on the Internet and even determine the discount price for customers (Udaya et al., 2017). For example, in the Chinese industry, obtaining customer information and storing it in a database using the CRM system has become a competitive factor. This works thanks to the analysis that the system develops by understanding consumer behavior and obtaining information about their purchase intention. This in turn, allows for classifying groups of customers based on their demands and establishing the appropriate strategy or the best-personalized service for each one (Zheng, 2020).

Likewise, the company S-Neat-Kers is a company dedicated to the cleaning and care of shoes, which, despite remaining in development, has been able to align its productivity with the satisfaction of customer needs through the CRM model, reducing costs thanks to remote communication and digitalization of consumer data. This company is based on certainty, improvement, and customer retention. In addition to implementing the CRM model, it optimized marketing through the slogan "we know how to treat your kicks" which gives a plus for the customer to know what kind of service they provide; thus, the idea is to offer what the customer wants, give promotions, maintain contact with preferential information about new services or benefits of the brand. For example, the delivery of already clean shoes (Ayuninggati et al., 2021).

Another interesting case is that of "Garuda Airlines", which is an airline company, to improve service and quality. Therefore, it implemented a website with a section in which customers can request a frequent flyer membership card. In addition to developing mobile apps to encourage continuous communication. The idea of this company is that the customer feels part of the company, generating long-term loyalty, which has an impact on an intention to purchase the company's services again (Pradana et al., 2017).

A resounding success has been that of the Colombian pharmaceutical company Genfar S.A., which implemented a CRM model "Saleslogix", complemented by a mobile application called "Mind SMS" to improve customer service. Its results have been beneficial because its coverage has been 100% in Colombia, in addition to the fact that its orders have been expedited, communication has improved and the supply chain is faster and more efficient due to the increase in demand. Today this pharmaceutical company operates in more countries such as Ecuador, Venezuela, and Peru (Agudelo et al., 2013).

In a closer context, the case of the transportation company "Atrain Microbuses Courier" in the canton of Cuenca is presented, which has established a CRM model based on a correct plan with a trained, monitored, and evaluated team to determine growth in terms of sales. It is established that in the industrial sector it is essential to know customer information to improve service, as well as staff training. In this case, the author proposed a method based on surveys on satisfaction and service quality, analyzed by differentiating between customer expectations and employee performance. The study started by understanding the deficiencies in the company and the most notable was the lack of knowledge of automated processes that streamline the service with users (Torres-Sánchez et al., 2020).

It should be emphasized that during the process of adopting the CRM model the transition to digitalization is important for any company as it requires careful control to avoid any risk. An example of this has been the banks in Namibia, Africa, which have proposed a cautious process of digital transformation where security is the fundamental for the customer experience, considering some factors such as the expertise of those who develop the model, team structure, project management, active participation, communication and leadership (Ochara et al., 2018). In this sense, beyond the factors already mentioned and the importance of the detail that companies should have in every decision made, credibility and satisfaction should be mutual (Pradana et al., 2017).

Now, it is clear that the success of the company is measured in economic and monetary indicators once this model has been applied, however, qualitative indicators such as satisfaction and brand loyalty are equally important. For this, based on what Berraies et al., (2020) establish, known indicators such as employee-customer contact and perception of service quality can be taken. It is also essential to train and empower the employee in decision making so that he/she can improve/her skills and boost the company's performance.

It is important to take into account that, in the end, this process is carried out gradually and may present several obstacles. According to Suoniemi et al., (2021), the CRM model has several operating challenges depending on each company, however, a primary link in most cases, on which companies and the application of the CRM model generally depend, is technology and training processes, to reduce uncertainty in the face of new business strategies. Each time the acquisition of new knowledge and reinvention of strategies help to recognize the value of new information, assimilate it and apply it for business purposes. It should be emphasized that the CRM model is a tool that connects customers, and achieves fruitful relationships, however, to achieve these stable relationships, there must be well-defined objectives (Cao & Tian, 2020).

UCEM S.A. is a multinational cement company, part of the Grupo Gloria S.A. conglomerate, whose objective in Ecuador is to produce and commercialize cement and derivatives, based on a process of continuous improvement for customer satisfaction. In this sense, UCEM S.A. as of 2019, has managed a large direct investment in technology for the development of construction projects.

On the other hand, by 2020, the pandemic has been a driver in their rapid adaptation to digital media. However, although they have tools that aim to better manage with customers, their sales channels have not yet managed to be optimized to the point of managing their sales electronically, which is a latent need because at the same time you can improve the development of advertising campaigns digitally to improve the relationship between the company and the customer. This generates more engagement, value, positioning, and therefore optimizes productivity, advertising and sales of the company.

Now, regarding the CRM model as such, UCEM S.A. has put into consideration the implementation of this model. In fact, several CRM systems have been quoted, however, the cost of these models has been the main limitation to applying them. Similarly, the connectivity of the area is weak, so there were no stable

networks for the company to migrate to a better system such as CRM. For this reason, the operation of the traditional system, as well as the updating of the KPI (Key Performance Indicator) or ERP (Enterprise Resource Planning) system was inefficient and very costly. In fact, upgrading these systems and adopting CRM cost approximately USD 5,000,000.

In the same way, UCEM S.A. has tried to implement new software systems in order to optimize its database, so they have chosen to migrate to systems such as JD Edwards or SAP SE, which are software development companies, however, the aforementioned obstacles have been limiting for these processes. It should also be noted that, within the company's background, an approach was made with the Colombian company Móvil Ventas, which provides services by offering its mobile application as a sales channel for companies. This was done with the objective of having a commercial approach different from the traditional one, however, it has not been achieved.

Currently, independent of tools such as SAP SE, JD Edwards and ERP, the idea is to hire a "trade marketing" service called Involves, which is quoted from Bolivia. It is a Brazilian system with many advantages, since it is an independent software that is fed by the company's sales force and can monitor both the competition and the positioning of UCEM S.A. throughout the supply chain, such as distributors, hardware stores and various points of sale. Involves helps to generate marketing strategies.

It should also be noted that the purchasing and logistics manager manages his own matrix independent of JD Edwards and the other systems mentioned above, that is to say, it has another system, which, although it is not a CRM model as such, according to the KPIs analyzed in his area, stands out for its incredible structuring at a general level and the management of its service. In this way, the supply chain process can be viewed in real time. Moreover, in about a year or two, the same model could be applied in the marketing area and at a general company level. However, it is important to understand what is happening with the distributor, sub-distributor and hardware dealer, in terms of their perception of the company and the service provided by the commercial manager, warehouse manager, plant personnel, etc.

3. Methodology

Taking as a reference the methodology "A Model for Technology Transfer in Practice", proposed by Gorschek et al. (2006), when analyzing a case, cooperation between researchers and practitioners in an industry is essential, since there is an exchange of knowledge, which builds trust. From the researcher's point of view, the proposed project is necessary to have validation and with its application a result, which, from the industry's perspective, contributes to the improvement of the company. This methodology is based on different steps or stages, where the validation of the project will depend on supplying a need of the company.

1) Research schedule based on the company's needs

The needs to be improved are analyzed in order of priority. For this, all personnel must be involved in the project proposed by the researcher.

2) Formulation of the problem

The author establishes that an indispensable factor for the success of the project is to create a close relationship between the researcher and the company, so that the flow of information is easy, fast, and accurate.

3) Formulate a possible solution

A model required by the company to solve a shortcoming in a given area is proposed. The author calls it "RAM" (Requirements Abstraction Model). The objective of the "RAM" is to expose reliable and comparable information from different approaches, based on determining factors of the company so that the possible solution can be viable.

4) Validation Laboratory

Information on how the model works should be shared with the company while the functionality of the model is considered. Through this evaluation, feedback can be obtained, generating greater confidence for the implementation of the project. It is also important to be pragmatic and identify the limitations and points to consider regarding the applicability of the model.

5) Statistical validation

Based on the author, this validation process is carried out through a statistical survey, taking into account the information provided by the company. In the case of UCEM S.A., data from the commercial, sales or marketing areas. The way to collect this information is through the application of surveys and interviews in the aforementioned areas.

6) Dynamic Validation (Pilot Plan)

The execution of this plan generates greater confidence and commitment to the applicability of the proposed model since it maintains constant feedback.

7) Solution release

The results of the validation give way to the execution of the proposed project in case the company considers it necessary. To reach this point, the ideas of possible solutions must be sifted, obviously being realistic and taking into account that the model, although helpful, cannot satisfy all the needs of the target company.

The elaboration of this research, taking as a reference the methodology of Gorschek et al., (2006), is carried out based on the steps proposed by the author applied to the CRM model and its development in the company UCEM S.A. For this, we start by planning the study based on the needs of the company. In this case, we start from information provided by the commercial area of UCEM S.A., in which the need to promote an improvement in customer management was expressed, to optimize the customer experience and thus promote productivity and commercial sustainability of the company.

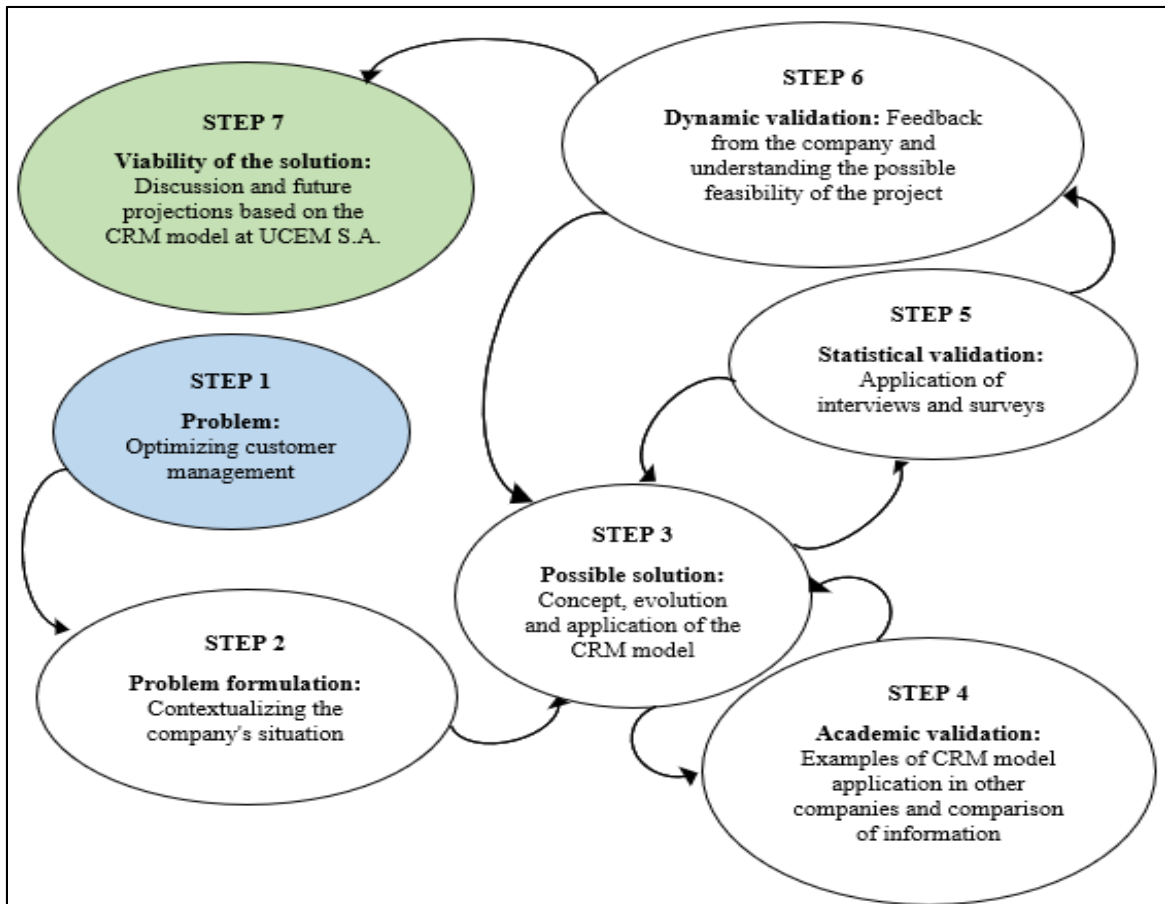
In this sense, we start by contextualizing the company's situation and understanding the problem to be solved, based on factors such as the COVID 19 pandemic and the economic impact and resilience of people, maintaining the approach of a "digitalized economy". Likewise, issues such as generational changes in the face of new trends, such as consumer behavior in general, are taken into account, and then, following the third step, a possible solution is formulated based on the conceptualization of the CRM model as such, as well as its evolution and application.

Subsequently, the validation process in the laboratory is carried out by developing the state of the art of research, in which we take some examples of the application of the CRM model in other companies. In the same way, general data of the company UCEM S.A. is detailed based on information provided by the commercial area of the company, as well as its evolution in terms of technological development before, during, and after the pandemic. Likewise, this information will be analyzed in parallel while obtaining relevant data in the context of analysis, covering topics such as the use of technological tools, electronic sales channels, digital marketing, and the impact of these on business activities.

Referring to the fifth step of the methodology, the statistical validation starts with the application of interviews and surveys in the commercial area of UCEM S.A. involving the entire team of the area, especially the managerial part of it. In this way, it is possible to proceed with a pilot plan, whose objective is to obtain feedback from the company to create credibility and understand the possible viability of the project.

Finally, and taking the seventh step, based on the results and validation of the research, it can be determined whether or not the implementation of the project is feasible, obviously considering the feedback, as well as determining factors such as the analysis of the electronic sales channels of the company from a commercial approach, as well as advertising media and customer outreach based on the marketing that the company manages. Thus, it is possible to generate a discussion and establish future projections towards the optimization of digital tools based on the impact of the CRM model, on the commercial sustainability and economic reactivation in the company UCEM S.A. and thus obtain the conclusions and recommendations of the research.

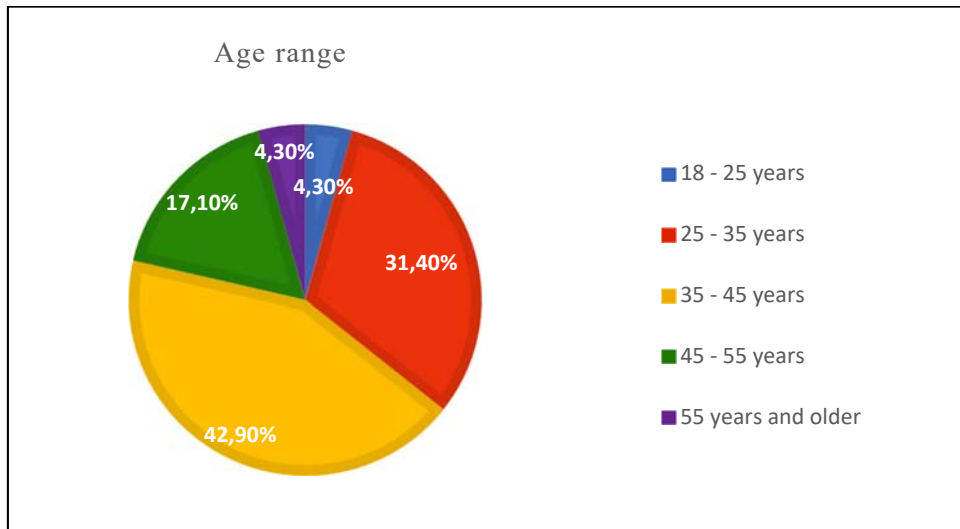
Figure 3 Adaptation of Gorschek's methodology



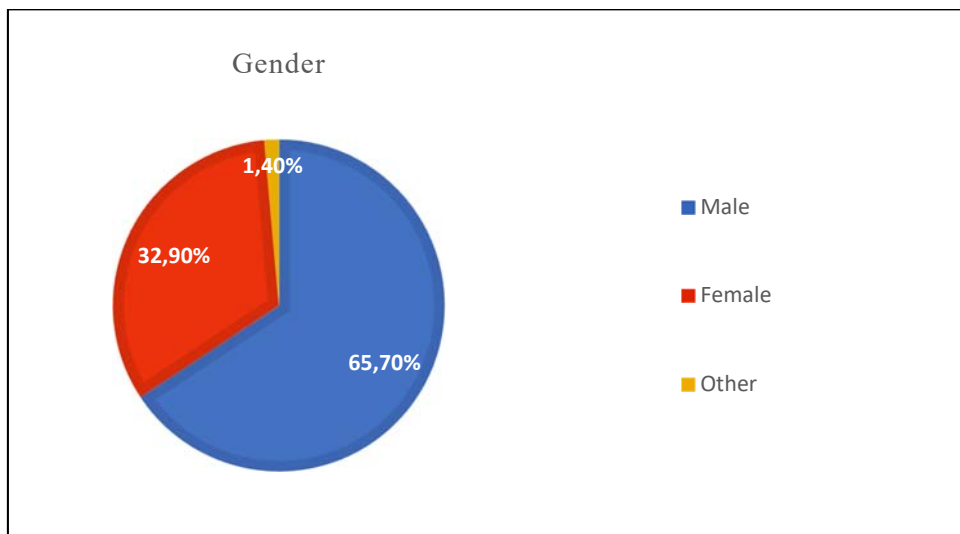
Source: Based on Gorschek, et al, 2006

4. Results

The following is an analysis of the results obtained from the statistical validation carried out by 70 surveys applied to collaborators of the commercial department, clients and regional heads of the headquarters of UCEM S.A. distributed in Quito, Guayaquil, Riobamba, Ambato, Azogues, Loja and Manabí. In the same way, three interviews were applied to Geovanny Arteaga, who is the national head of marketing, Carlos Espada, who holds the position of commercial manager and Christian Noboa, who is the Purchasing and logistics manager.

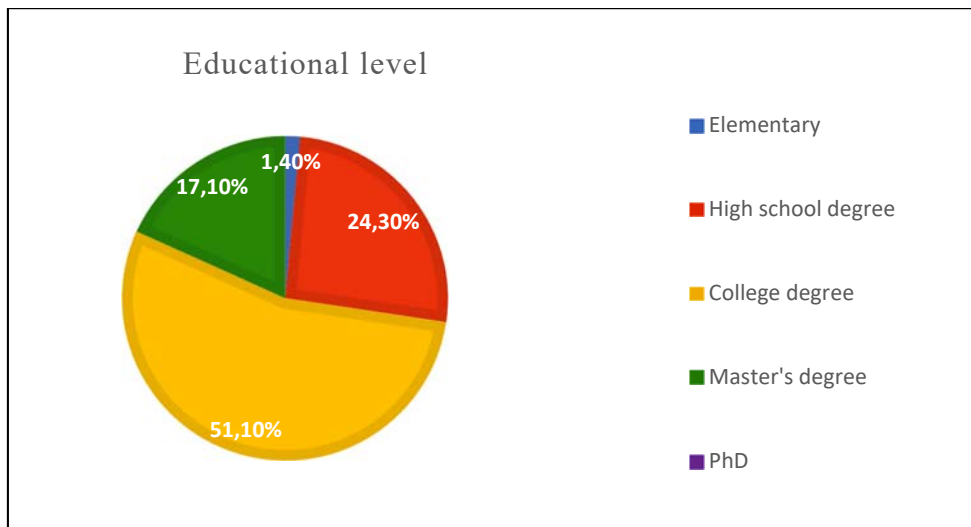
Figure 4 Age range

According to the chart, the most of the participants belong to the age range from 25 to 45 years old; on the other hand, only 4.3% of the population belongs to the range between 18 and 25 years old.

Figure 5 Gender

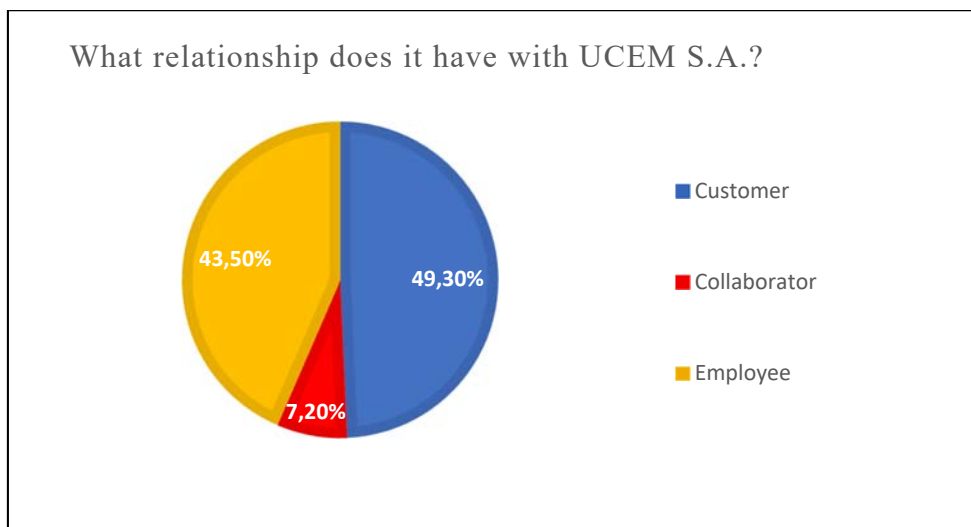
The above chart shows that the majority of participants are men (65.7%), while 32.9% of the population is female, and only 1.4% did not choose any of the above options.

Figure 6 Educational level



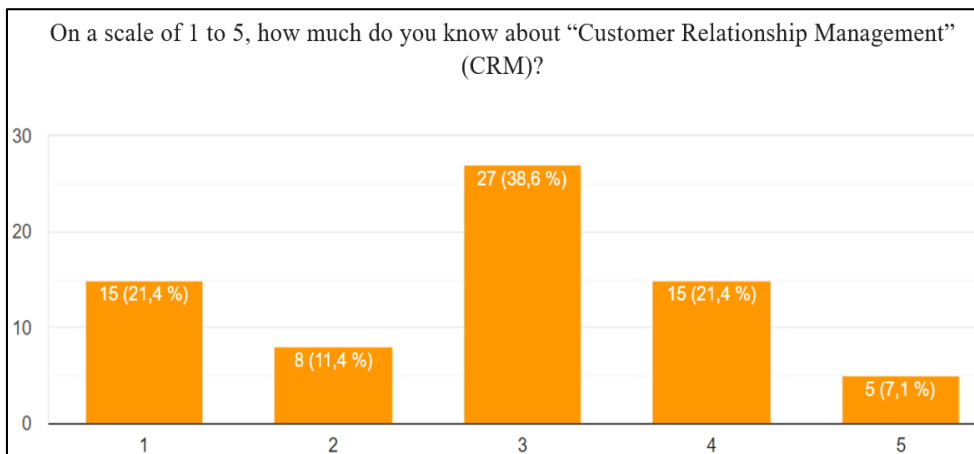
The above chart shows that 57.1% of the population has a college degree, followed by 24.3%, which represents the population with a high school degree. On the other hand, 17.1% have a master's degree, 1.4% have only an elementary education and no one has a PhD.

Figure 7 Relationship that participants have with UCEM S.A.



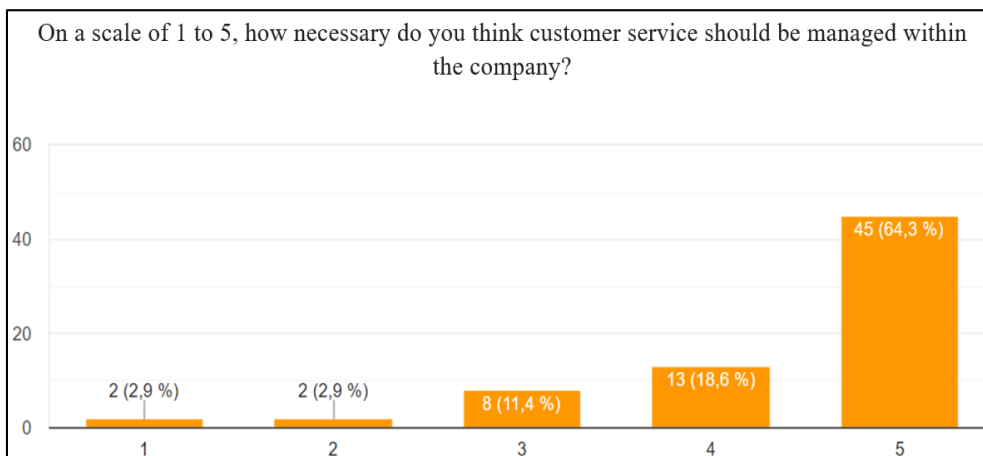
According to the sample, the majority of participants (49.3%) are customers of UCEM S.A., 43.5% work for the company as employees, and 7.2% are company collaborators, that is, distributors, sub-distributors, etc.

Figure 8 Knowledge about Customer Relationship Management (CRM)



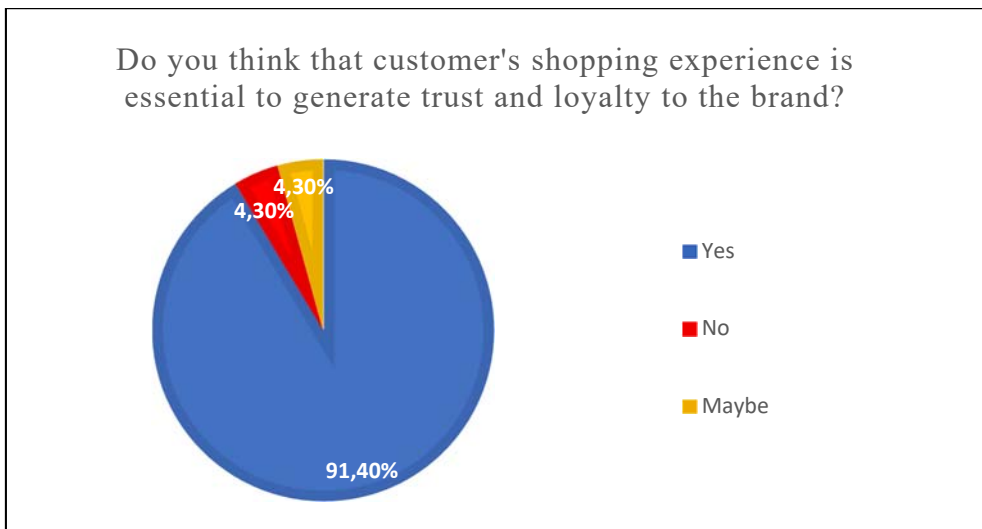
The chart shows that the majority of participants (38.6%) have an average knowledge of the CRM model. On the other hand, 21.4% do not know about the CRM model and only 7.1% know very well what the CRM model is.

Figure 9 Consideration of the importance of customer service management



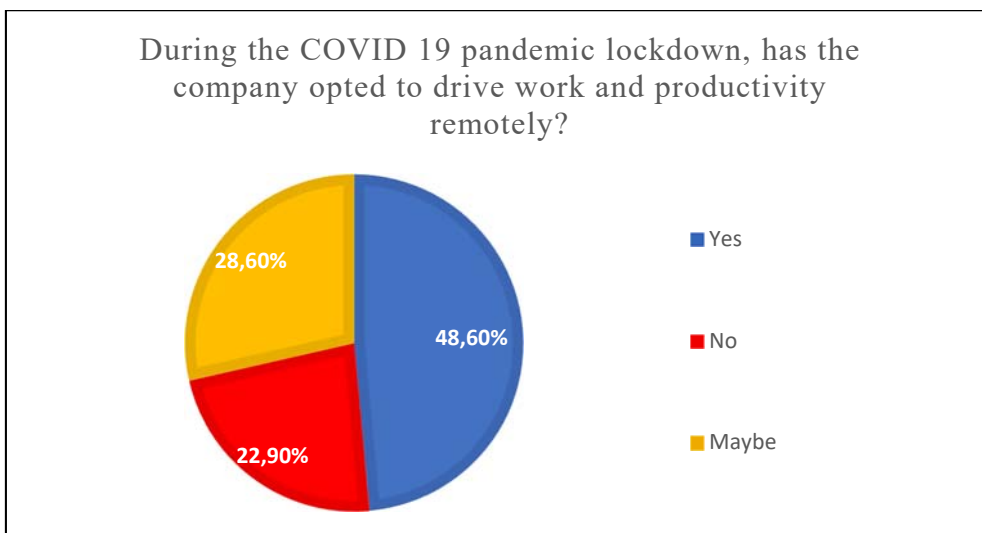
It can be noted that 45 respondents (64.3%) totally agree that the customer service provided by the company should be managed to improve it. The 18.6% agree moderately, 11.4% are indifferent, 2.9% disagree moderately and 2.9% totally disagree.

Figure 10 Importance of the customer's shopping experience in establishing trust and brand loyalty



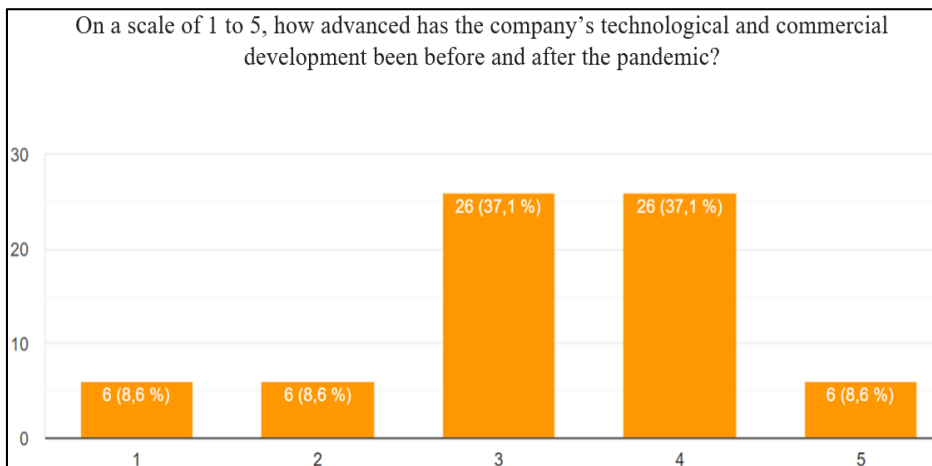
In the above chart, it can be seen that the majority of the population (91.4%) believes that the customer's shopping experience is fundamental in order to create greater trust and credibility in the brand. However, 4.3% believe that it could be important, and 4.3% do not believe it is important at all.

Figure 11 Promotion of teleworking and productivity of the company during confinement



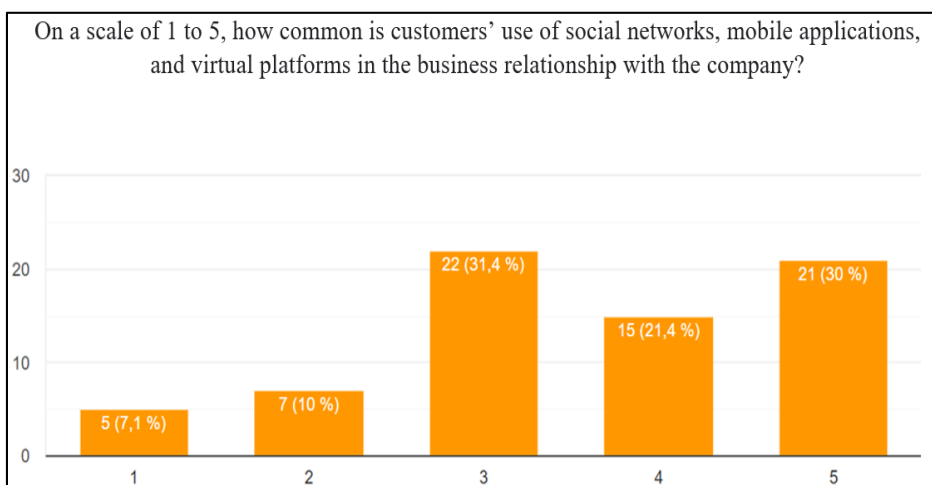
It is interesting to note that this chart, the 48.6% of the population does believe that the company was able to boost telework and productivity in the company during the pandemic. On the other hand, 28.6% believe that maybe it did, and 22.9% believe that it did not happen.

Figure 12 Technological development of UCEM S.A. before, during and after the pandemic



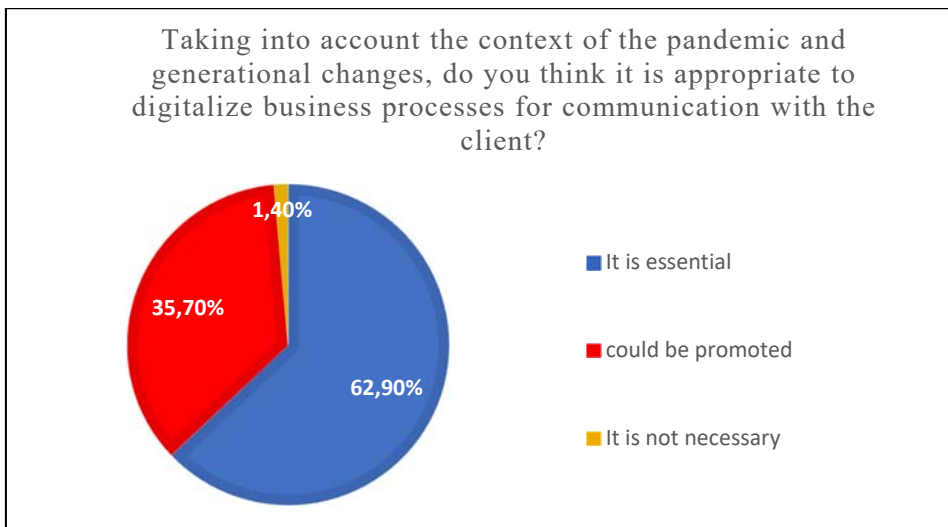
In the chart above, there was a tie between those who think that UCEM S.A.'s technological development has been moderately advanced and those who think that it has been advanced, representing 37.1% in both categories. On the other hand, there is a triple tie between those who think that UCEM S.A. has had no progress in its technological development, those who think that there has been little progress, and those who think that technological development has been very advanced. Each of these three categories represents 8.6%.

Figure 13 Use of social networks, mobile applications and virtual platforms in the commercial relationship with the client



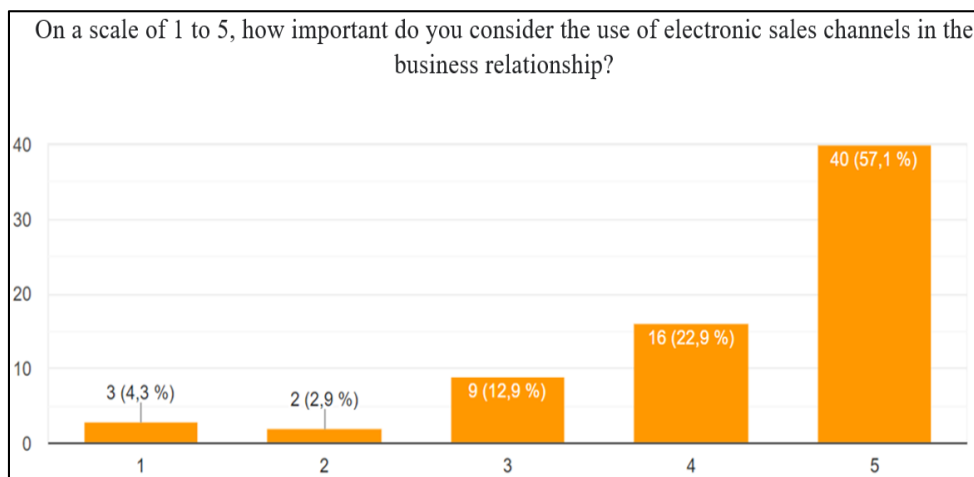
Among the surveyed population, 30% consider that the use of virtual platforms, mobile applications or social networks is very common in the commercial relationship with the company. The 21.4% believe it is quite common, 31.4% believe it is common, followed by 10% who think it is uncommon, and lastly, 7.1% who consider it is not common at all.

Figure 14 Opinion on the digitization of business processes for customer communication



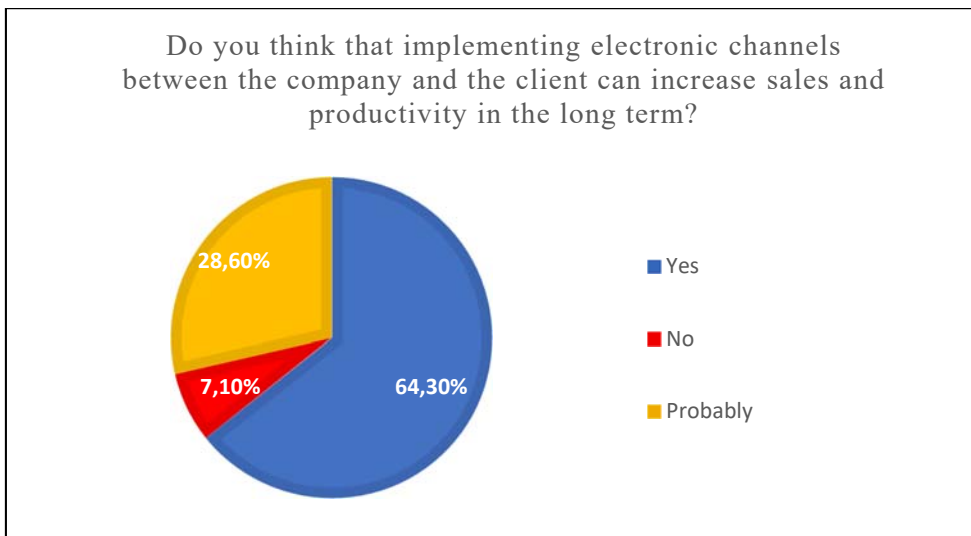
In the chart above, 62.9% believe that the digitalization of processes within UCEM S.A. is appropriate, while 35.7% believe that it could be promoted, however, it is not something latent. On the other hand, only 1.4% believe that it is not necessary.

Figure 15 Relevance of electronic sales channels in the commercial relationship with the customer



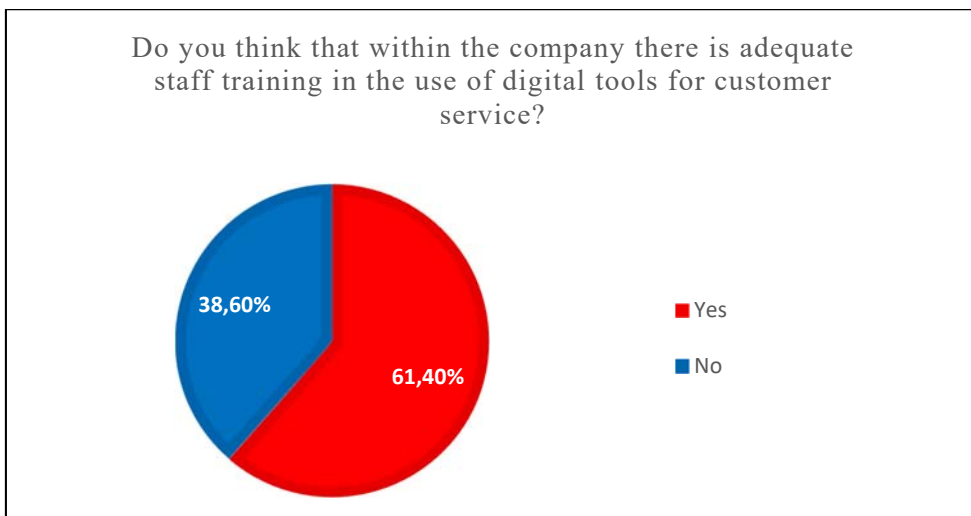
We can see those 40 participants, representing 57.1%, believe that these sales channels are very important. 22.9% consider them to be somewhat important. 12.9% are quite indifferent, so they may consider it as an important element, however, it is not indispensable. On the other hand, 2.9% think that the implementation of these channels is not very important and 4.3% consider that they are not important at all.

Figure 16 Opinion on the impact of electronic channels on increasing sales and productivity in the long term



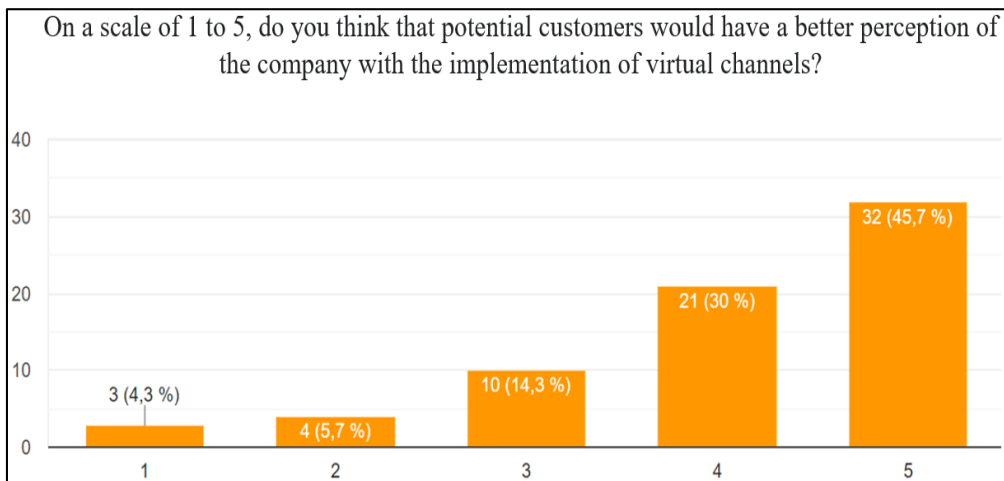
This chart shows that 64.3% do believe that channels are a great option to increase sales and productivity in the long term. On the other hand, 28.6% do not give it much importance, so they think that it might have a positive effect. Only 7.1% believe that this will not happen.

Figure 17 Consideration of the quality of training of UCEM S.A. personnel in the use of electronic tools



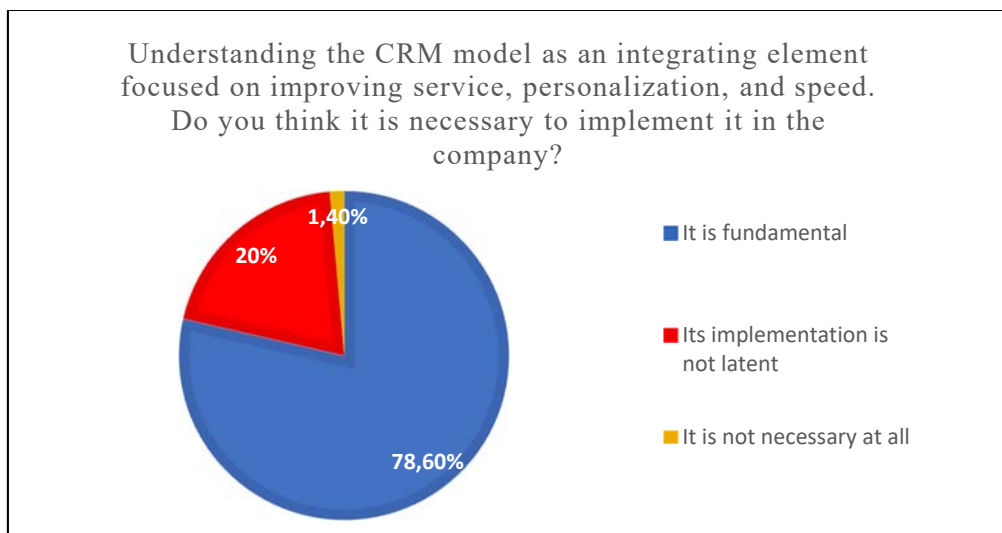
The above chart shows that 61.4% believe that there has not been an appropriate capacitation of the personnel for the use of digital tools, and only 38.6% consider that there is a good capacitation.

Figure 18 Customer perception of the implementation of virtual channels



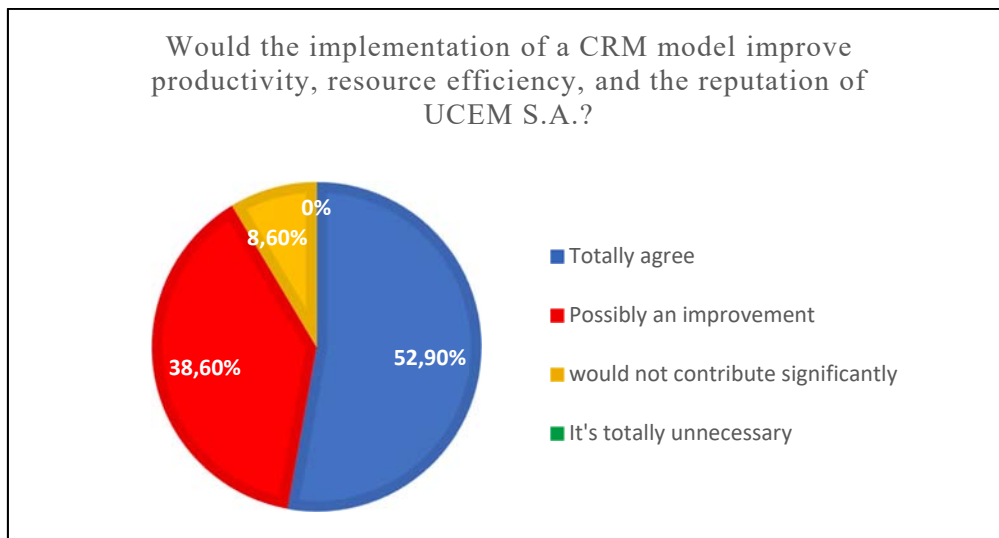
According to the graph, 45.7% of participants believe that the customer's perception of the company would definitely improve with the implementation of virtual channels. A 30% consider that it would improve somewhat with the implementation of these channels. 14.3% are mostly indifferent, 5.7% think that the improvement in perception would be low, and 4.3% think that it would not improve at all.

Figure 19 Opinion on the importance of implementing the CRM model in UCEM S.A.



Regarding the implementation of the CRM model in UCEM S.A., 78.6% believe that it is essential to do so, 20% believe that it is not essential, and 1.4% believe that it is not necessary at all.

Figure 20 Consideration of the contribution of the CRM model in terms of productivity, efficiency and company reputation



Regarding the last question of the survey, the chart shows that 52.9% of the population totally agrees that it is essential to implement a CRM model, 38.6% think that there is possibly an improvement, 8.6% think that it would not contribute significantly and there are no people who thought that it is totally unnecessary.

Regarding the interviews conducted with the aforementioned officials, discussed issues related to the market segment of UCEM S.A., the operation of the customer service area, its technological development as a company, the adaptation of people to electronic sales channels, due to the pandemic by COVID 19, changes in consumer habits, generational changes and digital evolution. Also discussed the customer support during the sales and post-sales process. On the other hand, the topic of the CRM model was approached with the objective of knowing the knowledge that the personnel of the company have about this model, background with similar systems, how viable could be its application, as well as, if there is a predisposition to opt for a CRM model taking into account the factors that are detailed in this article with a projection towards the future of UCEM S.A.

4.1 Interview with the national marketing manager

The national marketing manager said that customers are looking for quality support and immediate product supply. On the other hand, the customer also focuses on competitiveness and profit margin in price, since UCEM S.A. has managed to optimize logistics to generate profitability for the customer, but without losing quality.

On the other hand, UCEM S.A. seeks a constant commercial relationship with customers. Therefore, technology must play in favor of the distributor and the market to be faster in the order process, information processing, invoicing, etc. In other words, innovation must be generated at a general company level.

Regarding the technological evolution of UCEM S.A., it is highlighted that it has an enterprise resource planning (ERP) system at digital level, however, there is no efficient connectivity to adopt a CRM system. In short, it is considered that there has not been an efficient management in terms of digital innovation.

With respect to the background, it was stated that, in November to December 2021, CRM systems were sought at the national level to supply commercial management. Oracle was approached, which is a company specialized in database systems and controlled by the company JD Edwards. However, it was not viable due to poor connectivity and cost. Subsequently, they opted for Salesforce, which is a software company, that manages a CRM that incorporates inventory, logistics, credit generation, etc. In the same way, the main limitation was the lack of connectivity in UCEM S.A.'s networking, as well as the capital required for its implementation.

It was emphasized that any company that manages itself technologically is better positioned. This has been the case of Fybeca and its distribution center similar to Amazon's, since they have a multifunction automated distribution center. In this sense, technology allows companies to grow at the operational level.

Indeed, the fact of placing an order and having it delivered the next day generates credibility, trust and therefore loyalty.

Finally, it was said that he would be willing to adopt new technological tools for the sales force, optimize times and create digital tools such as CRM, in order to improve service, productivity and generate new business opportunities. The implementation of CRM would save logistics operating costs, as well as personnel costs.

4.2 Interview with the commercial manager

The commercial manager of UCEM S.A. stated that the fact that their product is a commodity, they seek to differentiate themselves in service, since as they inquire about the client, they can balance what the client wants with what the company is able to offer.

It was pointed out that, during the pandemic, at a certain point contact with the customer was lost, since the sales consultant could not be present with the distributors and stores. In this sense, the technological tools helped to help covering this area. On the other hand, it is considered that technological development is still in process, and has been boosted even more in the midst of the confinement and with the current trends. Mainly through the website. They even wanted to transform it into a transactional tool, however, in the area that UCEM S.A. handles, it is difficult to advance technologically compared to a mass consumption store.

As for the background, the company chose to contact Móvil Ventas, but it did not satisfy their requirements. The company is currently working with a Brazilian company called Involves with the aim of consolidating digital communication with the customer.

Finally, regarding the CRM model, it was said that he would be willing to implement a CRM model, since UCEM S.A. has the Iso 9001 certification, which supports all commercial processes. By implementing this tool, it is intended to have a greater market share, especially in a mostly digital market. Likewise, its application will depend a lot on the quality of information, since it is necessary to reach the customer in a personalized way in order to have better strategies to solve multiple needs.

4.3 Interview with the purchasing and logistics manager

According to the purchasing and logistics manager, customers are looking for reliability, added value and a competitive price, understanding that the product is a commodity. In this way, long-term positioning is generated.

Something that stands out is that large companies based on high capital investment, such as UCEM S.A., are highly valued for their market share and volume. Regarding external factors such as the pandemic, generational changes or new consumer habits, the most important thing is to keep costs low to avoid raising the price of the product, but maintaining its quality. In this way, the aim is to demystify the commodity and gradually enter a consumer market.

Regarding technological development, it is mentioned that the culture of the company determines how competitive and how fast you can join digital markets, however, UCEM S.A. has a lot of organizational resistance, so there is still a long path to follow. However, it is important to note that digital channels make life easier and perhaps there is a niche market focused on companies that can adapt to a reliable technological system, non-bureaucratic and user-friendly, so it is latent to promote this technological development. On the other hand, it should be noted that commodities are not usually so accelerated or stimulated to radical changes in traditional sales channels, however, it is time to start.

Regarding the CRM model, he had a lot of knowledge about this model, due to experience in other companies, in addition, he considers that it is part of the value proposition of the company because it generates closeness with the customer, loyalty and also provides important information.

With a projection to the future, he is totally in favor of implementing a functional CRM. On the other hand, something you should know before implementing it, is to know the current relationship with the customer and how you want to improve the relationship between the customer and the company in the future. Also see what the competition is doing and do something differential that adds value. In short, it is an investment that is justified from any perspective and it is the future and growth of UCEM S.A. Although the internal culture does not capture very well what they are living and what we will live in the future, sometimes you must put yourself in the shoes of young people to understand how the future will be, although it is not easy.

5. Discussion

According to the results obtained through the surveys, as well as the examples given above, it is clear that factors such as the COVID 19 pandemic, changes in consumer habits and generational changes, have caused the population to adapt to new mechanisms that allow to some extent to maintain their productive and working life. Thus, digital tools, virtual platforms, among other technological systems, have been the means of subsistence and human development, especially in recent years.

In the business sector has been latent technological progress and the implementation of these tools, in the case treated in this research with the company UCEM S.A., is possible to say that external factors mentioned above have been the triggers to put greater emphasis on the importance of digital systems and strategies. Also, the weaknesses of the company were exposed, in terms of customer service, communication and comfort with traditional sales channels.

Customers, collaborators and employees, despite belonging to a group of people mostly over 35 years of age, understand the need to establish systems focused on the automation of processes seeking a shopping experience that satisfies the customer, as is the case of the CRM model. In the same way, personnel at management level and department heads, expressed the need to cover gaps regarding the accompaniment of product purchase, streamlining sales channels and proactive innovation to technological development of UCEM S.A., in order to sell a quality product, competitive, profitable, but also a product that generates a perception of credibility, trust, progress and priority to the customer.

Although the CRM is a model or system that integrates many aspects on which depends the commercial and economic productivity of UCEM S.A., besides considering limitations that hinder the adoption of digital systems such as these, there are several alternatives to be considered without trying to opt for complex systems that go beyond what is necessary. In other words, the model has to be friendly for both the company's staff, as for the hardware dealer, distributor or mason who buys the cement from UCEM S.A.

On the other hand, viable alternatives can be found, even taking as a reference examples of companies at national and international level that have applied this model, such as Telkom Indonesia, S-Neat-Kers, Garuda Airlines, Genfar S.A. or Atrain Microbuses Courier. Although each of these companies has started from different approaches due to the product or service they provide, there is no doubt that all of them have had several points of convergence. These are proximity to the customer, support, communication, experience, immediacy and innovation, that is to say, they have focused on adding value to a factor that goes beyond the product or service itself, which results not only in the acquisition of the product or service, but also in customer loyalty.

6. Conclusion

Through the analysis in this article, there is no doubt that the main drivers to new systems or digital strategies at the economic level, specifically in the business environment, have been the pandemic, new consumer habits and generational changes. Which have marked a process of adaptation to a reality in which continuous technological development can make the difference in terms of competitiveness between one company and another to have greater acceptance of a specific market.

One of the models or systems proposed in this research has been the Customer Relationship Management, better known as CRM, which is an integrative model, that aims to collect customer information, in order to provide an experience where personalization, interest, attraction, commitment, among others, are managed so that the customer trusts the brand and becomes loyal to it. Now, from a digital approach and through new technologies, this model can be optimized and generate greater impact, especially in a globalized society that has proven to be resilient to unexpected external factors.

The case of UCEM S.A. is an example of a company in the process of digital adaptation and technological development, which needs to be optimized, especially considering the customer service area. Therefore, the adoption of a CRM model has been proposed as a tool to improve this relationship between the company and the customer. In this sense, besides taking into account cases of companies and organizations of different aspects, both nationally and internationally, which have applied the CRM system, this model is optimal in areas in which UCEM S.A. has demonstrated weaknesses. As evidenced by the information collected through the surveys applied to workers, employees and customers of the company, as well as the interviews with management personnel and the national head of marketing.

Through this information, it can be concluded that the CRM model is viable for its application in UCEM S.A., because although it has been expressed certain limitations that may hinder the implementation of this

model in the short and medium term, it must also be understood that the socialization of digital media to collect information and communicate closely and continuously with customers can start from the most basic tools, that in fact UCEM S.A. already has. For example, the website, social networks as an advertising medium, virtual chats to contact the customer or electronic surveys to collect information. Obviously, the CRM model is a more complex system than these tools, but it is already a first step towards the adaptation of UCEM S.A.'s staff and customers to a virtual interaction that facilitates the processes of buying and selling the product.

Now, it is possible to determine that for the adoption of a CRM model in UCEM S.A., there is a high level of knowledge on the subject, especially of the personnel in fundamental areas such as marketing, supply chain and commercial area. In addition, there is contact with companies that are dedicated to the development of software and database as seen above. In the same way, there is the predisposition of the personnel to implement this model and to be able to socialize it at the general level of the company.

On the other hand, it is necessary for UCEM S.A. to start with the basics as mentioned above. It is essential to develop a structure for the application of this system. Starting by defining the target market, understanding its proximity and its level of adaptation to technology, seeing cases of companies with a functional CRM system, including the competition if they have already implemented it and training their workers in a better way. In other words, UCEM S.A. has the capacity to adopt this model, however, it is advisable to carefully analyze the alternatives that exist in order to develop a system, that with long term projection could be profitable and could satisfy the future demands of the market.

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