UNIVERSIDADE DE TRÁS-OS-MONTES E ALTO DOURO

E-marketing in the Galician companies

Dissertação de Mestrado em Engenharia Informática

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I want to take advantage of these lines to thank all the people who have supported and helped me in this process.

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To the pillar of life for his constant motivation and help.

To my grandfather, I wish you were eternal.

ABBREVIATIONS

ANOVA: Analysis of Variance

B2B: Business-to-Business

B2C: Business-to-Consumer

CRM: Customer Relationship Management

E-CRM: Electronic Customer Relationship Management

TIC: Technology of the information and communication

GAC: Galician Autonomous Community

AMA: American Marketing Association

SEM: Search Engine Marketing

SEO: Search Engine Optimization

ERP: Enterprise Resource Planning

B2B: Business-to-Business

B2C: Business-to-Consumer

B2G: Business-to-Government

C2C: Consumer-to-Consumer

C2B: Consumer-to-Business

MIS: Marketing Information System

SUMMARY

Marketing emerged as a function of the sales department. If the focus was on production before, now the focus is on the effort to sell the products. From the moment that effort to sell began to be considered a job, human work became more abstract and intellectual than physical.

However, it was not enough to produce and then try to sell. To capture customers it was necessary to know what they wanted to buy.

Marketing began to intervene also in the planning of the production. It was necessary to know how customers wanted this or that product. Marketing was extended to the production and distribution processes. Customers had to be retained after being picked up. Marketing broadens its scope of action to the after-sales service, such as maintenance and customer service.

It is now known that it is not exactly the product itself that the customer chooses and consumes.

Marketing acts intensely in the formation of the brand image and the communication of the most abstract attributes of each product or service. Between the years 1800/1920 the industrial revolution arose, the companies Europe and the United States showed a clear orientation to the production since the demand surpassed the supply, also it was believed that the consumers preferred products that were available and affordable and that therefore management should concentrate on improve the efficiency of production and distribution.

This project is carried out in the Galician Autonomous Community (GAC), it is done by means of a questionnaire answered by the managers of the companies of the GAC to identify the most used techniques, which are the most relevant factors in their choice, advantages, disadvantages, results and objectives that will be achieved with this practice, in addition to this, it will be possible to observe the practices of approach of the actions of e-marketing and finally, which is for them its importance and main objective with its web page, always from the perspective of the managers of the companies.

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1. Introduction

1.1 Proposed theme and analysis

At this point we are going to make a schematic picture of the project to be carried out as well as the importance and interest of its research, for which we will create a synopsis by way of what we will develop next. Introduction to consumer behavior and influences that affect such behavior.

Demographic and economic environment (volume of population, composition of itself, distribution and finally the factor of emigration, it will be also taken into account the income of Galicia as well as the familiar and the indices of confidence in the product) from an aggregate perspective, the income and the purchasing power of the population conditioned by the price level, decisively affect the behavior of consumers.

As for culture, no less important in terms of external influence on consumer behavior is the cultural environment, culture sets standards and values of behavior, conditioning the behavior of subjects and it is imperative to know it for any marketing strategy. The culture of a society allows, prohibits or helps consumption of certain goods and services, creates or makes products disappear, in short, culture affects: the products that are desired, the prices that must be fixed, distribution of goods and services, communication activities, so we will place social stratification as an element of the external structure that models the behavior of subjects (consumers).

Through the so-called the internet revolution (Tim Berners-Lee, 2000), inventor of the World Wide Web, (digital communication protocol on which the network is based) he knew he was making a progress in technology but probably he did not imagine the great revolution that launched his idea and that as in all great inventions the concept was very simple. It dealt with generating documents which were connected through hypertext (HTTP), thus it unified the way to build links and pages in which a browser could understand. The files can be found anywhere on the network where the subject connects to.

The transcendence of the emergence of the Internet in business and the economic situation created by the new technologies (the internet) are a great change and gave rise to the beginning of what was called "Economy Lond Tail" (Chris Anderson, 2006).

1.2 Justification and choice of project topic

In an autonomous community, Galicia, where competition between activities in companies is increasing, it becomes essential to diversify the marketing strategies of companies. With the rapid evolution of information technology, communication and accelerated globalization of markets, we have that E-Marketing is a viable solution, accessible both in cost and implementation for the vast majority of companies settled in Galicia.

One of the reasons for choosing this topic for the present project is undoubtedly the great growth in this community of both the quantity and the volume of companies and businesses that use e-marketing for the management of their sales.

According to the latest report on the index of industrial production, the (IPI) index of industrial production in the month of September 2017 in Galicia reached an interannual rate of 0.1%, reducing by 1.1 points the same as that registered on previous month (1.2%). However, in Spain an advance of 0.2% was registered, which worsens by 2 points this rate of the previous month. (Galician Institute of Statistics, 2017)

- Consumer goods decreased by 0.7%, which is 0.2 points lower than the inter-annual rate.
- Capital goods, on the other hand, registered an increase of 3.2%, which brings them close to 0.7 points, their interannual rate.
- Intermediate goods increased by 5% with a positive rate of 1.5 points.
- Energy suffered a sharp decline of -10.3%, with which it subtracts 2 points from that interannual rate.

The emergence of globalization of products and the worldwide commerce requires companies in this community an additional effort to make them internationally competitive, because with the current economic crisis, the survival of many companies in this community will be achieved on the basis of export and internal consumption, for which it is essential to have good professionals, that is, e-marketing managers since only they can with market studies see where the market wave goes, design new products and objectives in order to project campaigns more and more exciting and with the same try to modify and adapt the behavior of the subjects (clients).

The e-marketing has a wide range of strategies, however the science or rather its secret (e-marketing) is to focus all of them on the subject (client) to establish strong relationships of mutual trust with that subject and especially by hearing and personalizing solutions for the subject so that they feel identified and not used.

1.3 Objectives of the project

The study of this project aims to get an analysis of the marketing practices in the Galician autonomous community, as well as trying to give its entrepreneurs theirs defined marketing techniques and how they can improved them once it is analyzed all the data.

The main objectives in relation to the Galician companies, will be the following:

- Identify the main e-marketing techniques used.
- Identify the pros and cons of e-marketing.
- Detect the e-marketing techniques that obtained the best evaluations according to their managers.
- See the most important factors and objectives in the selection of e-marketing techniques.
- Check the attribution and the main purpose of the website in Galician companies and the importance it is given.

1.4 Phases and structure of the project

The project is divided into 4 phases.

1. Phase of Conception: In which a general analysis and approach of the project is made. The first step in this research is to detect the problem that needs to be solved and establish some objectives to achieve it. Once this is done, a preliminary investigation can be made to extract information from the approximate market situation.

2. Elaboration Phase: The first step to obtain the information is to review the secondary data sources available (the internet, market studies already published, etc.) to see if we can extract some information that interests us.

3. Construction Phase: Once all the sources have been analyzed, the process of realization and implementation of the questionnaire on which the project study is based is carried out.
4. Transition Phase: In this phase it is intended to make a classification and treatment of data, through statistical methods that involve a tabulation and homogenization of the information obtained. Subsequently an analysis and interpretation of the data is made, on which the appropriate decisions will be taken and the conclusions will be drawn.

The study carried out in the project will be subdivided into parts which will be developed throughout this documentation. It consists of a first introductory part in which the chosen study topic is developed, as well as the location concerning the consumer's behavior and the influences that affect that behavior.

Hereafter, it will be emphasized the fundamental issues related to marketing and its origins, as well as the advantages and disadvantages that this entails. Subsequently, the research methodologies that were carried out during the study, the methods used during data collection and the analysis will be detailed at all times.

Finally, the conclusions of the study based on the research and the data obtained and its analysis are presented as well as the main "errata" of the companies and which procedures should be modified.

2. Theoretical Framework

Before starting to develop this study is essential to understand certain concepts as well as the provenance and / or evolution of Marketing.

2.1 History and Evolution of Marketing

In this section we will delve deeper into the concept and look more closely at the historical evolution of marketing.

In the 21st century, we are witnessing the birth of a new management model in the business world where all activity revolves around the customer, focus costumer. This type of organization thinks and acts differently, its results depend directly on how they are perceived by the market.

The globalization of the economy is having multiple and varied effects on our society, the way we live, consumer habits, but above all, the globalization of the economy is impacting in a generalized way on the models of managing the companies so, we are at a point in which it has to overcome the traditional model to achieve a new one based on the global and horizontal integration of all business activities whose central axis is the strategic marketing vision (Morais et al., 2007: Gonçalves et al 2008).

The market is having an important evolution not only because of the leading role that the customer has acquired in recent times, but also because the presence of the Internet and new technologies in the economic world have generated the need to create a new strategic vision that until now it is difficult to predict its final reach and consequences (Gonçalves et al, 2010: 2011a: 2011b).

The birth of marketing is attributed to the beginning of the human existence. It is due to the definition of the term itself as an exchange technique for the administration, marketing and distribution of a product.

It is important to understand the dynamics and the marketing's evolution in which relevant aspects such as the digital era, the beginning of radio and printed advertising, among others have helped its momentum. Over the years, new models, new tools or ways of communicating information to customers have been penetrated, which has been given marketing the relevance it has today. To this end, we will differentiate 9 stages in the evolution of marketing.

During the *first stage*, which takes place between 1800 and 1920, demand exceeds the existing supply, so the orientation and approach of organizations is to produce and improve the production process, with which everything produced is consumed immediately and the consumer does not differ between substitute products. This is when first academic antecedents of Marketing appear in main USA universities.

The *second stage* comprised the years 1920 - 1929 due to the First World War the level of consumption and public expenditure contracted, as a consequence an economic recession was carried out causing, in turn, a decrease in the production and exchange of products which caused high levels of inflation, lack of jobs, high level of indebtedness, among others, which finally led to an economic recession in European countries.

Following the continued growth of the US, the crisis of the 1930s led to the collapse of the monetary system with deeper effects than those of other nations, hence the importance of strategically managing the level of product and the economic market, we start talking about strategic marketing and the birth of sales-oriented marketing characterized by a great confidence in the promotional activity.

In the *third stage*, 1930s-1950s it is created a decline in prices in the vast majority of the marketed products, as well as the purchasing power of people so that companies are forced to try to adjust supply and demand and to focus their efforts on improving distribution chains to be more competitive.

Thus, Marketing is adopted as an independent discipline with objects of study in particular and the AMA is born in order to promote the scientific study of Marketing given its new orientation.

During the *fourth stage* 1950-1960, what is known as modern marketing emerges. Defining the interdisciplinary nature of Marketing, the approximations are given to focus the activities of the latter with the consumer, and not in the production. New techniques of the social sciences are incorporated into the field of market research.

With regard to the *fifth stage* 1960 - 1970, new movements are born in favor of ecology and equality, among the peoples, so that Marketing is accused of deepening social problems, and the difference between classes. At this time the first organizations in defense of the consumer were born. During this period marketing will focus on studying qualitative variables and aspects of customers' social life.

In the *sixth stage* 1970 - 1980, the particular interests of the companies are conditioned to the general interests of society. The area of action of marketing stops being restricted to the companies and also extends to the nonprofit organizations (Social Marketing) and the Marketing is used in the spreading of ideas and beneficial behaviors for society.

Marketing is considered as a human activity that seeks the satisfaction of the people involved in the exchange. Marketing deals with goods and services with economic value, it covers any other type of value such as ideas, goods and services with no market value. An expansion of the target audience is generated, from the consumer to any other group that is related to the organization (customers, suppliers, creditors, shareholders or workers).

In the years 1980 - 1990 the *seventh stage* is developed. A strategic component is introduced in the discipline, influencing the theories of the administration of the organizations and the own economy of each company, together with Kotler and Bagozzi, Hunt is the third of the authors who have contributed most to focus the object of study of the marketing around the idea of exchange. From a previous review of the literature, (Hunt, 1983) defines marketing as the "... behavioral science that seeks to explain relations of exchange".

The evolution in the different concepts of the discipline advances and Kotler contributes an additional element: the one of the satisfaction of the needs and desires as objective of the marketing activities (Kotler, 1984). In 1985, the American Marketing Association undertook an effort to redefine the discipline of marketing, given the outdated and little accepted that had been the previous one of 1960.

The major influence of the academic field is reflected in a definition that accurately reflects the development of the discipline up to that moment: "Marketing is the process of planning and execution of the conception, pricing, promotion and distribution of ideas and services, to create exchanges that satisfy every objective both of individuals and organizations (American Marketing Association Board, 1985)".

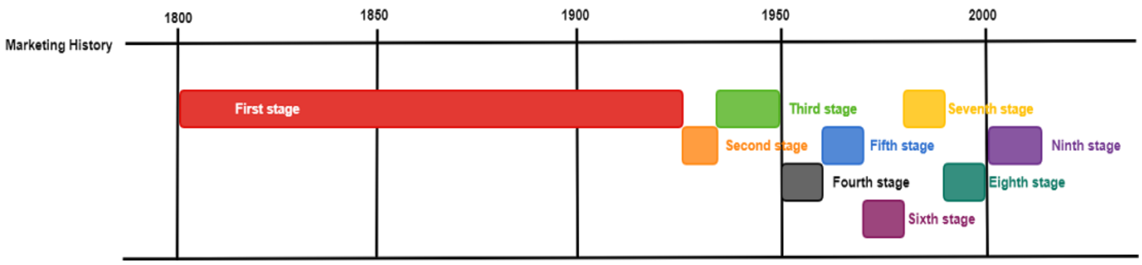
During the *eighth stage* 1990-2000, microcomputers and local area networks made it possible for all companies to have a database of customers, creating databases to develop their marketing strategy. Companies saw the more personalized approach to customers as a way to gain a competitive advantage. Marketers began to think in terms of using new technologies in order to build long-term relationships.

Finally the *ninth stage* 2000 - Nowadays, we define Marketing as a function of the organization and a set of processes aimed at creating, communicating and distributing value to customers and directing relationships with customers in a way that benefits the organization and its stakeholders. It expresses the intention to create and maintain stable relationships with users or clients, in a way that expresses the trend towards relationship marketing. The classic paradigm of 4Ps (Product, Price, Place and Promotion) is no longer useful since marketing has moved from a totally productive orientation to a customer-centric one.

The relationship is no sufficient that is beneficial to the parties involved in it and to the people with whom the organization establishes some type of contact, but rather seeks to benefit society in general. Marketing is defined as an activity of the institutions and processes of creation, communication, decision and exchange possibilities that offer value for users or clients, for partners, and for society in general.

As it can be seen in Figure 1, the evolution of marketing is shown through all its stages.

Figure 1. Stages of Marketing Evolution



2.2 What is Marketing?

Taking into account its interdisciplinary character, we must say that the term marketing from Anglo-Saxon origin began to be used in the US at the beginning of the last century. Specifically it was in 1910 when in the University of Wisconsin appeared a course called "Methods of marketing" taught by Butler.

In Spain it was not until the 60s and 70s due to the inrush of the multinationals when it began to be used at the enterprise level, however, it has had to take a long period of time to begin to root the benefits that can contribute the concept.

The industrial revolution together with the creation of large multinationals, work experience and new technologies caused a creation of market of supply and demand where the marketing must look for the total satisfaction of the consumer. Marketing comprises a range of inter-related activities tending not only to satisfy market demand, but also to meet the objectives set by and for the company (Martins et al, 2012: 2015).

To get a better understanding of the term marketing is essential to know its origin and / or evolution as we did in the previous section. It is also essential to understand it as a concept. To this end, then it is developed the definitions given by the most recognized authors:

"Marketing is a social process by which individuals and groups obtain what they need and desire through the creation and exchange of products and their valuation with others" (P.Kotler, 2010)

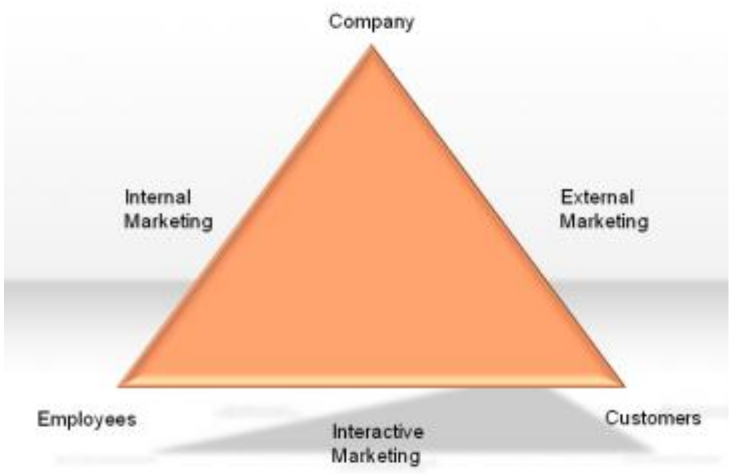
"Marketing is an organizational function and a set of processes to create, communicate and deliver value to clients and to manage relationships with them in a such way that it benefits the organization and its stakeholders"

"Marketing is the joint action of the company, directed towards the client with the objective of a profitability" (Goldmann, 1979)

"Marketing aims to know and understand consumers so well that the product fits their needs perfectly" (P.F Drucker, 2005)

Then, in Figure 2 it can be seen that within the marketing itself they differ; internal marketing that is the one that carries and executes within the company and company so that a good service is given to the users or clients, external marketing that is one that is given to the market and the interactive marketing that is the development of programs of marketing that create interaction of consumers and companies, that is to say it is one that allows people to interact and participate.

Figure 2. Types of Marketing



2.3 Importance of Marketing

We are in the 21st century and it seems that developing a marketing policy in our country is a normal and simple task, according to the times that this word is used by companies and media. However, reality shows us the very opposite, since printing a marketing dynamic finds a strong rejection in many of our companies, especially in certain groups. (Canta Izaguirre Andres et al., 2014)

Despite these barriers of implementation, it can be said that the market is no longer what it was. It is changing and constant and exponential evolution motivated mainly by the economic situation, the pressure of the different social forces, technological advances and globalization, the which create new behaviors and challenges that only from a marketing perspective find satisfactory answers.

As mentioned, US is the cradle of marketing, that is why they base mainly their high competitiveness in the continuous development of new marketing strategies. We are still questioning the utility of these strategies, entitling them to be ineffective or

unethical, that contribute to unnecessary needs and that manipulate consumers or users, among other reasons.

Marketing in Spain has until recently been the great unknown. It has been manipulated and used but rarely has been applied globally and strategically. In the new millennium the marketing has almost automatically taken the prominence of the situation. Justice will be done, it is the marketing moment since the market demands already qualified professionals who, starting from the reality they know how to give satisfactory answers to the same and which therefore increase the profit and profitability of companies.

2.4. Channels in development

2.4.1 Online Advertising

Online advertising is an advertising method through which webmasters can make their sites economically profitable and cover hosting costs and domain names. It is also a way to ensure the promotion of products and services that their website offers. Online advertising is, of course, aimed at the Internet users who are the ideal audience for this type of advertising campaign.

Generally, online advertising is developed within the framework of an advertising campaign through the placement of graphic advertising banners or sponsored links in the form of text. (Daniel Rodríguez del Pino, et al.,2014)

There are specialized companies known as "advertising firms" which are generally the recommended channel for managing advertising campaigns. These companies are the intermediaries between the advertisers (who want to launch an advertising campaign) and the publishers (who are the owners of the websites that agree to reserve part of their advertising space for the placement of advertising banners). The advertising firm receives a percentage of the revenue from advertising campaigns or "firm's costs".

Typically, the costs of the firm represent between 30 and 60 percent of revenues.

2.4.2 E-mail marketing

Email Marketing, also known as "e-mailing", consists of sending information to customers (regular or potential) through email. (Dave Chaffey, 2012)

An effective email marketing system should not send spam or junk mail and should be targeted exclusively to those users who explicitly requested the submission of information.

This type of actions in which the client gives his or her authorization to receive information are the ones that generate the highest returns and the best advertising results.

A clear example of this type of action is Newsletters.

The following are the main *objectives* of Email Marketing:

- Establish a frequent and close communication with the client.
- Increase sales.
- Increase cross-selling opportunities.
- Generate and increase brand recognition.
- Obtain more information about the target audience, which will allow to segment it more efficiently.
- Build loyalty.

The key advantages are:

- Its main advantage over any other type of communication is to allow users to be segmented and to apply specific strategies or messages to each segment, thus establishing economic, quick and easy communication.
- Lower cost and higher return on investment.
- Arrive quickly and efficiently to audiences segmented by innumerable variables (geographic, demographic, social, etc.).
- Allow error correction at lower cost.
- Allow measurement of results in real time.
- Generate a direct relationship with the client obtaining more information about him and his needs.
- Use the information obtained to segment more efficiently.

2.4.3 Search Engine Marketing

Search Engine Marketing (SEM) is a form of Internet marketing that seeks to promote websites by increasing their visibility on search engine result pages (SERPs). According to the Search Engine Marketing Professional Organization, SEM methods are: search engine optimization (SEO), payment for PPC search, contextual advertising, provided as long as there is a payment in between. Other sources, including the New York Times, define SEM as 'the practice of paying for ads in search engine results'.

2.4.4 Viral Marketing

Viral marketing can be clearly perceived or concealed, in the latter case it is usually to create opinions that simulate those of users in order to create a false positive image about the brand.

The problem that this provokes is that many times the action ends up being suspicious by the web surfers (for example because comments come from a newly registered user on the page) and if they confirm their doubts, they manifest it openly, which means an important undermining of credibility and image of the firm, setting it in a much worse position than before starting to create any branded action.

Another example of hidden marketing is based on original or creative campaigns that catch the user and from which the firm ends up benefiting in some way. In the end, it is discovered that the brand is behind it, but if it is original and creative enough, it does not have to receive an adverse reaction from the audience, but quite the contrary depending on the suitability of the message to its audience.

It is not only a question of budget, since in recent years, viral marketing has been especially strengthened. The fact that a high international audience can be reached at a very low cost in relation to other media has been the trigger for small advertisers to choose the Internet and viral marketing as a promotional alternative.

But it is not only a budget issue, it is also a very powerful weapon for large companies that want to make a gap between the audience profile of certain Internet sites. Bearing in mind that a target audience is easily reached and that the user is not bothered, instead it is he or she who decides to participate or not actively achieving higher indexes of interaction and therefore results, viral marketing make this medium essential for each brand (Silvia Sivera Bello, 2011).

As important is the idea and creativity as the way to make it known as much or even more for that, to choose the most appropriate technique and to make a monitoring that allows to control the results, is fundamental to talk about success in viral marketing.

The most used methods are several, but some options are:

- A campaign that encourages to invite other users, for example if it is a contest.
- Those that foster the thought of a more original mentality by sharing it.
- Hidden marketing: a shocking news is spread, which puzzles and the user does not know very well where it leads. It creates a great diffusion by the uncertainty that creates the news and as a result, viral load occurs. Another version, perhaps less creative, is the one that adds hidden opinions that pretend to be those of users, when in fact, it is company personnel, something that does not usually bring good consequences.
- Fans: with the creation of fan websites, but also of fan pages in social networks, it may to have a place in which it is possible to talk about the brand and that only interested people turn out to it, being able to benefit from promotions or news in scoop. In many cases, these pages are created on a voluntary basis, so if this is the case, it is important not to link the brand with the page to give the audience more freedom.
- Rumors: among the scandalous and what is not politically correct, rumors appear to surprise any internaut, who with this reaction, will bring the news to their acquaintances. An example are the celebrities who lead the main pages of many websites, forums and rankings of hastags before the premiere of the film they star.
- Databases and invitation to register: an example of this technique would be social networks, in which the user registers and has the possibility to invite others and make the site popular only for this fact.

The most appropriate strategy will depend on the objectives pursued in each case and on the circumstances and capacity of the company, but in any case, the most important thing is to take into account the respect for the Internet user and their privacy. If the Internet user feels cheated or deceived, viral marketing can produce destructive effects as a double-edged sword that is.

2.4.5 Mobile Marketing

Mobile marketing is the marketing made through mobile devices, such as mobile phones. Includes activities dedicated to the design, implementation and execution of marketing actions (Cindy Krum, 2010).

Andreas Kaplan, professor of Marketing, defines it as "any marketing activity carried out through a ubiquitous network to which consumers are constantly connected through a personal mobile device." Kaplan uses two variables, the degree of consumer awareness and the trigger of communication to differentiate between four types of mobile marketing applications: "Strangers," "Victims," "groupies," and "users."

The mobile devices used by mobile marketing are small digital media, easy to use and manage, allowing them to be moved to any place without difficulty and whose consumption is made without the need for electrical connection: mobile phones, personal digital assistant, iPods consoles laptops, GPS navigators, etc.

The main mobile marketing actions currently being carried out are:

- The development of communication campaigns consisting of the sending of SMS or MMS through mobile devices of a specific content, whether informative or promotional, addressed to databases previously treated and properly systematized.

- The carrying out of communication campaigns consisting of the use of mobile devices as a means for a specific audience to participate in promotions, competitions or drawings that have been previously announced in other media such as radio, press or television, by sending one or several SMS, MMS or making phone calls by the customer.

• The development of campaigns to issue telephone calls to mobile devices, from a company and aimed mainly at databases previously treated and adequately systematized in order to inform about promotions, products or services.

• The use of mobile devices as an advertising medium by inserting advertisements or sponsorships into content that is distributed through this channel.

• Advergaming, which uses games to promote a product or brand.

The various mobile marketing actions can be grouped into four media:

• Messaging (SMS and MMS)

• Mobile Internet

• Voice and music (modalities in the RBT - Ring Back Tone)

• Applications (or apps).

2.4.6 E –CRM

E-CRM (Electronic-Customer Relationship Management) The acronym "E-CRM" corresponds to the acronym in English of "Electronic Customer Relationship Management" and whose translation into our language corresponds to "Electronic Administration of Relations with Clients". It can be defined as an integrated business process through the use of the Internet technology that involves a series of activities related to the development and retention of the client through the increase of their loyalty and satisfaction with the products and services that the company provides, which leads to an increase in sales.

In simpler terms, E-CRM enables companies to conduct interactive, personalized and relevant communication with customers on two types of channels (Martins et al, 2016):

• Traditional: Sales Points, Call Centers, etc.

• Electronics: the Internet, E-mail, Portals, Virtual Shops, etc.

That is, it is a hybrid blend of technology and human resources to create a synergy that truly achieves effective communication with customers. It allows a broader view of consumer preferences on how and when to communicate with the company.

Of course E-CRM means something different for each company. Some adopt it through traditional contact management plus sales force automation software. Other companies consider the E-CRM as the natural extension of their telephone exchanges and claims centers. But in an ideal system, historical information, such as customer buying preferences or circumstantial information such as contract volumes and customer purchases, could lead to an innumerable data and stock screens. And finally, companies that have enterprise resource planning (ERP) systems see E-CRM as a natural part of computer-aided management.

Getting to the implementation of an E-CRM is not an easy process, as achieving a deep knowledge of the activities of the consumer has a common purpose which is optimizing the value between the company and its main assets - that is, the customers. Evolving towards this concept requires changes in business processes and within the organization, changes of specific applications and a technological architecture to endure the E-CRM process (Jerry Fjermestad, Nicholas C Robertson Jr, 2015).

The improvements offered by the E-CRM are mainly a truly qualified relationship with the customer and a long-term loyalty. This is a step beyond the CRM that in the future will become an essential condition for the success of any company.

3. Research

3.1 Use of techniques applied to research analysis

In this section, the research methodologies used in this project will be defined in order to meet the objectives defined in this study. Once the topic of study to be treated is defined, it is divided into stages. In the first stage a review / research is done on the existing and most relevant research methodologies up to that point in order to be able to define and cover in the best possible way this study and so that these results are satisfactory.

For this, it is essential to identify and satisfy the needs of customers, this part is essential to reach the ultimate goal of marketing, as companies that do not care about such needs tend to fail. Market research has always been a task that has helped and benefited business leaders in their decision-making as well as controlling the activity of their company and observing the environment. That is why it is fundamental to know what market research is. The following are some of the most relevant definitions according to authors;

Market research is the function that links the consumer, the customer and the public with the marketer through information. This information is used to identify and define marketing opportunities and problems; as well as to generate, refine and evaluate marketing actions, monitor performance and improve understanding of marketing as a process. (Kinnear & Taylor, 1998)

The market research task is to meet information needs and provide management with up-to-date, relevant, accurate, reliable and valid information. The current competitive marketing environment and ever-increasing costs, which are attributed to ineffective decision-making, require market research to contribute meaningful information. Appropriate decisions are not based on the sixth sense, intuition or judgment (Malhotra, 1997).

Market research specifies the information required to address these issues, designs the method for collecting information, directs and implements the data collection process, analyzes results and communicates the findings and their implications. (Peter D. Bennett, 1998).

In order to solve effectively the problems posed above, a marketing information system, hereinafter referred to as SIM, must be made, which is based on assessing the information needs, that is, the development of such information.

According to the authors (Kinnear & Taylor, 1998), the formal process of market research can be considered as a series of steps called the research process. For this process it is vital to foresee the nine steps listed in Figure 3. Steps of the research Process.

Figure 3. Steps of the Research Process.

1. Need for information
2. Objectives of research
3. Research Design and Data Sources
4. Data collection procedure
5. Sample Design
6. Data collection
7. Data processing
8. Data analysis
9. Presentation of results

Source: Market Research (Kinnear and Taylor, 1998, pp. 123)

The need for information is the first research process since it is necessary to know what is the need for information for the project, once it has been clearly established this need to specify what the objectives of the proposed research will be.

The next step is that the research design is the basic plan that guides data collection and analysis phases of the research project, that is to say, it is the structure that specifies the type of information that has been collected, the sources of data, analysis and procedures of data collection.

3.2 Classification of research methods

The classification of market research types according to Kinnear and Taylor is as follows:

- *Exploratory Research* is appropriate for the initial stages of the decision-making process, generally this research is designed to obtain a preliminary analysis of the situation with a minimum expenditure both in money and in time. The design of research, among other things, is characterized by the flexibility to be sensitive to unexpected situations or to find out hidden information a priori unidentified, using wide and versatile approaches, including secondary sources of data, observations, interviews with experts, etc.
- *Performance monitoring research*, once implementing the marketing program to follow, performance monitoring research is needed, as it is an essential element to control marketing programs in accordance with established plans. Deviation from the plan may be the result of improper execution of the marketing program and / or unforeseen changes.
- *Research conclusively*, provides information that helps to evaluate and select a course of action. Research design is characterized by formal research procedures, which encompasses clearly established research objectives and information needs. A detailed questionnaire was drafted in that plan.

  The conclusive research is therefore designed to provide information for the evaluation of alternative courses of action and is subdivided into:
- *Descriptive research*, whose purpose is to know and interpret reality, the vast majority of market research studies include this type of research, since they depend mainly on the formulation of questions to their respondents and the availability of data in sources of secondary data.

  The purpose of descriptive research differs substantially from the types of exploratory research. Effective descriptive research is characterized by a clear statement of the decision problem, specific research objectives and detailed information needs.

  It is also characterized by a carefully structured and planned research design. It generally makes use of a cross-sectional research design by taking samples of the elements of the population at a specific point in time, this is called research design in survey, which is what is done in said project, since this is the most popular type of research design and with which people are more familiar, it is also useful in describing the characteristics of consumers and in determining frequency of marketing phenomena.

- *Causal research*, is appropriate given the following objectives; understanding which are the variables that are due to what is predicted and to understand the nature of the functional relationship between the causal factors and the effect to be predicted, it must be designed in such a way that the evidence related to the causality is clear.

In developing the data collection procedure, an effective link is established between the information needs and the questions that are asked. As mentioned earlier, in this project the descriptive research method is used so, questionnaires will be applied to the people who make up the market to obtain the necessary information.

Therefore, this project will use the method of conclusive research focused on descriptive research, that is, for the accomplishment of the quantitative study we opt for the collection of data through a structured questionnaire in which will be applied find to the sample of the potential applicants to be selected in the GAC.

Within the research methods four main groups can be classified; or by telephone, personal poll by mail or electronically. This research was chosen by electronic poll.

As for the rest of the procedures described will be seen throughout the documentation of the said project.

3.3 Data collected and scales used.

During the development of data collection, an effective link is established between the information needs and the questions that will be asked. As mentioned above, the descriptive research method is used, so questionnaires will be applied to companies from different sectors of the GAC, which make up that market, to obtain basic information for the realization of the said project.

Any resource for determining the magnitude or quantity of an object or fact of any kind; instrument to assign a number that will indicate how much of something there is; a measurement resource that provides a set of rules (numbered according to certain working rules) with which to compare the object to be measured to assign a number or mathematical value that represents its magnitude. The term is broadly applicable: a scale of some kind is included in any measurement or estimation. Implicit in each case is a set of rules for assigning numbers or values: it is these rules that give meaning to the quantities. Objects can be perceptual or conceptual.

A scale can be conceived as a continuum of ordered values correlatively that supports a starting point and an end point. In order for a scale to be considered capable of providing objective information it must meet at least the following basic requirements:

- Reliability: it refers to the internal consistency of it, its ability to discriminate persistently between one value and another.

- Validity: it indicates the ability of the scale to measure the qualities for which it has been constructed and not others similar. A confusing scale cannot be valid, just as on a scale that is measuring at the same time and indiscriminately different overlapping variables. "A scale is valid when it truly measures what it claims to measure."

There are different types of scales that are distinguished according to the rigor with which they have been constructed and to the own behavior of the variables that measure. It is customary to classify them into four general types which are as follows:

a) Nominal: Its values can only be classified into classes (or categories), they cannot be ordered from small to large or from less to more. In this scale, two conditions must be taken into account:

- It is not possible for the same value or subject to be in two groups at a time. Therefore this level requires that the categories be mutually exclusive to each other.

- Numbers have no value except as names or groups labels.

In this type of measures, names or labels are assigned to objects. The assignment is carried out by evaluating, according to a procedure, the similarity of the instance to be measured with each set of copies or category definitions. The name of the majority of nominated copies or definitions is the "value" assigned to the nominal measure of the given instance. If two instances have the same name associated with them then they belong to the same category and that is the only meaning that nominal measures have.

This scale comprises categorical variables that are identified by attributes or qualities. Variables of this type name and identify different categories without following an order. The nominal concept suggests its use which is to label or name. The use of a number is to identify. One number has no greater value than another. For data processing, names can be replaced by numbers but in that case the numerical value of the given numbers

is irrelevant. The only type of comparisons that can be made with this type of variables is equality or difference. Comparisons "greater than" or "less than" do not exist between names, as well as operations such as addition, subtraction, etc.

Examples of nominal measures are some of these variables: marital status, gender, race, religious creed, political affiliation, place of birth, social security number, sex or telephone numbers among others.

The only measure of central tendency that can be done is the mode. The statistical dispersion can be done with rate of variation, index of qualitative variation or by entropy of information. There is no standard deviation.

b) Ordinal: Their values can be classified into categories and can be ordered in hierarchies with respect to the characteristic being evaluated. The ordinal level describes the variables along a continuum on which values can be ordered. In this case the variables are not only assigned to groups but also can be established relations of greater than, less than or equal to, between the elements.

Variables of this type apart from naming are considered to assign an order to the data. This implies that a higher number has a higher degree of attribute measured in comparison with a smaller number but the differences between ranges may not be equal.

c) Interval: Its values have a natural order, it is possible to quantify the difference between two interval values. Usually they have a unit of measure.

This level integrates the variables that can establish equal intervals between their values. The interval level variables allow us to determine the difference between points along the same continuum. Possible operations are all of previous scales plus addition and subtraction.

In this type of measure, the numbers assigned to the objects have all the characteristics of the ordinal measures and in addition, the differences between measures represent equivalent intervals. That is, the differences between an arbitrary pair of measures can be significantly compared. These variables name, order and show equality of magnitude. Therefore, operations such as addition or subtraction have meaning. In these variables the zero point of the scale is arbitrary and does not mean absence of value. Negative values can be used.

Measures of central tendency can be represented by the mode, the median to the arithmetic average. The average provides more information. The variables measured at the interval level are called interval variables or scale variables.

d) Proportion or Ratio: Zero represents the absence of the characteristic being evaluated. The level of reason, whose denomination comes from Latin *ratio* (calculation), integrates those variables with equal intervals that can place an absolute zero. These variables name order, have equal intervals, and zero means absence of the characteristic. Absolute zero implies identifying a position of total absence of the feature or phenomenon.

Numbers assigned to objects have all the characteristics of interval measures and they also have significant ratios between arbitrary pairs of numbers. Operations such as multiplication and division have meaning. The zero position is not arbitrary for this type of measurement. The variables for this level of measurement are called rational variables.

The measures of central tendency of a variable measured at rational level can be represented by the mode, the median, the arithmetic average or its geometric average. As with the interval scale, the arithmetic mean provides the most information.

Many authors consider that the difference between the ratio scale and the interval scale is not always clear or evident and therefore they are considered as mere categories. As far as the interval and reason scales are concerned, data are quantitative or metric, however, in the nominal and ordinal scales the data are qualitative and not metric. A comparative table of the basic measurement scales can be seen in Figure 4.

Figure 4. Basic Measurement Scales

Scale	Basic Characteristics	Common Examples	Marketing Examples	Permissible Statistics	
				Descriptive	Inferential
Nominal	Numbers identify & classify objects	Social Security nos., numbering of football players	Brand nos., store types	Percentages, mode	Chi-square, binomial test
Ordinal	Nos. indicate the relative positions of objects but not the magnitude of differences between them	Quality rankings, rankings of teams in a tournament	Preference rankings, market position, social class	Percentile, median	Rank-order correlation, Friedman ANOVA
Interval	Differences between objects	Temperature (Fahrenheit)	Attitudes, opinions, index	Range, mean, standard	Product-moment
Ratio	Zero point is fixed, ratios of scale values can be compared	Length, weight	Age, sales, income, costs	Geometric mean, harmonic mean	Coefficient of variation

Source: (Malhotra, 2008).

In this project, the variables, which have been obtained through this study, will be specified in addition to the questions and answers of the questionnaire that give way to the data that will be finally evaluated.

4. Research design

The research work requires a lot of precision and discipline, so it is necessary to define exactly the process that has been carried out for the execution of itself. Due to the complexity of the study, the construction of measuring scales was carried out.

Scales are the measuring instruments or psychological tests that are frequently used for the measurement of attitudes. (Summers, 1982) defines the term attitude as the "...total sum of inclinations and feelings, prejudices or distortions, preconceived notions, ideas, fears, threats and convictions of an individual about any specific subject."

On a measurement scale of attitudes, the opinion or set of words expressed by the person does not really matter. What is really important is the attitude of those who think. The attitude measurement scale analyzes the thoughts and feelings of the person towards the facts already specified.

Attitudes can be measured through various types of scales, including the scale of attitudes type (Likert, 1932) and the scalogram of (Guttman, 1950).

- Likert scale

  The Likert scale measures individual attitudes or predispositions in particular social contexts. It is known as the summed scale because the score of each unit of analysis is obtained by summing the answers obtained in each item.

  The scale is constructed based on a series of items that reflect a positive or negative attitude about a stimulus or referent. Each item is structured with five response alternatives;

  ( ) Totally agree

  ( ) Agree

  ( ) Indifferent

  ( ) In disagreement

  ( ) Totally disagree

- Guttman's Scale

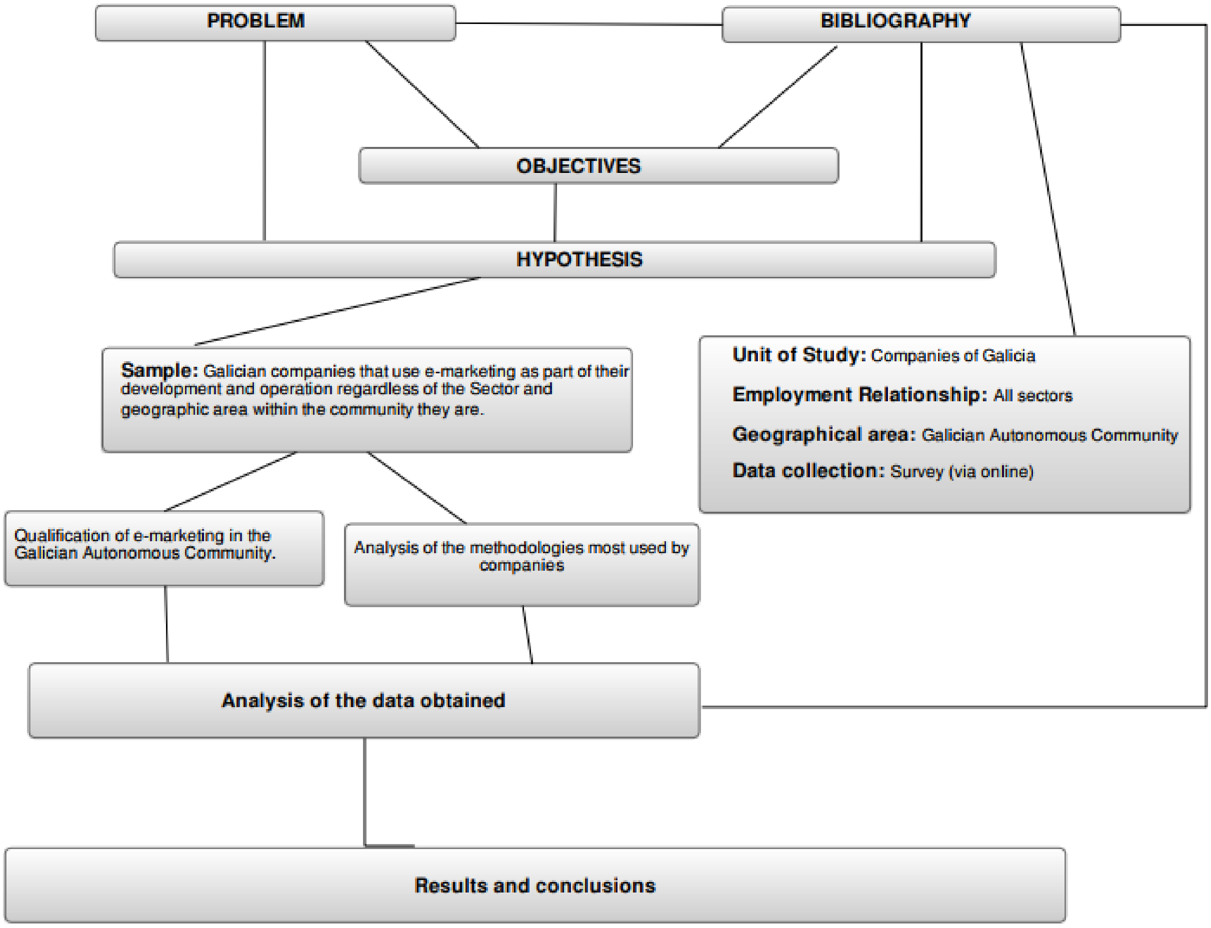
  Guttman developed a technique for measuring attitudes in a single dimension. It is known as the Guttman's Scale. It is characterized by measuring the intensity of the attitude through a set of items.

  The scale is one-dimensional as long as it is cumulative, that is, the items that integrate it have a perfect scale. The above refers to the fact that the set of items are chained to each other in such a way that if a unit of analysis expresses agreement with the first item it must be in agreement with the rest of the items that make up the scalogram. The items are ordered from highest to lowest intensity.

  The type of main research that has been used is the questionnaire with the support of the structured questionnaire, through which will be identified and evaluated the e-Marketing actions used by the companies of the GAC, as well as some type of opinion about some of the entrepreneurs on this subject.

In Figure 5. Design of the research, one can observe the research design as it was carried out and also as the research model of the project was elaborated.

Figure 5. Research design



4.1 Data collection

The main objective of this point is to define the method of data collection and its decision making. 'The key to good descriptive research is to know exactly what to measure, as well as to select a survey technique where each participant is willing to cooperate and be able to provide complete and accurate information efficiently.' Joe Ottaviani.

In the investigation it is usual to use both primary and secondary data sources, which we will analyze below.

The primary data are those generated by the researcher with the specific purpose of the research carried out, generally, they have a cost on time and money much higher than the data obtained by secondary sources. With a problem of social or economic field, data collection through a survey is one of the methods available to collect primary data.

Secondary data are the data collected for other purposes, these are of quick access and of a low cost. The main drawback is the limitation of their adequacy to the research needs in terms of sample design and validity.

In conducting a survey or questionnaire there are two clearly differentiated elements. The type of statistical sampling and method of data collection. The first one refers to the number of subjects to be surveyed and how they will be selected while the second explains the method of information exchange between the respondent and the interviewer. Then both items will be displayed.

As far as statistical sampling is concerned, there are five stages, each closely interrelated as shown in Figure 6. Stages in the design of the sampling process.

Figure 6. Stages in the design of the sampling process.

Definition of target population
Determination of the sampling frame
Selection of sampling techniques
Determination of sample size
Execution of the sampling process

Definition of the target population, this refers to the set of elements that have the information that needs to be collected, that is the "target population". It determines who should or should not be included in the sample.

Determination of the sampling frame is a representation of the target population. When the sampling frame does not match the target population is said to commit a sampling frame error.

Selection of sampling techniques. Sampling techniques are divided into probabilistic and non-probabilistic. This distinction refers to the possibility of knowing or not a priori what will be the probability of each element of the population for being selected in the sample.

According to the objective of the research and the relevance of the representativeness of the sample with respect to the population from which it arises, and therefore, the level of available resources, we will choose one technique or another. In Figure 7. The advantages and disadvantages of each are summarized.

Figure 7. Advantages and disadvantages of each sampling technique.

	Technique	Advantages	Disadvantages
Non-Probabilistic techniques	Convenience Sampling	The lowest cost and execution time	Non-representative sample
	Sampling of judgment	Low cost and little time	Subjectivity
	Quota sampling	The sample can be controlled for certain characteristics	Representation is not ensured Difficult to choose the variables that divide the population into strata
	Chained Sampling	It can study characteristics that are considered unusual	It takes a lot of time
Probabilistic techniques	Simple random sampling (MAS)	Easy to understand, the results are projectable to the entire population	Difficult to have the sampling frame Expensive and of low precision
	Systematic Sampling	It may increase representativeness Easier than MAS	Representation is not assured It can reduce representativeness if a type of elements is concentrated in a part of the list
	Stratified Sampling	Includes all subpopulations It can increase accuracy Expensive	Difficult to choose the variables that divide the population into strata
	Conglomerate Sampling	Cheap	Easy to carry out Inaccurate; difficult to compute and interpret the results

Source: (Malhotra and Birks, 1999)

Determining of the sample size. It is one of the most complex and demanded aspects. In order to approach the problem it is necessary to know the level of precision, the level of confidence and the degree of variability of the attribute being measured.

- Level of precision or also known as relative error of the estimate. It indicates the range of our estimate interval within which the real value is found which would be the one we would obtain if we had data from the whole population instead of one simple sample.
- Level of confidence, it informs us of the probability that the real value is within the confidence interval which is usually at 95%.
- Degree of variability, the greater the heterogeneity in a population the greater the sample size to achieve the same level of precision.

The execution of the sampling process, the execution of the sampling process requires a detailed specification of how the sampling design decisions will be carried out in relation to the population.

4.2 Methods of collecting information

The survey studies are a descriptive type of study and, therefore, their objective will be to help describe the phenomenon to be studied. The survey studies are often in many cases a first contact with the reality that interests us to know and of this, later, an in-depth study on the educational phenomenon that has been detected by the study of survey is extracted. For that reason, the methods of collecting information and which is the most appropriate to carry out the study or questionnaire should be analyzed very well.

The main objective of this point is to define the method of obtaining data, whose choice depends on the type of questions formulated by the researcher and the degree of control he exert over studied data (Lyber & Cassel, 2001). The main source of data collection will be distributed by a questionnaire with questions designed to be answered via the internet by several companies regardless of the sector to which they are dedicated. In order to do this, both the issues and the research hypotheses are defined in advance. For the preparation of the questionnaire, it was crucial to analyze companies and their development environments, mainly their webs.

The elaboration of the questionnaire is much more than its construction. It is a process that involves many stages and in each one it must be defined with accuracy, since in order to be successful, it must be planned with great care. The effectiveness of a questionnaire is due to five main factors. (Lyber & Cassel, 2001).

- Clarity
- Reliability
- Ease of response
- Ease of analysis
- Time to obtain the reduced results.

The questionnaires allow to know behaviors or opinions of a particular type of respondents, they look for specific questions like the ones mentioned below; "Why", "how", "where", and so on. There are different types of questionnaires, generally divided into three classes:

- The simple or self-administered questionnaire.
- The Interview Questionnaire
- Socio-metric scales.

The first is that the respondents, after reading it, answer in writing, without direct intervention of any person.

In the second, the questionnaire is applied to the subjects investigated by persons specialized in this task, who ask the respondents the questions of the questionnaire and write down the answers in the form.

The third, are the so-called "socio-metric scales" that are a special form of questionnaire. These are characterized because the different answers to the questions are assigned a numerical value, which allows to measure the degree or level reached in each case, the attitude or appreciation investigated. A questionnaire can be divided into eleven stages which must be correctly implemented so that no erroneous results are produced.

1. *Targeting of the survey*: The objectives of the survey should be set out clearly and concisely and refer to those objectives as progress is made in the design and implementation of the survey. Objectives should be kept simple enough so that they are understood by those who work in the survey and are successfully achieved when the survey is completed.

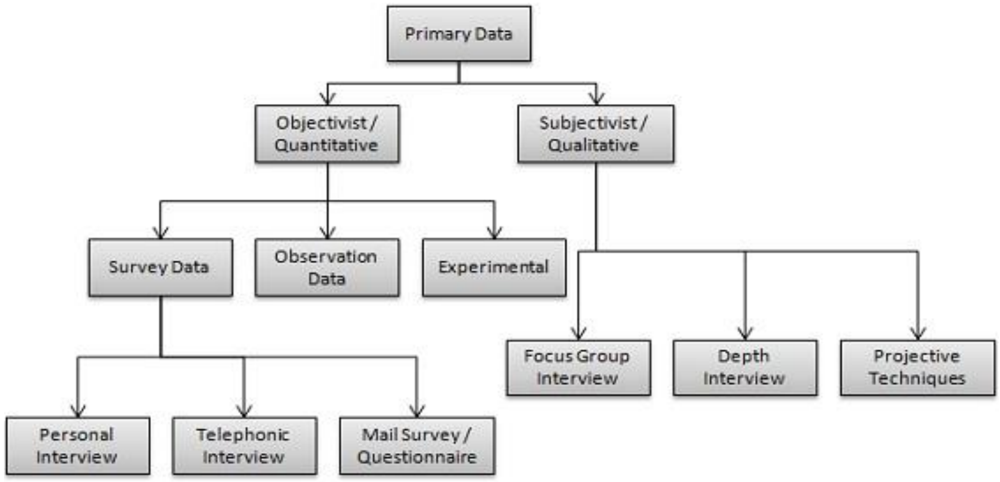
2. *Target population*. The population to be sampled must be carefully defined, which must be specified according to the concepts and variables to be measured. In order to select the sample correctly, the target population must match the one that is sampled; if not, the results are applicable only to the population sampled.

3. *Choice of sampling frame*: The sampling frame is the list of sampling units. These last ones are the units where we realized the sample; for example, a family is a unit of sampling and the individuals that live in it will be units of observation. The frame (or frames) must be selected in such a way that the list of sample units and the target population match as closely as possible.

It should be take into account that multiple frames can make sampling more efficient. Care must be taken with the possible deficiencies presented by the framework, such as incomplete, obsolete, inadequate information, etc., as it will affect the results to be obtained.

4. *Establishment of the measurement method*: Decide on the method of measurement. These are usually: personal interviews, telephone interviews, questionnaires sent by mail or direct observation. In this respect, the survey can be classified.

Figure 8. Types of survey in which you can classify



5. *Measuring instrument*: In conjunction with the previous step, it should be carefully specified which measurements are to be obtained. If it is going to use a questionnaire and plan the questions in such a way as to minimize non-response and bias in them. Always kept in mind that the willingness of a respondent to respond will depend on the presentation of the survey. This should contain the presentation of the objectives of the study and instructions on filling. It is convenient to include identification data such as: name of the institution, name of the interviewer, number of the sample questionnaire, starting time of the interview and all kinds of data used to control the investigation.

The final section should contain the closing of the interview, the time of completion and space for the interviewer to record their observations, or for some other information that the interviewer determines what is convenient to observe and note.

It should also be taken into account:

- Order the questions. It is recommended that the most general questions are presented first and then the specific ones. The complexity of the questions should go from less to more; for example, first put forward those as: sex, age, schooling, occupation, etc. Questions about the subject of research and finally, if desired, questions of opinion or attitudes should be followed. The sequence of questions should be designed so as to avoid so-called contamination, which consists of the influence or bias that the order of the questions can exert on the respondent's responses.

- Contents of the questions. It must be verified that the questions really allow to gather the necessary information to cover the objective (s). For this there may be short questions or opinion, if the subject requires it. Sometimes the combination of open-ended questions (the respondent does not address categories in the answer) and closed-ended questions (multiple options are presented) to motivate the respondent. These last ones allow a simple codification and capture of the information. Consequently, most of the questions should have a simple numerical response (such as the respondent's age) or a fixed number of predetermined selections one of which will be chosen by the respondent.
- Writing the questions. These should be done in a language appropriate to the people to whom they are addressed. The terminology of a specialist is not comparable with that of the general population. On the other hand, many questions that may seem clear to those who design the survey will not be for the respondent. Questions that induce the interviewee to say what he or she wants to hear must also be avoided, that is why one must be very careful in writing the questions of a survey.

6. Sampling design: The sampling design should be carefully planned by calculating an appropriate number of elements in the sample so that it provides sufficient information for the survey objectives. Many surveys produce little or no information because they were not designed properly.

7. Selection and training of field researchers. Field investigators should be carefully selected and trained because after the sampling plan is clear and fully established, someone should collect the data appropriately. People who are going to collect the data must be carefully trained on what measurements to take and how to do them. Training is especially important if personal interviews are used because the response rate and the accuracy of the responses are affected by the interviewer's personal style.

8. Pilot test: It is advisable to select a small sample for a pilot test. The pilot test is crucial, since it allows in the field to test the questionnaire and other measurement instruments, to qualify the interviewers, etc. The results of the pilot test usually suggest some modifications before the complete sampling.

9. Organization of fieldwork: Field work should be planned in detail. Any large-scale survey involves large numbers of people working as interviewers, coordinators, or data management personnel. Before starting the survey, the work should be carefully organized, clearly delineating the tasks, and establishing the lines of authority.

10. Organization and management of data: An outline of appropriate information management should be developed at all stages of the survey. Large surveys generate a great deal of information and therefore require a well-prepared plan for data management. This plan should include the steps to follow in the data processing from the moment a measurement is made in the field until the final analysis has been completed. A quality control scheme should also be included to verify the correlation between the data processed and the data collected in the field.

11. Analysis of the data: To define the analyzes to be performed. This point is closely related to the previous step and involves the detailed specification of the analyses that must be performed. One can also list the topics to be included in the final report.

In order to know why the method of the survey type is chosen, it is necessary to know the type of surveys that exist according to their characteristics, depending on their objective, design, etc. In most studies the following options are chosen: face-to-face interview that reduces the possibility of misinterpretation but is the most expensive method and does not have much privacy. Telephone surveys are the fastest and not too expensive, however, they do not cover the entire target population, and finally, the mail surveys that are chosen for the study of such research as it is cheap and allows the respondent to think the answers, look for information and guarantee anonymity. Figure 9 shows a comparison of the different methods of collecting information

Figure 9. Comparison of the different methods of collecting information

Feature	Face-to-face	Post	Phone	E-mail
Probability of finding an individual selected	Medium	High	High	High
Response rate	High	Low	High	Medium
Possibility of a long questionnaire	High	Low	Low	Low
Possibility of complex questions	High	Medium	Low	Medium
Success with open questions	High	Low	High	Medium
Success with tedious or boring questions	High	Low	Low	Low
Probability of avoiding questions without answers	High	Medium	High	High
Probability of avoiding socially desirable responses	Low	High	Medium	Low
Probability of avoiding interviewer distortion	Low		Medium	Medium
Probability of finding qualified interviewer	Low		High	
Probability of conducting queries when needed	Medium	High	Low	High
Probability of speed of realization	Low	Low	High	High
Probability of keeping costs low	Low	High	Medium	High

Source: Adapted (Dillman, 1978) and extended for E-mail.

Within the classification of the survey studies in this project It was chosen the interview via Internet (E-mail) since the nature of this project is based on the study of e-marketing in GAC and therefore is not required of a specific profile but is characterized by the study of a global objective of the environment. In addition to these, companies usually have little time for these types of acts and so, this is the best option. The answers obtained are precise / concrete and finally, it is avoided any kind of contingencies at the time of completion (the cancellation of an interview, for example).

5. Methods and techniques applied in data analysis

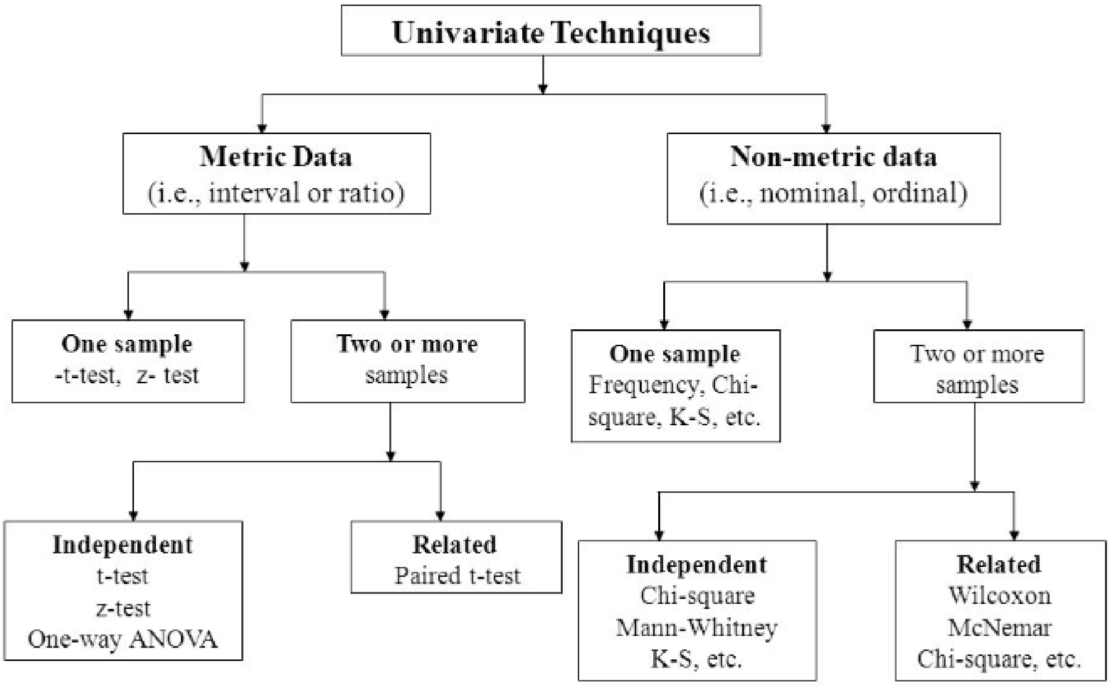
For the analysis of the data collected with the questionnaire will be used a set of quantitative methods, the data resulting from this analysis will be organized in graphs to make possible its interpretation and reasoning about it, in addition to this, the main factors that motivate e-marketing in the companies surveyed and the practices most used by them will be named.

The analysis of the data should be based on the preliminary stages of research in Marketing, that is, on the definition and approach of the problem to investigate, its design, data characteristics, statistical technical properties and information and philosophy of the researcher Malhotra (1999). The techniques used in the analysis of the data can be classified in univariate and multivariate.

- Univariate techniques are appropriate when there is a single measurement scale for each element of the sample, or if there are several measurements, each variable is analyzed separately. They are classified depending on whether their data are metric or not, metric data is measured on an interval or proportional scale, however, non-metric data are measured on a nominal or ordinal scale.
- Multivariate techniques deal with the simultaneous relations between two or more phenomena. They allow to establish, from numerous data and variables, certain relationships. They also allow to investigate latent structures and try different ways of organizing such data, either by transforming them and presenting them in a new, more affordable form, or by reducing them, without losing too much initial information without losing too much initial information, until composing a summary as complete as possible of the original data set, usually quite complex.

Univariate methods are techniques of inductive statistics that treat differences between samples which use only one variable, however multivariate methods can be divided into two large groups; descriptive methods that seek to explore relations or interdependencies and explanatory methods that are based on determining dependencies between variables.

Figure 10. Univariate data analysis techniques



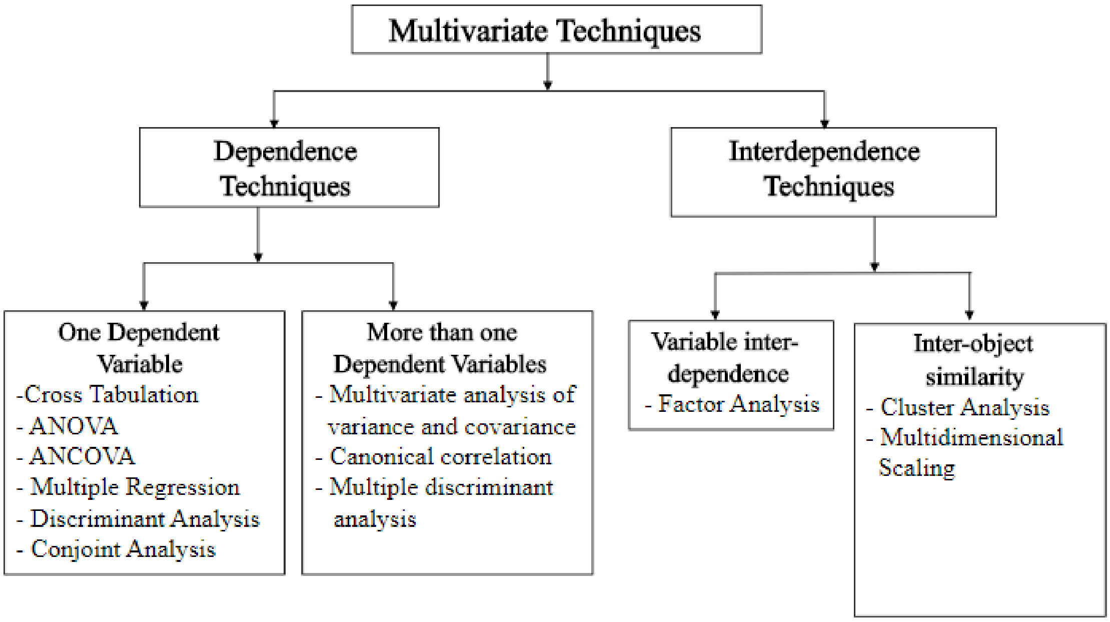
Source: (Malhotra, 2008)

The descriptive methods are concerned with the way in which the variables are related and not establishing any type of causal relationships so they have as main objective to describe and reduce the data collected through the exploration of interdependence relations.

Explanatory methods are based on the establishment of relations of chance ie how one or more variables can explain the level of one or more variables.

As examples for both cases we have that within the descriptive methods the analysis in main components, cluster analysis, factorial analysis and correspondence analysis and as an example of explicative methods we have the linear and logistic regression, the joint analysis and the models of structural equations.

Figure 11. Multivariate data analysis techniques



Source: (Malhotra, 2008)

5.1 Statistical techniques

5.1.1 Descriptive Statistics

Descriptive Statistics or Exploratory Data Analysis helps to present the data in such a way that its structure excels. There are several simple and interesting ways to organize data into graphs that allow you to detect both outstanding features and unexpected characteristics.

The other way to describe the data is to summarize them in one or two numbers that pretend to characterize the whole with the least distortion or loss of information possible.

That is, it offers ways of presenting and evaluating the main characteristics of the data through tables, graphs and measures summaries. The purpose of constructing these graphs is to be able to appreciate the data as a whole and identify its outstanding characteristics. This type of statistics will be used in the characterization of the samples of the companies surveyed as well as in the description of the answers of the questionnaire.

Among several forms of characterization of samples, central tendency measurements are more important than searching for the characterization of the value of the variable over the study that occurs more frequently.

The dispersion of the observations revolve around the trend statistics or in the sample, these are called dispersion measures, while the measurements of the shape of the distribution of the sample elements are called asymmetry measures, whereas the measures that characterize the intensity and direction of the common variation among variables, in the case of multivariate samples, are called association measures.The main measures are the techniques that tend to describe the center of distribution:

• Mean is the characteristic value of a series of quantitative data, object of study that starts from the principle of mathematical hope or expected value. Mean is obtained from the sum of all its values divided by the number of summands. The mean, is given by;

$$\overline{X} = \sum_{i=1}^{n} X_i / n$$

Where:

Xi = observed values of the variable X.

n = number of observations (sample size).

- Mode, it is the value most often in a data distribution.
- Median, it represents the value of the central position variable in a set of ordered data.

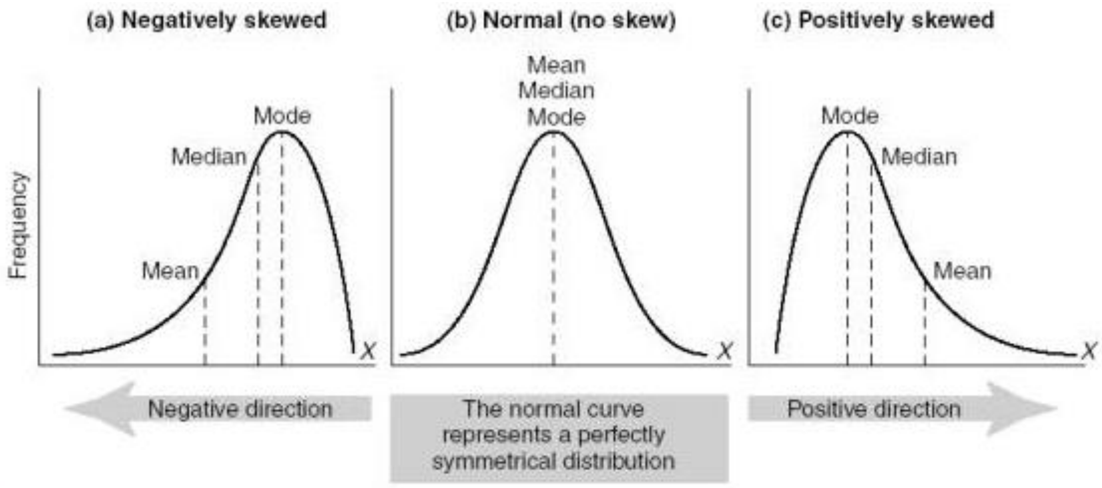
In totally symmetrical distributions, the mean, median and mode coincide, being located in the same value. On the other hand, in moderately asymmetric distributions, the following relation is maintained approximately:

Media - Mode = 3 (Media - Median)

Relative positions of the mean, median and mode for right and left asymmetric frequency curves respectively for symmetric curves the three values coincide.

Continuation in Figure 12 shows the empirical relationship between the mean, mode and median.

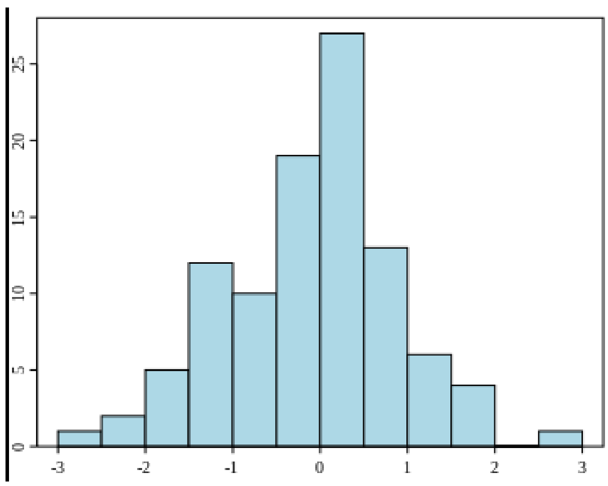
Figure 12. Empirical relationship between the mean, mode and median



5.1.2 Hypothesis testing

When performing any statistical test it is essential to understand what a distribution function is and thus the probability of obtaining a value or range determined at random. It is possible to have a visualization of the distribution of the data using a frequency diagram, that is, a histogram, grouping the cases in each category. The height of each bar indicates the number of cases in the interval, allowing us to have a visual approximation of both the central tendency of the sample data and its dispersion, as can be seen in Figure 13.

Figure 13. Frequency diagram



5.1.3 Demonstration of statistical hypotheses

In any type of statistical test the statistical value is compared with the theoretical value, provided that it is a determined distribution. The concepts related to a hypothesis test are:

- Calculated statistical value: is the value which is obtained from the data of the sample using a mathematical formula.
- Critical value of a statistic: it is the value that leaves to the right of the distribution whenever the value is positive or to the left if it is negative a percentage of the total area of the same. This percentage represents the probability of exceeding that critical value and it is called the significance level (α).

Null hypothesis (H_0) is the one in which it is rejected if the calculated value of the statistic exceeds the critical value of the same.

- Alternative hypothesis (H_1) is one that is accepted when the null hypothesis is rejected.

For Chi-square test of independence between two variables, the Chi statistic is calculated based on observed and expected frequencies. This statistic, under the null hypothesis of independence, is distributed as a Chi-square with $(m-1) * (n-1)$ degrees of freedom, *m* and *n* being the number of categories of each variable. Our hypotheses would be:

H_0: The two variables are independent.

H_1: They are not independent.

This test is intended to determine the strength of the tests against the null hypothesis. Therefore we can deduce that the null hypothesis is a statement that does not cause any effect or change, it would be represented mathematically as H_0: $p_1 = p_2$ where:

p_1 = Mean of population 1

p_2 = Mean of population 2

In addition, the null hypothesis may demand samples that are rejected from the same population:

$$H_0: p_1 - p_2 = 0$$

Also of the null hypothesis, there is another alternative hypothesis, which is named by H_1. It receives this name given to the statement that is expected to be true:

$$H_0: p_1 > p_2$$

Figure 14 below summarizes some of the most common hypothesis contrasts in statistical analysis including the formulation of the null hypothesis (which is rejected when p <0.05) and their significance.

Figure 14. Null hypothesis in the most usual hypothesis tests

Type of test or analysis	Statistical	Null hypothesis (H0)
Comparison of means	t, Mann-Whitney,Wilcoxon	The means are the same, so there is no difference between the groups
Independence between two nominal variables	Chi-square, Fisher	The two variables are independent
Correlation	Pearson, Spearman, Kendall Tau	The correlation coefficient is zero, so there is no relationship between the two variables
ANOVA	F, Kruskal-Walls	The factor has no effect on the dependent variable
Homogeneity of variance	Barlett, Cochran, Hartley.	Homogeneity of variance between groups
Regression	F	Therefore no variables contribute anything to the explanation of the dependent variable
Regression	t	The coefficient of the explanatory variable is equal to zero, so the variable must be eliminated from the model

5.1.4 Statistical Errors

In most tests performed in statistics a probability of 5% is set, so the level of significance is equal to ($\alpha = 0.05$). This is the limit to accept that the value we are observing may have been selected randomly with a probability less than 5% which is actually low so it is not considered to have been obtained randomly but was a null hypothesis and therefore false. To accept or reject the null hypothesis it is enough to obtain the tabulated value of the distribution function that leaves that percentage of the surface to the right, that is to say 2.5% in each end, which will denominated critical value.

If the value calculated in the sample is greater than the critical value we reject the null hypothesis and we accept the alternative hypothesis. On the contrary, if this value is lower than the critical value, our null hypothesis cannot be rejected.

The error we define as Type I consists of rejecting a null hypothesis when it is really true, this type of error is equal to the level of significance (α) that usually stands at 5% or for really demanding tests is located in the 1%.

The error we define as Type II is to accept a null hypothesis when it is really false. This error known as β is related to the value of α in an inverse and non-linear way, so the lower the risk of committing the Type I error the greater the risk of committing the Type II error. Figure 15 summarizes the probability of making one error or another:

Figure 15. Probability of committing Type I or II error.

	Decision made by the investigator	
Reality (we do not know it)	**H0 is true**	**H0 is false**
H0 is true.	Correct decision. Probability = 1- = . *Confidence level*	Error Type I. Probability = =. Level of significance
H0 is false	Type II error. Probability =B	Correct decision. Probability= 1-B = *Power of the test*

When the alternative hypothesis does not indicate the meaning of the difference, we must use a two-tailed test, on the other hand, if the direction of the difference is collected in the alternative hypothesis, the single-tailed test is used. Both are detailed below.

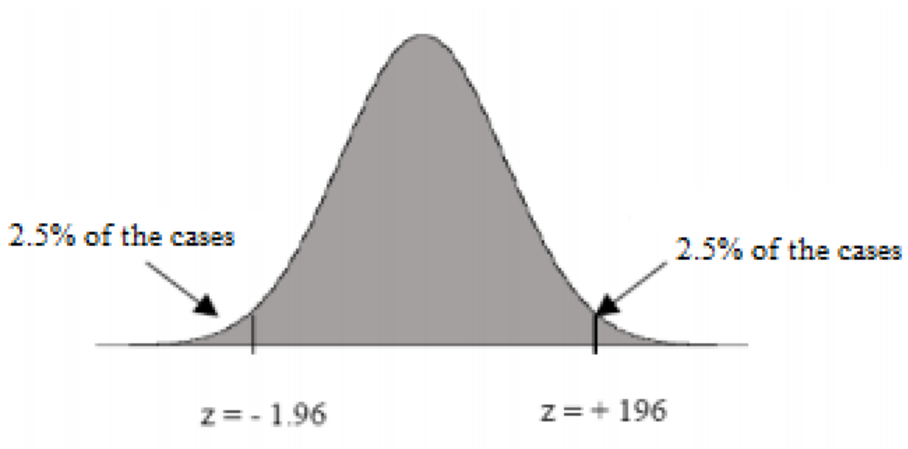
The value of z = 1.96 is remembered as a value that in a normal distribution indicates if we can reject the null hypothesis (we exceed or equal that value with the statistic) and therefore to conclude that there is a statistically significant effect. For example, with the Student t test, the probability that the mean Y1 exceeds the mean Y2 in 1.96 typical errors is 2.5%.

Likewise, the probability that the mean Y2 exceeds the average Y1 in 1.96 typical errors is also 2.5%. The test in this case has been done in two tails (bidirectional) since the difference of means is sought in the two tails of the normal distribution.

Therefore, if the two directions of the mean differences are included, the probability that a difference between the means exceeds the value of 1.96 is 5% (2.5% + 2.5%). Usually this type of bilateral contrasts are applied in psychological research. The researcher raises in his hypothesis that the direction of the difference of means may be both in favor of Y1 and Y2 and once the statistical significance is obtained ($p < 0.05$) the direction of the means is observed and concluded.

Therefore, when working with unilateral contrasts, the decision to opt for a single address must be justified. The bilateral or unilateral option is established a priori, before collecting the data and of course before analyzing the data.

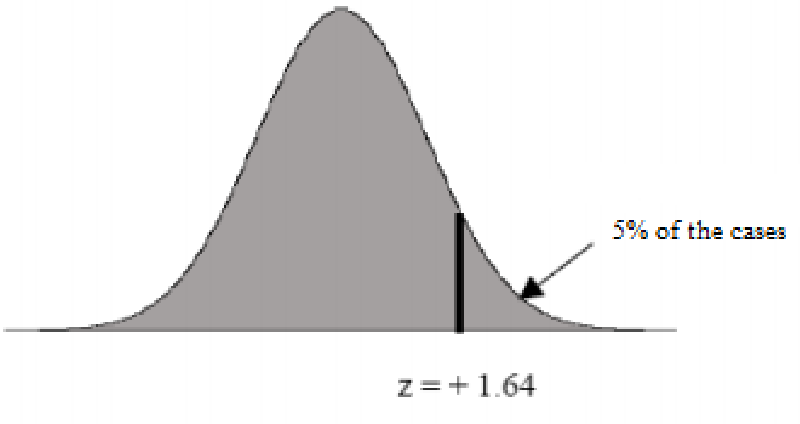
Figure 16. Two-tailed test



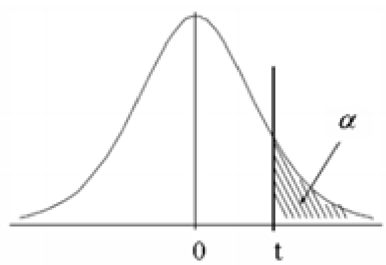
However, it is also possible to pose a unilateral contrast or a tail. In fact many of the hypotheses that are posed in Psychology, or perhaps the majority, are unidirectional (this group has a greater average than the other, there has been a change but in this direction, etc.).

The decision to use a two-tailed test or a queue (unidirectional or bidirectional) depends on the degree of knowledge of the relationship between the variables. And it should never be decided after performing the experiment since the statistical decision would be contaminated.

Figure 17. Testing a queue



The rejection zone of H_0 is in the right tail of the distribution of the statistic.



For the related probabilities, the table shows the values $t_{n;\alpha}$,such that $\alpha = P(t_n \geq t_{n;\alpha})$ where t_n is a Student *t* random variable with *n* degrees of freedom .

6. Results of research

6.1 Statistical Procedures and Classification of Variables

Although the study can be considered accurate in the context of the companies surveyed, it does not accurately reflect the reality of the CAG companies. The total of the surveyed companies is 280, of which a response was obtained by 55.

This is due in part to the resistance on the part of many companies to the change posed by ICT. The number of companies to which the questionnaire was sent was also significant and no response was obtained, for various reasons.

The reasons for the lack of response are reflected below. A) Yes:

- 10% of companies do not have an official website or email.
- 35% of companies do not use them when they do not know the scope of ICT.
- 36% of the companies NS / NC.
- 19% of the companies are on which the study is based.

The responses included in the questionnaire were classified according to their nature, as it can be seen in the following Table 1. Classification of variables.The questionnaire is composed of ordinal type variables that follow the Likert scale, where each level of response corresponds to a name and attribute and, finally, multiple choice answers. In this type of question the respondent has the possibility to choose more than one answer at a time, so that the total absolute frequencies can exceed the total of respondents, in addition, the total of the percentages can exceed 100%. In this way the questionnaire is composed only of questions or questions that give rise to categorized variables, that is to say that they are composed by levels and therefore do not exist questions of continuous numerical nature.

Table 1. Classification of variables

Question	Answer	Type of variable in relation to the question
No. Of woerkers	Less than 10 From 10 to 50 From 50 to 150 More than 150	Nomimal
Which e-marketing initiative privided the best restults?	E-mail Marketing Online advertising Affiliate Marketing Search Engine Marketing Social network Marketing Mobile Marketing E-CRM	
The main advantage of e-marketing in his/her company is:	It has no ease of adaption Acceotance by customers Reduced costs	
The main disadvantage of e-marketing in his/her company is:	It has no ease of adaption Acceotance by customers Reduced costs	
An e-marketing plan was elabrated than guided us in the actions carried out	1. yes 2. no 3. DK/NA/NR	
Did the e-marketing actions carried out achieve the defined objetives of a principle?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	Ordinal
Did the e-marketing actions carried out lead to new markets?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	
Did the e-marketing actions carried out contribute to the internationalization of the company?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	
Did your e-marketing actions help you attract new customers?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	
Did the e-marketing actions carried out enable out reduce costs?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	
Did the e-marketing actions carried out enable the company to develop in new business areas?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	
Did the e-marketing actions made differentiate out products and services?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	
Did the em-marketing actions carried out enable us distinguish out products and services?	1. Totally disagree 2. Disagree 3. DK/NA/NR 4. Agree 5. Totally agree	

In our company, is it done E-mail marketing actions?	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
In our company, are made advertisements in means of Online Advertising?	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
In our company, are carried out actions of Mobile Marketing?	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
In our company, are carried out actions of Search Engine Marketing?	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	Ordinal (*1)
In our company, Viral Marketing actions are carried out	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
Marketing actions are carried out through different social networks	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
Marketing actions are carried out through different social networks	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
In our company, are carried out actions related to e-CRM Systems	1. Never 2. Rarely 3. DK/NA/NR 4. Frequently 5. Always	
What is the importance of the website for the development of out company?	1.None 2. Not Important 3. Very Important 4. DK/NA/NR 5. Important	Ordinal (*2)
In your opinion, what is the importance tha customers give to your website?	1.None 2. Not Important 3. Very Important 4. DK/NA/NR 5. Important	
Who carried out out website?	Specialized company Our company Freelancer Other	
What are e-marketing actions aimed at? *	Consumers Resellers Other	
Reasons for implementing the e-marketing strategy.	Cost reduction Develop new business areas Internationalization of the company Customer loyalty Attracting new customers Betting on th difference Promoting productos and services Other	Multiple answer
Who carried out out e-marketing actions?	Specialized company Our company Freelancer Other	
What are the objectives of your website?	Disclose the objetives and missions of the compa To function as an e-commerce platform Disclose the productos and services of the compa Other	

*1. Likert scale, except level 3
*2. Likert scale, except level 4

In the first approach of the data, the tables of absolute (N) and relative (%) frequency were used and graphs were presented in order to better visualize and distribute the results obtained from that study.

In this first phase, the approach given to the data is called descriptive analysis. In the second phase, inferential analysis is used using statistical tests so that the study has a significant statistical demonstration.

One of the objectives was to analyze if the type of e-marketing techniques used was directly related to the number of workers that the company has, as well as its situation and the activity sector that forms within the Galician Autonomous Community (GAC). During the study, the Chi-square ($\chi 2$) independence test was used as it is very useful to be able to assess whether the counts of the two-factor variables are dependent or independent. This test evaluates as the null hypothesis, the independence between two variables in analysis, that is, if the sign result of the test is less than or equal to 0.05 the hypothesis of independence is rejected, since it can be affirmed that there is a significant association. That is, the significance of Chi-square (p) is a measure more accurate than the value of Chi itself and therefore we will use this data better to check if the result is significant or not.

- If $p < 0.05$, the result is significant, that is, we reject the null hypothesis of independence and therefore conclude that both variables are dependent, there is a relationship between them. This means that there is less than a 5% chance that the null hypothesis is true in our population.

- If $p > 0.05$ the result is not significant, that is, we accept the null hypothesis of independence and therefore we conclude that both variables studied are independent, there is no relationship between them. This means that there is more than a 5% probability that the null hypothesis is true in our population and we consider it sufficient to accept.

The value of 0.05 is a value established according to the 95% confidence level. Until now the relationship between two categorical variables has been analyzed, however, to be able to analyze the relationship between similar variables and verify the significant association is a analysis of multiple correspondences, in abbreviated form MCA.

In order to identify the companies that use the most e-marketing techniques according to the number of workers, in addition to the location and its environment. Multiple correspondence analysis quantifies nominal (categorical) data by assigning numeric values to cases (objects) and categories, so that objects in the same category are close to one another and objects of different categories away from each other. Each object is as close as possible to the category points for the categories that apply to that object. In this way, categories divide objects into homogeneous subgroups.

The variables are considered homogeneous when classifying objects of the same categories into the same subgroups.

Cronbach's alpha is a coefficient that is used to measure the reliability of a measurement scale, and whose Alpha denomination was performed by Cronbach in 1951. The Cronbach's alpha is an average of the correlations between the variables that are part of the scale. It can be calculated in two ways: from the variances (Cronbach's alpha) or from the item correlations (Cronbach's alpha standardized).

The alpha coefficient can be used as an index of internal strength. But it implies nothing about the stability in time nor on the equivalence between alternate forms of the instrument. The alpha coefficient can be visualized as the lower limit of the coefficient of reliability known as the coefficient of precision. In other words, an alpha coefficient of 0.80 only implies that the coefficient of precision is greater than 0.80, but it is not known by how much it differs.

It can be visualized as the average of all the reliability coefficients that are obtained by the methods of the two halves. Moreover, it is not an index of unidimensionality of the instrument, it can be used in any situation in which we want to estimate the reliability of a compound.

There are factors that can affect reliability such as:

- Homogeneity of the group.
- Time.
- Size of the questionnaire.
- Objectivity of the process of assigning scores.

Cronbach's alpha will be applied to a group of questions that evaluate the e-marketing actions used by the companies, in addition to being applied in the results of these to see as it will be shown if there is an internal consistency in both groups. Each group of questions has to measure the same characteristic, they all have the same number of levels in each question and following the scale of Likert. When the value of Cronbach's alpha is equal to or greater than 0.6, the internal consistency of the group of questions being analyzed is verified, that is to say, when there are significant differences the scores applied by the respondents this is because the opinions disagree and not because the questionnaire is confusing or induced to multiple interpretations, so it is said that it is a measure of reliability.

At this point, we can average the scores for each group of questions, and there are two continuous and continuous numerical variables, with the sole objective of evaluating whether the most usual use of e-marketing actions is the most specific objective of the company and through this evaluation do their own actions of e-marketing. Since it is a numerical and continuous variable, the technique that is carried out is going to be a coefficient of relation, where in the first place it is verified if the two variables follow a normal distribution, for this objective the Kolmogorov-Smirnov test is used, which is applied to contrast the normality hypothesis of the population. The test statistic is the maximum difference:

$$D = \max | Fn (X) - F0 (X) |$$

Since Fn (x) is the sample distribution function and Fo (x) is the theoretical function or corresponding to the normal population specified in the null hypothesis.

The distribution of the statistic Kolmogorov-Smirnov is independent of the population distribution specified in the null hypothesis and the critical values of this statistic are tabulated. If the postulated distribution is normal and its parameters are estimated, the critical values are obtained by applying the significance correction proposed by Lilliefors. If the sig. it is superior to 0.05 the normality hypothesis is rejected, thus verifying the normal distribution, being able to cross the Pearson parametric correlation coefficient test.

Both the Pearson and the Spearman correlation coefficient follow the same interpretation rules, only taking into account values between 1 and -1. The value 0 indicates that there is no correlation and the numerical value indicates the magnitude of the correlation. As for the correlation coefficient, it quantifies the correlation between two variables, when it actually exists.

The fact that there is correlation between the variables does not imply that there is causality or dependence between them. From what we can deduce that the sign indicates the direction of the correlation and the values close to 1 indicate a very good or exceptional correlation and the values close to zero a null or minimum correlation. When the two variables under the correlation study do not have a normal distribution, we will proceed with the measurement ranges for each variable.

There are two methods of rank correlation, one by Spearman (1904) and another by Kendall (Kendall, 1938, Kendall & Babington Smith, 1939). In case of Spearman correlation rank, after giving the ranges to each measurement of the variable it will use the following equation to proceed with the operation.

$$rs = 1 - [6 \Sigma di\ 2 / (n\ 3 - n)]$$

Where, di = difference between X and Y ranges. The value of rs varies from "-1" to "+1" and has no unit, however, this value is different from the value of r calculated by the Pearson method.

6.2 Reliability of the scales

From a general point of view, the validity of a scale refers to the extent to which indicators are measuring what they should measure. In this respect, there are multiple validity variants that can be contrasted. Specifically, this work will analyze for each of the scales both its validity of content and its discriminant validity.

Content validity attempts to evaluate the instrument's ability to collect the content and scope of the construct and the dimension. In this research, the validity of content is based on the theoretical basis and empirical evidence supporting the measurement instruments used. More specifically, in this work, the validity of the content of the scales is based on the rigorous procedure that has been followed in the development of the scales collected in the questionnaire.

Thus, the literature review, considering both theoretical and conceptual as well as empirical aspects and the pre-test of the questionnaire, serve as a guarantee for such content validity.

As for discriminant validity, this is a necessary feature to avoid confusion and to facilitate the interpretation of the relationships between the questions. This validity refers to the property that the measure used does not correlate too much with the measures of other questions with which it is supposed to theoretically differ.

In this research, the discriminant validity has been evaluated by checking that, at a 95% confidence interval, the correlation between each pair of questions does not contain the value 1, which would allow to deduce that, since the questions are not perfectly correlated, each one of them represents a different concept.

On the other hand, and based on the fact that a necessary, but not sufficient, condition to validate a measure is its reliability, it has proceeded to its determination for each of the questions and dimensions. According to George and Mallery (1995), reliability is related to the fact that the measuring instrument produces the same results every time it is administered to the same person and in the same circumstances.

Thus, instruments used in the social sciences can usually be considered reliable if, regardless of who administers them and in the manner in which they are done, similar results are obtained. In this paper, Cronbach's alpha, which is the most widely used indicator for this type of analysis, has been used to assess the reliability of measurements.

This coefficient determines the internal consistency of a scale by analyzing the average correlation of one variable with all the others that make up that scale. It takes values between 0 and 1, but can also show negative values (which would indicate that there are items on the scale that measure the opposite of the rest).

The closer the coefficient to unity, the greater will be the internal consistency of the indicators in the scale evaluated, although there is no general agreement on the limit that defines when a scale can be considered as reliable or not. According to George and Mallery (1995), Cronbach's alpha below 0.5 shows an unacceptable level of reliability; if it took a value between 0.5 and 0.6 it could be considered as a poor level; if it was between 0.6 and 0.7, it would be at a weak level; between 0.7 and 0.8 would refer to an acceptable level; in the range of 0.8-0.9 could be rated as a good level, and if it took a value higher than 0.9 would be excellent.

In table 2. Type of e-marketing techniques and in Table 2. Techniques of e-marketing used collect the levels of reliability that have been obtained for the different questions that make up the questionnaire.

Table 2. Type of e-marketing techniques

	Variance	Mean	Standard deviation	Cronbach's Alpha
Item 2	1,6242424	2,9272727	1,2744577	**0,9036126**
Item 3	1,8909091	2,3272727	1,3751033	
Item 4	1,6080808	1,9454545	1,2681013	
Item 5	2,2242424	2,3272727	1,4913894	
Item 6	2,4464646	3,1272727	1,5641178	
Item 7	2,1333333	2,6	1,4605935	
Item 8	1,5434343	3,8909091	1,2423503	
Item 9	1,9205387	2,0727273	1,385835	

Item 2: Do we do E-mail marketing actions in our company?

Item 3: In our company they make ads in means of Online Advertising (Google Adwrds)

Item 4: Affiliate Marketing is negotiated in our company (With other online companies, web pages..)

Item 5: In our company, are actions taken for mobile devices, PDAs?

Item 6: In our company, we carry out actions of Search Engine Marketing, that is, actions to improve the position of our website in the different search engines.

Item 7: In our company Viral Marketing actions are carried out, in such a way that the message is transmitted from person to person, or more commonly called word of mouth

Item 8: Marketing actions are carried out through different social networks (Facebook, Twitter)

Item 9: Actions related to e-CRM systems (customer relationship management systems, eg SAP, Oracle, MongoDB, etc.) are carried out in our company.

Table 3. E-marketing techniques used

	Variance	Mean	Standard deviation	Cronbach's Alpha
Iem 10	0,8430976	3,4363636	0,9182035	**0,9036126**
Item 11	1,0282828	3,4363636	1,0140428	
Item 12	1,4175084	3,4166667	1,1905916	
Item 13	0,8774411	3,7818182	0,9367182	
Item 14	1,16633	2,9818182	1,0799676	
Item 15	1,1191919	3,2545455	1,0579187	
Item 16	1,1434343	3,5090909	1,0693149	
Item 17	1,1131313	3,6727273	1,0550504	

Item 10: Did the e-marketing actions carried out achieve the defined objectives of a principle?

Item 11: Did the e-marketing actions carried out lead to new markets?

Item 12: Did the e-marketing actions carried out contribute to the internationalization of the company?

Item 13: Did the e-marketing actions taken help to attract new customers?

Item 14: Did the e-marketing actions carried out reduce costs?

Item 15: Did the e-marketing actions carried out enable this company to develop in new business areas?

Item 16: Did the e-marketing actions carried out make customer loyalty possible?

Item 17: Did the e-marketing actions allowed us to differentiate our products and services?

As we can see in both scales, the Cronbrach alpha values were higher than 0.80 so it can be considered that the internal consistency of both tables and therefore of their issues is admissible. This means that once these values are obtained the consistency obtained is good.

As for the intermediate values obtained, the most used e-marketing technique by the companies is through different social networks with the value of 3.8909091 however the least used is the one that refers to Affiliate Marketing negotiations with a value of 1.9454545.

In the use of e-marketing actions the highest value, as can be seen in this table is 3.6727273 reason why the managers of the companies surveyed agree that the e-marketing actions allowed to establish a clear difference of their products and services.

On the contrary, the lowest value is 2.9818182, which corresponds to the fact that, according to the respondents, these actions did not serve to reduce costs.

7. Quantitative study

7.1 GAC

Within the questionnaire made to the companies in the research environment, a small preliminary analysis will be made, in terms of the geographical location (GAC) as well as the number of collaborating companies and a small summary of the most influential sectors in the GAC.

Then, the main issues will be developed, for which the project was proposed and this situation will be solved.

In order to understand the quantitative study of this project it is a priority knowledge of the context in which it is developed. For this purpose, we will analyze exhaustively the demographic outline as well as the constitution of the companies within the GAC and its relevance.

The GAC is located in northwestern Spain, north of Portugal and on the shores of the Atlantic Ocean. It is an autonomous community divided in four provinces: A Coruña, Lugo (in the north), Ourense and Pontevedra (in the south). Santiago de Compostela is the capital of the community. In the socio-economic field, it should be noted that Galicia is a community with a strong agricultural tradition and an important fishing industry, canning and automobile, among others.

For this we will see the analysis of Pestel and the 5 forces of (Michael E. Porter, 1998). Well to find out the impact it will have on the sector we are in, about our studies.

Once we have defined the set of factors that can impact our environment we need to analyze those specific factors that can affect the profitability of operating in one sector or another.

For this I have included 4 of the 5 forces of Michael Porter, which I consider more relevant in this type of analysis that concerns us: suppliers, customers, substitute products and competition. I have ignored the fifth force, called competitiveness of the industry itself.

The following describes each of the factors proposed by Michael E.Porter:

Replacement products

It consists of assessing the threat posed by alternative technologies to meet the same or similar needs. When the threat of substitute products is high it means that the profits of the companies can be diminished, since the substitute limits the price at which the product of the sector can be sold. This threat will depend on:

- The degree of substitution: if the substitute perfectly meets the needs of the product they replace, the degree of substitution will be high and, therefore, the threat will be greater.
- Relative prices: if the price of the substitute is much lower than that of the product they replace, the greater the threat.

Potential competitors

It consists of evaluating the possibility that new companies can enter to compete in a sector. When there is a high threat of new competitors it means that new firms will compete in a given period and therefore the profits of existing companies may be diminished. The two factors on which the threat of new competitors depends are:

- The reaction of existing competitors to the entrance of a new company: if a new company expects a strong reaction from the companies already installed (trying to make it difficult to enter by lowering prices, intensifying advertising, incorporating innovations in products and / or processes, among other measures) will be less likely to decide to enter the sector.
- The existence of barriers to entry: barriers to entry refer to obstacles that need to be overcome by companies that do not operate in a sector and wish to do so. Some examples of entry barriers could be:
- The existence of economies of scale on the part of the companies already installed.
- The existence of highly differentiated products and / or with high fidelity of purchase by the customer.
- The existence of legal or administrative barriers that require certain authorizations to enter.
- The difficulty of accessing distribution channels or customers. The high initial investments.
- The favorable location of the companies already installed which prevents access to new entrants.
- The existence of "experience effect" by the companies already installed.
- The existence of barriers to exit: barriers to exit are economic, strategic or emotional factors that make it expensive to leave the sector.

Intensity of current competition

It consists in evaluating the rivalry between the competitors who are installed in the sector. When rivalry between existing competitors is high, companies see the opportunity to improve their position by reducing costs and prices, increasing the differentiation of their product / service or both at the same time. In the extreme case is the absence of rivalry, that is, the monopoly. The degree of rivalry between existing competitors depends on:

- The number of competitors and their degree of concentration: if there are few competitors and large rivalry will be less because in many cases, the larger company usually sets the rules that govern competition.
- The growth of the industrial sector: in growing sectors all companies can improve results without others having to reduce their results; on the contrary, in mature or declining sectors the rivalry increases.
- The degree of differentiation of the products / services of the sector: the more differentiated the products / services the less rivalry.
- The fixed costs of the activity: the higher the fixed costs of an activity, the greater the need to work at full capacity and, therefore, the greater the rivalry.

Bargaining power of suppliers:

It consists of evaluating the possibility that suppliers can establish the rules of the game in relations with the company. When there is a high bargaining power of suppliers means that they can modify the conditions of sale of their products / services (in terms of price or quality) and therefore the benefits of the companies they provide may be diminished. The bargaining power of suppliers depends on:

- The number of suppliers and their degree of concentration.
- The degree of differentiation of the products / services offered by suppliers.
- The existence of substitute products / services to the product / service offered by the supplier.
- The importance that our company (and even the industrial sector in which we operate) has for the supplier.
- The threat of forward vertical integration by the supplier.
- The importance of the supplier's product / service on the final cost of our product / service.

Power of negotiation of the clients

It consists of evaluating the possibility that customers can set the rules of the game in relationships with the company. When there is a high bargaining power of the customers means that they can modify the conditions (for example, price or quality) to buy to the companies and, therefore, the profits of these companies can be diminished. The bargaining power of customers depends on:

- The number of clients and their degree of concentration.
- The degree of differentiation of the products / services we offer to customers.
- The existence of substitute products / services to the product / service we offer to customers.
- The degree of profitability of the industrial client sector.
- The threat of vertical integration backwards by the industrial customer.
- The importance of our product / service on the final cost of the customer.
- The information available to the customer.

All of the above can be seen in Figure 17. Analysis of the Environment.

Figure 18. Environment Analysis

Source: PESTEL & Porter

Once all the external analysis and the demographic context have been defined, in Table 4. *Mercantile societies constituted segundo provincia e forma xurídica*, it is possible to see all companies. In 2016 in Galicia, 317 mercantile companies were formed whose average subscribed capital (which is calculated by dividing the total capital of the incorporated companies that increase capital among the number of incorporated companies that increase capital) amounted to almost 176,000€ per each society.

Looking at this table you can see how by provinces A Coruña and Pontevedra registered the largest number of constitutions with 38.49% of the mercantile companies created in A Coruña, and with a 42.90% in Pontevedra. 10.41% of the new companies are based in the province of Ourense and the rest with 8.20% in Lugo. Annex 1 is added to the Annex part, with all the companies incorporated in the GAC.

Table 4. *Mercantile companies constituted ,second province and legal form*

	2017/Xaneiro	2017/Febreiro	2017/Marzo	2017/Abril	2017/Maio
Galicia	439	417	438	353	327
A Coruña	197	194	179	151	167
Lugo	29	49	37	36	35
Ourense	38	46	53	44	22
Pontevedra	175	128	169	122	103

Source: IGE. Exploitation of the Official Gazette of the Rexistro Mercantil (BORME)

7.2 Study

At this point we will refer to the geographical location of the companies that responded to this questionnaire.

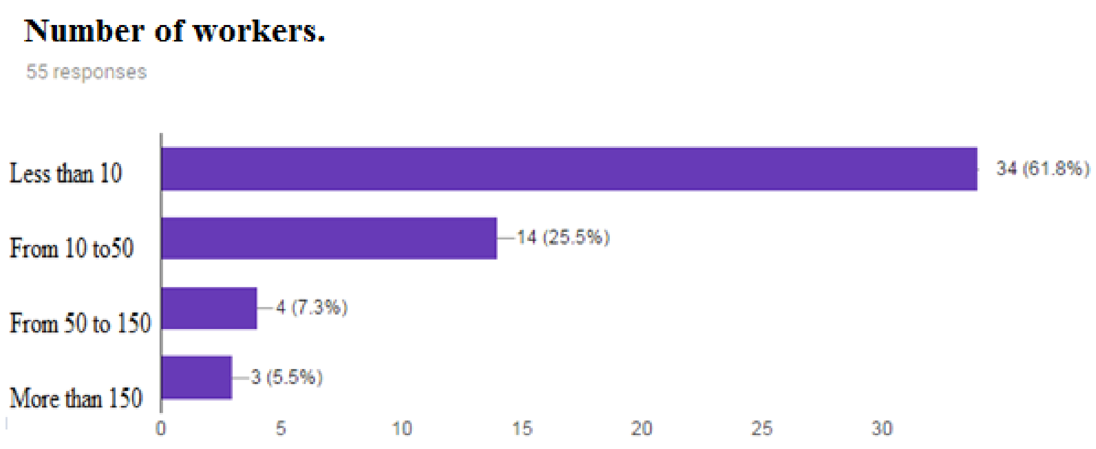
Table 5. Geographical location of companies (GAC)

Province	No. of companies	%
A Coruña	15	27,27%
Lugo	18	32,72%
Pontevedra	12	21,81%
Ourense	10	18,18%
TOTAL	55	100%

As can be seen in Table 5. Geographical location of the companies in the CAG, we observe that the total of the companies surveyed corresponds to 55 of the total of which 27.27% refers to the province of A Coruña, 32.72% to that of Lugo, 21.81% to that of Pontevedra and finally 18.18% to Ourense.

Therefore we can affirm that the largest number of companies surveyed is located in the province of Lugo, following A Coruña, Pontevedra and Ourense. In relation to the number of workers of each one of the companies surveyed we can find several types of profiles; the companies that have less than 10 workers (61.8%) are between 10 and 50 workers (25.5%), 50 to 150 (7.3%) and finally those with more than 150 workers with 5.5%

Graphic1. Number of workers



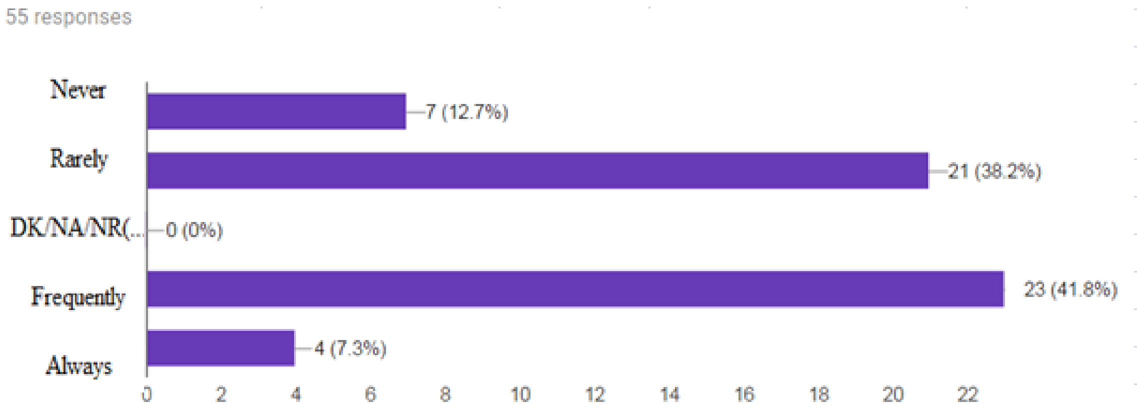
8. Results of the research analysis

8.1 E-Marketing techniques most used by GAC companies

8.1.1 E-mail Marketing Actions

The values set forth in the following table clearly express the most and least used e-marketing techniques according to the study carried out. As for the e-mail marketing actions carried out by the companies, we can observe them in Graph 2. E-mail Marketing, which are often used by 41.8% being rarely used 38.2%, never 12.7% and finally always 7.3%.

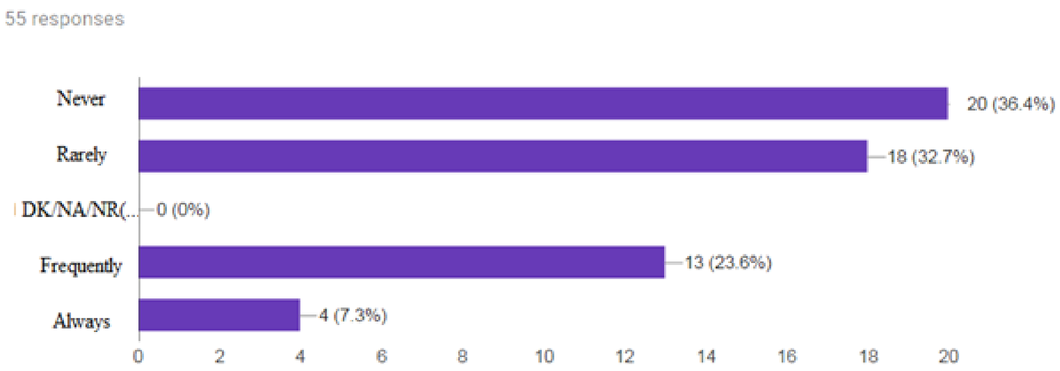
Graphic 2. Email Marketing



8.1.2 Advertisements in Online Advertising Media

With regard to the use of advertisements through online advertising, as seen in Graphic3. Advertisement in advertising media Online surveyed companies responded with 36.4% Never, 32.7% Rarely, Frequently 23.6% and finally always 7.3%, so we can deduce that most of the companies surveyed never used ads in online advertising media.

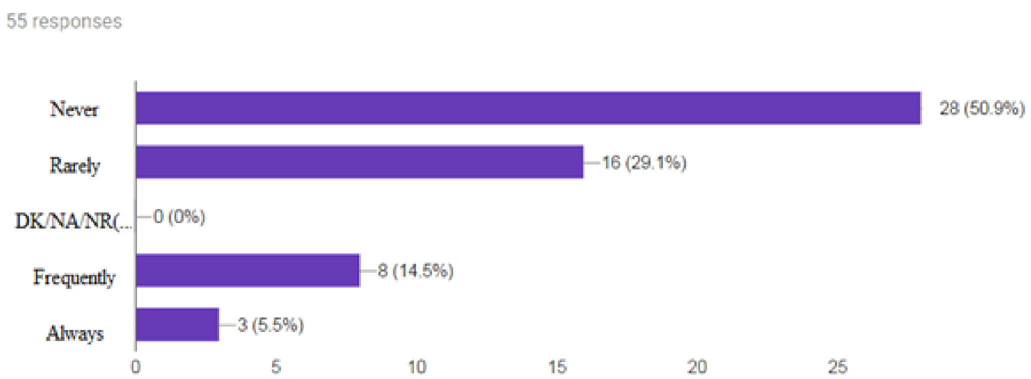
Graphic 3. Advertisement in online advertising media.



8.1.3 Affiliate Marketing Negotiations

In Graph 4. Affiliate Marketing negotiations, the answers obtained tell us that 50.9% never use it, 29.1% rarely. 14.5% frequently and 6.5% always. From what we can deduce that the companies surveyed do not use the marketing technique as the main marketing technique either.

Graphic 4. Affiliate Marketing Negotiations

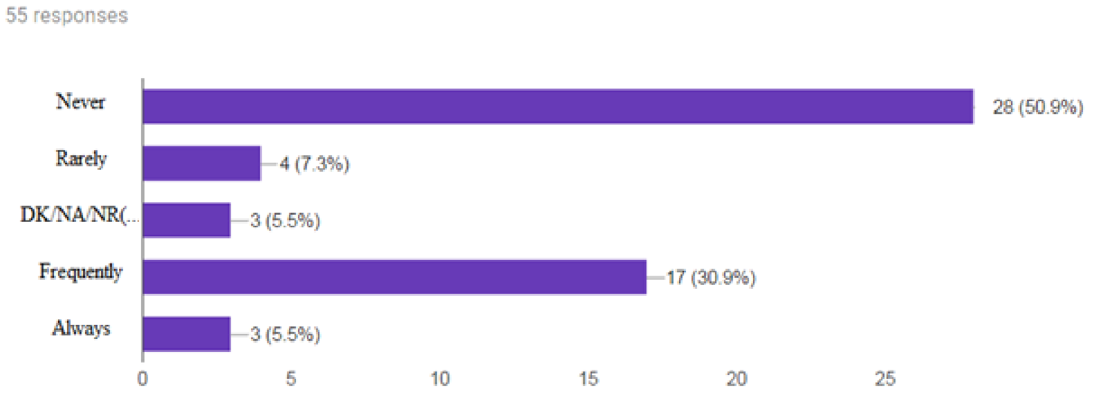


8.1.4 Mobile marketing actions

In Figure 5. Mobile Marketing actions we observed that in the responses obtained 50.9% never carried out mobile marketing actions, 30.9% frequently, 7.3% rarely.

In this situation it is visualized an equivalence in what to the use of the actions of mobile marketing refers with 5.5% both the response of always as the one of DK / NA /NR.

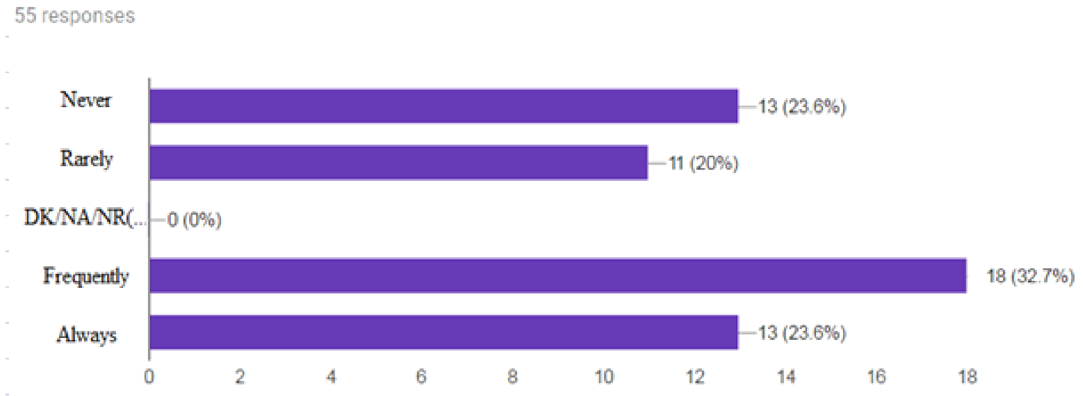
Graphic 5. Actions of Mobile Marketing



8.1.5 Search Engine Marketing Actions

Next, and in terms of the use of Search Engine Marketing, we observe that 32.7% is used frequently, rarely 20% and in both ends never and always with a 23.6%, making us understand that it is used by a percentage equal to that never uses it.

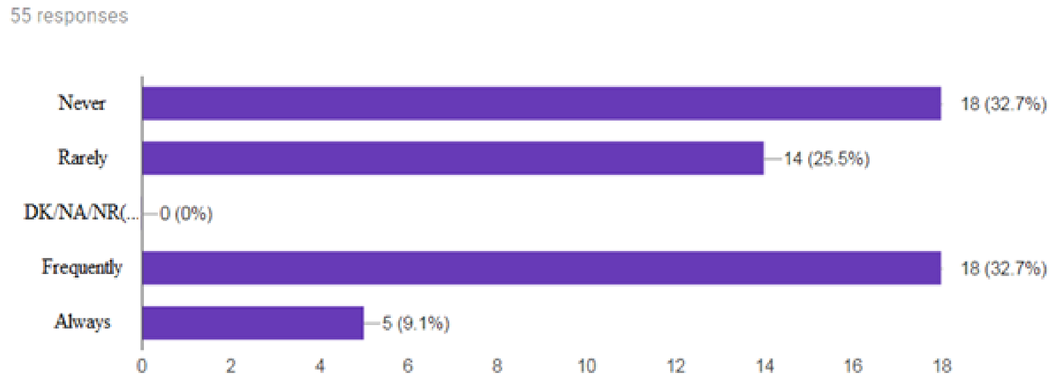
Graphic 6. Search Engine Marketing Actions



8.1.6 Viral Marketing Actions

Viral Marketing We concluded that viral marketing actions are frequently used among 32.7% of companies surveyed, with 32.7% never using them, rarely 25.5% and always 9.1%.

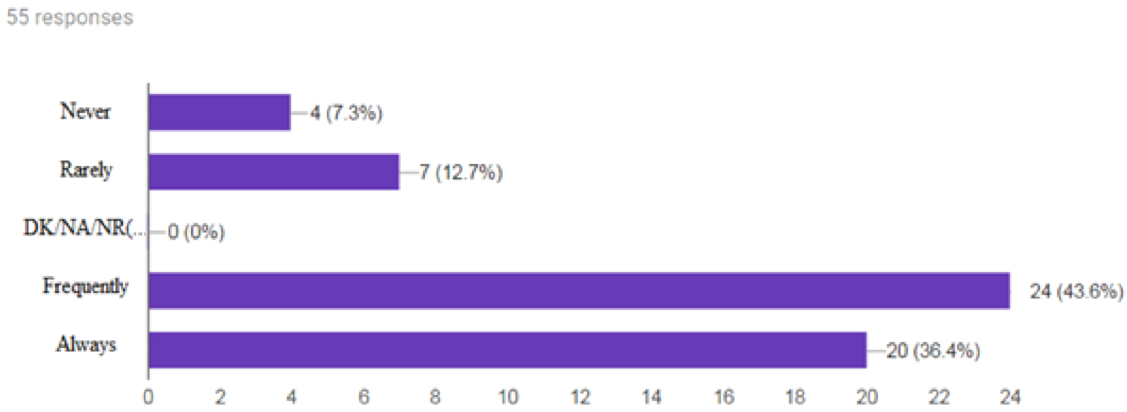
Graphic7. Viral Marketing



8.1.7 Marketing Actions in Social Networks

As far as social networks are concerned and since this may be one of the most well-known marketing actions and the ones most used by potential clients, we can deduce that they are used very frequently with 43.6% and always 36.4% both are one of the most used marketing actions without a doubt, then they are with 12.7% rarely and never 7.3% with those that carry relatively low percentages.

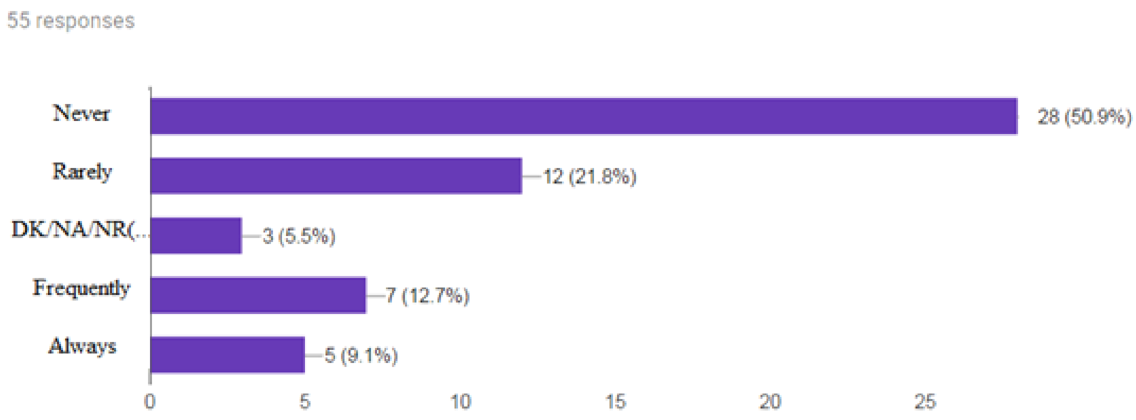
Graphic 8.Marketing in Social Networks



8.1.8 Actions related to e-CRM systems

On the contrary, e-CRM systems, which is a management model of an entity and organization have no greater relevance in what the companies surveyed refers to, with more than half the percentage, 50.9% we find that they do not use the systems never, rarely 21.8%, often 12.7%, always 9.1% and 5.5 do not know / no answer.

Graphic 9. e-CRMS Systems



8.2 E-Marketing Techniques that achieved better results at GAC

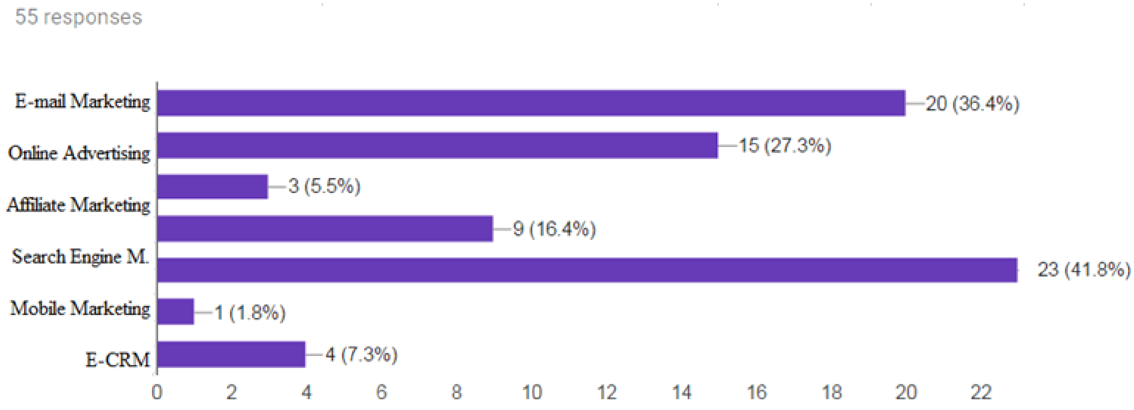
The techniques that obtained a better result with a considerable notation was marketing in social networks with 41.8%, as at present, a large number of potential clients, whether company or not, have a profile in one of the hundred networks social networks that exist in the current digital panorama. Therefore, they are an ideal showcase to make known the product, they open new market possibilities and on the other hand, facilitate much communication between the client and the company with a much more direct deal.

Next, E-mail marketing is 36.4% and it still has a powerful function, since the objective of the mass mailing of a commercial or informational email is to create loyalty, trust and credibility. With 27.3% is online advertising since this technique is inexpensive and allows the company to be able to easily measure what commercials and videos are being successful, in addition to allowing inform consumers about the product and / or service .

In fourth place but not less important is the Search Engine Marketing with a brand new 16.4% because it is very important as it allows to make more useful web pages for both users and search engines.

Finally, it is with 7.3% e-CRM systems since it is a tool that will help us build relationships with our customers basing these relationships on offering products and services adapted to their needs. With 5.5% is the Affiliate Marketing and with 1.8% the Mobile Marketing.

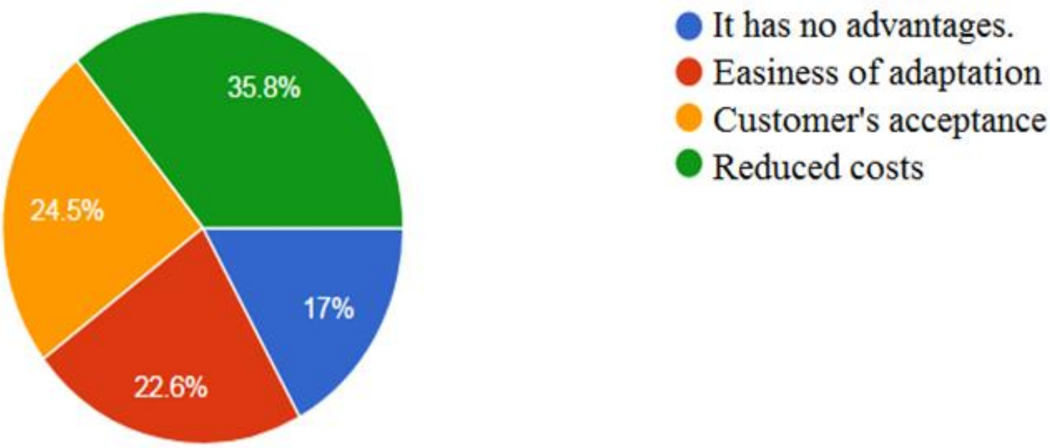
Graph 10. Marketing techniques with better results in GAC.



8.3 Advantages and Disadvantages of E-marketing

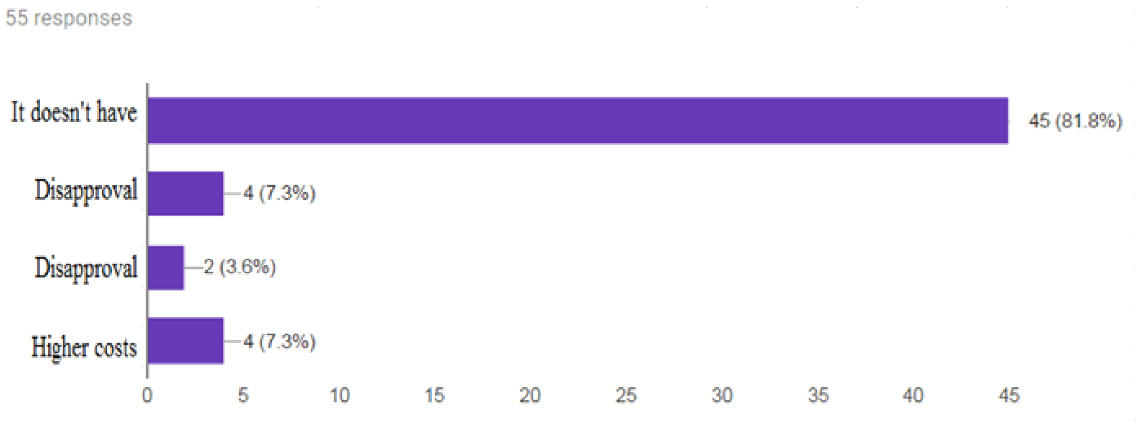
In relation to the advantages of E-marketing we can see in graph 11 that the most prominent advantage with 35.8% are the reduced costs, followed by 24.5% customer's acceptance, with a 22.6% ease of adaptation and finally with 17% we find that the companies consider that it has no advantages.

Graphic11. Advantages of E-Marketing in CAG



In relation to the disadvantages related to E-marketing as can be seen in figure 12, with more of the majority of the percentage, namely 81.8% that has no disadvantages followed by higher costs and disapproval by the workers with 7.3% and finally with 3.6% of disapproval by the customers.

Graphic12. Disadvantages of E-Marketing in GAC.

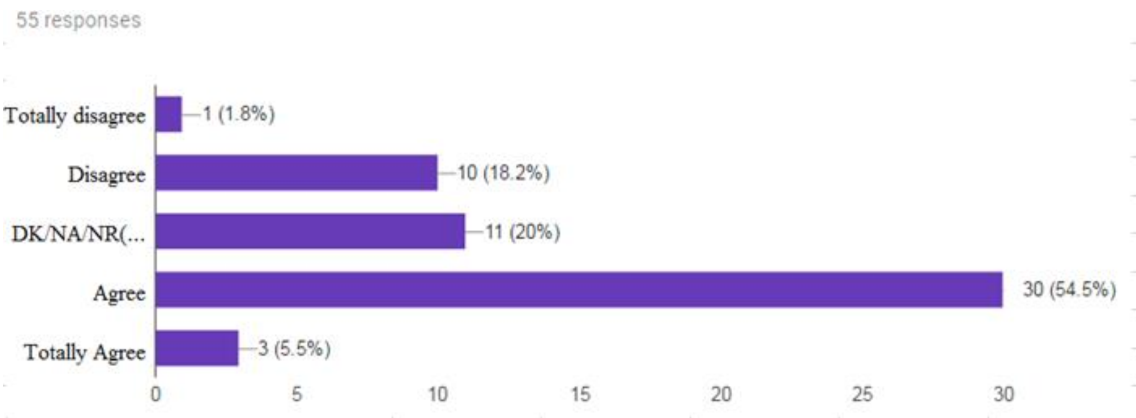


8.4 Goal setting through E-Marketing

8.4.1 Achieving defined objectives

Objectives are a fundamental part of the implicit success of a company, both its definition and execution. In figure 13. Defined objectives, we can observe that more than half of the companies surveyed, 54.5% agree to achieve the objectives defined from the beginning, 20% do not know / do not respond / 18.2% disagree, 5.5% are totally in agreement and 1.8% totally disagree.

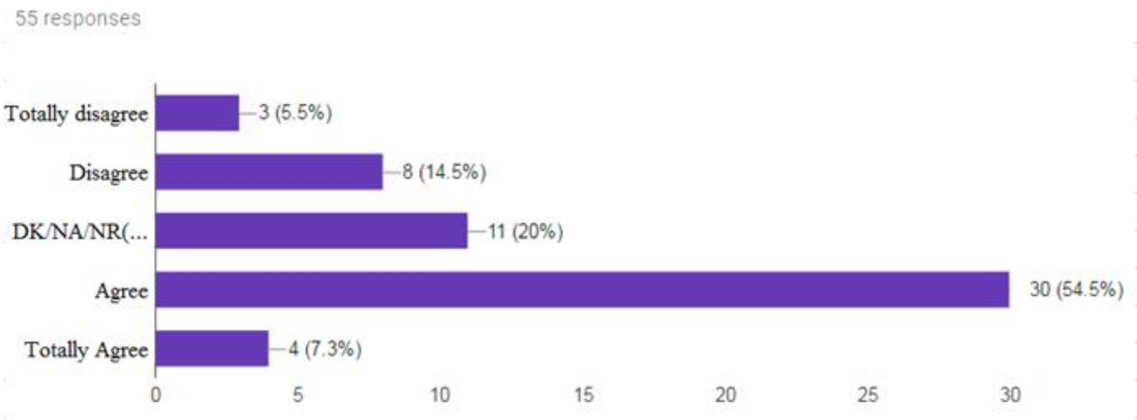
Graphic13. Defined objectives



8.4.2 Achieving new markets

With 54.5%, companies agree that they get new markets compared to 20% who do not know / do not respond, 14.5% disagree, 7.3% are in complete agreement and finally 5.5% totally disagree.

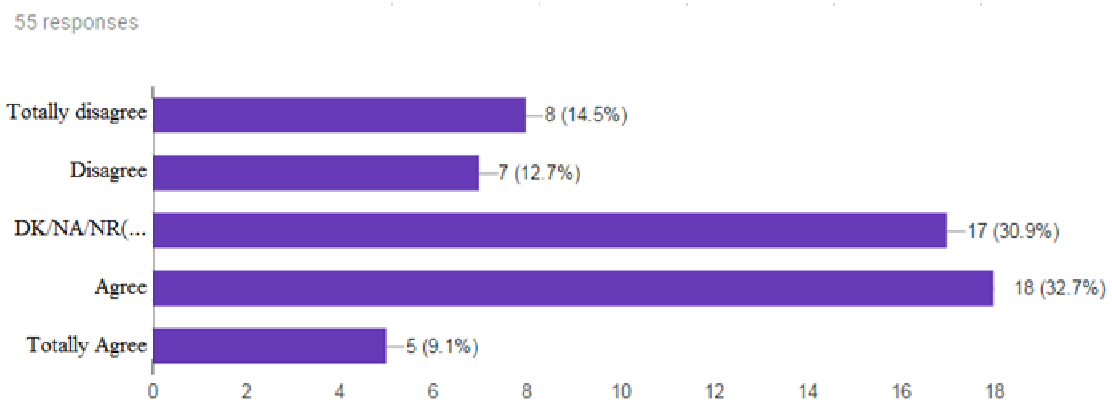
Graphic14. New markets



8.4.3 Contribute to the internationalization of the company

Regarding the internationalization of the company, 32.7% of the surveyed companies agree, compared to 30.9% who do not know or do not answer. They also totally disagree with 14.5%, partially 12.7% and they totally agree 9.1%.

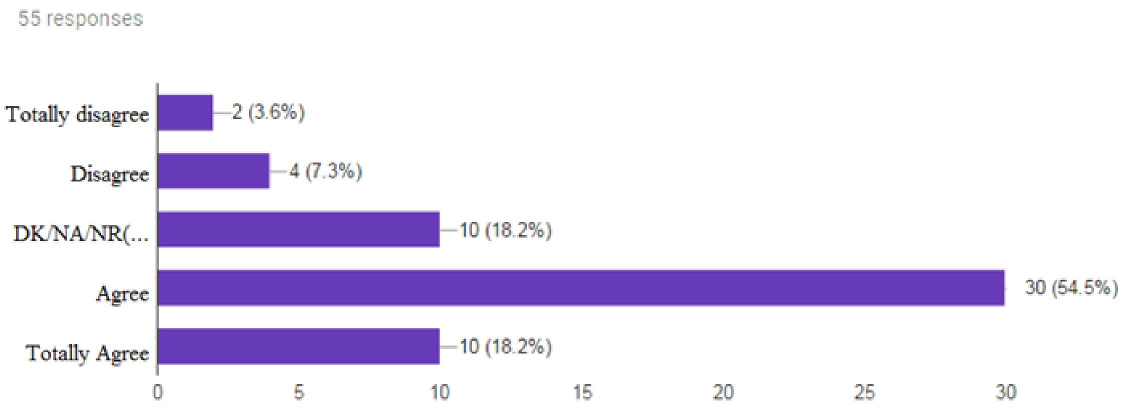
Graphic15. Internationalization of the company



8.4.4 Attracting new customers

With a strong majority we find that with 54.5% companies agree that through the actions of e-marketing is the capture of new potential customers, this is imperative, since a potential customer is the focus of the most creative and aggressive current marketing strategies, so they are largely responsible for the survival of the business, 18.2% are totally in agreement and at the same time do not know, do not answer, 7.3% disagree and finally a 3.6 % totally disagree.

Graphic16.New customers

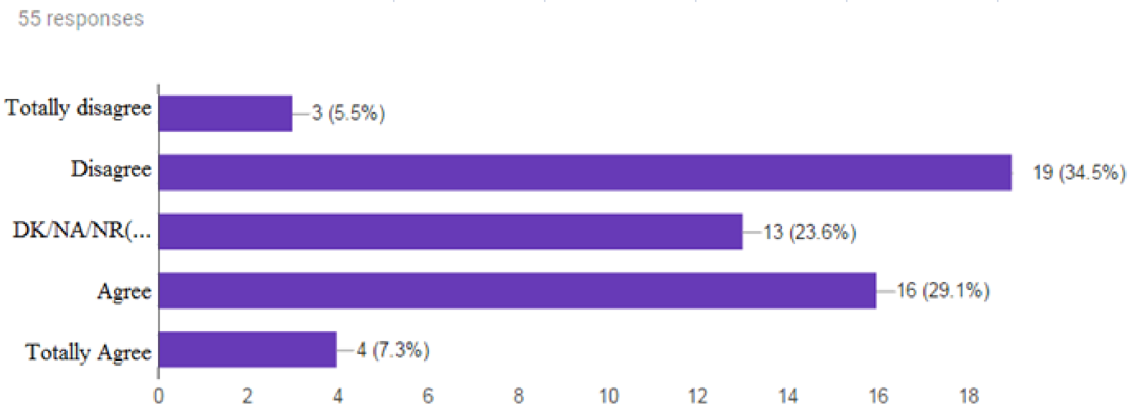


8.4.5 Reduction of costs

In Chart 17. Reduction in costs, the companies disagree in 34.5% that the actions of e-marketing taken allowed to carry out the reduction of costs compared to 29.1% that are in agreement.

Some 23.6% do not know / do not answer, they totally agree 7.3% and finally disagree in their entirely 5.5% of the companies surveyed within the GAC.

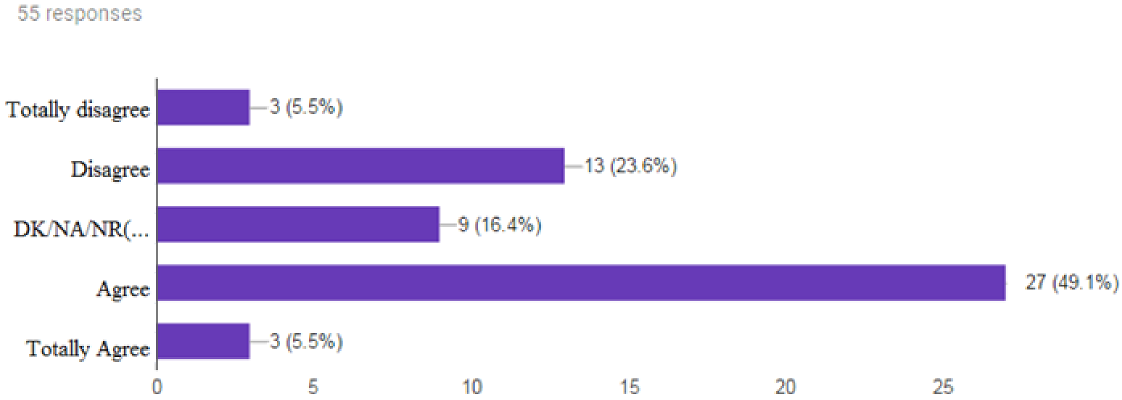
Graph17.Reduction of costs



8.4.6 New Business Areas

With a 49.1% the companies agree that the actions carried out help to get new business areas, 23.6% disagree, 16.4% do not know / do not answer and at the same time with 5.5% totally disagree and in turn another 5.5% fully agree.

Graphic 18.New Business Areas



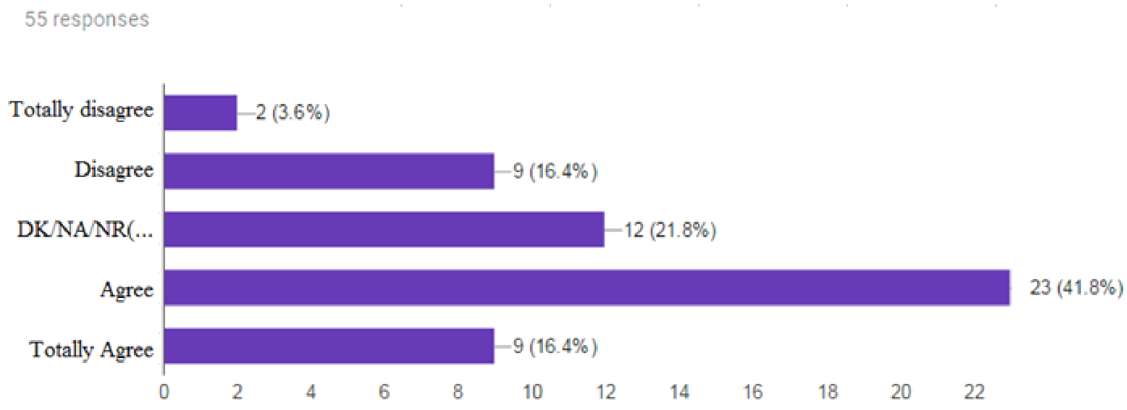
8.4.7 Customer Loyalty

Customer loyalty is a key part of a company's performance, logically. However, offering an innovative product or service, quality is not enough today to get loyal customers. Their loyalty, therefore, is made necessary by effective loyalty strategies, capable of fostering that trust and loyalty.

For this reason, 41.8% of the companies surveyed agree that these actions therefore help customer loyalty, 21.8% do not know / do not answer on a par with 16.4% are in full agreement and the another 16.4% disagree, finally with 3.6% totally disagree. In the field of marketing, loyalty is an essential concept for client-oriented companies that pursuit a long-term relationship with final users.

In practice, the goal is to achieve customer loyalty, that is, a consumer who has purchased our product or service becomes a regular customer who, even better, also recommends us.

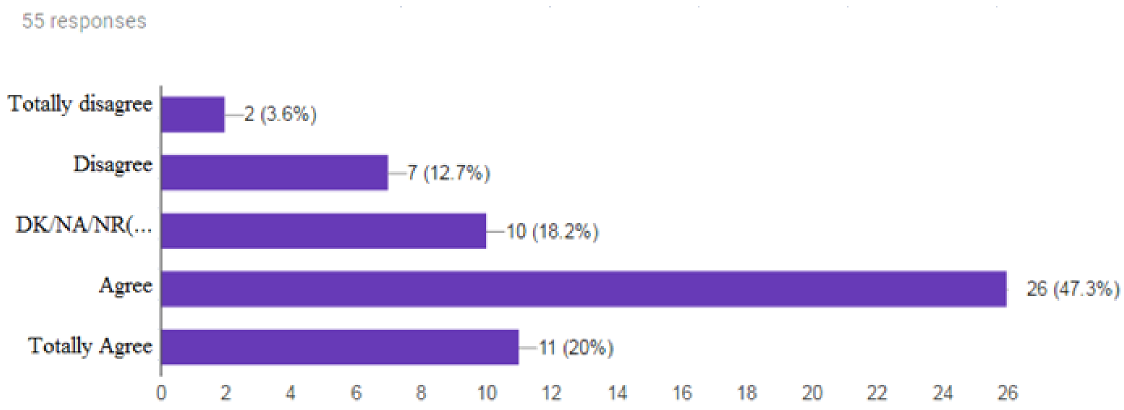
Graphic19. Customer loyalty.



8.4.8 Product Differentiation vs. Services

With a large majority of 47.3% of the companies surveyed in the GAC agree that these actions help and contribute to a better differentiation of their products and services, 20% totally agree, 18.2% do not know / no answer, 12.7% disagree and 3.6% disagree completely.

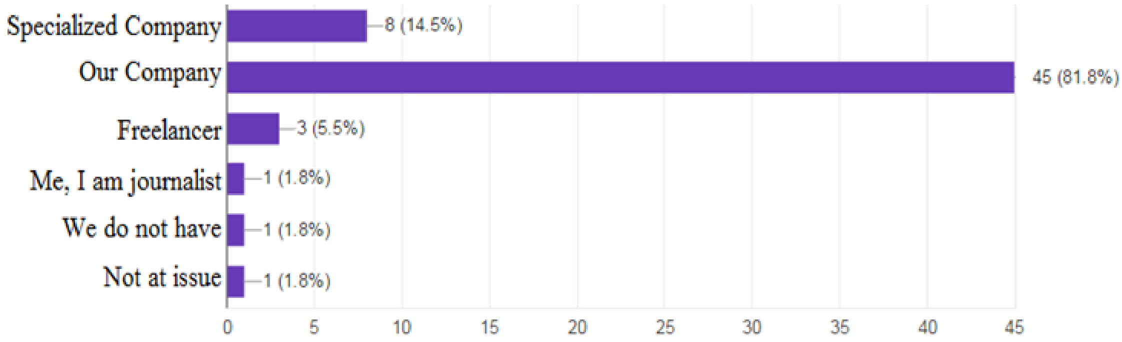
Graph 20. Differentiation between products vs services



8.5 Approach to E-marketing actions

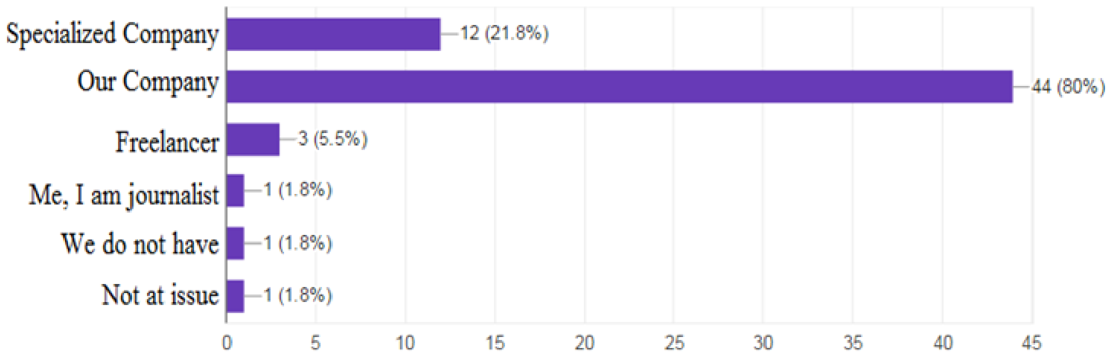
In graph 21. Who purposed marketing actions, we can see that 81.8% were the companies themselves that led the proposal of the actions compared to 14.5% who decided to have specialized companies, 5.5% Freelancer, and with the remaining 1.8% the entrepreneur himself, with another 1.8% do not have and the definitive 1.8% say that this question was not at issue.

Graphic21. Who proposed the actions of e-marketing.



In graphic 22. Who led to the marketing actions we can see that 80% were the companies themselves that carried out the approach of the shares compared to 21.8% who decided to have specialized companies, 5.5% Freelancer, and with the remaining 1.8% an advertising company, with another 1.8% do not have and the definitive 1.8% says that this question was not at issue.

Graphic22. Who carried out our e-marketing actions?

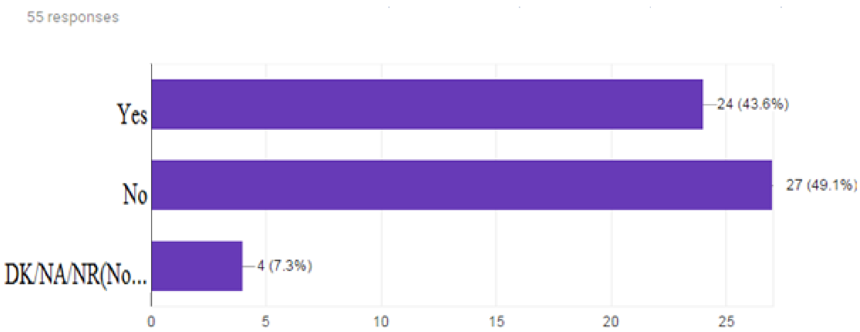


The main reason why a marketing plan should be carried out is because it helps to achieve the general objectives of the company, which are related to the market, as mentioned above, attracting new customers and loyalty .

The marketing plan also motivates the team. It has the power to unite and create team, as it has a great collaborative and participative character, part of the success of the companies is based on it.

In relation to the elaboration of the e-marketing plan, as can be seen in the following graph, 49.1% did not elaborate an e-marketing plan and 43.6% if they did the drawing of the plan, consequently 7.3% do not know / does not answer.

Graphic 23. Development of an e-marketing plan.

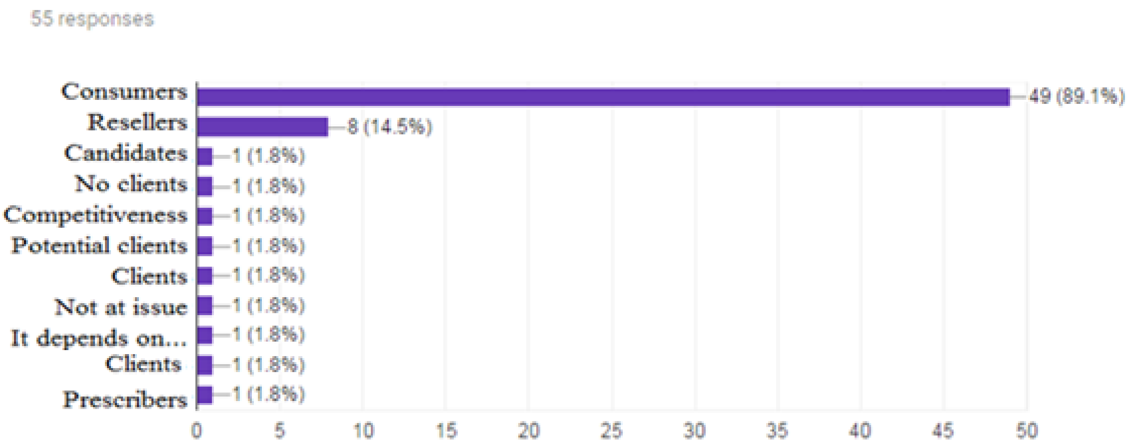


In order to understand the target audience for e-marketing actions, it is vital to know first what the target audience is.

The target audience or target audience, would be all the people who sell or want to sell the products and services. Therefore, it is vitally important that our target audience be clear, sharp, defined and identified.

As can be seen in Graph 24. Public target of e-marketing actions, the main target audience according to the companies surveyed in the GAC is by broad majority a 89.1% Consumers, with a 14.5% resellers with a 1.8% the rest of the options displayed in the graphic 24.

Graphic24. Target audience for e-marketing actions



9. Conclusions

In the final part of the paper we will try to answer the objectives and questions that we define in the research carried out taking into account the results of the study as well as the bibliography used in it.

We observe that there is a great correlation between the average frequency between the use of actions of e-marketing actions and the valuations that are made of them, thus observes that the companies that rarely resort to actions of e-marketing reveal a lack in as to their ultimate business objectives; while companies that systematically use e-marketing see positively the actions carried out in the objectives of the company.

So we can say without a doubt that the companies that use the most e-marketing are satisfied in their business goals. However, it can also be said that those who use it little do not do so to a greater extent because they do not recognize enough merit to justify its use.

Main e-marketing techniques used in GAC companies.

The questions in this group identify the e-marketing actions used by the GAC companies included in this study. According to the answer to the questionnaire and once analyzed we can affirm that the technique of e-marketing most used in the GAC is the e-mail marketing.

We also find that in the companies of Galicia comes secondly the e-marketing in social networks widespread among the young people being able to become one of the main engines of this Autonomous Community of Galicia.

We also observed that half of the companies (50.9%) surveyed do not use any e-marketing technique which is probably due to their lack of knowledge.

E-marketing techniques with better results at GAC

The companies make a valuation on the results of the techniques of e-marketing used like this we have as first the e-marketing in the social networks, it follows the e-mail marketing and lastly advertisement online.

As for e-marketing in social networks not only mean that it is the most used but the best results can confirm its effectiveness and benefit that this technique has in the evolution of companies in Galicia.

Advantages and disadvantages of e-marketing in the mentioned companies

The main advantages of the techniques of e-marketing according to the respondents are the acceptance by the customers and the reduction of costs; being this last point the reduction of costs the most valued by the respondents.

As for the main disadvantage that occurs in the technique of e-marketing according to said responses of the respondents is that there is no disadvantage.

Objectives achieved through e-marketing

When making an implementation of e-marketing in a company it is convenient to define clearly what are the objectives or goals that you want to achieve with it. Through this implementation or variant of marketing it is possible to achieve different objectives, reach distant markets or develop new business areas.

If we go back to the analysis of results we can conclude that a large majority of respondents have difficulties in evaluating the impact of e-marketing actions on defined objectives, possibly due to lack of objectives or lack of knowledge (tables) to evaluate them. However, it is to be expected that companies that almost never carry out e-marketing actions are aware of any need that such actions may have in achieving the objectives defined by the company.

The most repeated impact by most of the respondents was that the e-marketing actions allowed them a greater diffusion of the services and products that the company manages. It is curious to see that the greatest discrepancy occurs when evaluating the impact of e-marketing on the internationalization of the company.

Planning of e-marketing actions

One of the main objectives of this work is to understand the extent to which most of the GAC companies are responsible for the conception and execution of their e-marketing actions, which will be verified. It is undoubtedly these behaviors of internationalization of these actions that can be explained by the objective of reducing costs, since most companies have it in their DNA because it is what allows them to compete and safeguard their existence.

However, we can say that the elaboration of e-marketing plans is not a habitual practice in the sample, since there is a deep lack of knowledge in the companies of this fact.

If, on the contrary, e-marketing plans are implemented, they could provide new concepts and implement these techniques in a much more integrated way, efficiently achieving the strategic marketing objectives of the companies.

As for the reasons exposed for the implementation of the e-marketing strategy we verified without doubts through the surveys conducted that they vary according to the activity of the company.

With regard to the target audience and its e-marketing actions, the sample is mainly aimed at the final consumers, being the promotion of products and services the fundamental basis of the reason given for its implementation and an e-marketing strategy.

Surveys clearly show that although the targets of e-marketing actions vary according to the size of the companies; so those with more than ten workers see their end-users as their main objective, in a higher number than expected; however in the company with more than fifty workers have in their target more resellers than expected.

The existence of a Website is very important in the development of a company, because it helps them to draw with more visibility and invigorates the image of the same, in the sample we observe that this criterion is true.

The need for companies to address new markets leads them to develop web pages, to develop such pages most of the companies surveyed opt for their own equipment; while the rest opted for companies specialized in such action.

We can also say that the companies that externalized the development of the web pages depend in part on their greater location in Ourense.

Last conclusions

We can say that this study allows us to verify the "state of the art" of e-marketing in the GAC companies. Thus, the companies surveyed carried out e-marketing actions with a certain frequency and recognize their importance to achieve the proposed objectives. It is also noted that a significant portion has difficulties in evaluating the objectives achieved, perhaps due to lack of customer feedback.

The vast majority of strategic e-marketing actions aim to reduce costs and strengthen as much as possible the client's relationship with the company. It is also stated that the resistance by the clients to the actions of e-marketing is quite contested.

The lack of e-marketing planning is a problem to solve, since these plans can help us to structure the company's strategy, being also fundamental for a correct definition and application of these techniques, based on an adequate diagnosis of the situation.

The use of specialized companies in the elaboration of e-marketing plans should be a reason why the technical knowledge of them would contribute much more effectively to the definition and subsequent implementation.

The company's web pages are for the most part outreach platforms of it. But betting on other functions for web pages, such forums, newsletters and especially the online service would be fundamental in order to strengthen communication with the client. As a rule, the use of e-marketing, is being correctly used, however in the future they should be much more encouraged so that companies can take advantage of the great possibilities that this world opens them.

The small sampling size on which this study is based is undoubtedly a limitation. It could be that with a larger size the results obtained varied and were somewhat different, but the lack of response from many companies, the delay of others and the time in which the present study has to be made condition its realization with the available data.

The present study is expected to open new avenues for other actors in the areas of strategy and e-marketing actions in companies. It would be interesting in a future study to compare this study with others carried out in communities or peripheral regions such as Galicia.

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Annex - Sociedades mercantís constituídas na CAG

	2017/Xaneiro	2017/Febreiro	2017/Marzo	2017/Abril
01.Agricultura, gandaría, caza e servizos relacionados con elas	10	8	9	5
02.Silvicultura e explotación forestal	8	4	5	6
03.Pesca e acuicultura	4	2	3	4
05.Extracción de antracita, hulla e lignito	0	0	0	0
06.Extracción de cru de petróleo e gas natural	0	0	0	0
07.Extracción de minerais metálicos	0	0	0	0
08.Outras industrias extractivas	2	1	1	0
09.Actividades de apoio ás industrias extractivas	0	0	0	0
10.Industria da alimentación	5	5	6	10
11.Fabricación de bebidas	1	1	2	2
12.Industria do tabaco	0	0	0	0
13.Industria téxtil	0	0	0	1
14.Confección de roupa de vestir	2	1	2	3
15.Industria do coiro e do calzado	0	0	0	0
16.Industria da madeira e da cortiza, agás mobles; cestaría e espartaría	1	2	1	0
17.Industria do papel	0	0	0	0
18.Artes gráficas e reprodución de soportes gravados	7	2	3	2
19.Coquerías e refinación de petróleo	0	0	0	0
20.Industria química	0	0	0	2
21.Fabricación de produtos farmacéuticos	1	0	0	0
22.Fabricación de produtos de caucho e plásticos	0	1	0	0
23.Fabricación doutros produtos minerais non metálicos	2	1	1	0
24.Metalurxia; fabricación de produtos de ferro, aceiro e ferroaliaxes	0	0	1	0
25.Fabricación de produtos metálicos, agás maquinaria e equipamento	2	1	4	3
26.Fabricación de produtos informáticos, electrónicos e ópticos	0	0	0	0
27.Fabricación de material e equipamento eléctrico	0	0	1	1
28.Fabricación de maquinaria e equipamento n.c.n.	0	1	3	2
29.Fabricación de vehículos de motor, remolques e semirremolques	0	0	0	1
30.Fabricación doutro material de transporte	5	0	1	0
31.Fabricación de mobles	5	2	1	0
32.Outras industrias manufactureiras	1	0	0	1
33.Reparación e instalación de maquinaria e equipamento	5	1	3	1
35.Fornecemento de enerxía eléctrica, gas, vapor e aire acondicionado	8	4	2	2
36.Captación, depuración e distribución de auga	0	0	0	0
37.Recolla e tratamento de augas residuais	0	0	0	0
38.Recolla, tratamento e eliminación de residuos; valorización	0	0	2	0
39.Actividades de descontaminación e outros servizos de xestión de residuos	0	0	0	1
41.Construción de edificios	16	14	13	17
42.Enxeñaría civil	1	2	0	0
43.Actividades de construción especializada	23	30	27	18
45.Venta e reparación de vehículos de motor e motocicletas	19	15	21	13

46.Comercio por xunto e intermediarios do comercio, salvo de vehículos de motor e motocicletas	69	51	61	40
47.Comercio a retallo, salvo de vehículos de motor e motocicletas	46	43	36	49
49.Transporte terrestre e por tubaxe	12	23	17	12
50.Transporte marítimo e por vías navegables interiores	0	0	0	0
51.Transporte aéreo	0	0	0	0
52.Almacenamento e actividades anexas ao transporte	3	1	1	4
53.Actividades postais e de correos	0	1	0	0
55.Servizos de aloxamento	4	3	9	5
56.Servizos de comidas e bebidas	43	40	46	41
58.Edición	1	0	1	1
59.Actividades cinematográficas, de vídeo e de programas de televisión, gravación de son e edición musical	0	1	4	4
60.Actividades de programación e emisión de radio e televisión	0	0	1	0
61.Telecomunicacións	1	3	3	1
62.Programación, consultaría e outras actividades relacionadas coa informática	4	14	6	8
63.Servizos de información	1	3	2	0
64.Servizos financeiros, agás seguros e fondos de pensións	1	1	1	1
65.Seguros, reaseguros e fondos de pensións, agás seguranza social obrigatoria	4	2	3	0
66.Actividades auxiliares aos servizos financeiros e aos seguros	9	5	2	1
68.Actividades inmobiliarias	21	28	29	15
69.Actividades xurídicas e de contabilidade	10	12	8	8
70.Actividades das sedes centrais; actividades de consultoría de xestión empresarial	13	10	14	12
71.Servizos técnicos de arquitectura e enxeñaría; ensaios e análises técnicas	10	7	8	11
72.Investigación e desenvolvemento	2	3	2	0
73.Publicidade e estudos de mercado	9	3	8	0
74.Outras actividades profesionais, científicas e técnicas	6	5	3	0
75.Actividades veterinarias	2	1	2	0
77.Actividades de aluguer	6	3	4	5
78.Actividades relacionadas co emprego	0	0	0	1
79.Actividades de axencias de viaxes, operadores turísticos, servizos de reservas e actividades relacionadas con estes	2	4	4	0
80.Actividades de seguranza e investigación	0	0	0	0
81.Servizos a edificios e actividades de xardinaría	2	2	7	4
82.Actividades administrativas de oficina e outras actividades auxiliares ás empresas	3	5	5	3
84.Administración pública e defensa; seguranza social obrigatoria	0	0	0	0
85.Educación	6	10	2	4
86.Actividades sanitarias	7	12	11	4
87.Asistencia en establecementos residenciais	0	1	2	0
88.Actividades de servizos sociais sen aloxamento	0	1	1	1
90.Actividades de creación, artísticas e espectáculos	2	4	3	2
91.Actividades de bibliotecas, arquivos, museos e outras actividades culturais	0	0	1	0
92.Actividades de xogos de azar e apostas	1	2	0	2
93.Actividades deportivas, recreativas e de entretemento	3	10	12	9
94.Actividades asociativas	0	0	0	0
95.Reparación de ordenadores, efectos persoais e artigos de uso doméstico	2	0	0	2
96.Outros servizos persoais	6	5	7	8
97.Actividades dos fogares como empregadores de persoal doméstico	0	0	0	0
98.Actividades dos fogares como produtores de bens e servizos para uso propio	0	0	0	0
99.Actividades de organizacións e organismos extraterritoriais	0	0	0	0
TOTAL	439	417	438	353