



LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

**MESTRADO EM
CIÊNCIAS EMPRESARIAIS**

**TRABALHO FINAL DE MESTRADO
DISSERTAÇÃO**

**SOCIAL MEDIA: A STUDY OF APPLICATION IN THE COMPETITIVE
INTELLIGENCE CONTEXT**

DIOGO GONÇALVES DE CARVALHO

JUNHO - 2015



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ORIENTAÇÃO:

PROFESSORA DOUTORA WINNIE PICOTO

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Abstract

The appearance of social media has completely revolutionized the way we communicate and interact with each other. However, our “connections” are not the only ones who have access to the information we share on these online platforms. This investigative research arises from a desire to analyze the potential impact of social media gathered data in the competitive intelligence process of organizations. It does so by utilizing a mixed method research approach to better comprehend two phenomena. First, is the current state of the competitive intelligence processes within companies. Secondly, an exploration of the potential contribution of social media to the competitive intelligence processes and how organizations can benefit from this. To draw understanding from these topics, qualitative and quantitative methods were employed, specifically interviews and surveys. These investigative tools allowed for the conclusion that the addition of social media data, after being filtered and processed, can benefit organizations and as such should be included in the competitive intelligence process. Of equal importance, was the discovery of outsourcing and the possibilities which it presents, such being a viable strategic option in an organization’s decision making process.

Keywords: Data, Information, Competitive Intelligence, Social Media

Resumo

Com o aparecimento das redes sociais, a forma como comunicamos e interagimos uns com os outros foi completamente revolucionada. Embora esta partilha seja mais facilitada, o acesso a esta informação não se limita às nossas ligações. Esta investigação nasce de uma vontade de analisar o potencial dos dados adquiridos através das redes sociais nos processos de inteligência competitiva das organizações. Utilizando um método misto de investigação abordam-se duas questões. Primeiro, o atual estado dos processos de inteligência competitiva dentro das empresas. Segundo, o potencial da contribuição das redes sociais aos processos de inteligência competitiva e como as empresas poderão beneficiar. Para responder a estas questões foram utilizados métodos qualitativos e quantitativos, mais concretamente entrevistas e inquéritos. Estas ferramentas permitiram concluir que a inclusão dos dados adquiridos nas redes sociais, depois de filtrados e analisados, podem beneficiar as empresas e como tal deverão pertencer ao processo de inteligência competitiva. De igual importância foi a descoberta da possibilidade de outsourcing destes processos, que adiciona à tomada de decisão mais uma opção estratégica.

Palavras-Chave: Dados, Informação, Inteligência Competitiva, Redes Sociais

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1. Introduction

The first chapter of this thesis provides an introduction to the research performed. The research questions and the motivation for this investigation will also be presented, as well as the methodology used. Moreover, it defines the structure of the thesis by providing a brief explanation of each chapter. The goal of this initial part is to leave the reader with a firm understanding of why this investigation was undertaken and how it was conducted.

Social media (SM) arrived into our lives with the appearance of Web 2.0 and revolutionized the way we communicate and interact online (Berthon et al., 2012). Whether it is through a network of friends on Facebook, or a Twitter feed with our favorite sources of information, it has become as much a part of daily activities as watching TV or listening to music. There is no doubt of its impact on a social level, but what about in terms of business impact? Can my favorite applications for discussing movies, food, clothes, books, cities, etc... be used by businesses in their intelligence process?

The notion of intelligence has a long and abundant existence which spans for over 2,000 years (Juhari and Stephens, 2006). It has been defined and redefined many times and by various authors, not to mention, given different names and labels. In the business context, one could start with environmental scanning (Aguilar, 1967; Fahey and King, 1977; Fahey et al., 1982), transform it into business intelligence (Cleland and King, 1975; Benjamin, 1979), adapt the label once more and refer to it as strategic intelligence (Montgomery and Weinberg, 1979; Aaker, 1983), alter it yet again to market intelligence (Chonko et al., 1991; Maltz and Kohli, 1996), and finally arrive at competitor analysis (Ghoshal and Westney, 1991) or competitive technical intelligence (Brockhoff, 1991; Albagli et al., 1996). Although they may not agree on how to address this concept, most of these authors

consider intelligence as an organizational necessity and a key resource in the strategic planning process (Dishman & Calof, 2008).

Since the end of the United States and Soviet Union altercation known as the Cold War, Competitive Intelligence (CI) has crossed borders from the military scenario and infiltrated the business world (Deng & Luo, 2007). *Competitive-Strategy: Techniques for Analyzing Industries and Competitors*, written by Michael Porter and published in 1980, is regarded by many as the founding study for what is today's CI in organizations. At times mistaken for and compared to corporate espionage (Hemphill, 2002), which is illegal, CI is seen as a moral and ethical practice involving the gathering of information from a company's internal and external environment. It involves organizing and standardizing processes of information gathering, analysis and conversion, to aid and facilitate business decision making (Dey, et al., 2011).

One could define organizational and competitive intelligence as the ability, as a whole, to gather information, analyze it, convert it into usable knowledge and finally, make strategic decisions based upon that knowledge (McMaster, 1996). An efficient and effective intelligence process does not focus on collecting all the information related to a certain subject or issue, instead channels its efforts and gathers and treats that which is considered more important to management (Aguilar, 1967; Montgomery and Weinberg, 1979; Porter, 1980; Herring, 1998). Choo (2003) considers the identification of what is important, alongside of what is needed, the most crucial step in the intelligence process and which should arise from the lack of knowledge needed to solve organizational problems related to operations and management.

The ultimate goal of CI is to efficiently utilize the information that was turned into intelligence. For this process to be successful it requires input from the internal and external environment, the input comes in the form of information or knowledge (Vuori,

2011). However, in recent years businesses have noticed that the existing information systems are rather restraining and lack elements that enable informal knowledge exchange (Vuori & Okkonen, 2012). Technological development, broken barriers that facilitate establishing connections and globalization have significantly increased the amount of information and knowledge available (Coakes et al., 2008). Moreover, the kind of information and knowledge that can be acquired has also evolved, affecting the ability for an organization's comprehension of its external environment (Badr et al., 2006; Fleisher and Bensoussan, 2007). Table I shows some previously conducted studies in intelligence usage within organizations.

Table 1 - Summaries of Studies in Intelligence Use (Mayeh, M., Scheepers, R., & Valos, M., 2012, p. 5)

Study	Type of Study	Intelligence Utilisation Impact
Nemutanzhela et al. (2011)	Empirical/Case Study	Products and services innovation
Popovic et al. (2010)	Conceptual	In Business processes which leads to higher business performance
Carbonell et al. (2010)	Empirical/Survey	Innovation speed and new product performance
Paris et al. (2011)	Empirical/Case Study	Improving government service
Dishman et al. (2008)	Empirical/Survey	Marketing strategy formulation

Social Media is a very vast, decentralized and openly distributed data platform, which has revolutionized and completely altered the competitive scenario in which modern organizations participate (Dai, et al., 2011). Some common activities that can be undertaken through SM applications include product branding, development and innovation, customer service, marketing and content delivery (Culnan, et al., 2010). However, SM's greatest contribution comes from the customers' view point, and the vast amount of user-generated content they produce that can be analyzed by an organization.

Traditionally, CI professionals based their results on numbers, charts and surveys that often came from reports compiled by specialized firms (Calof, 2008). However, given the amount of readily accessible information available through SM, it has become necessary to develop new tools and methods which can contribute to the CI process (Dey, et al., 2011). As the use of SM continues to expand and become a part of the daily activities of a

large percentage of the population, analysis of this data has become a critical business need that provides essential support for decision makers. This process will lead to a better understanding of how an organization's products or services are viewed by the public, how the competitors' products or services are viewed, as well a better understanding of the market in which it competes (He, et al., 2013).

Even though the data extracted from SM comes in a digital format, it is necessary to have a dedicated team to be able to extract, interpret and transform the information into usable knowledge and intelligence (Dey, et al., 2011). Unfortunately, SM based CI is either inexistent or in "embryotic" stages in most companies and therefore is still a work in progress (Zhao & Jin, 2011). Not to mention, since SM is a relatively new phenomenon, the academic literature and studies to support its implementation are very limited and scarce (Vuori & Väisänen, 2009).

The objective behind this investigation resides in understanding the social media impact on the organizational competitive intelligence process. It does so by answering two questions: First, what is the current implementation of the competitive intelligence process in companies? How could social media be used to enhance competitive intelligence in an organizational context?

Hereafter, this thesis is structured as follows: The second chapter presents the literature review to situate the reader on the concepts and current status of CI and SM. The third chapter discusses and presents the methodology implemented for this research. Once again an exhaustive literary review provides a foundation for the methods chosen: the qualitative open-ended interviews and the structured survey.

The fourth chapter presents the results of the interviews that were conducted along with the characteristics of the interviewees, as well as the structured survey. There is also an analysis of the data that was gathered from the interviews and the surveys. This

investigation concludes with two final chapters, the fifth that provides a general overview of the results of the research conducted. Allowing for an understanding of the research conducted. Finally, the sixth chapter concludes this thesis by providing some of the limitations and also some further investigations that may be undertaken by any researcher wishing to take the work conducted a step further, in another direction or contradict the findings presented.

2. Literature Review

A deep and comprehensive review of the relevant literature pertaining to the topic an investigator wishes to examine is a crucial starting point for any thesis looking to contribute to that academic field, whether it is to create knowledge, develop a theory or simply contribute to an already existing debate (Järvinen, 2008). An exhaustive research of the literature already produced helps to guide the work and allows the investigator to understand what has been accomplished, through which methods and with what end results. This method will also provide a necessary element to any pertinent investigation, which is, what has yet to be done, how it can be performed differently or what can be added. Finally, the literature review can assist the investigator in developing research questions which are focused and relevant to the topic (Vuori, 2011).

2.1. Competitive Intelligence

When defining CI, one must first ask, what is intelligence? Intelligence can be defined as high-level, processed, exploitable information (Prior, 2008), whose quality and access are two crucial elements in any company's success. In the current perspective of high competition among enterprises, information is the main resource for acquiring competitive advantage (Vuori, 2011). Nevertheless, the value of the information collected diminishes as the time passes, therefore the intelligence must be acquired and processed as fast as possible (Fleisher, 2001). In organizations where it is fully established, CI can be seen as

an information processing routine that looks forward to prepare the organization to compete in changing environments (Santos & Correia, 2010).

For this reason, some firms have established a department to process the information and their task is often referred to as CI. Adequate and rapid information is a must for CI, which transforms the acquisition of the information a very important task (Deng & Luo, 2007). The premise behind CI borrows heavily from the knowledge based theory, which concludes that an organization's competitiveness is a direct result of the information and knowledge resources of that organization, which can vary from a personal human network, traditional media and the new means provided by the internet and the applications associated to it (Vuori, 2011). This theory also considers knowledge as a way of arriving at a sustainable competitive advantage, since it is difficult to imitate and is restricted to the context from where it was obtained and by whom (Grant, 1996). There are many definitions of CI, yet all of them seem to agree that gathering and analyzing information are key elements of the process.

According to Dey, et al. (2011), CI is the art of defining, gathering and analyzing intelligence about competitor's products, promotions, sales etc. Zhao & Jin (2009) believe it is obvious that enterprises can receive many benefits and even enhance the competitive power by obtaining lots of intelligence from the competitors. Kahaner (1997) goes a step further, and sees CI as the process of gathering, analyzing and delivering the information about the environment as well as about the capabilities and intentions of competitors, and then transforming them into intelligence. In this definition it is clear that in addition to the direct competition, it is necessary to be aware of the whole external environment which has influence and can impact the business.

It is widely accepted that CI provides management with valuable sets of information that improve the quality of decisions and has a positive effect on a company's competitiveness

(Santos & Correia, 2010). However, intelligence is more than just asking questions about competitors as it involves other aspects of the environment that can include activities such as, competitor profiling, product line comparisons, war-gaming and competitive move predictions (Dishman & Calof, 2008). A firm should perform a continuous scanning of potential threats and opportunities arising from this external environment (Vuori, 2011). Taking it a step further, Vuori (2011) believes that this continuous scanning of potential threats and opportunities arising from the external environment, understanding their meaning to the company and acting upon that knowledge, is a major factor that will define a company's success.

CI arises from a systematic process involving disseminating information for opportunities, or developments that have the potential to affect a company's competitive situation (Mayeh, et al., 2012). In this definition the focus is placed on the availability of the information acquired and that it must spread throughout the organization to anyone who may need to utilize it. Santos & Correia (2010) define effective CI as a continuous process involving the legal and ethical collection of information, analysis that does not avoid unwelcome conclusions, and controlled dissemination of actionable intelligence to decision-makers. Researchers Oliveira, et al., (2004), define CI as a business activity whose goal is to provide strategic information about markets for management activities. They continue by stating that organizations can use CI to analyze how saturated a market is or what kind of players are present and if there is space for a niche offer.

Companies use information in generating their products and services, in addition to know-how, they need to understand to whom, at what price, where, when and how the products and services should be sold so as to generate the best possible profit (Vuori & Väisänen, 2009). In this context, CI can also be categorized as a process by which actionable information is gathered and which is then applied to the planning and decision-making

procedures of an organization (Dai, et al., 2011). Vuori (2011) adds that CI is a support function that aims to provide actionable competitive knowledge to back up decisions that further the company's business goals. For the benefits of collecting data to be converted into an advantage or for the monitoring to be useful, the information gathered needs to be assimilated into the internal procedures or planning phases. Having high-quality data or knowing a competitor's action, no matter how secretive or hard to obtain, can be useless if an organization does not know how to utilize it properly.

Efficient sharing and using of knowledge is a source for achieving and maintaining a sustainable competitive advantage (Riege, 2005). Thus, information management processes, such as CI, usually follow a structure with a cycle of consecutive phases (Vuori & Okkonen, 2012), [See Figure I]. It is important for this procedure to be standardized and transversal throughout the organization in order to ensure that any employee who acquires useful information is aware of how it should be treated. CI uses a systematic process which should involve planning, collection, analysis, communication and management (Calof, 2008). In this definition we can notice that internal communication and the role of management are important factors in the CI process.

Figure 1 - Competitive Intelligence Process (Vuori, V., & Okkonen, J., 2012, p. 120)

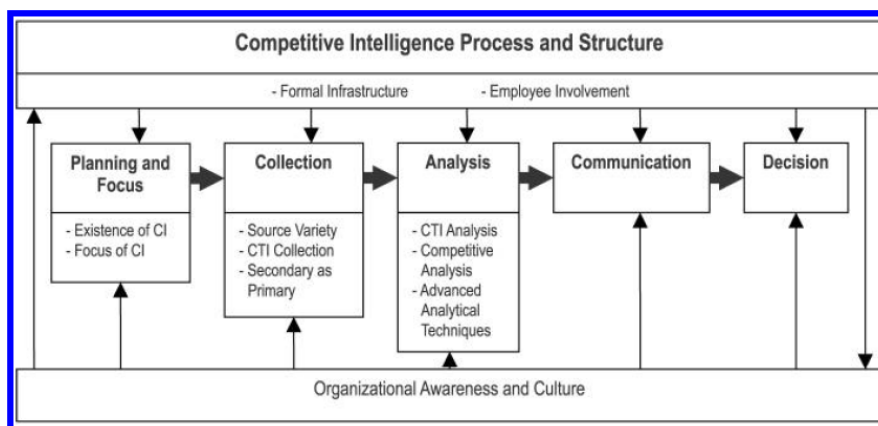


Vuori (2011) describes CI as a continuous process which is made up of the following steps:

1. Discovering what are the information needs?
2. Which sources are available to gather the information from?
3. How will the company organize and disseminate the information?
4. Finally, can this information be used to assist management in its decision making process?

The ability to develop adequate organizational mechanisms for information acquisition, dissemination and effective utilization may be precursors to identifying and effectively adapting to major market shifts (Dishman & Calof, 2008). Dishman & Calof (2008), also states that intelligence requires appropriate policies, procedures and a formal infrastructure, so that employees may contribute effectively to the intelligence system as well as gain the benefits from the intelligence process, [see Figure II]. However, gathering this data is a highly specialized activity, making it very difficult to be completely automated (Dey, et al., 2011).

Figure 2 - Competitive Intelligence Process and Structure (Dishman, P. L., & Calof, J. L., 2008, p. 779)



A very large and often misunderstood or misused source of CI is the internet and more specifically SM (Mayeh, et al., 2012). News, blogs and SM can furnish information about competitor firms and also their consumers' perceptions about their products and sources (Dey, et al., 2011). According to some surveys conducted, over 90% of the top 500 organizations in the world have CI systems, yet most of them still rely on traditional non-web-based sources (Deng & Luo, 2007). However in a different survey, Lamar (2007)

reveals that circa 85 to 90% of CI data can be acquired from online sources, including SM. This new study contradicts the previous survey and demonstrates that organizations should adapt to this new source of information. Nevertheless, the major problem facing CI acquired from SM is that most companies are reluctant to approach this method since they are still unfamiliar with it (Dai, et al., 2011).

2.2. Social Media

Social Media, a Web 2.0 tool, is an online representation of social networks, which are networks, or links, of personal relationships (Zhao & Jin, 2011). Kaplan and Haenlein (2010) define SM as a group of internet-based applications that utilize the foundations created by Web 2.0 and that create the possibility for user-generated content to be published and shared. By utilizing the internet functions these applications also allow for relationships to be established at any time, from any place. Besides representing social networks, SM can also include the activities of human interaction and information publishing (Vuori & Väisänen, 2009), and facilitate the sharing of information through easily accessible web-linked platforms. SM has also revolutionized the interaction and communication between individuals, communities and companies (Kietzmann, et al., 2011), therefore monitoring and analyzing has the potential for extracting patterns that can be advantageous for companies, users and customers (Gundecha, & Liu, 2012).

SM employs mobile and web-based innovations to generate highly interactive platforms so that communities and individual users may share, co-create, discuss and change user-generated content (Kietzmann, et al., 2011). SM is comprised of different types of traditional media platforms like television, radio and newspaper, and social applications like Twitter and Facebook, which have registered impressive numbers in regards to users. Facebook recorded more than 1.3 billion active monthly users as of December of 2014¹, a

¹ <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>

population which is only surpassed by the country of China. Twitter, as of December of 2014, recorded more than 280 active monthly users². Together Facebook and Twitter have accumulated more than 1.5 billion users, a number which exceeds the population of any country and is second only to the continent of Asia. Not as large but also impressive is the network of blogs which contains over 100 million blogs³ that can reflect public opinion or sentiment towards a product or brand. These numbers aid in establishing the premise that the amount of information available and published daily is enormous.

SM has altered the intelligence scenario by granting online users free authorship and publishing rights, allowing anyone to share information through the various platforms (Bonsón and Flores, 2011). According to Vuori & Väisänen (2009), CI professionals are keen to find out ways to use Twitter, LinkedIn, Facebook, blogs and other SM applications for information purposes and to be incorporated into the organizations' CI process. These applications are sources of vast amounts of knowledge, with new information arising daily and due to this phenomenon, have been transformed recently into sources of information that businesses' should monitor closely (Patino et al., 2012).

A benefit of SM analysis can be associated with the social capital theory, which is based on the idea that some forms of capital, not associated with money, will grant access to resources, influence and power (Portes, 1998). This theory states that the employees of a company and their knowledge can be just as important as having access to cash and will produce or provide some resources that monetary means are unable to. The information sharing approach looks at SM as a means to share information and knowledge and as an enabler of collaborative analysis in the company (Rothwell, 2009). In other words, it provides an opportunity for the CI process to be implemented as an engaging set of actions that encourage employees to participate and contribute to the process (Vuori, 2011). This

² <http://www.statista.com/statistics/282087/number-of-monthly-active-twitter-users/>

³ <http://www.statista.com/statistics/278527/number-of-blogs-worldwide/>

process looks at CI as a joint effort that should be undertaken by the whole organization, with SM empowering the employees and incentivizing them to participate as information sources, analyzers and users (Rothwell, 2009). Even if the company was able to acquire the same knowledge from other sources the one gained through employees is of greater value, due to the employees acting as “information filters” that will put the original data in context and give it more meaning from the company’s point of view (Vuori, 2011).

Utilizing SM applications as collaborative tools also enriches information, as it may contain elements that are not present in common business information systems (Vuori & Okkonen, 2012), thus providing intelligence that will not be found elsewhere. Personal updates and news of accomplishments on an individual’s profile may be linked to press releases or announcements that have not been divulged outside of the company by other means (Fawley, 2013). Monitoring the profile of an organization and also their employees can furnish corporate details not found elsewhere. CI experts can identify employees through the various applications and platforms to create links between them and their employers. (Skeels & Grudin, 2009). By analyzing the information collected from SM platforms, liked LinkedIn, information professionals can compose a better, or bigger, profile of an employee or an organization (Fawley, 2013).

Another theory that can be associated to SM is the social learning theory (Dabbagh & Kitsantas, 2012). The main idea behind the social learning theory is that an individual’s behavior is not only influenced by cognitive and internal psychological factors, but also by the social environment (Davis and Luthans, 1980). Most users feel like when they are using SM applications they are surrounded by their peers and equals, creating a tendency to feel more comfortable and open when expressing sentiment or sharing information. Mainly personal and informal sources are used, suggesting the importance of the impact on the intelligence process that SM may have (Santos & Correia, 2010).

Monitoring and analyzing SM can have a positive effect on the competitive advantages of an organization. In order to effectively assess the competitive environment of a business, firms must monitor and analyze, not only their own SM sites, but also the information available on their competitors' sites (He, et al., 2013). Competing firms may use SM outlets to publish events such as new product announcements, strategic partnerships, entrances to new markets, etc... (Dai, et al., 2011). Therefore, the key resides in knowing where to look and how to discover the hidden knowledge which can be transformed into a competitive edge (Antikainen et al., 2010).

More and more organizations are interacting with their customers through SM applications such as Facebook and Twitter (Mangold & Faulds, 2009), this creates an opportunity for a company to monitor and analyze competitors' interactions with their clients, both from the end-clients' perspective as well as the competitor firms. If the objective is to achieve a more direct analysis, SM teams must limit their monitoring to interactions involving a particular firm, product, person or brand image (He, et al., 2013). By studying the competitors' moves and how they interact with their costumers, an organization can anticipate some of the actions and develop a preemptive strategy which can provide an advantage (McCarthy et al., 2010). A company can also compare its SM data to that of their competitors to gain a perspective in terms of performance (He, et al., 2013).

In the CI arena, concept analysis allows for identifying players within a market, products and services, their characteristics, benefits, and events of the real world, vendors' strategies, opinions of people and media companies (de Oliveira, et al., 2004). This segmentation helps to compare strategies looking for common themes or differences: saturated markets, niches of market, most popular products, and new services (de Oliveira, et al., 2004). These features influence information gathering and increase the available sources, not to mention, SM applications offer technologies to automate some parts of

information gathering and processing (Vuori, 2011), making it easier to incorporate into the decision making process. In conclusion, SM monitoring and analysis will be a crucial factor as companies strive to maintain or develop sustainable competitive advantages (Kaplan and Haenlein, 2010).

3. Research Method

The following chapter introduces the research methods that were chosen to conduct the investigation. Besides presenting them, there is also a justification of why they were selected and the purpose each will serve. This thesis utilizes a mixed method research approach, incorporating semi-structured interviews (qualitative) with a structured survey (quantitative).

Mixed methods research can be defined as a process in which the investigator combines qualitative and quantitative concepts, methods, approaches or techniques in one study (Johnson & Onwuegbuzie, 2004). According to Tashakkori and Creswell (2007), a researcher participating in a mixed method research draws conclusions from gathering and analyzing data derived from a combination of both techniques. Sale et al. (2002), state that it is possible to combine both approaches since they share the common goal of analyzing and comprehending the environment in which we are immersed. Investigators must eliminate the necessity for an “either-or” mentality since both qualitative and quantitative research “share a unified logic and the same rules of inference apply to both” (King et al., 1994, p. 64).

“Considering the strength of mixed methods research with respect to understanding and explaining complex organizational and social phenomena, there is clearly a need for information systems (IS) researchers to conduct and publish research that employs mixed methods” (Venkatesh et al., 2013, p. 2). Uniting qualitative and quantitative findings creates the possibility of obtaining findings and insights which a singular approach is

incapable of producing (Bryman, 2007). More specifically, employing a mixed method research has the potential to create discoveries regarding IS phenomena that single methods may not be capable of (Venkatesh et al., 2013).

“By using multiple methods to study the same problem, we can detect recurrent patterns or consistent relationships among variables, results that are independent of one particular data source or type of measurement and its inherent weaknesses” (Abowitz & Toole, 2009, p. 16). This type of research creates the potential for a capitalization of the strengths while minimizing the weaknesses present in single method research studies (Johnson & Onwuegbuzie, 2004; Ostlund et al., 2010). The mixture of qualitative and quantitative approaches allows for an investigation which counterbalances the strengths and weaknesses of each respective concept (Abowitz & Toole, 2009). In other words, “often mixed methods research provides a more workable solution and produces a superior product” (Johnson & Onwuegbuzie, 2004, p. 17).

Utilizing mixed methods allows for the triangulation of the results obtained, in other words the data from quantitative and qualitative research may be combined to provide greater validity (Bryman, 2006). “Using triangulation as a methodological metaphor can facilitate the integration of qualitative and quantitative findings, help researchers to clarify their theoretical propositions and the basis of their results” (Ostlund et al., 2010, p. 378). The triangulation of the findings, if they are converged and corroborate, provides a stronger evidence for a conclusion as well as augment the generalizability of the results (Johnson & Onwuegbuzie, 2004).

Nevertheless, the investigations main focus and purpose is to answer the research questions in the most adequate manner. As such, “taking a non-purist or compatibilist or mixed position allows researchers to mix and match design components that offer the best chance of answering their specific research questions” (Johnson & Onwuegbuzie, 2004, p.

15). Mixed methods grants researchers the opportunity to make meta-inferences, by integrating the results from the qualitative and quantitative methods, thus creating greater and more powerful responses to the questions posed by investigation (Venkatesh et al., 2013).

The mixed method research approach was applied following a sequential/equal status method [see Figure III], with semi-structured interviews (qualitative) serving as precursors to the structured survey (quantitative). “Sequential data analysis, follows a process in which data is analyzed in a particular sequence with the purpose of informing, rather than being integrated with, the use of, or findings from, the other method” (Onwuegbuzie and Teddlie, 2003, p. 364). Thus the interviews not only served a purpose of obtaining a conceptual understanding of the phenomenon, but also to aid in the construction of the survey.

Figure 3 - Mixed Methods Design Matrix (Johnson, R. B., & Onwuegbuzie, A. J., 2004, p. 22)

		Time Order Decision	
		Concurrent	Sequential
Paradigm Emphasis Decision	Equal Status	QUAL + QUAN	QUAL → QUAN QUAN → QUAL
	Dominant Status	QUAL + quan QUAN + qual	QUAL → quan qual → QUAN QUAN → qual quan → QUAL

3.1.Data Collection

As was previously mentioned this investigation utilized two distinct methods for acquiring data, semi-structured interviews (qualitative) and a structured survey (quantitative). “Interviews, a qualitative data collection approach, can provide depth in a research inquiry by allowing researchers to gain deep insights from rich narratives, and surveys, a quantitative data collection approach, can bring breadth to a study by helping researchers

gather data about different aspects of a phenomenon from many participants” (Venkatesh et al., 2013, p. 5).

The interview method chosen for this thesis is the semi-structured interview. Semi-structured, or open-ended, interviews consist of open-ended questions which are designed to initiate the exploration of a topic and allow for the flexibility of relative divergence in order to attain greater detail or understanding (Britten, 1995). The goal of a qualitative interview is to uncover the meaning which a subject gives to a certain topic or phenomenon and to go beyond the superficial exploration and discover new areas or ideas that had not emerged at the beginning of the investigation (Britten, 1995).

The questions were presented in a neutral manner, trying as best to avoid leading towards a certain answer, so that the interviewees may respond in their own words and meaning. Rapley (2001) recommends encouraging the person being interviewed to express themselves in regards to the topic with as little incentive from the interviewer as possible. Nevertheless, it is always important to remember that the respondents are “creative interpreters” affected by their context and the task of the interviewer is to record the account of “their world in their own words” (Myers & Newman, 2007). The interview scenarios we’re chosen by the interviewees so as to feel as natural as possible and to refrain from exerting any type of environment influence.

The interview questions were constructed based on the two primary phenomenon under investigation, CI and SM. They were designed to begin with a broad understanding or definition of the phenomenon and then transitioning to more concrete applications, like how they relate to organizations. Finally, concluding with very specific matters related to improvements, potential limitations and benefits, which were used to construct some of the survey questions presented to the organizations.

After collecting, organizing and analyzing the data obtained from the interviews, the structured survey was constructed. The questions and issues addressed in the survey were inspired by a survey in *Social media changing the competitive intelligence process: Elicitation of employees' competitive knowledge*, Vuori (2011), having been adapted based on the findings of the literary review and the open-ended interviews. The literary review allowed for an expansion, and alteration, of the of CI questions present in Vuori's survey, while the interviews unearthed concepts which were not present such as outsourcing activities or the use of SM based information.

Venkatesh et al. (2013) defend this notion by suggesting that in certain sequential designs "IS researchers conduct a qualitative study first to inductively develop a theoretical perspective followed by a quantitative study to validate this theory" (p. 18). Greene et al. (1989) refer to this method as *development*, where the investigator uses the results from one approach to help inform or develop the other.

Surveys have been applied often and when they are well defined and structured can produce valid and interpretable data (Pinsonneault & Kraemer, 1993). The information obtained from the structured surveys is considered to be "hard" data, or numerical products that enhance credibility and are easy to interpret (Rapley, 2001). The survey utilized in this investigation was created in a web-based platform and distributed electronically due to the features, characteristics and the location of the chosen subjects.

Web-based surveys have the added benefits of being relatively low-cost and possibly increasing the response rate obtained (Schonlau et al., 2002; Greenlaw & Brown-Welty, 2009). This investigation must work within the limits of a budget and an internet survey has the capability of altering the economic resources required, since the cost of utilizing this method is greatly reduced when compared to traditional methods (Simsek & Veiga,

2001). Therefore the web-based survey addressed two important variables that must be taken into consideration, response rate and expenses (Greenlaw & Brown-Welty, 2009).

The survey was constructed using the online application Google Forms⁴, enabling the creation of the survey for free and even including data analysis tools. The survey was then e-mailed to Fortune 1000 companies of the United States⁵, with the responses gathered by the application. These organizations were chosen due to their size and resource capability, making it more likely that they would have the means to have a well-established CI process (Alliance, 2005; Tarraf & Molz, 2006). The main focus of the survey was to understand how the organizations implement CI and also their view on SM in regards to the inclusion in the CI process. Google Forms allowed for an excel extraction of the data, along with various graphs and charts to aid in visualizing the information obtained.

4. Data and Results

As was previously mentioned this thesis relies on two different methods to acquire information and defend the investigative intentions: the semi-structured interview and the structured survey. This next chapter will focus on the data that was acquired from their application and the posterior analysis.

4.1. Open-Ended Interviews

The open-ended interviews that were conducted served a two-fold purpose. First, they allowed for a diversified viewpoint in regards to the subjects at hand, since the respondents had different profiles and experiences to share. Second, the interviews served as a foundation for the creation of the structured survey by providing some pertinent topics which the organizations should address that were not identified earlier. The full structure of the interview is available in the Annexes section of the thesis (see Annex 1).

⁴ <http://www.google.com/forms/about/>

⁵ <http://www.geolounge.com/fortune-1000-companies-2014-list/>

The selection of the interviewees was based on having experience in the field of CI. Besides experience it was also necessary for each subject to have a different role since it would influence the perspective and allow for differing points of view. By choosing participants that did not have similar backgrounds the investigation intends to avoid the minimal variation that may arise from matching profiles. For these reasons the three subjects chosen were a professor, an operational worker and a subject in a management position.

The first person to be interviewed was a CI professor responsible for the CI class in an Information Systems Management Master's Degree. Besides teaching he has also consulted professionally for various companies on matters of competitive intelligence. The second interviewee is a social market analyst. He works for a social media hub established in Lisbon, which specializes in social media monitoring, analysis and reporting. The third interview subject is a founder of a startup company that was bought out by one of the top five Portuguese IT companies and is currently one of the managers responsible for the competitive intelligence department. The interviewee has over 15 years of experience in competitive intelligence and in customizing and adapting the services for the specific customer needs. (see Table 2).

Table 2 - Information Regarding Conducted Interviews

Interviewees	Date	Length	Via	Location
CI Professor	09-03-2015	55 minutes	Skype	Residence
Social Market Analyst	15-03-2015	40 minutes	In person	Residence
CI Dept. Manager	18-03-2015	19 minutes	In person	Office

In order to address the two major issues discussed in the investigation the interviews questions were divided by two topics. First, questions pertaining to the CI process were addressed to get an understanding of the current situation and how it may be improved.

The next phase of the interviews revolved around SM, specifically how the organizations perceive this phenomenon and whether it can be an additional component of the CI process. All interviews were recorded, enabling a verification and comparison of each interview in detail.

The interviews were later transcribed, for which Bogdan and Bilkin (1997) suggest labelling by coding criteria. For this process the NVIVO10⁶ software was used to discover word frequency similarities in meaning. Besides the expected words, such as CI and SM, the most common used were “customized”, “outsource”, “perception”, “monitoring” and “analysis”. The most common relationships was the association regarding outsourcing of the CI process or activities to the improvement or enhancement of the same and the superior capability of the human component in the content analysis phase.

The main notions and point of views from the interviewees will now be presented. “Competitive intelligence is seen as an auxiliary tool which can aid in the strategic decision making process.” While some believe it should be tailored and customized to the specific needs of an organization, others consider it a standard mold which can be applied to any company in any industry. Unanimously all viewed outsourcing CI as a viable and recommended approach. One interviewee considers this “a *natural* choice since most companies either lack the resources or the knowhow to implement this process successfully.” While another added that, “outsourcing these services allows them to focus on their core business while acquiring the intelligence needed at a less costly price than that of implementing a CI department.”

In terms of SM, it is a “vast source of information and knowledge... can be acquired at a relatively low cost and allows for management to understand how the customers perceive their organization, brands, products, marketing campaigns, etc...” This possibility for

⁶ http://www.qsrinternational.com/products_nvivo.aspx

sentiment analysis is considered to be one of the “greatest contributions of SM to the CI process.” However, not everything related to SM is seen as facilitating the CI process and there can be some drawbacks. For one interviewee, “there is a great resistance in organizations to adopt SM due to their lack of knowledge regarding this recent phenomenon.”

In conclusion, although not all interviewees agree on the benefits or disadvantages of implementing SM in the CI process, they do agree that the benefits outweigh the disadvantages. All respondents stated that this process cannot be fully automated since, as one source stated, “the analytical functions associated to the process must be performed by skilled workers fully dedicated to this task.”

4.2. Structured Surveys

The survey was utilized as a means to collect empirical data regarding the way organizations utilize and implement the competitive intelligence process and how they view social media based information. The full structure of the survey is available in the Annexes section of the thesis (see Annex 2).

Academic studies aim at achieving the highest response rate possible, although one should not expect a 100% rate, especially when the responding is voluntary (Baruch & Holtom, 2008). Also, since the main objective of a survey is “to collect data representative of a population”, as long as the researcher has an adequate number of responses, it is possible “generalize findings from a drawn sample back to a population” (Kotrlík, et al., 2001). Therefore, the definition of an adequate response rate is highly dependent on the research itself (Dey, 1997).

The response rate for the survey administered in this study was 22.7%, in other words, out of the 1000 organizations that were e-mailed 227 replied. Of those 227 surveys 60 were considered unusable, making the final number of acceptable responses 167 or 16.7% of

the organizations that were initially contacted. Although this number may appear to be rather low, these organizations share many traits, which makes for what is considered to be an adequate representation of the sample population.

The survey responses were analyzed using IBM’s SPSS ⁷ analytics software and Microsoft’s Excel⁸ spreadsheets. Each question was transformed into a variable, with the responses being coded by numeric values. A full list of the variable attributed to each questions is available in the Annexes section (see Annex 3.1). SPSS allowed for the establishing of descriptive statistics regarding each variable: the lowest response; the highest response; the average response; and the standard deviation. A table containing each variable with the respective results is available in the Annexes section (see Annex 3.2)

Table 3 - CI Related Survey Results

Category	Sub Category	Results
Implement Competitive Intelligence	-	62.9%
Of these how many outsource activities	-	75.24%
Area of CI that most requires improvement	Measurement of benefits (4 or 5)	78%
Greatest benefit of CI	Improved customer relationship (4 or 5)	80.9%

Table 4 - SM Related Survey Results

Category	Sub Category	Results
Monitor Social Media	-	83.9%
Consider SM info reliable	-	83.9%
SM platforms monitored	Facebook/ Twitter	97.2%
Greatest benefit of SM	Sources of information (4 or 5)	76.8%

Tables 3 and 4 demonstrate some of the more basic results from a superficial analysis of some variable when examined independently. At this level, survey responses expand upon

⁷ <http://www-01.ibm.com/software/analytics/spss/>

⁸ <https://products.office.com/en-us/excel>

and, in most cases go along with, the data that had been gathered in the interviews. Furthermore, it allows for some preliminary relationships to be established.

The first interesting correlation would be the higher percentage of organizations that stated monitoring SM in regards to implementing CI (or at least naming it that). This demonstrates that companies are aware of the importance of SM and the need to monitor the contents produced, even if they don't consider this part of a CI process. Also noteworthy, is that over 70% of companies outsource these activities to specialized firms. This demonstrates either a lack of capability, knowledge and/or resources or that they prefer to focus on their core activity and would rather purchase these services.

The relationship between benefits of CI and SM is also very interesting. 80.9% of organizations felt that CI improved their relationship with their customers, while 76.8% felt that the sources of SM provide the greatest benefit. If one considers that customers of these organizations create content in SM it is possible to establish a link between analyzing this content and thus creating a benefit in terms of customer relationship. By monitoring and analyzing such content firms could "listen" to their customers and create better links and discover ways of improving customer care e social interaction.

Finally, the 78% of firms that state that there needs to be an improvement on the measurement of benefits from CI. This rather high percentage leads to the assumption that most companies are not sure of the impact which CI can have, even though they implement such a process. This once again leads us to the question of outsourcing since most organizations do not fully understand the effect which CI can have since they seem unable to quantify or draw concrete conclusions from these activities.

Nevertheless, a more in depth analysis was done to unearth correlations or patterns between certain variables and groups of others which could be associated to a certain category. Four distinct analysis groups were created: CI Infrastructure; Number of People

in CI; Outsourcing of CI; and the Monitoring of SM. The four categories against which these were analyzed are: Competitive Intelligence Usage Based on Hierarchy; Benefits of Using Competitive Intelligence; Benefits of Using Social Media; and Other Variables. The relationships were established based on the average response rate, filtered by variable, and can be referred to in the Annexes section (see Annex 3.3).

Table 5 - CI Infrastructure Results

VAR3	Does your company have a person responsible for competitive intelligence?	Yes	Average	Deviation
VAR4	Does your company have a competitive intelligence department?			
Competitive Intelligence Usage Based on Hierarchy			4,488	0,809
Benefits of Using Competitive Intelligence			3,659	1,239
Benefits of Using Social Media			3,732	1,276
Other Variables			0,878	0,331
VAR3	Does your company have a person responsible for competitive intelligence?	No	Average	Deviation
VAR4	Does your company have a competitive intelligence department?			
Competitive Intelligence Usage Based on Hierarchy			3,500	1,320
Benefits of Using Competitive Intelligence			2,735	1,247
Benefits of Using Social Media			3,250	1,437
Other Variables			0,750	0,440

Table 5 displays the effect that having an established CI infrastructure had on the utilization by rank within the organizations and the perceived benefits of using CI and SM. The numbers presented are the averages of the variables which make up each group. The expanded version with each individual variable result is available in the Annexes section (see Annex 3.3.1).

Having an established structure provides a greater positive impact on the variables tested. First it seems to promote a higher rate of usage of the information harnessed by the CI department. Having a department designated exclusively for CI activities, based on this data, promotes the dissemination and utilization at a companywide level. There is also a greater perception of the benefits which can be contributed to the CI and the SM activities of the organization.

In the case of CI the difference is more noticeable, where a lack of structure may have negative repercussions on the capabilities and performance of the CI process. Having a department also increased the probably of monitoring SM and finding the information obtained from this source as reliable. Not surprisingly, organizations with an established structured relied more than 70% less on outsourcing services, choosing instead to have full control the CI process.

Table 6 - Number of People in CI Results

VAR5	How many people are dedicated to competitive intelligence?	1 or 2	Average	Deviation
Competitive Intelligence Usage Based on Hierarchy			3,429	1,543
Benefits of Using Competitive Intelligence			2,643	1,480
Benefits of Using Social Media			2,714	1,397
Other Variables			0,857	0,378
VAR5	How many people are dedicated to competitive intelligence?	3 to 5	Average	Deviation
Competitive Intelligence Usage Based on Hierarchy			4,090	1,093
Benefits of Using Competitive Intelligence			3,214	1,189
Benefits of Using Social Media			3,557	1,192
Other Variables			0,820	0,388
VAR5	How many people are dedicated to competitive intelligence?	5 to 10	Average	Deviation
Competitive Intelligence Usage Based on Hierarchy			4,466	0,891
Benefits of Using Competitive Intelligence			3,438	0,994
Benefits of Using Social Media			3,822	1,142
Other Variables			0,890	0,315
VAR5	How many people are dedicated to competitive intelligence?	more 10	Average	Deviation
Competitive Intelligence Usage Based on Hierarchy			4,404	1,036
Benefits of Using Competitive Intelligence			3,289	1,185
Benefits of Using Social Media			3,808	1,120
Other Variables			0,808	0,402

Table 6 displays the relationship between the number of employees dedicated to CI and the utilization by rank within the organizations, as well as the perceived benefits of using CI and SM. The numbers presented are the averages of the variables which make up each group. The expanded version with each individual variable result is available in the Annexes section (see Annex 3.3.2).

According to these numbers having more people dedicated to CI activities seems to have a positive correlation to the variables. However, the cut off line was established at 5 to 10

employees. Although having more than 10 provides a higher perception than 1-2 or 3-5, there seems to be a point of diminishing returns past 10 employees, setting the ideal size for a CI department at the range of 5 to 10 employees. These figures seem to implicate that there is a minimum number of employees necessary for the proper functioning of the CI process. Yet, if there are too many employees, in this case over 10, this may decrease the efficiency of the activities undertaken.

Once again, not surprisingly is the result of the size of the team with regards to the outsourcing of the CI process. As the number of people dedicated to CI activities increases, the likelihood of an organization hiring outside companies specializing in CI diminishes. In regards to SM, the results displayed no linear relationship between size and monitoring. The same could be said on the perception of whether or not the information is reliable, although the highest results were based in the two middle groups with the extremities displaying less confidence. Still no solid conclusions or relationships could be established towards SM and number of employees based on these statistics.

Table 7 - Outsourcing of CI Results

VAR43	Does your company outsource its competitive intelligence activities?	Yes	Average	Deviation
Competitive Intelligence Usage Based on Hierarchy			4,290	1,077
Benefits of Using Competitive Intelligence			3,252	1,085
Benefits of Using Social Media			3,681	1,123
Other Variables			0,862	0,347
VAR43	Does your company outsource its competitive intelligence activities?	No	Average	Deviation
Competitive Intelligence Usage Based on Hierarchy			4,344	1,026
Benefits of Using Competitive Intelligence			3,417	1,235
Benefits of Using Social Media			3,604	1,333
Other Variables			0,792	0,410

Table 7 displays the impact of outsourcing the CI activities has on the utilization by rank within the organizations and the perceived benefits of using CI and SM. The numbers presented are the averages of the variables which make up each group. The expanded

version with each individual variable result is available in the Annexes section (see Annex 3.3.3).

This data set was one of the most interesting of all, showing great amount of variation based on the topic group which was being analyzed. There seems to be a negative relationship between outsourcing and CI related variables. On the other hand, SM variables show an opposite pattern and seem to be more positive when the organizations resort to outsourcing. Yet if the individual variables are taken into consideration, it is possible to notice some figures clash with the group results.

It is important to remember that these figures are an average of all the variables. For instance, in the case of CI, companies that resort to outsourcing show a greater perception of benefits regarding the decision-making process and the quality of information obtained. Similarly, in the topics pertaining to SM, those companies which did not outsource activities seem to perceive greater benefits arising from the quantity, availability and the cost of acquiring the information. These numbers exemplify the difficulty that exists in trying to establish a relationship between the groups and that the analysis must be made on an individual variable level.

There was one exception to the mixed results, the Other Variables category. In both cases organizations which outsource their CI processes had higher response rates when it comes to monitoring SM and considering the information collected reliable. This demonstrates the possibility that companies recognize the potential that SM can have within the scope of CI and in most cases when they purchase external services they want SM monitoring and analysis to be included.

Table 8 - Monitoring of SM Results

VAR41	Does your company monitor social media?	Yes	Average	Deviation
	Competitive Intelligence Usage Based on Hierarchy		4,351	1,040
	Benefits of Using Competitive Intelligence		3,344	1,128
	Benefits of Using Social Media		3,922	1,016
	Other Variables		0,840	0,326
VAR41	Does your company monitor social media?	No	Average	Deviation
	Competitive Intelligence Usage Based on Hierarchy		4,058	1,153
	Benefits of Using Competitive Intelligence		3,019	1,204
	Benefits of Using Social Media		2,154	1,206
	Other Variables		0,423	0,444

Table 8 demonstrates the correlation between monitoring SM and the utilization by rank within the organizations and the perceived benefits of using CI and SM. The numbers presented are the averages of the variables which make up each group. The expanded version with each individual variable result is available in the Annexes section (see Annex 3.3.4).

Pertaining to this aspect the figures are pretty straight forward and there seems to be a very clear relationship between monitoring SM and a more positive response rate. In terms of information and knowledge sharing, SM seems to encourage a higher rate of dissemination throughout the organizations on all levels. One surprising aspect was the difference of impact when it came to the top-tier management level.

The inclusion of SM in the CI process also creates the perception of a greater benefit in all areas that were discussed in the survey, especially in regards to product manufacturing which is very interesting. Two other areas which demonstrated a positive impact where cost saving and customer relationships. These results show a distinct correlation between the utilization of SM data and an enhancement of the benefits which CI can grant an organization.

Not as interesting, it should come as no surprise that companies whom do not monitor SM found less potential benefits in its usage. The two factors which seem to contribute the most to this reality are the cost of acquiring the information and the quality of the same. Even in firms that monitor SM the cost of acquiring the information was seen as the least beneficial variable.

In conclusion, based on the data collected this investigation has determined that organizations should have an established and well-structured CI department. Furthermore, this department should have between 5 to 10 employees in order to maximize the potential. When it comes to outsourcing, it depends on the company's specific needs. Nevertheless, regardless of whether it outsources its CI activities or not, each firm should monitor SM in order to enhance the CI process.

5. Discussion

The objective of this section is to provide a brief and general overview of the results obtained from research that was conducted. This summary allows the reader to consolidate the information that was presented.

The objective behind this investigation was to understand the social media impact on the organizational competitive intelligence process, by answering two questions: First, what is the current implementation of the competitive intelligence process in companies? How could social media be used to enhance competitive intelligence in an organizational context?

In regards to the current implementation of the competitive intelligence process in companies, this investigations utilized three different methods: the literary review, the interviews and the survey responses. The literature provided an academic viewpoint on what CI should be and how it should theoretically be implemented. The interviews and

survey responses provided greater insight into the everyday use and applicability of CI in organizations.

One of the most notable findings was that even though all of the companies stated monitoring their external environment and having some type of CI processes or activities, the vast majority outsource these services to other organizations. As was mentioned in the interviews, outsourcing these services allows them to focus on their core business while acquiring much needed intelligence. Demonstrates either a clear lack of capabilities, knowledge and/or the resources required to implement and manage their own CI departments and process or a strategic decision to outsource these services.

Considering the importance and the impact that such information can have, one would think the firms would be reluctant to allow outside sources to access this. The survey results also demonstrated that even though outsourcing seems to be the preferred choice there are some mixed results as to which approach is more beneficial for specific organizational needs. However, this tendency to outsource means that there is great potential for firms specialized in offering these services (Vagadia, 2011). Another factor to take into consideration was the cost of acquiring the information, if these specialized firms could manage to offer attractive and competitive prices they could certainly increase their demand within the marketplace.

In terms of how the information produced is handled, over half of the firms distribute and utilize the data amongst everyone, ranging from top-tier management to operational employees. This aspect was especially evident in those organizations which have a structured CI department. This can be seen as a very positive and effective knowledge sharing approach and methodology within those companies. Most have realized that the benefits of dissemination outweigh restricting this information to a select few, especially

when it is taken into account the relatively high number of organizations which stated that there needs to be an improvement in the knowledge sharing process.

The departments which seem to benefit the most from this approach are the customer service and the business planning and development, which shows a very direct relationship between information needs and consumer needs. Thus, it comes as no surprise that the information considered most desirable relates to the consumers, as well as the competitors firms. Organizations must not limit their information needs to customer desire, but also have an understanding of how their competition operates so that they may adjust or developed preemptive measures to achieve or annul an advantage obtained by a competing firm.

The second part of this investigation revolved around analyzing the potential of social media in the competitive intelligence context and its implementation. For this next phase the research relied on two distinct methods: the qualitative interviews and the quantitative survey, for understanding the use of social media data. The interviews allowed for a more broad approach of the advantages of incorporating SM, as well as how the organizations view this recent phenomenon. On the other hand, the survey provided knowledge and an understanding of information needs, thus directing which SM data should be incorporated into their CI process and activities.

Most organizations not only admitted to monitoring the activities and conversations undertaken in SM applications, but also deemed the information obtained reliable. Those companies which responded that they include SM information within their CI process demonstrated a higher recognition of the benefits which CI can provide. Since SM is a vast source of information, this allows the firms an opportunity to gather large amounts of useful data. Considering the large number of users on Facebook and Twitter, these applications have the potential to become endless streams of actionable intelligence. Not

to mention, the availability of this information is only limited to the time and tools of the inquirer, since these sources are accessible at any time of the day.

One of the most important aspects of SM information is the sources themselves, since the customers and clients of the firms, or competitors, are the ones making the direct statements. This not only allows for a comprehension of how an action or product is perceived, but also for the possibility of interaction. Interaction thus becomes a powerful tool for reactive, preemptive or proactive strategies in customer relationship management. However, since SM is still a rather recent phenomenon some organizations are still very hesitant as to the utilization and benefits which can be attained, even though the ones which are already incorporating SM into CI perceive this as a tool which can enhance and contribute.

In conclusion, this section was meant to provide clarity and to summarize how the investigation answered the research questions presented. These questions pertained to the current implementation of the CI process in companies, as well as, the potential of SM in the CI context. The inquiries are believed to have been answered in an adequate manner through the utilization of the various methods of research: textual research, analysis and review; face-to-face and skype interviews; and an electronic structured survey.

6. Final Remarks

This final section is meant to provide the reader with the practical implications of the findings obtained. Besides the implications, this section will present the limitations of the investigation conducted, as well as, provide some suggestions for future research for any investigator whom desires to expand upon, modify or to contradict the investigation.

6.1. Conclusion and Implications

This investigation has demonstrated that SM should be incorporated into the CI process of organizations, as well as the very positive impact it can generate by producing vast amounts of intelligence which could not be acquired so easily elsewhere. As such, those companies which are still reluctant to embrace SM should reevaluate their position and consider the impact that embracing these platforms can have on their intelligence capabilities. Those which are not able to incorporate these methods independently can resort to the outsourcing of these activities as other companies have done before them. This allows the firms to maintain focus on their core functions while obtaining the information from specialized providers. Not to mention, outsourcing these activities is considerably cheaper than implementing the process (Vagadia, 2011).

Today's corporations, for the most part, have access to the same resources as their competitor's. As such, gaining a competitive advantage is becoming an ever increasing difficult task. The future of the advantage resides in information and knowledge (Choo, 2003). SM will not only contribute, but rather enhance the capabilities of the firms in acquiring and maintaining an advantage (Culnan, et al., 2010).

6.2. Limitations and Future Investigation

As with all research and investigation this thesis is not without its limitations. First and foremost is the structured survey, more precisely the inquired parties. As was previously mentioned, all of the organizations asked to participate are large companies. This excludes any small and medium enterprises, which may have led to variation in the findings. Also, since the survey did not require the respondents to identify themselves, it is not possible to know the source of the response. Therefore, anyone from an entry-level employee to a senior manager could have provided the answers. Finally, all of the organizations are

based in North America, thus limiting the scope of the responses to the reality of that part of the globe.

Limitations can also be placed on the interviews. Once again these limitations apply to the perception imposed by the restriction of the choices. Although it would be extremely unrealistic to expect to capture every possible interpretation regarding the phenomenon under investigation, one must still recognize that the results will always be influenced by the respondents. Also, the small number of interviewees limits the possible answers and interpretations which could have been obtained, especially if we consider that the interviews served as an influential component in the development of the survey.

In regards to future investigation, it can be orientated in various manners. Two examples are to study the reality of a different type of organization or the reality of a different section of the globe. An investigation can be done focusing on small and medium enterprises to see if it would impact the results obtained. Also, the organizations selected can be from a different part of the globe, the research could focus on European or Asian firms or companies based in Portugal, Spain, Japan, etc...

Developing a framework for incorporating SM into the CI process is another possibility, or a case study could be performed of companies that implemented or adapted a certain framework, for using SM in CI, to their realities. Another possibility is to develop a case study based on companies that utilize SM intelligence and how it has affected their intelligence department or their overall performance. Finally, an alternative approach would be to disprove the findings presented and to demonstrate how the CI process differs from what was described or that SM is unable contribute as much to intelligence activities as was stated and defended.

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Annexes

Annex 1: Semi-Structured Interview

1. Could you please define competitive intelligence?
2. How do companies currently implement the competitive intelligence process?
3. How do you believe companies could improve the competitive intelligence process?
4. What is your understanding of social media?
5. What is necessary for organizations to adopt social media?
6. How do organizations currently utilize social media?
7. Could social media be utilized in the competitive intelligence process? How?
8. What are some of the potential and realized benefits of using social media?
9. What are some of the challenges and limitations of using social media?

Annex 2: Competitive Intelligence/Social Media Survey

1. Does your company gather and analyze information about the external environment?

(Yes / No)

2. If yes, what name is given to these activities?

(Business Intelligence / Competitive Intelligence / Other: _ _ _ _ _)

3. Does your company have a person responsible for competitive intelligence?

(Yes / No)

4. Does your company have a competitive intelligence department?

(Yes / No)

5. How many people are dedicated to competitive intelligence?

(1-2 / 3-5 / 5-10 / More than 10)

6. Is there a specific budget for competitive intelligence?

(Yes / No)

7. Does your company outsource its competitive intelligence activities?

(Yes / No)

8. Who are the people who use competitive intelligence in your company?

(Mark only one per row)

	Never	Rarely	Sometimes	Often	Every Day
Top Management					
Middle Management					
Experts					
Other Employees					

9. Which areas of your company use the information produced by competitive intelligence? (1 = never use, 5 = use very frequently)

	1	2	3	4	5
HR					
Marketing					
Finance					
R&D					
Customer Service					
Business Planning and Development					

10. How important are the following topics when acquiring information for competitive intelligence? (1 = not important, 5 = extremely important)

	1	2	3	4	5
Customer Information					
Competitor Information					
Market Information					
Industry Information					
Other Industries Information					
Technological Information					

11. How often does your company produce competitive intelligence reports?

(Never / Daily / Bi-Weekly / Weekly / Bi-Monthly / Monthly / Once per Trimester / Once per Semester / Once per Year)

12. How is the information developed transmitted within the company?

(Presentation / Intranet / Internal Application / E-Mail / Other: _ _ _ _ _)

13. How would you evaluate the benefits of competitive intelligence to your company? (1 = no benefit, 5 = extremely beneficial)

	1	2	3	4	5
Recognition of opportunities or threats					
Increased sales					
Increased market share					
Improved the products manufactured					
Improved customer relationship					
Improved decision-making process					
Achieved cost savings					

14. Which areas of competitive intelligence do you feel require improvement?

(Mark only one per row)

	Yes	No	Not Sure
Being on schedule			
Identifying information needs			
Measurement of the benefits			
Management commitment			
Number of staff			
Technological resources			
Efficiency of information gathering			
More effective knowledge sharing			

15. Does your company monitor social media?

(Yes / No)

16. If yes, which platforms? (Check all that apply)

(_Facebook, _Twitter, _LinkedIn, _YouTube, _Pinterest, _Myspace, _Other: _ _ _ _)

17. Do you consider the information obtained from social media reliable?

(Yes / No)

18. How would you evaluate the benefits of monitoring social media?

(1 = no benefit, 5 = extremely beneficial)

	1	2	3	4	5
Cost of acquiring information					
Quantity of information					
Sources of information					
Quality of information					
Availability of information					

Annex 3 – Competitive Intelligence Survey Data

Annex 3.1 – Survey Variables

VAR1	Does your company gather and analyze information about the external environment?
VAR2	If yes, what name is given to these activities?
VAR3	Does your company have a person responsible for competitive intelligence?
VAR4	Does your company have a competitive intelligence department?
VAR5	How many people are dedicated to competitive intelligence?
VAR6	Is there a specific budget for competitive intelligence?
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]
VAR11	Which areas of your company use the information produced by competitive intelligence? [HR]
VAR12	Which areas of your company use the information produced by competitive intelligence? [Marketing]
VAR13	Which areas of your company use the information produced by competitive intelligence? [Finance]
VAR14	Which areas of your company use the information produced by competitive intelligence? [R&D]
VAR15	Which areas of your company use the information produced by competitive intelligence? [Customer Service]
VAR16	Which areas of your company use the information produced by competitive intelligence? [Business Planning and Development]
VAR17	How important are the following topics when acquiring information for competitive intelligence? [Customer Information]
VAR18	How important are the following topics when acquiring information for competitive intelligence? [Competitor Information]
VAR19	How important are the following topics when acquiring information for competitive intelligence? [Market Information]
VAR20	How important are the following topics when acquiring information for competitive intelligence? [Industry Information]
VAR21	How important are the following topics when acquiring information for competitive intelligence? [Other Industries Information]
VAR22	How important are the following topics when acquiring information for competitive intelligence? [Technological Information]
VAR23	How often does your company produce competitive intelligence reports?
VAR24	How is the information developed transmitted within the company?
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]
VAR33	Which areas of competitive intelligence do you feel require improvement? [Being on schedule]
VAR34	Which areas of competitive intelligence do you feel require improvement? [Identifying information needs]
VAR35	Which areas of competitive intelligence do you feel require improvement? [Measurement of the benefits]
VAR36	Which areas of competitive intelligence do you feel require improvement? [Management commitment]
VAR37	Which areas of competitive intelligence do you feel require improvement? [Number of staff]
VAR38	Which areas of competitive intelligence do you feel require improvement? [Technological resources]
VAR39	Which areas of competitive intelligence do you feel require improvement? [Efficiency of information gathering]
VAR40	Which areas of competitive intelligence do you feel require improvement? [More effective knowledge sharing]
VAR41	Does your company monitor social media?
VAR42	If yes, which platforms?
VAR43	Does your company outsource its competitive intelligence activities?
VAR44	Do you consider the information obtained from social media reliable?
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]

Annex 3.2 – Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
VAR1	167	1	1	1	0
VAR2	167	1	3	1,4371	0,61649
VAR3	167	0	1	0,8024	0,39939
VAR4	167	0	1	0,2515	0,43518
VAR5	167	1	4	2,7066	0,77856
VAR6	167	0	1	0,8503	0,35785
VAR7	167	2	5	4,2635	1,00722
VAR8	167	2	5	4,3473	0,84972
VAR9	167	1	5	4,509	1,11327
VAR10	167	1	5	4,006	1,2539
VAR11	167	1	5	2,8084	1,16647
VAR12	167	2	5	3,8982	0,91595
VAR13	167	1	5	2,8084	1,19706
VAR14	167	1	5	3,8323	1,09022
VAR15	167	2	5	4,5689	0,73205
VAR16	167	1	5	4,3174	0,93196
VAR17	167	2	5	4,8084	0,49007
VAR18	167	2	5	4,6467	0,74509
VAR19	167	2	5	4,5509	0,70846
VAR20	167	2	5	4,3234	0,93312
VAR21	167	1	5	2,0419	0,9141
VAR22	167	1	5	3,3892	1,30269
VAR23	167	1	7	5,4072	1,03059
VAR24	167	1	5	2,6347	1,35486
VAR25	167	1	5	3,509	1,10785
VAR26	167	1	5	3,2156	1,16226
VAR27	167	1	5	3,2096	1,15034
VAR28	167	1	5	2,9281	1,14896
VAR29	167	1	5	4,2216	0,94678
VAR30	167	1	5	4,024	1,1083
VAR31	167	1	5	3,3653	1,1635
VAR32	167	1	5	2,8802	1,15018
VAR33	167	0	2	0,515	0,71857
VAR34	167	0	2	1,0479	0,53558
VAR35	167	0	2	1,1377	0,45145
VAR36	167	0	2	0,2575	0,5593
VAR37	167	0	2	0,5808	0,83109
VAR38	167	0	2	1,3054	0,49955
VAR39	167	0	2	1,0898	0,47626
VAR40	167	0	2	1,1437	0,67908
VAR41	167	0	1	0,8443	0,36365
VAR43	167	0	1	0,7126	0,45392
VAR44	167	0	1	0,8383	0,36926
VAR45	167	1	5	2,2754	1,15469
VAR46	167	1	5	3,5928	1,18299
VAR47	167	1	5	4,1437	1,33207
VAR48	167	1	5	3,7605	1,37626
VAR49	167	1	5	3,6886	1,09161

Annex 3.3 – Correlations

Annex 3.3.1 – CI Infrastructure

VAR3	Does your company have a person responsible for competitive intelligence?	Yes	41
VAR4	Does your company have a competitive intelligence department?		

Competitive Intelligence Usage Based on Hierarchy		Average	Deviation
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]	4,439	0,867
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]	4,537	0,711
VAR9	Who are the people who use competitive intelligence in your company? [Experts]	4,707	0,750
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]	4,049	1,048

Benefits of Using Competitive Intelligence		Average	Deviation
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]	3,951	1,024
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]	3,659	1,277
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]	3,659	1,237
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]	3,293	1,309
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]	4,463	0,840
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]	4,195	1,100
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]	3,390	1,302
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]	3,244	1,241

Benefits of Using Social Media		Average	Deviation
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]	2,902	1,158
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]	3,732	1,285
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]	4,146	1,276
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]	3,659	1,371
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]	3,878	1,100

Other Variables		Average	Deviation
VAR41	Does your company monitor social media?	0,878	0,331
VAR43	Does your company outsource its competitive intelligence activities?	0,098	0,300
VAR44	Do you consider the information obtained from social media reliable?	0,878	0,331

VAR3	Does your company have a person responsible for competitive intelligence?	No	32
VAR4	Does your company have a competitive intelligence department?		

Competitive Intelligence Usage Based on Hierarchy		Average	Deviation
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]	3,375	1,264
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]	3,625	0,793
VAR9	Who are the people who use competitive intelligence in your company? [Experts]	3,813	1,635
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]	3,094	1,376

Benefits of Using Competitive Intelligence		Average	Deviation
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]	2,719	1,250
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]	2,750	1,244
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]	2,719	1,250
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]	2,781	1,263
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]	3,594	1,103
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]	3,250	1,218
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]	2,656	1,234
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]	2,594	1,292

Benefits of Using Social Media		Average	Deviation
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]	2,094	1,254
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]	3,250	1,437
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]	3,625	1,581
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]	3,250	1,586
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]	3,219	1,237

Other Variables		Average	Deviation
VAR41	Does your company monitor social media?	0,750	0,440
VAR43	Does your company outsource its competitive intelligence activities?	0,844	0,369
VAR44	Do you consider the information obtained from social media reliable?	0,719	0,457

Annex 3.3.2 – Number of People in CI

VAR5	How many people are dedicated to competitive intelligence?
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1 or 2 (7)

Competitive Intelligence Usage Based on Hierarchy	
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]

Average	Deviation
3,429	1,512
3,429	0,976
3,857	1,952
3,143	1,574

Benefits of Using Competitive Intelligence	
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]

Average	Deviation
2,714	1,496
2,429	1,618
2,286	1,604
3,143	1,345
3,571	1,134
3,143	1,464
2,571	1,718
2,143	1,345

Benefits of Using Social Media	
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]

Average	Deviation
2,143	1,345
2,571	1,397
3,000	1,528
2,714	1,496
3,000	0,816

Other Variables	
VAR41	Does your company monitor social media?
VAR43	Does your company outsource its competitive intelligence activities?
VAR44	Do you consider the information obtained from social media reliable?

Average	Deviation
0,857	0,378
1,000	0,000
0,571	0,535

VAR5	How many people are dedicated to competitive intelligence?
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between 3-5 (61)

Competitive Intelligence Usage Based on Hierarchy	
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]

Average	Deviation
4,049	1,023
4,131	0,903
4,459	1,163
3,721	1,368

Benefits of Using Competitive Intelligence	
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]

Average	Deviation
3,410	1,216
3,197	1,249

VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]	3,180	1,245
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]	2,869	1,162
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]	4,000	1,080
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]	3,918	1,144
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]	3,230	1,131
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]	2,820	1,245

Benefits of Using Social Media		Average	Deviation
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]	1,984	1,072
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]	3,508	1,192
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]	4,033	1,414
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]	3,738	1,413
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]	3,557	1,191

Other Variables		Average	Deviation
VAR41	Does your company monitor social media?	0,789	0,413
VAR43	Does your company outsource its competitive intelligence activities?	0,885	0,321
VAR44	Do you consider the information obtained from social media reliable?	0,820	0,388

VAR5	How many people are dedicated to competitive intelligence?	between 5-10 (73)
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Competitive Intelligence Usage Based on Hierarchy		Average	Deviation
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]	4,411	0,940
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]	4,521	0,729
VAR9	Who are the people who use competitive intelligence in your company? [Experts]	4,712	0,841
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]	4,356	1,019

Benefits of Using Competitive Intelligence		Average	Deviation
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]	3,575	0,956
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]	3,288	1,007
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]	3,301	0,996
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]	2,822	1,032
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]	4,411	0,761
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]	4,164	1,028
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]	3,644	0,977
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]	2,932	0,991

Benefits of Using Social Media		Average	Deviation
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]	2,329	1,155
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]	3,562	1,142

VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]	4,397	1,102
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]	4,014	1,184
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]	3,822	1,059

Other Variables		Average	Deviation
VAR41	Does your company monitor social media?	0,904	0,296
VAR43	Does your company outsource its competitive intelligence activities?	0,726	0,449
VAR44	Do you consider the information obtained from social media reliable?	0,890	0,315

VAR5	How many people are dedicated to competitive intelligence?	more than 10 (26)
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Competitive Intelligence Usage Based on Hierarchy		Average	Deviation
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]	4,577	0,809
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]	4,615	0,752
VAR9	Who are the people who use competitive intelligence in your company? [Experts]	4,231	1,306
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]	3,923	1,262

Benefits of Using Competitive Intelligence		Average	Deviation
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]	3,769	1,07
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]	3,269	1,218
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]	3,269	1,151
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]	3,308	1,35
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]	4,385	0,898
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]	4,115	1,071
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]	3,115	1,395
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]	3,077	1,262

Benefits of Using Social Media		Average	Deviation
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]	2,846	1,120
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]	4,154	1,008
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]	4,000	1,523
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]	3,385	1,602
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]	3,808	0,939

Other Variables		Average	Deviation
VAR41	Does your company monitor social media?	0,808	0,402
VAR43	Does your company outsource its competitive intelligence activities?	0,192	0,402
VAR44	Do you consider the information obtained from social media reliable?	0,808	0,402

Annex 3.3.3 – Outsource CI

VAR43	Does your company outsource its competitive intelligence activities?
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Yes (119)

Competitive Intelligence Usage Based on Hierarchy	
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]

Average Deviation

4,269	0,997
4,311	0,881
4,521	1,156
4,076	1,263

Benefits of Using Competitive Intelligence	
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]

Average Deviation

3,403	1,084
3,134	1,089
3,126	1,086
2,815	1,073
4,218	0,949
4,034	1,081
3,370	1,149
2,790	1,096

Benefits of Using Social Media	
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]

Average Deviation

2,076	1,075
3,588	1,123
4,252	1,257
3,874	1,318
3,681	1,041

Other Variables	
VAR41	Does your company monitor social media?
VAR44	Do you consider the information obtained from social media reliable?

Average Deviation

0,857	0,351
0,866	0,343

VAR43	Does your company outsource its competitive intelligence activities?
-------	--

No (48)

Competitive Intelligence Usage Based on Hierarchy	
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]

Average Deviation

4,250 1,042

4,438 0,769

4,479 1,010

3,833 1,226

Benefits of Using Competitive Intelligence	
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]

Average Deviation

3,771 1,134

3,417 1,318

3,417 1,285

3,208 1,288

4,229 0,951

4,000 1,185

3,354 1,211

3,104 1,259

Benefits of Using Social Media	
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]

Average Deviation

2,771 1,207

3,604 1,333

3,875 1,482

3,479 1,487

3,708 1,220

Other Variables	
VAR41	Does your company monitor social media?
VAR44	Do you consider the information obtained from social media reliable?

Average Deviation

0,813 0,394

0,771 0,425

Annex 3.3.4 – Monitor SM

VAR41	Does your company monitor social media?
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Yes (141)

Competitive Intelligence Usage Based on Hierarchy	
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]

Average Deviation

4,319	0,981
4,383	0,834
4,546	1,099
4,092	1,230

Benefits of Using Competitive Intelligence	
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]

Average Deviation

3,560	1,085
3,277	1,147
3,262	1,138
3,007	1,118
4,291	0,891
4,085	1,092
3,411	1,153
2,936	1,148

Benefits of Using Social Media	
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]

Average Deviation

2,447	1,155
3,844	1,023
4,511	0,907
4,135	1,016
3,922	0,895

Other Variables	
VAR43	Does your company outsource its competitive intelligence activities?
VAR44	Do you consider the information obtained from social media reliable?

Average Deviation

0,723	0,449
0,957	0,203

VAR41	Does your company monitor social media?
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No (26)

Competitive Intelligence Usage Based on Hierarchy	
VAR7	Who are the people who use competitive intelligence in your company? [Top Management]
VAR8	Who are the people who use competitive intelligence in your company? [Middle Management]
VAR9	Who are the people who use competitive intelligence in your company? [Experts]
VAR10	Who are the people who use competitive intelligence in your company? [Other employees]

Average Deviation

3,962	1,113
4,154	0,925
4,308	1,192
3,538	1,303

Benefits of Using Competitive Intelligence	
VAR25	How would you evaluate the benefits of competitive intelligence to your company? [Recognition of opportunities or threats]
VAR26	How would you evaluate the benefits of competitive intelligence to your company? [Increased sales]
VAR27	How would you evaluate the benefits of competitive intelligence to your company? [Increased market share]
VAR28	How would you evaluate the benefits of competitive intelligence to your company? [Improved the products manufactured]
VAR29	How would you evaluate the benefits of competitive intelligence to your company? [Improved customer relationship]
VAR30	How would you evaluate the benefits of competitive intelligence to your company? [Improved decision-making process]
VAR31	How would you evaluate the benefits of competitive intelligence to your company? [Improved the quality of information]
VAR32	How would you evaluate the benefits of competitive intelligence to your company? [Achieved cost savings]

Average Deviation

3,231	1,210
2,885	1,211
2,923	1,197
2,500	1,241
3,846	1,156
3,692	1,158
3,115	1,211
2,577	1,137

Benefits of Using Social Media	
VAR45	How would you evaluate the benefits of monitoring social media? [Cost of acquiring information]
VAR46	How would you evaluate the benefits of monitoring social media? [Quantity of information]
VAR47	How would you evaluate the benefits of monitoring social media? [Sources of information]
VAR48	How would you evaluate the benefits of monitoring social media? [Quality of information]
VAR49	How would you evaluate the benefits of monitoring social media? [Availability of information]

Average Deviation

1,346	0,562
2,231	1,070
2,154	1,515
1,731	1,313
2,423	1,206

Other Variables	
VAR43	Does your company outsource its competitive intelligence activities?
VAR44	Do you consider the information obtained from social media reliable?

Average Deviation

0,654	0,485
0,192	0,402