THE RESTRUCTURING OF STRATEGIC MARKETING INTELLIGENCE WITH CONSIDERING THE DEVELOPING ROLE OF OPEN SOURCE DATA

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ABSTRACT

The notable changes of organizational environments in the recent century have created the need to a sustainable competition for coping with these changes, and achieve success. In such circumstances, organization would seek to formulate the suitable strategies for internal capacities and external opportunities. The organizations implement their strategies by creating competitive advantage via key merits including creating value for customers, customer attraction and satisfaction. Thus, customer-oriented strategies would be preferred by organizations, which are based on innovative science, new thinking, and long-term efficient relationship with customer. In intelligent marketing strategies, organizations should consider innovative knowledge as a new input for maintaining competitive advantage and developing marketing intelligence strategy. The present study is aimed to investigate the concept of marketing intelligence and provide solutions for the implementation of marketing intelligence systems and the use of open source data in the development of intelligent marketing systems. It is a scientific review based on the most important available references. First, it explores the theoretical background of the concepts of intelligent marketing and then provides solutions for the implementation or improvement of marketing intelligence systems. The results of the present study showed that marketing intelligence works as a strategic activity within organizations which seeks deep market analysis, customer satisfaction (which could lead to business continuity), facilitate decision making, coping with changes, etc. In the meantime, the use of open source data in the intelligent marketing process is associated with aggregated information, full selection of information, easily accessible features and updating features, and so on.

KEYWORDS: *competitive intelligence, marketing intelligence, open source data and Strategic Marketing Intelligence.*

1. INTRODUCTION

Competitive pressures on businesses in the today's world have led them to realizing the importance of knowledge in competitive areas and attempt to use this tool for reaching their competitive goals. Such a phenomenon led to the emergence of a new concept called intelligence. Today, the arrival of new information and communication technologies and online technologies enabled the businesses to establish long-term relationships with their customers, and also collect the information and knowledge related to their customers and rivals more efficiently, process this information accurately and use them in their fields of competition. Therefore, during the recent years many studies have been done on the concept of intelligence in its general sense and also the associated specific concepts such as marketing & competitive intelligence (Cacciolatti & Fearne, 2013). Moreover,

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previous studies show that many leading institutes in the market have tried to utilize these concepts in their measures (Badr, 2003; Wright et al., 1998).

Ettorre (1995) aligned the concept of MI (Marketing intelligence) to strategic planning by saying "Marketing intelligence was about staying one step ahead of the competition by gathering information which could be converted to actionable intelligence and which can then be applied to both short and long term strategic planning".

On the other hand Calof and Skinner (1998) defined CI (Competitive intelligence) as:

The art and science of preparing companies for the future by way of a systematic knowledge management process. It is creating knowledge from openly available information by use of a systematic process involving planning, collection, analysis, communication and management, which results in decision-maker action.

Despite the various definitions of these two concepts, one of the major issues that has occasionally led to considerable debate between practitioners and academics is providing a precise definition of the concept of marketing intelligence and competitive intelligence. For this purpose, these concepts are examined in the first part of the present paper.

In general, marketing strategies play two important roles to maintain competitive advantage. First, encouraging the customers to return and second, creating distinct competencies by key merits. In the disordered world of today, key merits are important for keeping customers, but they are not sufficient for sustainable competitive advantage and achieving superior performance. Key competencies are known as valuable, scarce, non-imitable and organizational cases. Hence, the market of organizations should be customer-oriented and create an efficient long-term relationship with customers based on innovative knowledge, and new thinking. This competency belongs to those organizations which can be the base knowledge, formulate their marketing strategies, and save their competitive advantage based on knowledge. In other words, in Strategic Marketing Intelligence, organizations should consider innovative knowledge as a new input for maintaining competitive advantage and developing Strategic Marketing Intelligence (Navarro et al, 2011). In the second part, a new perspective is provided for development of strategic marketing intelligence.

On the other hand, despite the advances in the field of information technology, today, organizations are faced with a large amount of data in these technologies, which can greatly help the organizations to get competitive advantage by being identified, collected and analyzed (Tej Adidam et al., 2012).

The gathering of data and information from open sources (OS) has been an active focus of both national and private-sector intelligence organizations for decades (Steele, 2002). Business enterprises have long been reliant on open sources for intelligence purposes –whether applied to marketing concerns, mergers and acquisitions, partnering due diligence, or strategy development among other things; on the other hand, national intelligence organizations have recently been encouraged to make better use of open sources in their array of intelligence gathering functions (Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, 2005).

With regard to the points mentioned for a better understanding of the concept of Strategic Marketing Intelligence, the concept of competitive intelligence which is the underlying ground of marketing intelligence will be discussed and then the role of open source data in the development of marketing intelligence will be elaborated.

2. LITERATURE REVIEW

2.1 The long history of competitive intelligence

Historically, the concept of intelligence dates back to 5000 years ago in China. One of the most prominent works published on the concept of intelligence (especially competitive intelligence) is The Art of War, by Sun Tzu, which has been written 2400 years ago (San, 1988). Even in the

historical records of European countries, some traces of using the concept of intelligence in the last centuries can be found.

This is evidenced by Nathan Rothschild's timely intelligence to make a fortune on the London Stock Exchange following the Battle of Waterloo in 1815. Among Rothschild's intelligence network was an agent who watched Napoleon's defeat at Waterloo and subsequent lysent carrier pigeons to Rothschild, who the following morning sold large volumes of shares. Observers wrongly concluded that the French had won the battle, and shares slumped. Rothschild then bought back and awaited the news, which arrived conventionally, that Wellington had won. The market correction helped Rothschild to his fortune (Juhari & Stephens, 2006).

Of course, the attempt to obtain environmental information and awareness from the movement of rivals to achieve competitive advantage has not been very moral always, and since the old times some enterprises tried to use immoral ways to achieve competitive advantage, known as industrial espionage. For example The Byzantine emperor Justinian I (483-565) in the sixth century used monks to steal silk worms from the Chinese in an attempt to understand how to make silk (Fraumann, 1997).

The British tea industry has it roots in CI, going as far back as 1615. Mr R. L. Wickham, who worked as an agent for the English East India Company, was sent to China to gather intelligence and he relayed the importance of tea and its potential to contribute to the British economy. Wickham learned about the Chinese production of tea over ten years and then, thanks to various inventions such as tea boxes and chests, he was able to successfully start a tea industry in Britain (Breed, 1999). As can be seen from the examples given above, whilst today it is reported that 87 per cent of all large companies, regardless of locations, have an intelligence capability (Global Intelligence Alliance, 2005), it can be seen that the commercial application of CI, as we know it, has been around for at least 5,000 years if not longer.

2.2 Competitive intelligence

Competitive intelligence involves the collection of information, internal, external and from competitors, but also from customers, suppliers, technologies, environments, and potential business relations. CI is designed to provide early warning and help to predict the moves of competitors, customers, and governments (Hodges, 2005). This suggests that the focus of CI covers the entire competitive environment, not just the competition. This systematic scanning for CI, including noticing and interpreting competitive stimuli, is critical for organisations to stay abreast of changing market conditions and avoid costly mistakes (Patton & McKenna, 2005).

CI focused on producing the following results:

. new or increased revenue;
. new product or services;
. cost savings/avoidance;
. time savings;
. profit increases; and
. financial goals met.

Their systems were focused on various key intelligence topics (KITs), given below in rank order:

(1) company profiles;
(2) competitive benchmarking;
(3) early warning alerts;
(4) market or industry trends;
(5) customer or supplier profile;
(6) technology assessment;
(7) economic/ political analysis; and
(8) executive profiles (Murphy, 2016).

There was clear evidence that the CI gathered from these KITs resulted in supporting decisions in the following areas:
. corporate or business strategy;
. sales or business development;
. market entry decisions;
. product development;
. R&D/ technology decisions;
. M&A decisions;
. due diligence;
. joint venture decisions;
. regulatory/ legal responses (Bose, 2008).

2.3 Marketing intelligence

Information and reliable data form the bedrock of any management decision. They also form the basis for all the diagnostic and prognostic efforts of managers. From a marketing stand point, problems can only be anticipated, identified, analysed and resolved or prevented if accurate and reliable, relevant information can be obtained promptly from both internal and external sources. This overriding importance of marketing information is so obvious that every trained marketing manager or executive makes deliberate and sustained efforts to generate, analyze and use reliable marketing related information (Igbaekemen, 2014).
Grinstein (2007) meta-analytic review of the market orientation literature demonstrates empirically that gaining in-depth knowledge about customers latent needs (i.e. customer orientation) and continuously learning from rivals (i.e competitor orientation) positively influences innovation consequences.
A constant use of these innovations can facilitate obtaining sustainable competitive advantage for the organization. In fact, when the organization adopts an innovative approach, it finds the ability to create new sectors in the existing market and thus, it can exploit the advantage of being present in the market where there is no competitors. It is a fact that the time that the organization can use these conditions depends largely on the obstacles that the organization considers for the entrance of rivals to that section of the market. In fact, as these obstacles are bigger, that market sector becomes less attractive for the entrance of rivals, and thus the change of having rivals in that sector reduces (Lendel & Varmus, 2011).
One of the most effective obstacles for the entry of competitors is that the organization has the ability to constantly bring innovations in its proposed packages. Of course, the important point is that innovation should be attractive and tailored to the needs of customers in order to create positive behavioral tendencies on their part. In general, the main advantage of using continuous innovations in these situations is that even if the competitor enters that part of the market, it will take a long time to provide a response to the organization's innovations and if The organization uses a system that can be used to understand the needs of its customers, while innovators can rival newcomers at the same time as their competitors, and their position in the market is improving. Forgive (Barney & Hesterly, 2010).
As pointed, to reach this condition, an organization needs to realize the needs of customers correctly and be able to obtain the required information from the market, which takes place in the ground of marketing intelligence.
Marketing intelligence capability is defined as the availability and use of business resources and processes through which "firms learn about their markets and use market knowledge " (Vorhies & Morgan, 2005).It involves collecting information about customers and competitors, analyzing such market information, and making complete use of market intelligence to develop competitive marketing programs. This information is considered highly important in "shaping strategic marketing decisions and building market oriented organizations" including the development of new

and novel products. Similar to relational proclivity defined above, marketing intelligence capability is viewed here as an organizational asset that facilitates the development of distinctive capabilities (Jaworski et al., 2002).

Generally, the companies which have the ability to employ marketing intelligence are also able to collect and analyze the information of market and also use them as a basis for developing new products. Such capabilities are shown to enable organizations to sense and respond to changing customers' needs and, therefore, enhance new product outcomes (Olavarrieta & Friedmann, 2008). In fact, those organizations that are able to develop and execute new procedures, such as allowing the assessment of market trends and responding to new product concepts, are often best positioned to secure new product development process advantage (Wind & Mahajan, 1997).

Another benefit of using marketing intelligences promoting the level of foreign knowledge about the market through the use of concepts related to marketing intelligence, which will help the company to better identify its strengths and weaknesses and, accordingly develops a better strategy that will bring competitive advantage for the company (Camiso´n & Fore´s, 2010).

2.4 The Restructuring of Strategic Marketing Intelligence

The most important characteristic of competition in the various industries is that competition in various industries is rapidly evolving (Barney, 2010). In this condition competition known as a process creates future conditions and covers integrated moves. In this process success is thought as to be able to envisage businesses 'market trends, to keep the needs of changing customer needs quickly and by creating new necessities, to transform consumer habits (Moutinho & Southern, 2010). According to such a thought, the essence of competition is not the structure of products and markets of the business but is the dynamic and integrated attitude that the business take. Moreover, if the businesses delimitate themselves to existing competitive environment with an organized consistency, they can reach success in a certain extent ,but in competition, the possibility of having a permanent solution is assessed low. Because for a permanent solution in competition, it is necessary for the businesses to develop an effective systematical approach which enables to do their best in changing environment freely, to keep themselves in the same development line together with their markets and customers and up to a certain level, to be able to change the variation systems/processes.Russel Ackoff describes the system as "a physical or ideational entity which consists of interdependent departments". Or a system can be described as "a whole which cannot be divided into independent departments"(Dodgson & Hughes, 2009). Therefore, it is essential to consider competitive intelligence as an activity which requires intelligent in-depth examinations and give it a complex multidimensional nature. Besides, it is important to view the activities related to marketing, communication and evaluation as a connected process which affect each other. Having a systematic look to this issue is of great significance, which leads to the occurrence of goal-setting processes and implementing the related programs in coordination with each other (Hakansson, 2015). In order to establish this systematic look it is required to put aside the limited operational view to these domains. In other words it is necessary to dividing the problems into the small pieces and then reunite them towards the defined target.This thought is oriented to be able to comprehend the relationship between the problem and the higher system. Even in advanced thought, it should be the observing the effects of problem solving within "an environmentally interacted integrity". In this process the main understanding, can be crystallized as "system synergy" which was envisaged by Aristo centuries ago.Because it should be thought that, the sub-systems that designed independently, cannot be appropriately useful for the organization. System synergy means higher energy production than aforesaid sub-systems' energy. System Approach; (a) interdisciplinary approach, (b) integrated approach and (c) depends on scientific approaching principles ((Laszlo et al., 2010). in order to achieve to this level it is necessary for managers to obtain the thinking skills. These thinking skills qualify three understandings: institutionalized agility skills, (b) all working activities' representing the processes (c) the only purpose's being customer pleasure. In other words

all the businesses have only one purpose; whatever their sector and quality is-"to obtain permanent customer" Or it can be said like this; to keep existing customers and to gain possible ones and to obtain permanent customer (Zexian and Xuhui, 2010).

Organizations should act through four important principles to construct Strategic Marketing Intelligence:

1 -Competitive intelligence must direct to correct customers/people at correct time

2 -The organization should be ready to accept envisaged the expert people about competitive intelligence and must have them easily

3 -Competitive intelligence should be capable of transferring information and the best application

4-for the sake of Strategic Marketing Intelligence formation, the organization should be open to cross-coordinative actions

*To obtain competitive intelligence for correct customers/people at correct time***:**

While forming strategies connected to markets, it is leading the best applications of the organization to the people who are in need at correct time when they need competitive intelligence. Here it is the main point is submission of competitive intelligence data as aimed way and donation of all domestic networks of the business to competitive intelligence. Competitive Intelligence's being lead correctly and as the aimed way, it is crucial to form organizational structures simplifying data share .And It requires reconstruction of the organization as in the way of facilitating the data share with cross-work functions.

To give job to the experts of competitive Intelligence: Another important principle in forming SMI is to give job opportunities to the advanced/experienced specialists about competitive intelligence in the organizations, in order to obtain their organized information keys ,it is highly needed to form an activity mechanism and its applicability. And for this, it should be thought to activate these processes: (i) to employ the persons who are expert in their own branches by talking personally and with various aimed questions to have intrinsic communication. (ii) to define expert people and clarify their being reachable through intranet. (iii) To comprise competitive intelligence networks. By the help of this we benefit from expert competitive intelligence networks' elevating effect.

*To be able to transfer information and the best applications***:** In forming MSI the third component is the ability to transfer information and the best applications of competitive intelligence. To form such a mechanism the basic necessities are periodical forms, information fairs, guides, discussion groups, e-mail and distribution lists, competitive intelligence teams, the competitive intelligence personnel's internal and external rotation, excellent competitive intelligence centre, competitive intelligence databases and intranets. Competitive intelligence teams head the cross functional teams and every team is responsible for reaching related topics quickly with a special key rival. These teams are responsible for being able to transfer the learned courses related to their specific rival whose informatics is needed.

Organization's being tolerant against cross coordinative activities: In forming SMI, Cross Coordinative Activities cause the excellent ideas are assessed synchronically and normally meaningless information when it is alone, here comes together with the other ones and become meaningful and this is provided by cross coordinative activities. Just like the loops of a carpet, how they are meaningless alone and when they come together they form the carpet and have a great value; this is just in the case of Cross Coordinative Activities. If the organization is tolerant to Cross Coordinative Activities, it will ease the development of marketing understanding and the organization won't be dependent or limited to the obtained information and market informatics, by this way the business will envisage what can be done as a whole (Papatya & Papatya, 2011).

2.5 Using open source data in developing and marketing intelligence

Implementing marketing intelligence within organizations will make the decisions more effective within organizations and the internal operations will take place more attentively toward the market,

and this market-based view resulting from the use of marketing intelligence results in improving the financial performance of the organization (Fahey, 2007). Within this intelligence process, data collection is an essential element can comprise a significant part of the resources allocated toward developing insights (Stalder & Hirsh, 2002). Open source intelligence, more commonly known as OSINT, is an information processing discipline. More specifically for the purposes of this paper, it is defined as the scanning, finding, gathering, exploitation, validation, analysis, and sharing with intelligence-seeking clients of publicly available print and digital/electronic data from unclassified, non-secret, and "grey literature" sources. Grey literature is published material that is not indexed and often lacks data about the publisher. It is frequently used by academics or researchers to share their earliest ideas about concepts or experiments they are working on, unpublished papers in conference proceedings, and is often found on personal web sites, by commercial corporations in the form of "whitepapers", or even in web logs (i.e. blogs). OSINT is the most frequently used form of C/MI intelligence gathering in business enterprises, desirable because it is easy ,inexpensive and produces abundant raw material for further processing (Vibert, 2003). In the past, OSINT was considered as the ability of organization for collecting the information needed through second hand resources such as books, journals, magazines, pamphlets, reports and etc., however, the advances in the field of digital media had a great improvement compared to the past and organizations seek to achieve the intended first hand sources via digital sources. The grid in Table I shows the broad range of both internal and external channels utilized for open source intelligence purposes.

Table 1. Sample open source information target grid

	Internal (channels and sources)	**External (channels and sources)**
Human sources providing data that can be archived in various public media	Boundary spanners (public affairs,	Academics
	public relations)	Competitors
	Customers	Consultants/experts
	Customer service data	Customers
	Employees	Government officials
	Managers	Interest groups
Documents and captured media	Building diagrams	Advertisements
	Business plans	Blogs/wikis
	CRM databases/reports	Broadcasts (TV, radio)
	Databases	Company home pages
	Information resource library	Government publications
	Intranet (text, A&V)	Images/maps (e.g. satellite)
Mixed channels providing data that can be archived in various public media	Observations	Seminars
	Meetings	Site visits
	Site visits	Trade events

Source: Authors

OSINT serves a dual purpose – it creatively gathers, selectively encodes, and combines transparent information to develop solutions to novel problems, and as part of its natural process brings higher levels of trust among interested users – especially that the solutions are focused on the targeted problem and not maintenance of some interested community organization. OSINT attempts to over ride adult based in cultural intelligence and replace it with fluid intelligence-based opportunities, by presenting information in ways that engender inductive and (author citation) reasoning approaches.

The purpose of this early OSINT is to invite end users to draw their own inferences about meaning and relevance, and map them onto higher order rules systems, developing their own solutions to unique problems.
OSINT is at once cognitive and social in nature (although the social aspects can be ambiguous beyond common problem solving activity). It can be used to right information imbalances, address the lack of trust members of the community may have in third party problems solvers (or even each other), for community verification of conclusions, and to promote extended information sharing within the community (Burke, 2007). Information in an OSINT framework is more open and horizontal in nature, spread out across the entire community (which promotes a more inductive response to information) instead of maintained by specific sets of individuals and groups within the community. So if for example there is recognition of a relationship between water table level and increase in extremism the information is distributed across possible end users who might have interest in or be able to add a new in link to the situation; whether the end user is a military advisor or a Community Based Organization administrator (Glassman& Kang, 2012).

2.6 Analysts and the implications of data gathered from open sources

Analysts in business enterprises have been seeking, processing and applying open source data to their tasks for decades. Only in recent years, as the volume of digital information has grown so rapidly, have problems surfaced associated with using the mass of data (Vibert, 2003). Managers have been known to spend several hours a day searching for information, later realizing that much of the information they acquired has little relevance or value toward meeting their needs. Companies typically spend far more resources, and particularly in the form of time, gathering information than they do processing, analyzing and exploiting it. Studies in the MI field have shown that practitioners would like to reverse this equation, and spend more time processing, analyzing and exploiting data as opposed to just gathering it (Competitive Intelligence Foundation, 2006). OSINT is still developing, and probably in its early stages, but we believe it is possible to lay out some core principles as outlined in this paper.
1- The most critical skills in OSINT are search for, organization of, and differentiation of information.
2- OSINT relies far more on processes reminiscent of fluid intelligence than processes involving crystal intelligence. This continues and even increases into adulthood.
3- OSINT makes self-termination processes of problem solving much more 'user friendly' and exhaustive processes less necessary. Again this continues and even increases into adulthood.
4- Information is always transparent, always open access, always readily available, and treated more as a community resource than an individual commodity.
5- Ability to develop a reliable community to moderate/vet new information is critical. The value of information processes are correlated with the level of user(s) trust.
6- There are no set hierarchies in problem solving and little predetermined (context/cultural intelligence). This frees users to explore new avenues of thinking but also puts much more responsibility on them in terms of encoding and combination. 3. Psychology in an age of information driven opportunity (Glassman & Kang, 2012).

2.7 Proven C/MI operating practices in an OSINT-dominant context

One of the biggest challenges faced by C/MI analysts in employing open sources within the larger intelligence process is in making the data gathered there usable and helpful .The following guidelines have been demonstrated to be important in making effective use of OS:
Reliability and authority – Information on which analysts base their insights should ideally come from authoritative, edited, and reviewed sources. C/MI functions that employ OSINT more capably and avoid "garbage in garbage out" problems build protocols into their data collection process that

impose some requirements to keep source tagging of digital information or for collectors to provide this information to allow for cross-checking and verification (Clark, 2004).
Updated and archived – Systems used to gather OS data should provide timely access to the most updated information as well as extensive archiving ability (Glassman & Kang, 2012).
Aggregated information – Analysts need ready, centralized access to their sources; therefore, sources should ideally be aggregated and searchable within a single interface. This is becoming an easier task with solution suites that are designed expressly for intelligence purposes.
Easily accessible – Today's analysts are nearly always "on the go" and need to be able to access their data from anywhere via any devices – including mobile phones, Blackberry, laptop, via telephone, the internet, and so on (Tan & See, 2004).
Full selection of information – Today's analysts need access to a vast array of open sources, e.g. newswires, industry newsletters, specialty publications, daily business press, trade journals, industry analysts' reports, and so forth. Many of these are "free", but better intelligence sources are frequently commercial ones and nearly always require some expenditure. Additionally, a lot of "free" data are untrustworthy, hard to organize, difficult to validate, and/or the processor requires much time to manipulate them to make them suitable for intelligence analysis purposes (Steele, 2002).
Ready-to-download information – Analysts work better with information in integrative formats that are easy to download, e-mail or print. This is not only an information technology issue but one of needing to educate and inform intelligence network participants of appropriate protocols for sharing information as well (Azvine et al., 2005).
Updating features – Analysts are best served when their open source systems provide them the use of electronic clipping services, "alerts" and other automated/automatic updating capabilities. This keeps them aware of potentially important changes (Azvine et al., 2005).

3. CONCLUSION

With regard to the points discussed, one can conclude that the activities related to marketing intelligence can be considered as a collection of strategic activities inside the organizations, according to which the organizations can do the activities related to planning for sales and production management in the best way. Moreover, it was stated in the study that marketing intelligence activities is considered as a sub-category of activities related to knowledge management inside an organization; it is an activity that needs complex structural considerations for being conducted. Therefore, in the present study there are four basic important principles to create a suitable structure for marketing intelligence as follows:
1. Marketing intelligence system in an organization should be designed to collect the right information at the right time and from the right people.
2. In addition to the need to collect information in the best possible way, marketing intelligence system in an organization should provide this information to the stakeholders within the organization at an appropriate time and format.
3. Firstly, the organization should predict its need to the human resources appropriately and next, provides the capacity required to absorb the expert human resources.
4. Attention to the coordination between different operational sections of the organization is vital to create an intelligent marketing system inside the organization. This point indicates that launching an intelligent marketing system inside the organization is not a task can be implemented properly by an individual or a section of the organization alone and requires suitable interactive system between all organizational levels.
Furthermore, for developing marketing intelligence inside the organization it should be noted that the organization analysts have to exploit all data and information tactfully in order to improve the condition of organization in the market to a desirable one. Although using traditional methods

related to marketing research are still considered as a main method for achieving a suitable marketing intelligence system, the importance of the data that exist in communicative technologies should not be ignored.

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