Marketing Information Systems - MIS: More than simple technological boxes


Abstract
The need for marketing information is not new, but in today’s increasingly complex and dynamic environment, the translation of data into information relevant to management decisions is vital to the long-term survival of a business. The Information Technology revolution of the last years has increasingly made this possible, but evidence suggests that while the products and the technologies that we daily find, have constantly been improving, the process of updating and management of the information with strategic orientation toward the decisions of Marketing, and more specifically by the Marketing executives do not change significantly. Though it is certain that we have improved a great deal in the use of tools to gather and handle information, the process continues being the same: “Input, Process, Output”. It is not a box of tools that replace a good Marketing Information System the one that would permit the survival to the business; it would be instead, the capacity of use and knowledge of those that integrate the organization. Why do not we use the MIS as a model of management and thus, such as the viral marketing does, we could transmit the virus of the marketing to all the employees of the company.

Keywords: Marketing Information Systems, customer, management function, management level, decision support system, organizational culture, organizational structure.

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Introduction

Many investigations have been done about systems, marketing, information and communication technologies (ICTs) for many years, and concretely about Marketing Information Systems (MIS). The topics that have direct relationship with MIS, from the point of view of hard technology, they have been changing dramatically. It exists new developments able to handle high volumes of data in a more efficient way, as well as marketing strategies to access data faster, in other words, the integration of data and the tools used for the transformation of them continue developing.

These advances benefit highly to those organizations which have strong structures of capital and investment in technologies, but not to those that do not have enough capital to do it, such as SMEs (Small and medium size enterprises).

Additionally, while the products and technologies that we find daily have been refining constantly, the process of updating and handling of information strategically directed towards marketing decisions, and specifically by the marketing executive, they have not changed significantly. A true management model of MIS has not been created.

The lack of this model is a necessary deficit to overcome, due to the comprehensive use of an effective and responsible management of the information, is important for those workers of entrepreneurial knowledge in a society of today’s global information. The MIS have to perform an important role in the efficient operations, in the effective management and in the strategic success of enterprises and organizations that should intervene in a competitive environment.

The continue references of the named Marketing Information Systems and the repercussion that have the arrival of all the theories, specifically of ICTs, as well as in the social habits as in the models of the interchange of goods and services, and in general in all the aspects of today’s society. They convey to reflect about the role of MIS as the main pillar in marketing decision making.
This article is part of a investigation whose departure hypothetical exposition was the one to verify that, as much theoretical as companies associates the MIS with the automated processing of all the information of the company (technological boxes), ignoring, in general, the importance of concepts that they have to see with the structure and the organizational culture from the company to the moment to manage all the information of marketing. All this generates a high level of dissatisfaction with the MIS.

A first moment in MIS models

In the 1970s, Boone and Kurtz (1971) offered a brief look, taking as reference only big enterprises, and trying to compare the fixed systems according to the elements that developed the theories at that moment. Although each one of the models was focused in a particular aspect of the Marketing Information Systems, all of them made the fundamental structure of a system, that have: entries, process and exit.

Figure 1. Model of a Marketing Information Systems, MIS

Source: Boone y Kurtz (1971).
The box on the left hand side represents the sources of basic information for the decision making process that has to deal directly with marketing. A basket of data, and in some cases of marketing information, composed by clients, competitors, potential clients, domestic market and government in all the levels. In other words, the majority of the data and information available for a marketing executive would originate from this environment.

There exist some marketing aspects directly with the clients that allow the enterprise be ahead of their needs and satisfy them with goods and services. The information should be taken firstly from the clients, and then on another stage of the process, would be measure the satisfied needs. Additionally in any case, marketing also needs to know how the rest of the key agents operate in the environment (competitors, government, etc.)

The upper arrow (Figure 1) shows that the information of these sources could be linked directly with the marketing executives, represented by a big box on the right hand side. These communications not necessarily pass directly to the auditor, and can become messages in printed documents such as newspapers, bulletins, magazines, memos, etc. even though in phone calls.

The central part of the figure represents the flow of data through the auditor and its storage using programs according to a software library, to be transformed into information of management. In this section you can find packs information of management: ORACLE, SQL SERVER, DB2, INFORMIX, OPEN SOURCE, MySQL, among others. And it is clear that the main characters of this process is the personnel of Information Systems Technologies of the companies.

Continuing with the figure 1, the functions of the marketing executives are marked on the right hand side of the box with the three levels of action (high, medium and low), the known 4 Ps that compose the mix of marketing (product, price, place and promotion) and the classic functions of an executive (plan, organize, lead and control). An executive at any of these levels make one or more of these functions while he/she manipulates ele-
ments of the mix of marketing. For example: a high level executive is in charge of planning new products, a medium executive is in charge of the promotion program, and one of the low level leads the employees on how to manage the policies of the prices of the enterprise.

At the bottom part of figure 1, you can see an arrow that means that it exists an information flow that feedback the system constantly for a better decision making of the enterprise, although the decision that is taken does not necessarily mean a total control of the surrounding or source of information, where each one of these unities may be influenced in a certain degree. The influence level is much bigger to some sources like clients and for others, like the Government.

**Frome white and black to the color**
Boon and Kurtz Model was one of the most outstanding during the 70s and 80s, until Kotler proposed a new Model frame of work in the 90s.

**Figure 2. Model of a Marketing Information Systems, MIS (Kotler)**

According to the model SIM in fig. 2, a more developed model, the three fundamental bases to the consecution of data and information to store in the data basis are: data processing (inside data), markets investigation and marketing intelligence.

- Data processing subsystem which is basically the same countable system of the enterprise normally provides the quantity of information to save all the important actions and transactions in a quantitative way.
- Markers investigation subsystem consists on those efforts to gather together data through special studies, that in those cases you can use order instruments both quantitative and qualitative.
- Marketing intelligence subsystem includes all the efforts to obtain information by different ways that describe the enterprise surrounding as it happens with the competence and government.

There is a 4th subsystem – Decision Support System (DSS) – it includes a more complex analytic model in its elaboration like expert systems, neuronal network etc. which would help marketing executives both to analyze more complex data and mix it in order to take better decisions.

If it’s true that we pass from white and black to the color to use tools to recollect process information, the process continues being the same: input, process an output.

The two models that were already explained are still highlight in the recollection of big quantities of information from a lot of sources. They work upon the invariants 4P’s, seeing it from any angle, and a fixed emphasis on core and functional structures where the information fluxes in a vertical way, and where the PC seems to be the center of attention. In client data, mainly from those who make the organizational change dynamic do not seem to have a great influence inside of these systems.

With the new paradigm of extended enterprise, suppliers, enterprise and clients, all together make an important triad in the new marketing
information system implementation where it’s necessary to a clearer concept and the criteria for its development.

**A new approach of MIS: more than technological tool boxes, a management model**

DATA WAREHOUSE, DATAMINING, CRM, among others it’s a topic that influenced organizations but at the same time it is not known how or what for it is used. But these terms are used a lot both system experts and information technologies, and those are applied by many marketing executives like a MIS substitute.

- Data Warehouse as a system came up in the mid 80s and is defined as the maximum advantage of information in a huge warehouse”.
- Datamining is a specific part inside the one above where information is analyzed in a multidimensional way through the modeling of data.
- Datamart shelters concrete information of a specific area of the company
- And the CRM more than a MIS is a philosophy of work at the moment of facing the client. That is to say that INTERNET is a MIS and not a relevant or less relevant channel, depending on its usage at the company.

Due to this, unfortunately, MIS have simply been reduced to buy software or as an organizer to be improved according to company needs. Of course this approach has mostly simplified commercial tasks and marketing and systems management responsibilities. “The new Technological Platform” seems to be the changing strategy to be used with the organizational paradigm.

Nevertheless, to carry out successfully a MIS improvement, several polivaluable aspects should be taken into account at the moment of considering the design of a new organizational structure, a procedure innova-
tion that leads the members of the organization to speak in terms of marketing, and changes related with the cultural aspects of the company.

Due to the huge amount of information that companies recollect, where any small data seems to be processed, people have to be conscious that MIS always existed and that most developments are continually changing the technological tools used in the processing of data and information, and especially in case of being used by those responsible for each company area. The first one is not so difficult because software producers and technology, data, and information researchers will continue developing them.

Nonetheless, it is necessary to say that though the majority of companies have systems based on organizers, and will have them in the future; they should also include non computerized components, “a good amount of recollected information for the analysis of marketing which is captured at the edge of the organizer.”

In any case, the real problem is the interface of all of that information with those responsible at the moment of taking marketing decisions. MIS are, now, closer to technicians than to people involved in marketing.

We have known about technology and its theories for the well-managing of information for more than two decades, but its high acceptance by marketing managers, even the use of marketing information systems as a support at the moment of making strategic decisions at companies.

High costs of technological advances, day by day, centralized decisions, intuition, pragmatism, personality and company identity reflected in marketing men and their concern for the reaching out of goals, have made them to avoid using MIS for their real purpose. The cultural characteristics and the social environment have influenced activities that would contribute at the moment of making decisions. Traditional belief systems, language, general characteristics about life styles, and informal administrative practices are seen around our daily management surroundings. It might say that, the developments of MIS have not practically been taken into account.
And it is specially important in case of the small and medium size enterprises (SMEs). The majority of SMEs do not count on bureaucratic marketing structures. On the contrary in the big companies, it is easy to find in these places marketing departments, research marketing departments which constantly collect data through the use of MIS, trade and product managers, advertising, communication, public relations, and sales departments, and vice-presidents or marketing directors (functional structures).

The lack of these structures in the SMEs does that the decisions have to deal with marketing and are generally person-centered. At the heart of companies there is no movement for a culture where marketing is highlighted. Here, there is a great need to develop their own MIS with good programs which facilitate trading and accomplishment of goals; a systematic planning program for the exploration and internal analysis of the organization and its surroundings is also needed, where supporting systems for marketing decisions should be flexible enough, without sacrificing not only data integrity, but also their analysis, having in mind any technological changes and the repercussion on the working styles and marketing thinking.

Having a good understanding of the usage of an effective management function and been responsible at the moment of using information systems and technologies, is important for all managers and people working in the business field. They play an important role in efficient operations, in an effective management, in the strategic business success, and other organizations which should work having in mind the global business world we are living nowadays.

MIS should be an important tool when making decisions that understand the knowledge of the company itself, its market, competitors, tendencies, opportunities, and corporate abilities. The measurement of procedures, the individual-centered approach, and the 360 degrees relationships (clients, suppliers, business investors and workers) are more important tendencies to put into practice than the traditional accounting data.
In that line, the Internet strategy used at most companies, should also permit that changes take place. Internet nowadays is offered more than requested by clients. If this is the case, the client, our main source of information, our partner; then, we should try to take it apart from that inert, passive estate which does not allow it to interact as we would like: actively, with our companies.

Marketing Information Systems should help create a culture conscience in our public objective, they should guarantee the betterment of not only the process of interchange as well as all sources of information and groups of interest that can be better prepared, well informed, with higher university degrees, and more demanding. To make them part of the organization, to train them the way we train workers to get them involved in the process, so that when they are of the organization, they can speak the same language.

For all of this, it is not a tool box which takes over an employee’s marketing information system position, which would allow him to survive at the enterprise; it would be, then, his knowledge and ability to use MIS within the organization, including the client, the keys to success.

In one of the latest studies at the Marketing Science Institute, during 2002 and 2004, professors highlight the priority and tendency to measure with metric systems the efficiency of internal and external markets by encouraging employees to reach out a MARKETING CULTURE within the organizations to make them more competitive.

A final reflection
The companies count on modern technologies for the handling of the information, which does not prevent the operative handling of it. Also, the uncertainty on the advantage of the technology and the lack of specialists of information technologies are not an obstacle in the use of a MIS. Are rather obstacles those related to the attitude of the suppliers and clients of the same one, that is to say, the people of the organization.
A clear consensus by the companies does not exist about the implantation of the traditional MIS: most of these it considers that they do not have it implanted, and those that say that they have it, associate the handling of the information yet, specially of the countable and financial area of the company, like the theoreticians and investigators on the subject. The association is corroborated that becomes of the SIM with the computer and the countable and financial area of the company (the operative part).

It has carried on the one that in the companies, the support MIS has centred on the operative levels, that is to say, where there centers the major flow of countable, financial information, sales and logistics.

A high degree of use of information for the decision making of marketing character exists, but it is not framed within an information system of trade itself. The intuition, the judgment and the pragmatism are considered important at the time of making the decisions.

In sum, there are few companies with clear and definite processes of marketing. It exists clarity brings over of the need to have information of marketing for the capture of decisions, but not with regard to how to obtain the same one and how to use it adequately. We must be capable of that the Marketing Information Systems are more than simple technological boxes, and turn into Models of Management who allow to spread the culture of marketing to the whole of the organization.

Why don’t we use MIS as a management model similar to the marketing viral usage, by transmitting the marketing little bug to all company employees?

References