

Marketing Intelligence: A New Way for Information Management

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Abstract—Digitalization has generated new challenges and opportunities for information management and relationship marketing. As more and more brands are utilizing digital technology for brand communication and multiple stakeholders, digital technologies can be associated with different enablement mechanisms relating to operational optimality, better sensing and responding capability. Contemporary marketing academia propounds marketing intelligence (MI) as a paradigm shift from market research to market orientation and now to marketing intelligence. The concept of intelligence in general and MI in particular has grown both in academia and the business world. This paper has conducted extensive review of literature on business intelligence, marketing intelligence and Marketing Information System (MkIS) and explored that it has the crucial role in managing the information effectively. Further, the factors of marketing intelligence- Organizational culture, process-culture and planning focus have been used for better brand positioning and performance of an organization.

Keywords: Business Intelligence (BI), Marketing Intelligence (MI), Marketing Information System (MkIS), Competitive Intelligence (CI)

1. INTRODUCTION

The idea of Marketing Intelligence (MI) as a whole in business has grown in educational, intellectual and in the corporate world. It is not peculiar for MI to be viewed as a propellant of strategy and competitive-edge in the business world [12]. MI keeps the organization ahead of competitors as it is the process of collection of facts and figures and this information can be converted into an applicable form of intelligence which is then used for strategic as well as short term planning [20]. In this regard, MkIS is a tool that assists managers to managers to generate MI to achieve competitive edge [8]. In today's era, with the advent of world-wide-web and internet world, managers can get the valuable information in no time and easily than ever before [4].

Consumers usually invest huge money for these products making quality and brand as of major imperative for the purchase decision. Marketing information system (MkIS) is a tool for attaining MI that can provide the competitive edge to marketing based companies. Earlier, MI was limited to the departmental level only for managing and analyzing information. Recently, MI has become an organization-wide phenomenon which involves intra as well as inter-organization information and analyzing the marketing environment [13]. The importance of MI can be viewed in long term ever-lasting forethought tasks, commodity promotion, brand development and new product maturation. Due to the advancement of computer-based systems, the approaches to marketing management have also changed and inspiring marketing managers into the corporate spotlight by providing new tools with which to respond to market opportunities [11], [20].

The pervasive impact of business computing has made information technology (IT) an essential part of regular operations and a strategic element or key to all organizations. It is not difficult to realize that organizations have accumulated large amount of data. This data has different origins and reaches the organizations through a range of channels. It is strategically important to make these data available for decision making, even because customers demand faster customer service. The growing volume of data generated every day in organizations and the crescent competitiveness of the market, leads to the need to use tools capable of generating knowledge from stored data [11]. In the global market where competition is fierce, companies increasingly need to reduce their profit margins to remain competitive. Thus, it is essential to use the information proactively.

The fierce global competition leads organizations to consistently obtain accurate information for decision-making in order to sustain its competitive advantage. It's crucial for an

organization to be proactive, acting before its competitors, by having a constantly updated vision of market development, then the Information processing becoming the platform that enhancing competitive advantage [1].

The analysis of large volumes of data is impossible without resorting to the appropriate software tools, making it essential to develop frameworks that help to automatically and intelligently, analyzing, interpreting and correlating data, enabling the development and selection of strategies for action [2]. In order to assist companies in this exploration of data, concepts and tools for organizing information are critical, highlighting the Business Intelligence (BI) and Marketing Intelligence (MI) as pillars to support the decision-making. The economic decline is impelling organizations to examine ways of retaining customers, speed up their services, spending less capital be more efficient regarding their budgets, and observing regulations. Business intelligence (BI) is the ability to access data from multiple sources in an organization and deliver it to appropriate business users for analysis [28]. Manage the performance of the business means know what questions to ask and have the facts at hand at time to answer them, and this is what business intelligence delivers. With pervasive business intelligence, organizations data warehouse changes to a system that can proactively and reactively interact with the business stakeholders, and it provides appropriate decision options to help marketers to respond and take action based on knowledge discovery in current integrated data [28]. Pertinent and accurate information from relevant and reliable sources entails to be successfully processed. This implies that a company needs to be confident it has the right information, at the right time, and dissembled to right people [3].

2. BUSINESS INTELLIGENCE

An increasing number of organizations are making BI more largely available to all decision makers inside and outside the organization. Internally, leads to greater responsibility by all employees and greater management stability. Externally, relation-ships with supplier and partners can be reinforced through effective sharing of key performance indicators for mutual benefits. However, it is not easy to implement [4] in SMEs because of the following factors: high price; high requirements for a hard-ware infrastructure; complexity for most users; irrelevant functionality; low flexibility to deal with a fast changing dynamic business environment; and low attention to difference in data access necessity in SMEs and large-scaled enterprises. But it's more important (and difficult) than ever today for organizations to make the right customer decisions. Companies know that the ability to frequently make the right customer decisions is essential to profitable growth, risk management and general performance. Due to non-controllable factors like fast-moving markets, economic and regulatory change, and new sources of competition, the right decision isn't a peaceful matter [28].

Business Intelligence bridges between different systems and users wishing to access information. Provides an environment that facilitates access to information needed for day to day activities, allowing analyze the current situation of the business and its performance. Systems and BI tools have a key role in the strategic planning process of organizations. These systems allow collect, store, access and analyze organizational data in order to assist decision making [10], [28].

3. MARKETING INTELLIGENCE

The information technologies are an essential key component to react to market changes and satisfy customers, helping marketers in decision making and implementation of marketing plans [13]. A well-known example was the application made by a major U.S. supermarket chain, where it was discovered a universe of buyers of diapers also bought beer on the eve of the weekend in which games were broadcast on television. This knowledge has been used, thus increasing their sale. The concept of general intelligence and MI in particular has evolved, being seen as a driver for strategy and market success [1]. A MI system is a set of procedures and sources used by marketers to get their daily information on relevant developments in the environment in which they operate [14]. Another definition, MI is a system to capture the information needed for decision making in marketing [15]. The fundamental purpose of MI is to help marketing managers to take the decisions they face every day in their various areas of responsibility, including pricing. Huster [16] define MI as the ability to understand, analyze and evaluate data from internal and external environment, related to the organization, customers, competitors, markets and companies to improve decision-making tactical and strategic, and the integration of competitive intelligence, marketing research, market analysis and analysis of business and financial information. The MI is a complex process, whose efficiency affects the quality of marketing decisions, including pricing [8]. For some authors, the MI can be defined as existing knowledge and prior knowledge about the external operating environment, obtained by concern opinions, attitudes, behavior and needs of individuals and organizations within the context of economic activities, environmental, social and everyday [21]-[22]. The American Marketing Association defines marketing [24] as the set of activities and processes for creating, communicating, delivering and exchanging offerings with value for customers, partners and society in general. Although market research focus often in response to specific information need or set of needs, intelligence is indicated as a continuous process of developing a holistic view of the operating environment, including competitors, customers and markets.

In the future, efforts should be aimed at measuring the demands of not satisfied consumer, through their behavior, measuring consumer response to marketing activities, and analysis customer's feedback. Allowing identify trends in consumer tastes, and points of friction between the

organization and customers. With modern technology can be done on a larger scale, with lower cost [17]. MI seeks to transform data into information, and information into intelligence. The data are the basis of all structure, from which we perceive and record a given reality [11], [28].

The MI process consists of a set of procedures and methods planned for collecting, analysis and representation of information for use in making marketing decisions [20]. We propose five basic processes for MKTI: 1) Planning, 2) Collection, 3) Analysis, 4) Representing, 5) Projections [27].

In planning process are defined the objectives and the necessary information for marketers marketing decisions. Then, the collection process, extract, transforms and load organization internal and external data sources, that include CRM, prospects data, market data and competition. The analysis process is the more complex and difficult, all activities should be developed in order to analyze the data, looking for patterns, and loaded organized and coded information on marketing data mart, as subset of the data warehouse. The representing process, access mart data and apply marketing metadata models for representing information from marketing perspective. In the projection process, results will be distributed to marketers for review and posterior feedback if needed. In MI conceptual framework one of the components presented is the metadata. The metadata model describes fields, values, sizes, ranges, field's definitions, data owners, latency, and transformation processes. Metadata provides transparency as data moves from sources to the warehouse to end users [19], [28].

Other authors have indicated that sales and marketing intelligence (SMI) may be one of the most important assets within a firm ([21]; [17]) were of the view that as SMI typically deals with customers, competitors, products and sales issues, it is difficult to find a better platform from which to base an organization's overall strategy and tactical CI capability.

Instead of regarding intelligence as simple data collection, these studies define intelligence as a much broader concept with an accompanying comprehensive process. Calof [2] found three distinct themes in past evaluation instruments:

1. process and structure – appropriate policies, procedures and a formal or informal infrastructure to enable employees to contribute effectively to the MI system as well as to gain benefits from the MI process are considered highly desirable;
2. culture, awareness and attitudes – appropriate organizational awareness of MI and a supportive culture is deemed essential if the firms is to utilize its MI efforts successfully; and
3. Intelligence project processes- an almost universal adoption of what is commonly referred to as the intelligence cycle or wheel with planning, collection,

analysis and communication as the usual elements with the help of MkIS.

It has been seen that innovative culture and policies, procedures, an informal and formal structure of working style effect on the degree of the marketing intelligence generation as it is stated by [27].

The studies were selected because they are amongst the very few conducted by academicians which view the intelligence effort as a systematic process as opposed to information collection. They are also rooted more firmly in the intelligence literature than the environmental scanning literature.

MkIS is a total system that incorporates human processes for interpreting and processing information into intelligence [26]. MI focuses particularly on competitors, customers, consumer spending, market trends, and suppliers. It tends to offer a broader view of markets including business and sector data such as market sizing, segmentation, and share data. The importance of MI can be viewed in long-term ever-lasting forethought tasks, commodity promotion, brand development and new product maturation. MkIS plays a major role in providing the competitive edge to companies [20]. Marshall [16] discussed that if companies use marketing information systems to extract marketing intelligence then the outputs would be product management, better sales forecasting, strategy simulation, market assessment, financial modeling, budget tracking, media planning, tactical product plans and overall brand management. MkIS is a tool that assists in capturing the intelligence and help in analyzing product features with customer data, evaluating channel and pricing options, creating and testing promotion plans, gaining instant feedback on concepts and plans and moving marketing plans rapidly into production.

One of the major aims of any company is to get the accurate internal and external information related to the organization itself, rivals and external market through any means whether offline or online source. MI plays a vital role with respect to performance [19]. However, questions still remain regarding the contribution of MI in marketing applications and decisions [8].

According to Kotler [14], Marketing Information System (MkIS) is defined as a continuing and interacting structure of people, equipment and procedures to gather, sort, analyze, evaluate and distribute timely and accurate information for use by marketing decision makers to improve their marketing planning, execution, and control. Figure 1 shows Marketing Information System (MkIS).

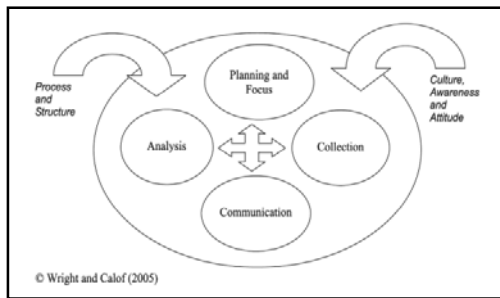


Fig. 1: Crucial elements for an efficient intelligence operation and the influencers which are responsible for MI (Adapted from [27]).

Kotler [14] model of a MkIS has four parts. These are internal records, MI, marketing research and marketing decision support system (MDSS). Internal records are the most used information in all the companies around the world such as reports of orders, sales, prices, costs, inventory levels, receivables, and payables. When analyzing these data the managers can spot the opportunities and threats facing the firm [12].

The MkIS can be classified into two groups depending on the users and the type of use- the system for managers and the system for operational sales and marketing activities. The users of marketing information systems are mainly senior executives, strategic business units, marketing managers and analysts [23]. The cross-functional design of a MkIS and the interconnection of different subsystem implies that the overall efficiency of the system will be dependent on both subsystem's efficiency but also and perhaps even more, the optimization of the cross-functional integration. Talvinen [23] emphasized the importance of maintaining a view of the MkIS as a system to sustain the development of the marketing process additionally to that of disseminates information across functional boundaries. The systems should reflect the three levels of the strategy of marketing: Corporate, business and functional. Therefore, a MkIS is made to sustain the marketing management in external analysis and perceptual positioning of the company through the structured presentation and analysis of collected tacit and explicit marketing information correlated with objective market research, internal operational data and treated with specific models. It should differentiate and selectively identify the most influential environmental factors for scanning. MkIS converts tacit vision and knowledge into explicit criteria to guide information scanning and sustain strategic marketing.

The notion of intelligence has a vivid background of more than 2000 years [11]. The MkIS consists of four main components 1. interface with the consumers, 2. software, 3. Database, 4. System Support. The MkIS provides organized and timely flow of information, necessary in work of decision-maker in marketing. When it finds, it does not imply just the equipment, software, databases, but also to procedures, methodologies and people, as inevitable elements for the

system in fulfilling their organizational goals. The MkIS encircles wider set of activities from simple transactions processing to complex strategic decision making in the field of marketing [6].

The idea of intelligence in marketing strategy formulation is used to enhance the competitiveness and strategic planning process of an organization [18]. Literature in the intelligence has been provided by many writers under numerous diverse names including environmental scanning and market research [7]. The terms "MI", "market orientation" and "competitive intelligence" are usually utilized exchangeable in the published writings [24]. The understanding of available and vital markets, corporate trends, rivals and the efficacy of promotional programs is critical to the advancement of any organization. The term CI sometimes referred as BI, is viewed as a topic of debate between practitioners and academicians. MI is part of BI and its purpose of MI is to fully understand the customers, competitors, and regulators of organizations to generate new opportunities and identify changes in the search for enduring competitive advantage [1]. Culture is significant to developing consumer behavior. Companies that have succeeded in understanding the dynamics of culture have been able to withstand the test of time in developing as successful companies. Cultural norms have often defined the needs and the buying choices of the consumers [22]. Calof [4] said that the previous European study [27] reported that 18% had one full time CI person and of those 23% had a separate CI department. It appears that over the 10 years there has been an increase in formal CI activities and formalized intelligence procedures. Companies require information about their customers to attract them, influence them, and build relationships.

4. FACTORS OF MARKETING INTELLIGENCE

The three factors of marketing intelligence operation have been identified which are very important for any organization. These three factors help in deciding the effective intelligence operation. The degree of their effectiveness varies from company to company [27]. Table 1 shows the significant factors of MI.

TABLE 1 SIGNIFICANT FACTORS OF MI

S. No.	Factors	Items	Author(s)
1	Planning Focus	Information Generation, Information dissemination and responsiveness	[10], [27]
2.	Process-Structure	Procedures, policies and formal (MkIS) or informal infrastructure	[27]
3.	Organizational Culture	supportive or teamwork culture, innovative culture, awareness of an organization	[27]

5. CONCLUSION

BI is a management concept that refers to a set of programs and technologies that provide features \ capabilities for collecting, analyzing and accessing data on processes of organizations. In any organization, the main objective of BI is to assist in decision making, timely and at all levels of the organization. With the intensification of competition between companies in open markets, organizations must learn about themselves and to the market, through the collection and analysis of data. The strategic information is seen as a key resource for success in the business, this being provided by Marketing Intelligence. The MkIS decision making is a complex process that goes from the collection of data from the organizations environment, until the generated quality information to assist marketing and strategic decision making. Organizations must to avoid invade customers with the highest rankings, and the marketers must remember that customers with low rankings should not be neglected, but instead should be cultivated to become better customers. The management of the future means not only being able to anticipate what will happen outside the organization, but also be able to represent the events through their own actions. Organizations can perform better if the organizational culture, process structure and its planning process is in-line with the business environment.

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