

Application of Management Information System in Marketing Management

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Marketing consists of individual and organizational activities that facilitate and expedite satisfying exchange relationships in a dynamic environment through the creation, distribution, promotion and pricing of goods, services and ideas.

In 1966 Professor Philip Kotler of Northwestern University used the term 'marketing nerve center' to describe a new unit within marketing to gather and process marketing information. He identified the three types of marketing information.

Table: 1 Marketing Mix representing elements of Marketing Management

4 P	4 C	4 R	4 R
Product	Customer	Relevance	Relevance
Price	Cost	Resources	Resources
Place	Convenience	Relationship	Relationship
Promotion	Communication	Return	Return

- Market Intelligence- It represents information that flows into the firm from the environment.
- Internal Marketing information- It is information that is gathered within the firm.
- Marketing Communications- It is information that flows from the firm outward to the environment.
- Management Information System- A set of efficient procedures and techniques that help organization to collect, evaluate, sort and generate reports for making effective marketing decisions. It helps to provide an organized flow of information and support marketing activities of an organization.

Types of Information

- **Recurrent:** Information required by an organization on day-to-day basis. Customer expectations, changing needs and market share of the product
- **Monitoring:** Market-related information collected by scanning information sources on a regular basis such as Magazines, articles, government reports, annual reports
- **Requested:** Such information generates in response to explicit request by marketing department. For example Competition strategies and market share.

Marketing information system can be defined as a computer based system that works in conjunction with other functional information systems to support the firm's management in solving problems that relate to marketing the firm's products.

During the period of 1967-1974, no fewer than five models of MKISs were described in the literature. Brien and Stafford were among the first modelers, basing their design on four Ps and emphasizing the development of strategic marketing programs. King and Cleland stressed strategic planning; whereas Kotler, Montgomery and Urban, and Crissy and Mossman emphasized decision support. These modeling efforts began in the 1960s and continued into the 1970s, laying a strong theoretical foundation for functional information systems that followed in the all areas.

- **Marketing Information System Model-** It consists of a combination of input and output subsystems connected by a database.
- **Input Subsystems-** The marketing research subsystem conducts special studies of marketing operations for the purpose of learning customer needs and improving marketing efficiency. Marketing intelligence subsystem gathers information from the firm's environment that has a bearing on marketing operations.
- **Marketing Research Subsystem-** In this subsystem a systematic gathering, recording and analyzing data relevant to marketing of goods and services takes place. Data can be collected from internal sources, government publications, periodicals and books, marketing research agencies and conducting field research, both primary data and secondary data collected for the purpose.
- **Marketing Intelligence Subsystem-** It is a Set of procedures and sources used by managers to obtain everyday information about development in marketing environment. By reading books, trade publications, business newspapers: talking to customers, suppliers and distributors. The term marketing intelligence may bring to mind visions of one firm spying on other- industrial espionage. There is really no reason to break the law to obtain the information, because it is so easy to obtain legally.

Model of MIS

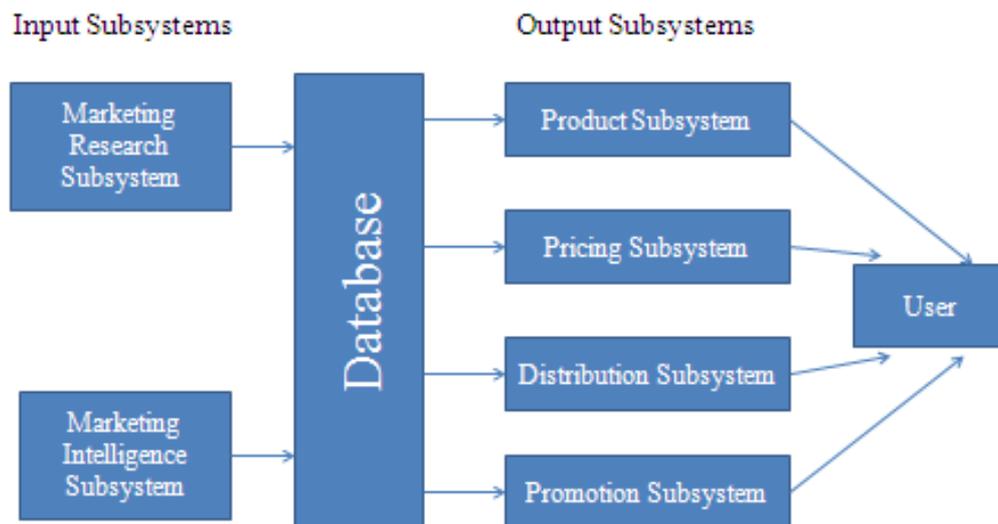


Figure: Model of Marketing Management Information System

- Database- The data used by the output subsystems come from the database. Some of the data in the database is unique to the marketing functions, but much is shared with other functional Areas.
- Output Subsystems- Each output subsystem provides information about its part of mix.
- Product Sub System- To assess whether different products or product lines are contributing to objectives of organization; SFA: Sales force automation software provides information relating to performance of each product. Market segmentation and Product positioning related information are also provided by product subsystem.
- Pricing Sub System- Information related to Price fixation, Value for money, Competitors' price, Cost plus price, Price change, upward revision and downward revision are part of pricing subsystem.
- Distribution Sub System- Identification of channels, Evaluation of channels and Channel selection related important information is provided by this subsystem.
- Promotion Sub System- Promotion mix (Advertising, Sales promotion and Personal selling) and Promotion budget related information could be obtained through this output subsystem.
- Integrated-Mix Subsystem- The integrated mix subsystem supports the manager as the ingredients of the marketing mix are combined to form a particular strategy. This goal is accomplished by projecting the possible

outcomes of various mixes. Descriptions of integrated mix subsystems in the literature are rare. The integrated mix model receiving the most publicity is BRANDAID, developed by MIT professor John D.C. Little. BRANDAID includes sub models for advertising, promotion, price, personal selling and retail distribution. The basic approach of this model is to estimate the effect of various influences on the manufacturer's sale.

Software Packages

- BRANDAID: Flexible marketing-mix model focuses on packaged goods, contains sub models for advertising, pricing and competition
- CALLPLAN: Determine no. of calls to make per person to each prospect and current client, takes into account travel time and selling time
- DETAILER: Determine which customers to call on and which products to represent on each call
- GEOLINE: Helpful in designing sales and service territories
- MEDIAC: Helps advertisers in media planning
- PROMOTER: Helps in evaluating sales promotion
- ADCAD: Determine type of advertisement that can be used
- COVERSTORY: Helps in analyzing sales data and writing reports

According to paper "Marketing information systems for consumer products companies: a management overview" by O'brien, Terrence V., Schoenbachler, Denise d., Gordon, Geoffrey L, to prepare the organization successfully for the implementation of an MKIS, the following steps must be taken:

- (1) Attain top management support.
- (2) Communicate:
 - MKIS purpose and objectives;
 - MKIS requirements;
 - MKIS advantages;
 - Changes in decision making and procedures;
 - Impact on organization structure and culture;
 - Elements of the MKIS;
 - MKIS impact on people in the organization and the relationship with its task environment.
- (3) Provide training:
 - To desensitize fears that organization members hold related to the MKIS;
 - On technically operating the MKIS system;
 - On new procedures that follow the MKIS.
- (4) Invest the necessary financial and human resources to prepare and implement the MKIS.

Advantages of MIS

- **Market Monitoring:** Identify emerging market segments with respect to various changes.
- **Strategy Development:** Helps in formulating new marketing strategies.
- **Functional Integration:** Helps in coordinating the activities of marketing department with other department.

References

- [1] Effy Oz (2002); 3rd Edition Management Information Systems; Vikas Publications, New Delhi pp 89.
- [2] James O'Brien (2002); 5th Edition Management Information Systems; Managing information technology in the e business enterprise TMH New Delhi pp 145
- [3] Prasad L M, Prasad Usha, Management Information System, Sutan Chand & Sons, Page no. 365
- [4] Raymond Mcleod, Jr. (1998), Management information System, seventh edition, prentice hall, USA pp 459-81
- [5] *The Journal of Consumer Marketing*, Vol. 12, Issue: 5, p. 16-, 1995.
- [6] Waman S. Jawadekar (2010); Management information systems- text and cases: A digital firm perspective by 4th edition TMH, New Delhi pp 404

