Full Length Research Paper

Role of marketing information system (MkIS) for the organizational culture and its effectiveness

Rahul Hakhu¹*, Ravi Kiran² and D. P. Goyal³

¹Rayat Institute of Management, Rayat Technology Centre of Excellence, RailMajra, District. S.B.S. Nagar, Punjab, INDIA-144 533.
²School of Management and Social Sciences, Thapar University, Patiala, Punjab, INDIA – 147 004
³Management Development Institute, Gurgaon, INDIA - 122 007.

Accepted 12 December, 2012

In this paper, an attempt has been made to illustrate the role of marketing information system (MkIS) for organizational culture and its effectiveness. This study investigates the success factors of MkIS model. The study uses a survey analysis for 140 SMEs (Small and medium enterprise) of manufacturing sector of Punjab in India to understand the level of MkIS by firms. However, the development of MkIS depends largely on the organizational, technical, managerial and technical cultures/environments of a company. These cultures are to be nurtured and made developed in order to improve and install a sustainable MkIS for accomplishing the corporate objectives in the highly competitive world economy in the long run. The study uses Step-wise Regression technique to find the important variables of the MkIS model for enhancing the effectiveness of an organizational culture. These are MkIS sophistication, design characteristics of MkIS, capabilities of MkIS, primary characteristics of MkIS and hindrance factors of MkIS. The results depict that coefficient of determination is 0.508 and adjusted coefficient of determination is 0.490. These predictors explain 49% of the variation.

Key words: Marketing information system (MkIS), organizational culture and small and medium enterprises.

INTRODUCTION

To understand the proper role of information systems one must examine what managers do and what information they need for decision making. We must also understand how decisions are made and what kinds of decision problems can be supported by formal information systems. One can then determine whether information systems will be valuable tools and how they should be designed. Since time immemorial the evolution of human civilization has been enriched, and developed by the proper and effective sharing of information carried out by different generations. The modern civilization is the outcome of that persistent information sharing system and perennially taking its logical and scientific shape from it. However, in economic literature, the assets are classified into two types: Tangible and intangible assets. The tangible assets are those, which are visible and having their material existence. These are, for instance, land, gold, cash, diamond, goods etc., whereas intangible assets are those, which are invisible. In simple sense "information is about experience, values, contextual information, and expert insight". Since time immemorial the use of information or intellect of human being has been playing a very crucial role in shaping the evolution process of civilizations on earth. The creation and dissemination of information have been carried out through various institutions for the promotion of human welfare from generation to generation. These institutions are family, society, various organizations, groups, etc.

MkIS can be best understood in terms of a discipline rather than a “silver bullet” or a technological solution. To some researchers MkIS is: Getting the right information to the right person at the right time.

However, in a world of radical discontinuous change, there are no programmable systems that can predict in advance what the right information, right person or the right time will be at any given point in the future. This can
also help understand the key distinction between “doing the right thing” and “doing things right”. The relatively stable and unchanging environment of the past allowed the luxury of predicting, pre-defining and pre-determining the future based on past data.

Generally speaking, MkIS is a process through which organizations generate value from their intellectual property and knowledge-based assets. MkIS involves in the creation, dissemination, and effective utilization of information to its optimal level. Moreover, MkIS could be effective in creating various benefits such as, revenue growth, production innovation, profit growth, enhancing customer focus, improving competitive and marketing both in short term and long term for a company when the information sharing culture is deeply rooted in the organizational structure of the entire company. In the present competitive business world order, establishing and developing an effective MkIS is one of the tough challenges faced by the managers of a company. However, the managers are trying hard and investing huge funds to nurture and build up a sound and sustainable MkIS in order to mitigate risk involved in the increasing agency and transaction cost problems arising out of improper and ineffective organizational culture.

As it is known that the corporate structure basically consists of three important agents: Namely, managers, stakeholders or employees and owners. The harmony among these agents is required for the attainment of broad cooperate objectives such as, profit making and higher growth. However, these objectives of a company only could be fulfilled if there is proper knowledge sharing culture in place.

Significance of culture in an organization

Culture is a term, which comprises of set of formal and informal rules, norms, values, attitude and behaviour of an organization. As we know that corporate organizations are group of individuals, stakeholders, shareholders, owners and communities who share some kind of common values, norms and rules to accomplish certain objectives. Each organization has a very distinct culture of its own, which clearly outlines how member of the organization relate to one another while working together in order to accomplish certain stipulated objectives, which would enrich the participation of each members (Goffee and Jones, 1996).

It exerts its influence in numerous invisible ways -- from the kinds of people who get hired, to the types of questions and comments that are tolerated, the formal and informal expectations made of staff, the focus of reward systems, how people interact and when they ask for help (Gupta and Govindarajan, 2000). The influence of culture in a corporate organization can be understood as shown in Figure 1.

It is apparent in Figure 1 that culture is an overarching mechanism in any kind of organization whether it is corporate or any other organization, which constrains all other aspects of organizational life and limits what is considered desirable, possible and practical to do. Needless to say, an organization's culture will therefore, affect its knowledge management initiatives and will predispose employees towards particular forms of behavior in knowledge sharing. Therefore, it plays very pivotal role in enhancing the performance of the organization in numerous ways and means by influencing different aspects.

Furthermore, organizational culture does not exist in a vacuum. Basically, it is shaped by the social culture in which the corporate organization lives. This is explained in Figures 1 and 2.

Therefore, a multinational corporate organization’s culture may vary somewhat from country to country. It is known fact that before a cultural change such as information sharing, can be effected, an organization’s present cultural sphere and state must be taken into consideration while implementing any strategies pertaining to MkIS.

Moreover, culture plays a very special role in organizations because it can powerfully influence human behavior in the right directions to maximize an objectives of an organization, and because it is extremely hard to change (Kotter, 1996).

All organizational cultures tend to vary along two dimensions: sociability and solidarity. These two dimensions capture much of what we know about organizational culture (Goffee and Jones, 1996).

Solidarity refers to the emotional and non-instrumental relations, which exist within an organization that is the friendliness and among members of the corporation. In fact, sociability makes work enjoyable, enhances spirit of teamwork, promotes information sharing and creates openness to new ideas and relieves stress factor on the part of the members. However, solidarity refers to the degree to which members of an organization share goals, plans, strategies, problems and tasks. It makes easy for the members or a worker to pursue shared objectives quickly and effectively regardless of personal identities and generates strategic focus, quick response and a strong sense of trust. Thus, these two dimensions of organizational culture should be well understood when a manager wishes to change it for implementing or adopting a new kind of cultural dimension such as MkIS.

As per Singh and Jain (2006) in the present scenario, there is a need of change felt to adapt cost cutting, technological up-gradation, lean structure and supportive systems to add to the competitiveness in the context to the culture of manufacturing small scale industry of Punjab. According to Talvinen (1995) in addition to the management perspective, MkIS can be an essential tool for the entire marketing organization. Bakos (1991) says that MkIS reduces buyers search costs and increase the efficiency of business culture, and therefore create
numerous possibilities for the strategic uses of these systems. The study by Lynne (1983) identified an emerging trend from single-source sales channels to electronic markets, lowering coordination costs for producers and retailers and resulting in fewer distribution costs and further enhancing the effectiveness of an organizational culture.

On the basis of literature, the following five predictors have been identified as variables of MkIS for enhancing the effectiveness of an organizational culture.

These are:

(1) Design characteristics of MkIS (Piercy and Evans, 1983; Little, 1979; Milis, 2008) deals with information. It covers the following: a. Broad scope information; b. Timely information; c. Accurate information; d. Current information; e. Aggregated information.

(2) Capabilities of MkIS: According to Knuckles (1987) and Fleisher et al. (2008), the broad capabilities of MkIS range from providing data to decision support system for sophisticated analysis of data. These capabilities are highlighted as: a. It simply provides data on which decisions are made; b. It has the capability to undertake simple analysis of the data and from this provides information on which decisions are made; c. It provides sophisticated analysis of data, and therefore provides invaluable decision support information; d. It provides sophisticated analysis of data and has the ability to make recommendations, if so required, as an aid to decision making.

(3) Primary characteristics of MkIS: According to Bhagwat and Sharma (2007), the primary characteristics of MkIS are considered as a major tool to help companies provide a competitive edge in the era of globalization. According to Murray et al. (2004), it covers the basic tools for MkIS, and it’s highlighted as: a. Windows 98 and Windows XP as Operating system; b. E-Mails and Search Engines as Internet; c. Word, Excel and PowerPoint as Applications; d. Timely information of marketing needs; e. Stores marketing information; f. Processed information maintained in the data-base.

(4) Hindrance factors of MkIS: For success of MkIS, it is essential to identify the factors that can deter its progress. It is essential to deal with them properly, so that they cannot act as impediment. As per tackling hindrance factors of MkIS is in fact very important (Sisodia, 1992). Infact, system implementation success factors is not just the use of technology. According to Thatcher and Oliver (2001) problems are the result of the interaction between characteristics of the people being asked to adopt the system and characteristics of the system itself. The hindrance factors covered are: a. Not as an information processing system; b. Can solve all management problems; c. Lack of training; d. Adequate attention not given; e. Impersonal system; f. Does not give perfect information; g. Under estimating.

(5) MkIS sophistication: According to Van Nievelt (1984) and Martin (2004), sophistication covers the marketing needs for meeting customer requirements and also for formulating of the strategic plan for effective marketing decision. The MkIS sophistication covered in the study are: a. Strategic perspective; b. Meeting customer needs; c. Threat; d. Strategic planning; e. IT budget; f. Marketing decision.

ROLE OF MkIS IN AN ORGANIZATION

Today, MkIS is widely–held view that it is indispensable for achieving and improving the performance of any corporate enterprises in the light of fast changing information technology across the globe.

Recently, some scholars suggest that willingness to
share knowledge is positively related to profitability and productivity, competitiveness and negatively related to labour cost (Jarvenpaa and Staples, 2000; Desai, 2002). In the same line of arguments, scholars of some focus groups believe that MkIS is positively linked to growth and innovation, increased customers satisfaction, increased shareholders value and learning.

The role of the MkIS in an organization can be compared to the role of heart in the body, the information is the blood and MkIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain. The MkIS plays exactly the same role in the organization. The MkIS helps the middle management in short them planning, target setting and controlling the business functions. It is supported by the use of the management tools of planning and control. The MkIS plays the role of information generation, communication, problem identification and helps in the process of decision making.

In order for MkIS, individuals must adhere to the norms, values, attitudes and beliefs established by the organization. Participants described a organization culture as one where people share openly, there is a willingness to teach and mentor others, where ideas can freely challenged ad where knowledge gained form other sources is used.

In MkIS, marketing is considered to be power, so information hoarding is the norm. Management operates on a need-to-know basis and actively promotes a culture of secrecy. The "not-invented-here" syndrome is rife and rewards are based on individual contributions. The challenge for today’s leaders is therefore to evolve from such a culture to one, which actively encourages and facilitates MkIS and discourages industrial age thinking and behaviors.

RESEARCH METHODOLOGY

The present study has been based on a survey analysis conducted for enhancing the effectiveness of an organizational culture in the state of Punjab, one of the growing states of Indian economy. Data has been collected through a self-structured questionnaire from 140 manufacturing industries which include 124 small and 16 medium enterprises respectively of Punjab from the following districts: Patiala for cutting tools (30 units), Jalandhar for sports goods (50 units) and Ludhiana for bicycle components (60 units). Reason for selecting these districts is due to the 82% exports of total exports from these districts of Punjab and they have prominent range of product. Cutting tools from Patiala, sports goods from Jalandhar and bicycle components from Ludhiana compromises nearly 15% of total exports from Punjab and provides 75% of the country’s requirement. These districts contribute to about 43% of the total small units and about 34% medium units respectively in Punjab.

The random samples were drawn from the population of enterprises in the Punjab state with 4000 bicycle components units in district Ludhiana, 1000 sports goods units in district Jalandhar and 30 cutting tools units in district Patiala respectively. By using Table 1, we get 140 manufacturing units as the sample size.

The survey was tested for reliability and overall reliability score (Cronbach Alpha) of the questionnaire has been 0.902. Face and content validity have been done. The questionnaire had been validated by the peers and has a validation score 3.75 on a scale of five. Some questions were reframed. Table 2 describes the details of the reliability statistics. The data so gathered analysed using SPSS ver.19. The reliability score of all the four sections ranged between 0.710 and 0. 829.

Regarding the nature of industry in the sample out of total 140 firms there are 30 firms producing cutting tools, 50 are producing sports goods and 60 are producing bicycle components. Categories of firms within these sectors have been depicted in Figure 3.

Size-wise sample has 124 small enterprises and 16 medium enterprises respectively as depicted in Figure 4.

Further to validate the success of MkIS model for SMEs, a case study has been developed from six firms of which 2 firms produce cutting tools from district Patiala, 2 firms producing sports goods from district Jalandhar and 2 firms producing bicycle components from district Ludhiana respectively have been included.

ANALYSIS

The regression model results are highlighted through Table 3 for which is highlighted the effectiveness of an organizational culture. The value of co-relation is .713, co-efficient of determination is 0 .508 and adjusted co-efficient of determination is 0.490, these variables explain 49% of the variation and Durbin-Watson index is 2.102, which is acceptable for the model. The ANOVA results are also significant, which depict the overall significance of the model. Moreover the results of step wise regression depict that value of $R^2$ has improved from 0.331 to 0.508 with the introduction of all variables. That means the model can include all these factors as the predicting power has improved from 32.6 to 49%. Thus the results verify that success factors of MkIS are

**Figure 3.** Category of industry.
positively associated with design characteristics, capabilities, primary characteristics and sophistication. Regarding predicting power primary characteristics and sophistication have higher value of ‘B’ and are relatively more important than other predictors.

**Concluding remarks**

Today, installing a MkIS is a challenge for even the most knowledge savvy organizations in spite of having best information technology. Because technology is not the only one thing by a manager could build up a sustainable MkIS in the corporate structure. Rather it is corporate culture, which plays very significant role in installing a MkIS. And it not that easy for the managers to develop a MkIS overnight without developing its internal culture which embodies social, organizational, managerial and technical cultures of a firm, which generally takes very long period to get maturity for the sustainable information in an organization. Because culture is difficult to pin down, it is often underestimated in efforts to change how firms work. Developing a culture which values and practices MkIS is a long term / multi-year effort involving attention to the social, organizational, managerial, and technical components of this behavior. Until organizations make a concerted effort to refocus their efforts, they will find it extremely difficult, if not impossible to grow a true MkIS. Therefore, the factors motivating a successful MkIS along with technology should be given equal priority and thrust while outlining the strategies for installing a successful and sustainable MkIS in a corporate structure.
**Table 3. MkIS (Marketing Information System) Regression Model for enhancing the effectiveness of an organizational culture.**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std. error of the estimate</th>
<th>Change statistic</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R square change</td>
<td>F-change</td>
<td>df1</td>
<td>df2</td>
<td>Sig. F change</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>.575a</td>
<td>0.33</td>
<td>0.32</td>
<td>0.25</td>
<td>0.33</td>
<td>68.33</td>
</tr>
<tr>
<td>2</td>
<td>.641b</td>
<td>0.41</td>
<td>0.40</td>
<td>0.23</td>
<td>0.07</td>
<td>18.43</td>
</tr>
<tr>
<td>3</td>
<td>.676c</td>
<td>0.45</td>
<td>0.44</td>
<td>0.23</td>
<td>0.04</td>
<td>11.47</td>
</tr>
<tr>
<td>4</td>
<td>.702d</td>
<td>0.49</td>
<td>0.47</td>
<td>0.22</td>
<td>0.03</td>
<td>9.68</td>
</tr>
<tr>
<td>5</td>
<td>.713e</td>
<td>0.50</td>
<td>0.49</td>
<td>0.22</td>
<td>0.01</td>
<td>4.25</td>
</tr>
</tbody>
</table>

*** p<.001; ** p<.01; and * p < .05

Design characteristics☆, Capabilities☆, Primary characteristics☆, Hindrance factors☆, Sophistications☆.

Successful MkIS in any firm is a means rather than ends to increase its performance in the highly competitive world business compared to its counterpart.

**REFERENCES**


