

## IMPORTANCE OF INFORMATION SYSTEM IN RAPIDLY CHANGING BUSINESS ENVIRONMENT: A FLEXIBILITY PERSPECTIVE

**Dr Kumar Shalender**

Associate Professor, Chitkara Business School, Chitkara University, Punjab

# [kshalender@gmail.com](mailto:kshalender@gmail.com)

---

### ABSTRACT

In order to have sustainable growth, organizations today must adapt and respond quickly according to the changes in business environment. The purpose of this study is to assess the overall role information system (IS) flexibility in providing the sustainable growth to the organization. The Study is carried out with the help of extensive literature review. We have done a comprehensive review of extant literature to find out important aspects of flexibility and IS flexibility. These aspects are then analyzed in terms of their contribution to organization's growth and sustainability. It has been found that IS flexibility helps the organizations by quickly accommodating and responding to the variations in information demanded by organization in the wake of changing business scenario. At strategic level, it aids the organization to attain the sustainable growth through its enhanced competitiveness while at operational level it helps to minimize the losses by hedging against the uncertain demand trends. A new outlook towards the IS flexibility has been attempted by the author that also integrates the perspective of sustainable growth and competitiveness.

**Keywords:** Competitiveness, Flexibility, Information System (IS), Organization, Sustainable growth.

---

### INTRODUCTION

With increasingly intense competition, shrinking product cycles, accelerated technological breakthroughs and progressively greater globalization, the business arena may best be described as being in a chronic state of flux, with continual variation in its external environment (Nadkarni and Herrmann, 2010). One theme that has now become omnipresent in market is the phenomenon of change. Though the intensity of this change may differ across the industries; there is little to doubt about its universal existence. Effects of liberalization, globalization and privatization have only added the momentum to its already accelerated pace and its implications resulted in contrasting effects as far as customers and organizations are concerned. On the one hand, customer has become real king of market and organizations have come under intense pressure to keep up with their changing tastes and preferences. This

has made even market leaders to stand on their toes all the time because of the fear that somebody from behind will come and topple them from their leadership position. Launch of new Wagon R by Maruti-Suzuki can be seen in this regard only. Despite of the fact that old model remained market leader throughout its life cycle, company went ahead and launched all new Wagon R. This shows the intensity of pressure and competition organizations are facing nowadays.

In the wake of this newly evolved business paradigm, this paper investigates the role of IS flexibility in providing sustainable growth to organizations. With a special focus on the flexibility attributes relating to dimensions of IS this study explores the impact of IS flexibility on the competitiveness of the organization. Flexibility attributes related to IS are taken from the literature review and then associated with their positive impact on the organization's performance.

### **Flexibility**

Flexibility, in general terms, is associated with the ability to change according to new conditions. It has found a number of references in literature and that point towards its multi-dimensional nature. Ansoff (1965) described the flexibility in terms of its external and internal aspects. According to him external flexibility can be achieved defensively or offensively while internal flexibility is more directed towards cushioning the business against catastrophe. Similarly Eppnik (1978) saw flexibility as characteristic of organization that makes it less vulnerable to unforeseeable changes. One of the most comprehensive definitions of flexibility was given by Bahrami (1992) who described flexibility as a multi-dimensional concept-demanding agility and versatility; associated with change, innovation and novelty; coupled with robustness and resilience, implying stability, sustainable advantage and capabilities that may evolve over time. Strategic value of flexibility was emphasized by Volberda (1997) especially in the context of turbulent changes and suggested the construct for the flexibilities at all three levels pertaining to strategy, structure and operation.

Sushil (2000) described the flexibility in systemic terms as an exercise of free will or freedom of choice on the continuum to synthesize the dynamic interplay of thesis and antithesis in an interactive and innovativemanner, capturing the ambiguity in systems and expanding the continuum with minimum time and efforts. Literature pertaining to flexibility reveals that flexibility is about implementing the changes quickly according to changes in environment. This not only helps the organization to swiftly tackle the changes but also provide them cushion in case of totally unforeseeable situations.

### Information System (IS)

The fast changing environment conditions has exaggerated the importance of IS. Today the competitive advantage lies in getting and using right kind of information on a priority basis. The focus of competition has been completely shifted from operand to operant resources and IS has emerged as one of the crucial components that can help the organization to stay ahead from its competitors with the dissemination of right kind of information at the right time. IS is a system that helps in making various kinds of decision making that pertains to a range of activities carried out by an organization. IS usually depicts a combination of information technology and organization's personnel to enhance the controlling capacity of the firm. In case of marketing, IS can be considered as a decision support system. Marketing activities are directed toward planning, promoting, and selling goods and services to satisfy the needs of customers and the objectives of the organizations; marketing information systems (MKIS) support decision making regarding to these activities (Harmon, 2003, Patrizio 2018). Figure 1 given below is the pictorial representation of MKIS.

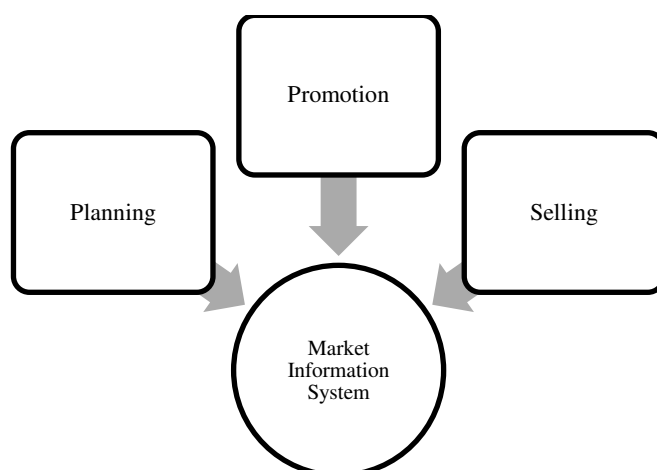
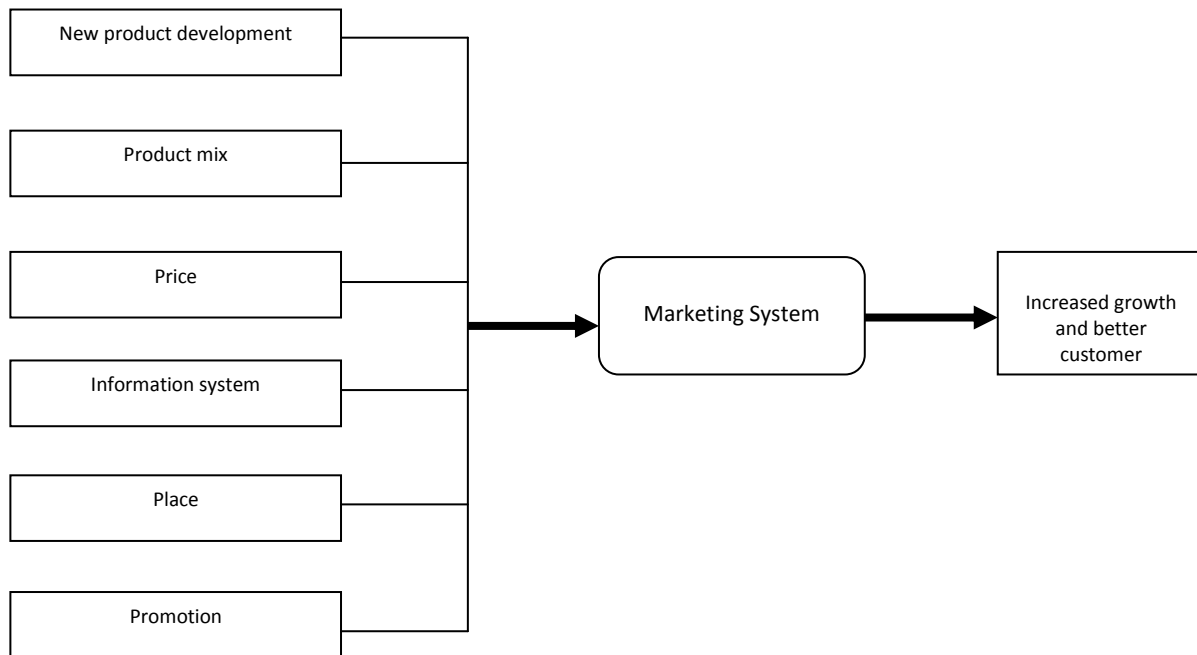


Figure 1: MKIS and its functions

*Source: Pictorial representation of Harmon concept.*

### Information System (IS) Flexibility

IS has crucial role to perform in order to endow the organization with capability to respond in timely and efficient manner. This requires end-to-end integration of information within the enterprise and a proper mechanism that makes this information available throughout the company seamlessly. Flexibility in this dimension helps by providing the updated information across the organization on real time basis. IS flexibility, as defined by Mensah (1989) is ability to respond and adapt to changing business conditions both within and outside the organization.



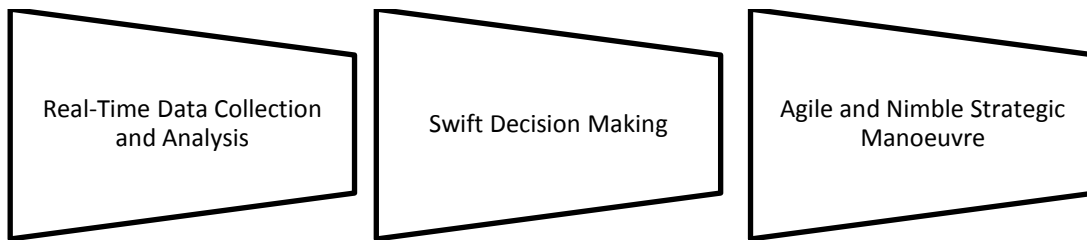
Though there are various dimensions of IS flexibility given by Byrd and Turner (2000), some relevant ones are shown in table 1 as below:

**Table 1: IS Flexibility**

Attributes	Importance
IT connectivity	Enables effective coordination and enhanced integration
Data Transparency	Enables permeability as well as enhances efficiency
IT Compatibility	Enables the smooth completion of cross-functional operations.

*Source: Byrd and Turner (2000).*

Similarly there are various techniques relating to enhance the IS flexibility of an organization though service oriented architecture (SOA) is one that seems to have caught the frenzy of many organizations. SOA is a technique that helps in integrating the primary resources of organization in seamless way and helps by creating highly accessible, loosely coupled and standard business oriented services (Erol et al., 2009). In fact this type of architecture has emerged as very successful option to build the organization wide flexibility and helps to disseminate information seamlessly across the organization. Many firms that have employed SOA in their organizations are reaping rich benefits of its implementation.



*Figure 2: Benefits of IS flexibility*

*Source: Pictorial representation of concepts by author.*

## **CONCLUSION AND DISCUSSION**

Volatile market conditions along with advanced means of communication have made it absolutely mandatory for the organizations to have requisite level of flexibility in their IS. This has become even more mandatory in the wake of unforeseeable changes that are constantly challenging the conventions of old business philosophy. The increased dynamism have made it almost impossible to accurately forecast the customers' needs and preferences patterns; thereby further enhancing the value of accurate and timely information.

Also with the situations changing at very fast pace, there is a constant needed to have the updated and relevant information throughout the organization. Flexibility in IS helps not only in making the information available across the departments but also helps by supplying the relevant statistics rather than piling up of loads of useless data. A flexible IS easily accommodates the various types of variations in information required by them decision activities that are warranted due to fast changing environment conditions both in and outside the organization. Therefore, IS flexibility hedges the organization from devastating change by equipping the firm with ability to foresee the crucial changes happening in market place with the early detection of trends that can prove crucial to its survival prospects.

The IS flexibility holds a great significance for the practitioners in the corporate world. As it has been rightly pointed out that the data has become new oil for the economy, organizations must embrace themselves for adopting flexible strategies to make more business sense out of the information system. This requires going beyond only looking at what kind of information is required but also doing a comprehensive analysis of how that information is going to make changes on a real-time basis. If the organization cannot be able to use the information on a real-time basis then it may difficult for the organization to achieve a competitive edge over the rivals. More flexible IS the organization is having better chances for it to win over customers than its rivals. In order to do so, undoubtedly organizations require a comprehensive IS policy with flexibility at its heart.

**REFERENCES**

- Ansoff, H.I. (1965), "Corporate Strategy: Business Policy for Growth and Expansion", McGraw Hill, New York.
- Bahrami, H. (1992), "The Emerging Flexible Organization; Perspectives from Silicon Valley", California Management Review, Vol.34 (4), 33-52.
- Byrd, T.A and Turner, D.E. (2000), "Measuring the Flexibility of Information Technology Infrastructure: Exploratory Analysis of a Construct", Journal of Management Information Systems, Vol. 17(1), 167-208.
- Eppink, D.J. (1978), "Planning for Strategic Flexibility", Long Range Planning, Vol. 11(4), 9-15.
- Erol, O., Sauser, B.J. and Boardman, J.T. (2009), "Creating Enterprise Flexibility through Service Oriented Architecture" Global Journal of Flexible Systems Management, Vol. 10(1), 11-16.
- Harmon Robert R. (2003). Marketing information system, Encyclopaedia of information systems, ElsevierScience (USA), Volume 3, 137-151.
- Mensah, E. (1989), "Evaluating Information Systems Projects: A Perspective on Cost Benefit Analysis", Journal of Information Systems, Vol. 14(3), pp. 205-217.
- Nadkarni, S. and Herrmann, P. (2010), "CEO Personality, Strategic Flexibility and Firm Performance: The case of the Indian Business Process Outsourcing Industry", Academy of Management Journal, Vol. 53 (5), pp. 1050-1073.
- Patrizio, A. (2018), "Top 25 Artificial Intelligence Companies", <https://www.datamation.com/applications/top-25-artificial-intelligence-companies.html> accessed on Feb 22, 2019
- Sushil (2000), "Systemic Flexibility", Global Journal of Flexible Systems Management, Vol. 1(1), pp.77-80.
- Volberda, H.W. (1997), "Building Flexible Organization for Fast Moving Markets", Long Range Planning, Vol. 30(2), pp.169-183.