

ROLE OF INFORMATION TECHNOLOGY (IT) IN BUSINESS MANAGEMENT: AN OVERVIEW

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Abstract

Business management is often about information management more than any other skill, as today's manager has quick access to every type of report about the operation of the business. An effective manager must be able to analyze all of the available information and sort out what is pertinent to the decisions he must make. This requires knowing about the effective use of information technology and specific business software packages. The role of information technology (IT) that supports and supported by business strategy is very important in business management. In today's organizations, the business conditions are changing rapidly that involve IT. So it is a need to learn that how to develop an effective IT strategy.

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Introduction

Despite the ongoing debate about information technology (IT), the role of IT in business organization is very important. It is playing a leading role in providing business transformation and top line value (Venkatraman and Handerson, 1998). The capabilities of emerging IT leads towards the strategic direction of a firm e.g. e-business, wireless etc. IT strategy delivers business value. For CIOs and other executives the IT strategy is one of the top business concern (Luftman and Mclean, 2004). Business strategy and IT are complement and support each other. It is already identified by research that many organizations are effected by strategic development. Business value and IT are working towards the same goals at the same time (Frohman, 1982).

Information Technology (IT) provides an opportunity for businesses to improve their effectiveness and efficiency, and even to gain comparative advantage. Information technology plays an important role in economical development of any country. Information technology, particularly the internet is having a significant impact on the operations of any small and medium scale business and it is claimed to be essential for the survival and growth of nation's economies (Hicks, 1993). Compared with traditional business new technologies facilitate an increased interactivity, flexibility, cheap business transactions as well as improve interconnection with business partners and customers.

Role of IT in Production Process

Production process is a process of producing different products or presenting the services. Many studies have defined the role of IT on the process of production both in industry level and national level. Decision makers who want to invest in IT, use investment criteria that is related to the outcomes at the level of firm. Total factor productivity and labour productivity are certainly often-used criteria. Managers also use some other measures such as market share, profitability, product variety, margins and quality as justification for the investment in IT systems.

Workers and managers can make decisions more effectively with the help of improved information. For example the information from the store-based system allows the managers to efficiently manage inventory stock. When a firm redesigns its process to attain higher levels of production then transformation impacts occur. The main difference between IT capital band and

other forms of capital is that IT can play dual role in an organization. First, it can be used as a production technology for improvement of labour technology. Secondly, it plays its role as a 'technology for coordination' and it has significant impact on effective integration of the process of business and increasing the productivity (Gurbaxani et al. 2003).

IT and Marketing

The developing and use of the internet on a global scale has created opportunities for end users, sellers and producers to communicate online and hence no physical movement required. Internet marketing combines creative and technical aspects of the Internet, including design, development, advertising, and sales. Internet marketing does not simply entail building or promoting a website, nor does it mean placing a banner advertisement on another website. Effective Internet marketing requires a comprehensive strategy that synergizes a given company's business model and sales objectives with its website function and appearance, focusing on its target market through proper choice of advertising type, media, and design (Combe, 2006).

Information technology has been a key contributor to the major transformations on how companies market their products and services. Anticipating the impact of information technology is becoming more difficult. Businesses are experiencing fundamental transformation due to the impact of information technology. When utilized appropriately, technology can affect how business processes are planned, implemented and evaluated. Technology can affect information processes and the information made available to decision makers, as well as the roles and responsibilities of organization personnel. Due to its potential impact, understanding the nature and use of information technology in solving problems is becoming increasingly important to professionals. (Hollander, Denna & Cherrington, 1996)

IT and Labour

For present purposes, IT can influence labor markets in three ways: it can affect the total number of jobs regardless of skill level or occupation, it can alter the skill mix of jobs through changes in occupational demand, and it can alter the skill mix of jobs through changes in the skill content of occupations without necessarily changing the occupational distribution (Handel, 2003). A great

deal of public concern has always focused on the question of whether technology is eliminating the need for human labor in general. The most extreme version of this idea argues that the future economy will require virtually no workers, causing massive unemployment and idleness (Aronowitz and DiFazio 1994; and Rifkin 1995).

A more modest version of this idea, with greater support among economists, holds that technology may result in a more limited net job loss or persistent job shortage, in which a certain fraction of the labor force faces long-term unemployment even when the economy is expanding. This issue of "jobless growth" has received some support and attention in the Western European experience (OECD 1996, pp. 62, 68).

Various studies of firm level in United States show that IT capital is a net substitute for labor. Use of IT allows the firms to reduce headcounts and to increase production faster than employment (Dewan and Min, 1997). The use of IT is associated with a shifting workers towards higher skill levels and then higher wages. It is found that the rate of upgradation of skill due to IT is most rapid in that industries which are most intensive users of computers. By analyzing the United States labor force data, Krueger (1993) that the workers who used computers had earned 10 to 15 percent more wages than nonusers.

IT and Wage Inequality

Some believe that this describes recent trends in employment and wages. Wage inequality has grown dramatically in the past 20 years, and many economists believe that computer technology has played a significant role in this process by reducing demand for less-skilled workers, some of which is manifest in declining employment for the less skilled (Katz and Murphy 1992; Krueger 1993; Berman, Bound, and Griliches 1994; Danziger and Gottschalk 1995; and Autor, Katz, and Krueger 1998). Proponents of this view argue that computer technology is skill biased rather than skill neutral. The skill upgrading effects of computers are not intrinsically problematic-they promote less physically demanding and more mentally challenging work-but the theory of skill-biased technological change (SBTC) states that the pace of change is so rapid that the demand for skill has outstripped the ability of the labor supply to meet it and has widened wage differentials (Handel, 2003).

Although economists generally do not frame the issue this way, the nature of the evidence makes it useful to distinguish two ways computers may increase the demand for skill (for an exception, see Howell and Wolff 1991). Computers can affect the occupational composition of employment by either eliminating low-skilled jobs through automation or increasing the number of medium- and high-skilled jobs, such as computer programmers or white collar workers, needed to analyze the increased number of reports that a computerized workplace generates. Alternatively, computers may increase the skill content of an occupation-for example, if IT is difficult to learn or requires greater abstract reasoning abilities-without necessarily altering that occupation's share of the workforce (Handel, 2003).

IT and Human Resource Management

One of the impacts of IT is that it enables the creation of an IT- based workplace, which leads to what should be a manager's top priority-namely, strategic competence management(Bergenhengouwen and Mooijman, 1996). Advances in IT hold the promise of meeting many of the challenges of HRM, such as attracting, retaining, and motivating employees, meeting the demands for a more strategic HR function, and managing the "human element" of technological change in the future(Ashbaugh and Miranda, 2002). HRM could support the efforts of technological innovation's to achieve high performance while such innovation; itself could serve as an approach to enable the HR function to focus more on value-added activities in order to realize the full potential of technology and organizational strategy(Shrivatsava and Shaw, 2003).

The biggest benefit of using IT in HRM to organizations is the freeing of HR staff from intermediary roles, thus enabling them to concentrate on strategic planning in human resource organization and development (Pinsonneault and Kraemer, 1993; Berardine, 1997 and Totty, 2001). Caudron (2003) has also observed that IT can automate other routine tasks such as payroll processing, benefits administration, and transactional activities, so that HR professionals are free to focus on more strategic matters such as boosting productivity.

In the present context of increasing globalization, employing organizations and their environments have become increasingly complex. Managers in these organizations face growing difficulties in coping with workforces that may be spread across a variety of countries, cultures

and political systems. Given such trends, IT has considerable potential as a tool that managers can utilize, both generally and in human resourcing functions in particular to increase the capabilities of the organization (Tansley and Watson, 2000).

IT and E-Banking

E-Banking (Electronic Banking), also known as cyber banking or online banking and includes different banking activities that are conducted from office, home or on the road, instead of at a physical location of a bank. With the help of IT, E-Banking has different capabilities ranging from securing a loan to paying bills electronically. E-Banking saves times and money for the customers of banks. Many banks are beginning to use electronic commerce and home banking as a major competitive strategy (Turban et al, 2006).

Total overhead charges of banking sector are also reduced due to information technology. Banking sector is facing tremendous changes due to IT, because it reduces the costs of management. Because, now a days, IT has replaced paper based and labor intensive methods with automated process (Daniel, 1999).

IT and International Trade

Globalisation results when markets and industries become more integrated because of lower tariffs or reduced trade costs, or both. These costs have fallen over the long term because of sustained advances in transport technology and, even more dramatically, in information and communication technology (World Development Report, 2009). Moreover, advances in transport technologies have significantly reduced the time trade good spend in transit (Hummels 2001).

Improved information technology eventually was complemented by the modern global supply chain, an organizational innovation that leverages information technology to better coordinate the activities of geographically dispersed economic agents. Direct communication costs tend to be a minor component of total transaction costs in international trade, and their share in total trading costs of any one shipment is smaller yet. Indirect communications cost, in particular the opportunity cost of imperfect coordination due to poor communication are unknown but may be significant, particular for perishable products. Perhaps it is because of reduced loss of coordination that the diffusion of digital information technology is believed to stimulate international trade (Hummels 2007).

References

- Aronowitz, S., and DiFazio, W. (1994). *The Jobless Future*. Minneapolis: University of Minnesota Press.
- Ashbaugh, S. & Miranda, R. (2002). Technology for Human Resource Management: Seven Questions and Answers. *Public Personnel Management*, 31(1), 7-20.
- Autor, D.H., L.F. Katz, and Krueger, A.B. (1998). Computing Inequality: Have Computers Changed the Labor Market?. *Quarterly Journal of Economics*, 113, 1169-1182.
- Berardine, T. (1997). Human Resource Information Systems Improve Management Decision-Making. *Canadian Manager*, 22(4), 17-18
- Berman, E., J. Bound, and Machin, S. (1998). Implications of Skill-Biased Technological Change: International Evidence. *Quarterly Journal of Economics*, (113), 1245-1256.
- Bergenhengouwen, G.J., and Mooijman, E.A. (1996). Competence Development - A Challenge for HRM Professionals: Core Competencies of Organizations as Guidelines For The Development of Employees. *Journal of European Industrial Training*, 20(9), 29-35.
- Caudron, C. (2003). Counting Heads and Hiring, Fring and Managing Them Too. *PROFIT Oracle'se-Business Magazine*, February, 79-80.
- Cleofhas, B., and Gibson, K. (2009). Effects of IT in Marketing of Communication Services Case: Safaricom Kenya Ltd. *Laurea Leppävaara*, Laurea University of Applied Sciences.
- Combe, C. (2006). Introduction to E-business. Amsterdam: Boston: *Butterworth-Heinemann*.
- Daniel, E. (1999). Provision of Electronic Banking in The UK and The Republic of Ireland, *International Journal of Bank Marketing*. 17 (2), 72-82.
- Danziger, S., and Gottschalk, P. (1995). *America Unequal*. Cambridge, MA: *Harvard University Press*.
- Frohman, A. (1982). Technology as a Competitive Weapon. *Harvard Business Review*, 60 (1), 97-104.

Gurbaxani, V., Dedrick, J., and Kraemer, K. (2003). Information Technology and Economic Performance: A Critical Review of the Empirical Evidence, *ACM Computing Surveys*, 35(1), 1-28.

Handel, J.M. (2003). Implications of Information Technology for Employment, Skills, and Wages: A Review of Recent Research. *SRI Project No.P10168*, SRI international.

Hollander, Denna, and Cherrington. (1996). Accounting, IT & Business Solution. USA: *Times Mirror Higher Education Group*.

Howell, D.R., and Wolff, E.N. (1991). Trends in The Growth and Distribution of Skills in The U.S. Workplace, 1960–1985. *Industrial and Labor Relations Review*, 44 (1), 486-503.

Hummels, D. (2007). Transportation Costs and International Trade in The Second Era of Globalization, *Journal of Economic Perspectives*, 21(1), 131-154.

Hummels, D. (2001). Time as a Trade Barrier, Unpublished Paper, Purdue University, West Lafayette, IN.

Katz, L.F., and Murphy, K.M. (1992). Changes in Relative Wages, 1963–1987: Supply and Demand Factors. *Quarterly Journal of Economics*, 107, 35-79.

Krueger, A.B. (1993). How Computers Have Changed the Wage Structure: Evidence from Microdata, 1984–1989. *Quarterly Journal of Economics*, 108, 33-61.

Luftman, J.N., and McLean, E.R. (2004). Key Issues for IT Executives. *MIS Quarterly Executive*, 3(2), 89-104.

Pinsonneault, A. and Kraemer, K. (1993). The Impact of Information Technology on Middle Managers. *MIS Quarterly*, September, 271-292

Rifkin, J. (1995). *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. New York: G.P. Putnam's Sons.

Shrivatsava, S., and Shaw, J. B. (2003). Liberating HR Through Technology. *Human Resource Management*, 42 (3), 201-222.

Smith, A.H., Mckeen, J.D., and Singh, S. (2007). Developing Information Technology Strategy for Business Value. *Journal of Information Technology Management*, 18(1), 49-58.

Tansley, C. and Watson, T. (2000). Strategic Exchange in The Development of Human Resource Information Systems (HRIS). *New Technology, Work and Employment*, 15 (2), 108-122.

Thiemann, F., Fleming, E., and Mueller, R.A. (2012). Impact of Information and Communication Technology on International Trade in Fruit and Vegetables: A Gravity Model Approach. Presented in International Association of Agricultural Economists (IAAE), Foz Do Lguacu, Brazil.

Totty, P. (2001). Human resources information systems. *Credit Union Magazine*, 67(8), 53-55.

Turban, E., Lee, J., King, D., and Chung, H. M. (2006). Electronic Commerce: A Managerial Prospective. 4th Edition. Prentice Hall, Inc. Upper Saddle River, NJ, USA.

Venkatraman, N., and Henderson, J. (1998) . Real Strategies for Virtual Organizing. *Sloan Management Review*, 40(1), 33-48.

World Development Report (2009): Reshaping Economic Geography. World Bank, Washington, D.C.