

Role of Information Technology in Commerce and Management

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Abstract:

Business technology is incessantly changing names and varying roles. In the 1970s, business technology was known as DATA PROCESSING (DP). Data are raw, unanalyzed, and summarized facts and figures. Information is the processed and summarized data that can be used for managerial decision making. Its role was to support existing business through improving the flow of financial information. It was primarily used to improve the flow of financial information.

In the 1980s, business technology became known as INFORMATION SYSTEMS (IS). Its role was changed from supporting business to doing business (for example, ATMs and voice mail). As business used technology more, it became more dependent on it. Positively Information Technology has drastic changes in business and management, such as business and their strategies. Now the author has represented brief overview of the role of Information technology in commerce and management, So this research paper totally based on primary and secondary data.

Primary data will be collected by Questionnaire from several respondents from various resources. This paper also tries to explore several, Role of Information Technology in Commerce and Management.

Keywords:

IT affects the Business Strategies, Communication Trends between Businesses and Customers, Effect of IT on Commerce and Management.

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Introduction:

Business technology is continuously changeable names and varying roles. In the 1970s, business technology was known as DATA PROCESSING (DP). Data are raw, unanalyzed, and summarize facts and statistics. Information is the processed and summarized data that can be used for managerial decision building. Its role was to support existing business through improving the flow of financial information. It was primarily used to improve the flow of fiscal information.

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In the late 1980s, business technology became known as INFORMATION TECHNOLOGY (IT). Business shifted from using new technology on old methods, to using it on NEW METHODS. Information technology's role became to CHANGE business.

Management Roles:

The job of managing is complicated and demanding. Managers must undertake several types of activities to achieve the objectives of their organization. To better understand the pattern of activities of the manager, we will use the concept of management roles, which was introduced by Mintzberg in the 1970s. The job of the manager consists of several roles at the same time. At a certain point in time, the manager might perceive one role as more important than the others. Mintzberg finds that it is a curiosity of the management literature that its best-known writers all seem to emphasize one particular part of the manager the exclusion of the others. Together they cover all the parts, but even that might not describe the whole job of managing. Mintzberg's role typology is frequently used in studies of

managerial work. In the context of information technology management, Grover, Jeong, Kettinger and Lee identified the relevance of six roles from Mintzberg's role typology: leader, spokesman, monitor, liaison, entrepreneur, and resource allocator. In this research, the same six roles are applied, both to the IT executive in charge of an IT department and the IT project manager in charge of an IT project. We are using the following role descriptions:

(A) Manager. As a leader, the manager is responsible for supervising, hiring, training, organizing, coordinating, and motivating a cadre of personnel as to reach the goals of the organization (which might be the IT department or the IT project). This role is mainly internal to the organization of the manager.

(B) Resource allocator. The manager must decide how to allocate human, financial and information resources to the different tasks of the organization. This role emphasizes planning, organizing, coordinating and controlling tasks. This role is mainly internal to the organization of the manager.

(C) Spokesman. When being a spokesman the manager extends organizational contacts to areas outside of his or her own jurisdiction. This role emphasizes promoting accept of the IT department or the IT project within the organization, which they are part of. For the IT executive it means contacts with the rest of the company, for the project manager contacts with the base organization. Frequently, he or she must cross traditional departmental boundaries and become involved in affairs of production, distribution, marketing, and finance.

(D) Entrepreneur. The manager identifies users' needs and develops solutions that change business situations. A

major responsibility of the manager is to ensure that

Rapidly evolving technical opportunities are understood, planned, implemented, and strategically exploited in the organization.

(E) Monitor. This role emphasizes scanning of the external environment to keep up with relevant technical changes and competition. The manager identifies new ideas from sources outside his or her organization. To accomplish this, the manager uses many sources, including vendor contacts, professional relationships, and a network of personal contacts.

(F) Liaison. In this role, the manager communicates with the external environment, including exchanging information with IS/IT suppliers, customers, buyers, market analysts, and the media. This is an active, external role. The six roles are illustrated as Figure 1. Leader and resource allocator are roles internal to the project for the project manager, or internal to the IT department of the IT executive. Spokesman

and entrepreneur are roles, directed towards the base organization for the project manager, and towards the company for the IT executive. Monitor and liaison are roles external to the base organization for the project manager, and to the company for the IT executive.

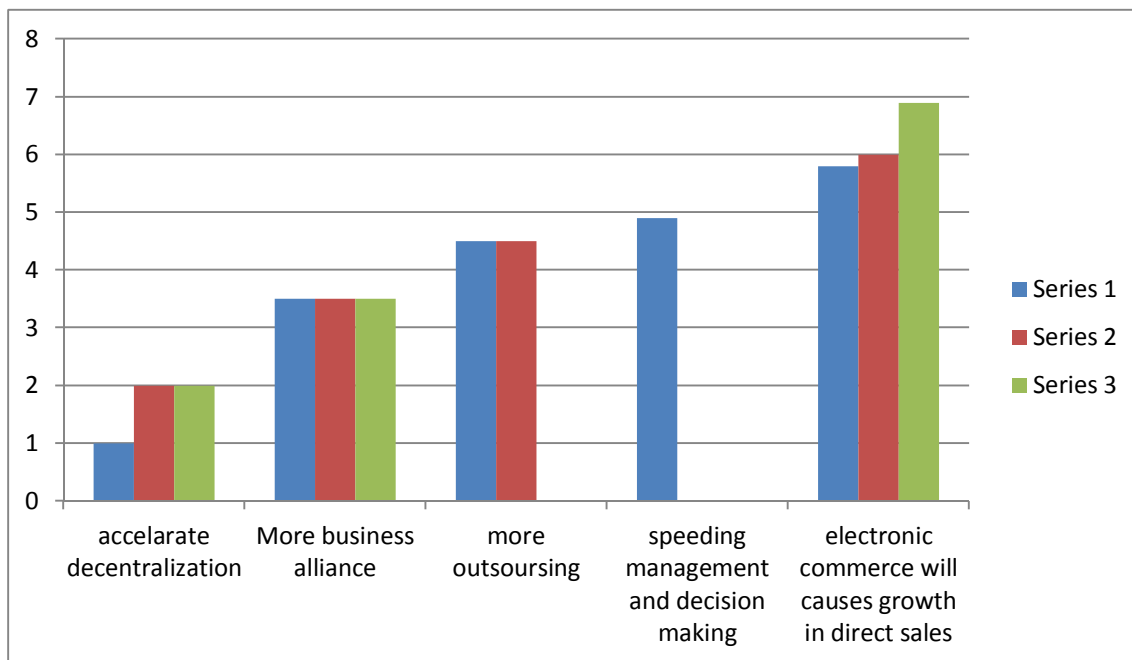
How Information Technology Changes Business

1) *Time and place have always been at the centre of business:*

Today IT allows businesses to deliver products and services whenever and wherever it is convenient for the customer. As IT breaks time and location barriers, it creates organizations and services that are independent of location. NASDAQ and SOFFEX are electronic stock exchanges without trading floors.

2) *IT also creates organizations and services that are independent of location.*

3) *Era of Direct Communication:*



According to a Nikkei Sangyo Shimbun survey of 28 think tanks in the U.S. and Japan, the

greatest change that networks will cause in businesses is the growth in direct sales through

the spread of electronic commerce. This was followed by speedier decision making processes, more outsourcing, and more network alliances. In particular, the growth of direct sales will inevitably precipitate changes in distribution by laminating intermediaries and sales companies. Direct sales will pose significant issues for management, including the consolidation and realignment of existing sales channels and revaluation of how prices are set. Moreover, it also entails major changes in the flow of information. The direct contact and communication between companies and their customers will require new marketing strategies specifically geared to direct sales. Nissan Motor among others has begun experimenting with communication for direct sales.

4) *New Communication Trends between Businesses and Customers*

(I) End to Monopolization of Information

In the era when a small number of producers provided information to a large number of consumers, the monopolization of information from manufacturers symbolized the power relationship. Jealously guarding information in a way was how businesses could express their purpose of existence. However, open networks such as the Internet have vastly expanded the volume of available information while reducing its cost, so that the information disparity between buyers and sellers is shrinking to practically zero. Sellers no longer enjoy the advantage of controlling the information flow to consumers, and consumers will gain more power to obtain the information they need.

Behind the development of the Internet has been the idea that information should not be controlled and monopolized by a few people, but made available to many people so that knowledge is shared. This information is seen not as a possession but as a shared asset among people participating in networks.

(II) Network-Type Services

On networks, customers can access information on related products, services, and companies using the links. These links are global in scale and not restricted by company size. We predict the emergence of service providers which, unlike conventional business affiliations, are based on loose alliances of core business

functions. Today there are already tie-ups offering services ranging from transportation, hotels, car rentals, and entertainment. These service providers will be "virtual companies" on networks and alliance of companies that offers a range of products and services which no single company could offer.

In addition, there is a strong possibility of the emergence of network shopping malls with specific consumer-oriented themes such as marriage, job hunting, child care, and so forth. These malls can be considered to be a new form of business that takes advantage of network characteristics.

(III) Greater Consumer Input in Corporate Processes

As companies come to deal directly with individual customers, customers will increasingly want customized information, services, and products. Producers will then have to make products tailored to individual consumer needs, while consumers will become able to participate in the development and production of products. Thus, consumers are likely to become more than simply consumers.

Moreover, companies will be able to present certain hypotheses or scenarios to customers, and use their responses to revise and refine the hypotheses. Consumers will participate in the actual design process by inputting information, knowledge and ideas into the product specification process. This networks will be an increasingly valuable resource for producers as a medium to convey their message to consumers.

(IV) Elimination of Intermediaries Who Provide No Added Value

By enabling direct contact between buyers and sellers and facilitating the exchange of information, computer networks will reduce the need for intermediaries standing between the two. People in the middle must do more than simply act as a representative in transactions or help exchange and transmit information, and shift to being on-going partners who add value to transactions, or will face the prospect of disintermediation. We predict that disintermediation through direct contact between buyer and seller will produce time savings,

reduce fees and other indirect costs, and thus lead to lower product prices.

(V) Customer Agents

Traditionally, sales people have represented manufacturers. Although they sometimes genuinely serve customers by providing useful knowledge, sales agents often are more interested in moving inventories and closing sales. Thus, their advice tends to be biased, and customers may not end up with the desired information or product.

This will change in the future. Sales agents will become customer agents who represent the customer's interests. Their main role will be to efficiently search through large amounts of information and find the information and products that customers want. They will collect data, learn customers' needs, observe trends, search for information, and make transaction arrangements. Intermediaries will also need to shift toward such roles.

Effects of Information Technology on Management and Commerce

Evaluate the human resource, security, privacy and stability issues in management that are affected by information technology.

a) HUMAN RESOURCE ISSUES

i) *Technology makes the work process more efficient as it replaces many bureaucratic functions.*

(1) One challenge is to recruit employees who know how to use the new technology.

(2) Some companies outsource technical training.

ii) *Computers and the increased use of the Internet and intranets will allow employees to stay home and do their work from there (Telecommuting):*

Advantages of Telecommuting:

(1) Telecommuting involves less travel time and costs, and often increases productivity.

(2) It helps companies save money by retaining valuable employees and by tempting experienced employees out of retirement.

(3) Companies can get by with smaller, less expensive office space.

(4) Telecommuting enables men and women to stay home with small children and is a tremendous boon for disabled workers.

(5) Studies show that it is more successful among self-starters and those whose work doesn't require face-to-face interaction with co-workers.

Disadvantages of Telecommuting:

(1) Long-distance work can give workers a dislocated feeling of being left out of the office loop.

(2) Some feel a loss of energy; people can get through social interaction.

(3) Often people working from home don't know when to turn the work off.

(4) Some companies are using telecommuting as a part-time alternative.

iii) *Electronic communication can never replace human communication for creating enthusiasm and esprit de corps:*

(1) Efficiency and productivity can result in people being treated like robots.

(2) Computers are a tool, not a replacement for managers and workers.

(3) Computers should aid creativity by giving people more freedom and more time.

(4) The technology also allows people to work at home, in the car, or any time of the day.

(5) The result is that US workers work longer hours than people in any other nation.

b) SECURITY ISSUES.

i) *Hackers, people who break into computer systems for illegal purposes, are an increasing problem.*

ii) *Computer security today is more complicated than in the past.*

(1) When information was processed in a mainframe environment, the single data centre was easier to control.

(2) Today, computers are not only accessible in all areas of the company, but also with other companies.

(3) It takes skill and knowledge to keep systems clean and hackers at bay.

iii) A Virus is a piece of programming code inserted into other programming to cause some unexpected and undesirable event.

(1) Viruses are spread by downloading infected programming over the Internet or by sharing an infected diskette.

(2) Some viruses are playful, but some can erase data or crash a hard drive.

(3) Software programs such as Norton's Antivirus "inoculate" the computer so that it doesn't catch a known virus.

(4) It is important to keep your antivirus protection program up-to-date and practice "safe computing."

iv) Existing laws do not address some Internet issues such as:

(1) Copyright and pornography laws.

(2) Intellectual property and contract disputes.

(3) Online sexual and racial harassment.

(4) Crooked sales schemes.

c) PRIVACY ISSUES.

i) Your e-mail is no more private than a postcard.

(1) More than a fourth of U.S. companies scan employee e-mail regularly and legally.

(2) Most e-mail travels over the Internet in unencrypted plain text.

ii) A major problem with privacy has developed as more and more personal information is stored in computers and people are able to access that data illegally.

(1) The Internet allows Web surfers to access all sorts of information about you.

(2) One of the key issues is: Isn't this personal information already public anyway?

iii) Web sites have gotten downright nosy by secretly tracking users' movements online.

(1) Web surfers seem willing to swap personal details for free access to online information.

(2) Web sites often send cookies to your computer that stay on your hard drive.

(3) These often simply contain your name and password.

(4) Others track your movements around the Web and then blend that information with their databases and tailor the ads you receive accordingly.

(5) You need to decide how much information about yourself you are willing to give away.

d) STABILITY ISSUES.

i) Instability in technology also has a significant impact on business.

ii) The text uses the example of Hershey and its Halloween candy delivery.

iii) The blame for such problems is a combination of computer error, human error, malfunctioning software, and overly complex systems.

Conclusion:

There is an old game called the "Message Relay Game" in which a somewhat multifarious combination of words is relayed verbally from person to person, and the team that most precisely conveys its message to the last person wins. Conventional communication between businesses and consumers resembles this game. The mass media spread information on new products and corporate images, while consumers have to go to a store or other intermediary to obtain comprehensive information. Since the information provided by intermediaries is very influential in consumer purchasing decisions businesses deliberate their efforts on controlling the intermediate channels. Thus, businesses play the message game with the aim of controlling and accurately conveying product information to consumers.

The advance of information technology through digitization and networking has the potential of completely altering this business environment. The cost of obtaining and exchanging information has roped, and anyone can participate in networks. Information swap among consumers will probably become more active as well.

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