

CHAPTER 1

INTRODUCTION

1.1. INFORMATION AND BUSINESSES

Information is one of the key concepts used in this study and other concepts revolve round this, directly or indirectly. Information is a term used widely in library science literature, as in the case with literature in other disciplines like business, computers, healthcare, economics, and so on.

The Random House Dictionary defines “information” as knowledge communicated or received concerning a particular fact or circumstances; or, any knowledge gained through communication, research, instruction, etc.

The use of the word “information” for more than six centuries, appearing as early as in the fourteenth century in one of Chaucer’s tales (Schement, 1993), has not helped in a consensus being created in defining it (Hord, 1995) and is an elusive concept and is debated on its meaning and its relationship to knowledge, learning, expertise, and so on (Kaye, 1995). The range of meanings, definitions and applications of information is so varied that it ranges from simply being derived from data to being treated as a commodity. Boyd (1996) describes information as “something that

people need to know and apply to their work in order to achieve their organization's objectives.”

One of the definitions of information is “that part of the data available appropriate to the requirements of a particular user or group of users (Ritchie, Marshall & Eardley, 1998). The other interesting definition of information is “any difference that makes a difference to a conscious human mind” (Bateson, 1972). Madden (2000) aptly looks at the various definitions and approaches underlying these attempts over the years to define information and in the process attempts to tie together the earlier works and proposes the definition of information as “a stimulus originating in one system that affects the interpretation by another system of either the second system's relationship to the first or of the relationship the two systems share with a given environment” (p. 543). The study proposes a model to understand information and is based on the idea that the meaning in a message depends on the context in which the message is generated and used.

Extending this to a working definition we could state that information is something that makes a difference to the user in fulfilling the purpose of having sought the information in the context of the environment the user operates in and also the ability of the use to apply the information.

The role of information is very critical in any organization or business enterprise and plays a role in every stage of a business right from ideation to growth and

sustainability of businesses. Stamper (1973, p.14) noted that “there is no organization controlling the flows of materials and energy, or the work of people and machines, which does not make elaborate use of information.” The use for information in organizations (Ritchie, Marshall & Eardley, 1998, p. 25) is clearly spelt as follows:

1. improved efficiency in resource usage
2. cost reduction
3. added value
4. competitive advantage
5. improved effectiveness
6. enhanced profitability

Porter and Millar (1985) view that information is an integral part of every business and they go on to state that every activity of value in the organization has an information component and refer to it as information-processing component. Like the physical component includes all the physical tasks required to perform the activity, they describe information-processing component as encompassing the steps required to capture, manipulate, and channel the data necessary to perform the activity. Information is considered the fundamental fabric of an organization and is indispensable to all activities of the organization.

In fact in defining an organized system, Scarrot (1994), states that “An organized system is an assembly of interdependent elements and/or organized systems the

physical activities of which are controlled by the interchange of information so that they co-operate for a purpose” (p. 89). The importance of information is clearly seen in the fact that it is the main ingredient in understanding and defining systems, organizations and economies today.

The information revolution (Porter and Millar, 1985) is affecting competition in three vital ways:

- It changes industry structure and, in so doing, alters the rules of competition.
- It creates competitive advantage by giving companies new ways to outperform their rivals.
- It spawns whole new business, often from within a company's existing operations.

Information is considered an important asset and over the years has been studied as adding value to an organization if managed appropriately. Oppenheim, Stenson & Wilson (2001) have reviewed earlier works in this area and finely summarize the attributes of information under the categories of economic, utility, quality, business process (like productivity and innovation) and cost and value (p. 463).

In fact it is this impact and value of information that is reflected in the coining of the phrases “information economy” and “knowledge era.” Drucker (1969) says, “from

an economy of goods, which America was as recently as World War II, we have changed into a knowledge economy.” In one of the important works in this context, Porat (1977) brought in the concept of information as an important sector along with agriculture, industry and services in the US economy.

The strategic role of information in organizations has been well written about and leads to many areas of specialization like Information Management. An entirely specialized area on its own and beyond the scope of this research, Information Management, is worthwhile understanding as it provides ample evidence to support in the attempt to describe importance of information. Information management is described by Rowley (1994) as “A more specific working definition of information management might be:

- Developing and managing an organization’s information systems and resources so that the most appropriate information can be located by the people associated with the organization, when that information is required.
- Locating, identifying and integrating information external to the organization into the organization’s own information systems, when that information is required” (p. 4).

The impact of information on the global economy today is quite emphatically reflected in this wikipedia link: http://en.wikipedia.org/wiki/Information_industry

(September 21, 2007) which includes a section on Information Industry. The entry goes on to explain various information industries as,

1. Industries which produce and sell information in form of good or service like media and consulting (where information is provided not as a tangible commodity but as a service).
2. Information processing services such as legal services, banking, insurance, computer programming, data processing, testing, and market research
3. Industries that are vital to the dissemination of the information goods mentioned above like telephone, broadcasting and book retail industries.
4. Manufacturers of information-processing devices that require research and sophisticated decision-making like computers, microelectronic devices, software programs, Printing and copying machines, measurement and recording devices of various kinds, electronic or otherwise
5. Research-intensive industries like pharmaceutical, food-processing, apparel design, medical and other high-tech industries belong to this type.

These developments have made information assume a main role in business activities and are quite often highlighted in the strategies of successful companies. The extent

of importance of information in the business world is very well established with appointment of specialist Chief Information Officers in businesses worldwide.

1.2. BUSINESS INFORMATION

According to Temin (1991), "Recognition is now given to the role which information has played, historically, as 'the key element to the functioning of an enterprise' (p. 2). The role of business information was recognized, (Black & Brunt, 1999), as crucial to the emergence of the large corporation at the end of the nineteenth century. A research conducted by Taylor Nelson AGB, commissioned by Reuters Business Information (Reuters Business Information, 1994) surveyed over 500 British managers and directors and found that eighty eight per cent of the sample believed that free flow of information was vital to the success of their businesses and nearly 75 per cent described their organizations as 'information-based.' Taylor and Farrell (1994) explain that information is vital in organizations for managers to make decisions, prepare plans, control activities, and to outwit competitors.

Business information is all recorded information that is produced or acquired by an enterprise in the conduct of its business (Willard, 1995). This in general is applicable to all forms of business enterprise and all sectors. This also implies that all types and forms of information whether available in print format or non-print formats like online, computer based formats or even information supplied through face-to-face or through telephone. Business information is part and parcel of all activities of a

business and is consequently sought from internal sources and external sources of a business either formally or through informal means. Interaction among internal constituents like people, divisions, functions, units among themselves and with external environment like suppliers, customers, partners, franchises, etc can be basically described as information exchange happening within and with outside players in a business enterprise.

Taylor and Farrell (1994) describe organizations as information processing systems which regularly collect, store, disseminate and communicate ideas, knowledge and intelligence for the achievement of goals and objectives (p. 87). Cashmore and Lyall (1991) indicate that business information embraces all information flows within the enterprise and between the enterprise and the external parties: customers, suppliers, the general public government, etc (p. 6).

In every stage of a business, as charted out by Neelameghan (1992), beginning from initiation wherein the idea is germinated to formulation of project plan, testing feasibility, getting financed, establishment of business, production to finally taking the product to market and then managing the business for growth information is required. Neelameghan (1992) goes on to identify the different types information required and the use it is put to in various stages of a business formation and management.

Chalmers (1995) observes that lately there has been a growing recognition that the ability of businesses in New Zealand to compete in a global environment depends on the availability of comprehensive and easily accessible information resources.

Evernden and Evernden (2003) describe the various uses of information in a corporate context as follows:

1. Aids decisions
2. Creates value or usefulness
3. Gain competitive advantage
4. Solve problems
5. Helps to monitor and control
6. Improves communication
7. Improves service
8. Increases flexibility
9. Creates knowledge
10. Increases productivity
11. Increases revenue
12. Reduces costs
13. Provides metrics and measurements
14. Integrates and coordinates resources
15. Makes things explicit
16. Reduces uncertainty
17. Supplements memory

Auster & Choo (1994) in their work on acquisition and use of information in business environmental scanning consider 'Information' as the raw material of managerial work. Kennerley (1979) talks about the managers, often being concerned with internal information for their monitoring and control function and their belief that it helps them in doing their job better. He also states that – "It is not widely realized that the true advantage of business information lies in the enhanced opportunity it provides for planning and decision, or that this is a conceptual leap from the traditional world of refined controls and improved forecasting" (p. 178). In true sense as Kaye (1995) says "...information required by a business can take many forms. It may be quantitative data or qualitative information such as opinions; it may be commercial, scientific, technical, legal, political or social; it may be internal to the organization or outside the firm" (p.6). Kaye (1995) also goes on to list examples of business information that may be required by businesses and some examples given are:

- What are the rates of output of our various assembly lines?
- How has the unit cost of manufacturing product X varied over the last 12 months and what has caused the variations?
- What were the profit margins of our different divisions in the last financial year?
- Should we buy or lease a replacement for machine X and what information is needed to make this decision?
- What are the training needs of the employees who will be working on the new project?

- What European regulations and standards would apply to our proposed new product? And is our new manufacturing process patentable?
- What share of the market is held by our main competitor? How does this compare with our own share?
- What are the likely effects on our business of the reunification of Germany?
- Who are the alternative suppliers of raw material Y?
- What are the properties of the new material Z which has just come on to the market, and could it be used to replace our present raw material?
- What are the long-term trends in the age distribution of the population, and what are the implications for our business?
- How can we improve customer satisfaction with our services?
- Would it be sensible to transfer some of our processes to Eastern Europe to take advantage of low labour costs?

Butcher (1998, 27) goes to the extent of saying that “The success or otherwise of the organization depends on the efficient and effective use of the resources at its disposal, and this cannot be achieved without the processing of appropriate information....”

The need for business information was not restricted only to urban areas and studies on rural business information needs (Marcella, McConnell, Moore & Seton, 1996) were undertaken indicating the all pervasive nature and importance of business information for rural businesses also.

In summary, it is clear that businesses irrespective of location, sectors, structures, objectives and mission, stage of business, size of business consider information critical to their existence and growth. International Encyclopedia of Business and Management, (2002, 2nd ed.) describes business information as being categorized either by location of information or by the purpose. By location we can term it as internal or external information. Internal information relevant to the businesses is available within the organization in forms of internal notes, circulars and notices, libraries, print books, handbooks, manuals, data generated in various departments and is also available with people working in the organization. Information is also available outside the organization (external) and may be available in print formats like books, journals, newspapers, magazines, brochures, etc and in external libraries, with consultants, customers, suppliers, vendors, competitors, and so on in addition to the internet and electronic databases.

The purpose based classification gives us market information, competitor information, macroeconomic and geopolitical information, supplier information, external financial information and information on regulations and taxation. The International Encyclopedia of Business and Management (2002, 2nd ed.) goes on to describe the goal of business information as to provide managers with the basis for knowledge about both the internal workings for the firm and the external environment in which it operates.

For the purpose of this study, we shall define business information as information relevant to the people working in the organization and need for this information is to fulfill their roles in the organization. The people working in these organizations, that are profit or not for profit, require this information to undertake their day to day work, decision making, planning or strategy development, skill development, assist others related to their work and also may be to enhance their knowledge.

1.3. BUSINESS INFORMATION NEEDS

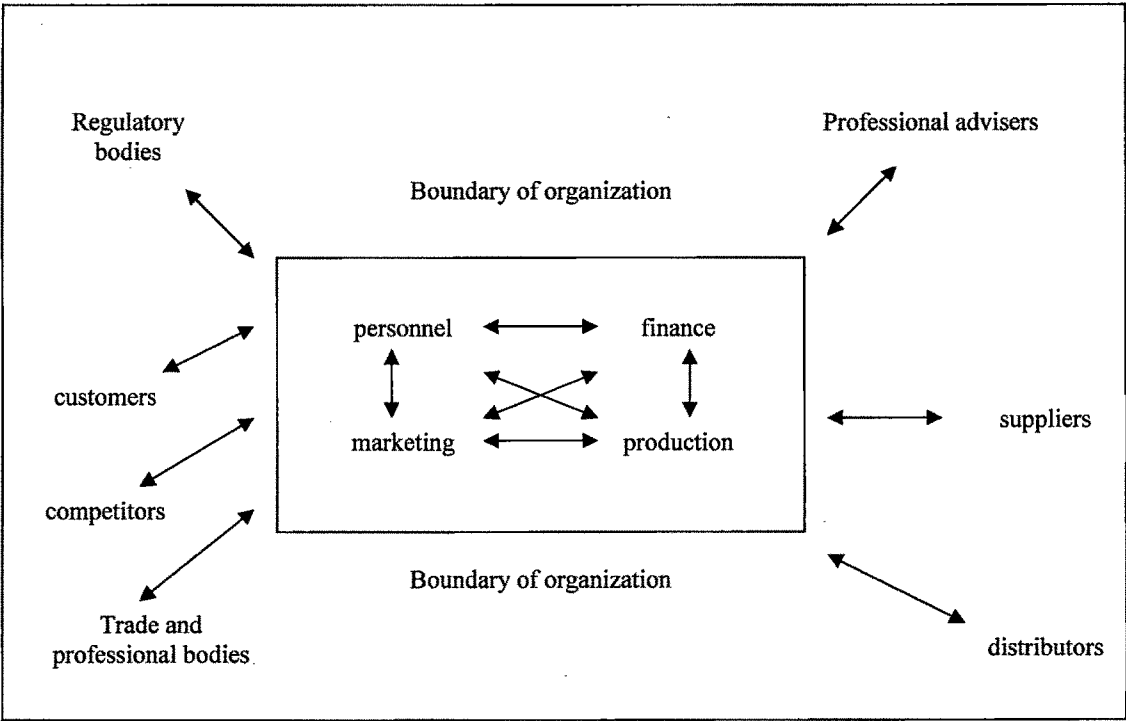


Figure 1: The flow of information within the organization and between it and the external environment (source: Aslib, 1998, 7)

The demand for information in a business is reflected in the information needed and sought by the employees. The Blackwell Encyclopedic Dictionary of Management Information Systems (1997) under the heading of Analyzing Information Needs says – “Given the glut of information available today, finding intelligent ways to navigate through all this data to gain the information needed is essential.” The truly overloading factor for an information seeker is the information glut that is flooded in all forms. Information is needed and is a critical component for every activity that is adding value to the final mission of the business. Information is of value only when used and it is this fact that ties information to people. The information needs of a business or an organization are the needs that are felt by people in the organization. As seen in the earlier section, information is across activities and functions of a business. This implies that people across functions and activities of a business need information. The flow of information is clearly depicted in the Figure 1.

The figure denotes the flow of information within the organization and between it and the external environment and clearly indicates that people working in any function or unit or department of the organization or involved in any activity of the organization are interconnected with all other players in the environment through flow of information. The figure also indicates that the information flow is not a simple process and it is difficult to determine information requirements of people in isolation of the work or activity that he or she is involved in the organization. The complexity is also because information is not only internal but external to the organization also. This complexity increases when one looks at the barriers to information flow adding

to the woes of information overload for people depending on information for their work.

The understanding of information needs of people working in organizations leads to the basic understanding of work environment and tasks that they perform. The important issue here is also the understanding of the people and their information seeking aspects like sources, media, purpose, attributes of the information they look for.

In Aslib (1998, p. 39) Mintzberg is quoted as describing the various tasks and work of managers, generalizing his propositions for all managers from the chief executive to the junior most managers and across all organizations in all sectors, including private and public, as depending on factors such as:

- environmental variables - the nature of the organization and the situation in which the organization finds itself at a particular time, together with the industrial sector in which the organization is situated;
- job variables – the level of the manager in the organization and the function for which he / is responsible;
- the individual manager's personality and style;
- situational variables – such as the problems and events which are currently of paramount importance. For example, periods of threat require the manager to spend a great proportion of his / her time in the disturbance handler role, which is then followed by the replenishment of contacts and resources.

Anthony (1965) classifies the managerial activity into operational control activity, activity associated with managerial and tactical control and strategic activity.

Having looked at the managerial tasks we can concur that the business information need for managers is to take decisions for accomplishing any of the tasks that have been enlisted above and generally accepted. The business information need depends on the decision to be taken and in this context we look at the various types of decisions. It is also generally seen that decisions are not taken in a programmable fashion and depends on various factors like the position of the person in question, the organizational context, the environmental context and situation in which the person who requires taking the decision is in. Simon (1960) in this context distinguishes structured and unstructured decisions or programmed and non-programmed decisions. Aslib (1998, p. 47) describes decisions mostly as not being programmed and rarely straightforward and lists several stages of decision making as follows:

- identifying situations which require a decision;
- problem identification – the essential details of the problem need to be identified, such as the environment, the people involved and the nature of the problem that is explored and an attempt is made to understand the problem;
- information collection – information is collected within the constraints of time, cost, and availability – few decisions are based on perfect information;
- generating alternative courses of action;
- evaluation of alternatives according to their expected outcomes – each solution may be assessed according to the desirability of its outcome, or the

probability of its being successful. The relative advantages and disadvantages of each outcome may be weighed against each other and the solutions ranked accordingly;

- a solution is chosen;
- the solution is implemented;
- the results of the implemented solution are monitored and evaluated.

An illustration of information needs could be better understood by looking at the list of types of information demanded by the businesses as provided by Reid & Keith (1993, p.38):

- Suppliers/sourcing
- Marketing information/research
- Training
- Financial assistance available
- Competitors
- Employment legislation
- Credit checking
- Product specification
- Marketing e.g. mailing lists
- Environmental legislation/issues
- Business advisory services
- Standards
- Property availability

- European legislation
- European Single Market
- Exporting
- Patents
- Eastern Europe
- Importing

Olanigan, S. A. (1987, p. 346) groups the information needs of businessmen into the six categories of:

1. capital procurement and mobilization
2. management training for managers of small businesses
3. technological know-how
4. knowledge of existing policies, practices and regulations
5. marketing
6. foreign trade

While on the topic of information needs we should acknowledge that there also exists the confusion on considering the information need of a person along with the psychological aspects of the people and looking at need in continuity with other needs like food, shelter, and clothing. It may be relevant here that we resort to the work of Derr (1983, p.276) who clarifies that information need is a condition which obtains between information and information purposes and goes on to state that in order to

determine his information need it is not necessary to identify the psychological states of the user but the task should be to determine the information purpose of the user.

The business information needs of managers can now be understood to be dependent on the role and task the person is involved in, the contexts of organization, personal and situation, and the decision making stage and process. In summary we can say that the information required for performing the organizational tasks is business information and the need for such information is the business information need of the individual, to be specific and in general the business information need of the business.

1.4. INDIAN BUSINESSES

Wikipedia (<http://en.wikipedia.org/wiki/Business>, Retrieved September 23, 2007) describes business “as a legally-recognized organizational entity existing within an economically free country designed to sell goods and/or services to consumers, usually in an effort to generate profit.

In predominantly capitalist economies, where most businesses are privately owned, businesses are typically formed to earn profit and grow the personal wealth of their owners. The owners and operators of a business have as one of their main objectives the receipt or generation of a financial return in exchange for their work — that is, the expense of time and energy — and for their acceptance of risk—investing work and money without certainty of success. Notable exceptions to this rule include

cooperative businesses and government institutions. This model of business functioning is opposed by socialists, who advocate either government, public, or worker ownership of most sizable businesses; and to a lesser extent by individuals advocating for a mixed economy of private and state-owned enterprises.”

The term “business” includes many types of organizations, from a part-time cleaner to a multinational company. A business may mean a single person resource or thousands of people working towards the business mission. Pathak (2007) describes the various forms of business as proprietorship, partnership, private and public and government and foreign companies. Basically the forms of business are varied depending on the ownership or control (private or government), in terms of sole proprietorships, partnerships, corporations, cooperatives, joint ventures, and syndicates. Charantimath (2006) adds another category to this called franchising. Business enterprises are also classified by the function they undertake like a manufacturing or a service enterprise. In fact in recent times there has been a situation where no delineation between product and service exists, especially after the advent of Information Technology Enabled Services sector. Generally the manufacturing enterprise is concerned with constructing, assembling or otherwise making a product. These enterprises basically produce finished goods in some form or other. The finished goods may be for direct consumption or used as a raw material by another business enterprise engaged in adding value to input and in the process producing another finished good. The service enterprise basically deals with the provision of services to the consumer and as such does not manufacture a product.



They are more in contact with the consumer and previously it was the service sector that acted as a point of contact between the consumer and the manufacturing enterprises. The increasing competition and cost factors have forced manufacturing enterprises to engage in providing services to the consumers in addition to their manufacturing function.

Coming back to the forms of ownership, in Indian environment (http://india.gov.in/business/start_business/location_industry.php. Retrieved August 21, 2007) we have basically five forms, namely, sole proprietorship, partnership, joint Hindu family firms, companies (public and private) and cooperatives. The businesses established by government are classified as public sector and those by private parties as private sector. The mixed economy has resulted in a combination government and private participation, called as joint sector.

A company (Nabhi, 2003) is a voluntary association of persons formed for the purpose of doing business, having a distinct name and limited liability. There are many forms of a company (Pathak, 2007, p. 284) like statutory, registered, unlimited liability, and limited by guarantee. Pathak (2007, p. 286) also explains that a company is treated like a person by the law and a company may also take form of a holding company or a subsidiary.

The post liberalization period of 1990s has been the most challenging and exciting period for Indian businesses. The opening of the Indian economy heralded the

beginning of global competition and with this also came the steady and massive flow of foreign investments into many sectors of Indian industry except sensitive sectors like defense and security.

United Nations Industrial Development Organization (1995, p. 1) talks about the opening of Indian economy as “Economic reforms introduced inhave taken a root and a major restructuring of the economy is taking place...The old isolation is giving way to a new zeal for globalization.”

The globalization of the economy has had great effect on India reflecting in its development as seen in the increase in access and quality of physical infrastructure like roads, power, and telecom. In addition there seems to be improvements in social indicators and reports on global competitiveness and entrepreneurship also show vital signs of improvement. The jewel in the crown has been the IT sector that has taken Indian businesses to a global level with operations worldwide. The recent spate of foreign acquisitions and mergers by Indian businesses provide ample indication of Indian companies becoming global in all aspects. It is in this environment of global competition and strategic alliances and partnerships that information is playing a key role in all activities of the Indian business.

For purposes of this study the Indian corporate sector includes sole proprietorship, partnership, companies and cooperatives like private limited companies, public

limited companies, family businesses and government organizations. Businesses with headquarters in India and operating globally are also included in the study.

1.5. RELEVANCE AND SCOPE OF THE STUDY

The study is an attempt in understanding the information needs of the Indian corporate sector. The relevance of the study is in creating a framework of understanding the information environment of the Indian corporate sector.

The study focuses on information needs of the Indian corporate sector by studying the perceptions of the people working in Indian businesses at the level of middle management and above. The people selected in the sample were working as engineers, assistant managers, software engineers, business analysts, research analysts, sales managers, and so on. The industries covered are varied and include manufacturing and service sectors like automobile, ITES, Consultancy, Banks, Financial services, Power, Iron and Steel, BPO, etc. The managers perceptions on type of information required for work or task completion, technology used at work, information sources used, information media preferred, information search pattern, where is the information sourced from and the purpose of the information search are focused in this study. The study also explores the differences and similarities in the information environment in the services and manufacturing businesses.

The relevance of this study in surveying and exploring various aspects of information seeking and needs among the managers in Indian corporate sector is important for India today. India is being keenly watched by world community as an important player in global business, politics, economy and social order.

Hence a study of this nature that contributes to the existing literature and knowledge generated in terms of understanding Indian corporate sector will prove to be useful for business information professionals, information providers and entrepreneurs, planners and policy makers. The study will also be relevant for indicating direction and scope for further research in related areas of interest.

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