Information Technology enabled Decision Making in Business Applications.

Mr. Dhruv Dixit | Prof. Bindu Trikha
IT Department, IMS Ghaziabad University Courses Campus, Ghaziabad.

Abstract: ***Technology makes information available to decision makers, helping to improve the quality and speed of decision making. Technology also makes it easier for people to collaborate so they can execute joint business decisions. Organizations use communication technology to update employees on business decisions and ensure the right people implement those decisions. Individuals or groups who make business decisions need rapid access to information to formulate and justify their decisions. Information can include historical corporate data, customer records, market trends, financial data and competitor profiles. This information may reside in varying databases within an organization, however, making it difficult for decision makers to get a complete picture. Investing in a networked data management system enables organizations to store data in central locations that decision makers can access via a secure network. Technology can also improve the collection of information needed for business decisions. Providing network links between a central database and local retail outlets, for example, enables organizations to collect the latest sales data and make decisions based on up-to-date information. Similarly, members of a supply chain can collect and share market and production data to make more accurate decisions about production and stock levels. Data alone cannot improve business decisions. According to Strategic Consultancy DSS Resources, data management must reflect decision-making processes. Many information technology (IT) departments believe that their responsibility is just to deliver large quantities of data to the decision maker's desktop. Raw data, however, is unlikely to reflect the decision makers' needs, creating a disconnect between IT and business. The decision-making process consists of a number of stages including decision preparation, decision structuring, decision making, and decision management. Data requirements are different at each stage, so large volumes of raw data are unnecessary. Business intelligence software tools are available that allow users to select, analyse and manipulate data into the form they need at different stages of the process. In many organizations, decision making is a group process, particularly for a project such as new product development. Technology supports decision making in a group environment by allowing all members to access essential data via a network. Groups can also use collaboration tools such as audio or video conferencing to conduct meetings between members in different locations as a way to speed up decision making.***

Keywords: Information Technology, Business Decision Making, Decision Support Systems

1. Introduction

With information technology (IT) going mobile, thanks to the deployment of faster and more reliable broadband networks, we are experiencing yet another technology driven transition. Technology (-based) businesses can be referred to as businesses that engage in technology related products, processes and services. They may be low-, medium- or high- technology. One area of the economy which has seen significant growth is that focused on new technology-based products and services and the high-technology sectors are perceived as major sources of future economic prosperity and employment growth.

However, IT includes the management information systems (computers, hardware, software, networks) used to automate and support business tasks and decision-making. IT is used to automate simple, routine tasks such as word processing and advanced processes such as production, scheduling and logistics. In this manner, information technology enables businesses to operate efficiently and profitably.

Technological advances in the past few decades have greatly increased the competitive nature of the economic business world. Companies have used software, computers and the Internet to transform their businesses from local places of business to national and global market competitors. Many companies have responded to these changes by automating their business processes and capturing industry-related information and using it to their advantage. Technology has also forced businesses to remain flexible, adapting their operations to newer and better technological advances.

Business owners once had very few tools at their disposal: little more than a basic adding machine and paper records. Today's business owners can complete their duties much more effectively than their predecessors with an array of technological tools at their disposal. By using these tech tools, companies and employees enjoy a number of business-related benefits.

We know that the business sector produces products and services for profit. Information technology describes any technology used to create, process and disseminate information that is critical to business performance. Information technology is important to the business sector as a management tool to optimize the processing of information to produce goods and services for profit. Automation improvements achieved by deploying information technology usually decrease the number of personnel required. Economies of scale gained through the deployment of information technology reduce the overall cost for businesses to produce products and services. This has an overwhelmingly positive effect on the financial goals of a business.

Quality assurance entails systematic testing to ensure that a business is producing quality goods and services for its customers. Rigorous quality standards help business

outputs meet the required specifications. Quality assurance can be used within processes such as marketing, customer support and accounting, as well as product testing. The effective and efficient processing of information related to achieving quality assurance goals is key to the delivery of quality goods and services to business customers. Investments in information technology can help make a firm's operational processes substantially more efficient, and its managerial processes much more effective. By making such improvements to its business processes a firm may be able to:

1. Dramatically cut costs
2. Improve the quality and customer service
3. Develop innovative products for new markets

Investments in information systems technology can result in the development of new products, services, and processes.
This can:
1. Create new business opportunities
2. Enable a firm to enter new markets
3. Enable a firm to enter into new market segments of existing markets.

About strategic, competitive advantage plays a fundamental role in the success of a given business within its sector. Information technology has become fundamental to acquiring competitive advantage. The combination of process improvements, cost reductions, communications and quality assurance all contribute to the competitive advantage of a business unit. However, the constant identification and analysis of new risks and opportunities are critical to the ongoing success of a business. Evolving Internet aggregation technologies, including social networks, blogs and subscription databases, are becoming important tools needed to achieve and maintain advantages within the business sector. The transfer of information is a significant impact of information technology in business. Companies gather information from both internal and external sources with more efficiently than in previous years. Email is now a common form of business communication that results in near-instant messages that deliver important information.

2. The Role of Information Technology

2.1 Importance of Information Technology in business relationships

The social interaction of a business relationship can be discussed in terms of how often people from the companies meet, or how well the parties know each other. It is argued that depending on the extent of the use of information technology for different exchanges, the impact on the social interaction patterns that are carried out without information technology may be influenced. One argument that could be raised in the theorizing on the effect of use of information technology in business relationships is that the number of meetings, or need for meetings will decrease, as the use of the technology handles a great deal of information exchanges, i.e. replaces some of the personal exchange of information.

The question is if the need for personal meetings decreases when the levels of information technology use increase. That would suggest increased efficiency of meetings, as the use of information technology then replaces other means of interaction for some types of exchanges. On the other hand, the use of information technology may require additional meetings, if the technology is difficult use or the purpose of its employment is another than making the information exchange more efficient by decreasing the need for meetings. The reasons why the use of information technology in business relationships would decrease or increase the need for personal meetings can only be speculated on.

The social interaction of a business relationship can be discussed in terms of how often people from the companies meet, or how well the parties know each other. It is argued that depending on the extent of the use of information technology for different exchanges, the impact on the social interaction patterns that are carried out without information technology may be influenced. One argument that could be raised in the theorizing on the effect of use of information technology in business relationships is that the number of meetings, or need for meetings will decrease, as the use of the technology handles a great deal of information exchanges, i.e. replaces some of the personal exchange of information.

The question is if the need for personal meetings decreases when the levels of information technology use increase. That would suggest increased efficiency of meetings, as the use of information technology then replaces other means of interaction for some types of exchanges. On the other hand, the use of information technology may require additional meetings, if the technology is difficult use or the purpose of its employment is another than making the information exchange more efficient by decreasing the need for meetings. The reasons why the use of information technology in business relationships would decrease or increase the need for personal meetings can only be speculated on.

This paper analyses the extent to which the need for personal meetings has decreased or increased in the investigated business relationships as a result of the use of information technology, as well as to the extent which such a change is related to levels of lower and higher of information technology. If the use of information technology affects the need for personal meetings, and that effect is related to when the use is lower or higher, it is interesting to analyse why and how the need for personal meetings is affected by the use of information technology. Now, most organizations in all sectors of industry, commerce and government are fundamentally dependent on their information technologies.

The information revolution is sweeping through our economy. No company can escape its effects. Dramatic reduction in the cost of achieving, processing, and transmitting information is changing the mode by which we do business. This article moves towards the explaining and distinguishing impact IT has on internal and corporate strategies in small and medium enterprises. The information revolution is sweeping through information is changing the mode by which we do business. Many companies in most our economy; no company can escape its effects. Dramatic reduction in the cost of achieving, processing, and transmitting industries have little choice but to implement some form of information technology in order to remain both innovative and on the cutting edge of competitive advantage.

2.2 View of Information Technology's Relationship to Business

There are two basic concepts or principles that can be effectively executed and applied within an organization to help the organization succeed when it comes to Information Technology [1].

- Link Information Technology Solutions to Overall Business Strategy
- Keep IT Simple

Maintaining focus on the overall goals and mission of an organization while looking at Information Technology enables management to make appropriate investments, reduce cost, and provide value. We recommend a top-down approach and have found the seven-layer OSI (Open Systems Interconnection) Model an excellent tool to help think about Information Technology needs. OSI is an international standard to help implementers, developers, technicians, and service providers ensure software and hardware properly work with one another and
communication can occur within the network and with end users.

We found the same approach can be used when thinking about your Information Technology needs. By looking at the "big picture", it is possible to align your business processes and Information Technology needs with the overall strategy and goals of your organisation. Strategy, Goals, Mission and Culture Drive Business Processes. Business Processes determine necessary tasks (who, what, why, where and how). The tasks define the Information Technology requirements (software and hardware) to be investigated, decided upon, and implemented.

The challenge occurs when discussing the tasks and Information Technology requirements. The communication channel tends to break down. This is known by many as the "IT Divide". Both sides have their own jargon, abbreviations, and unique experiences. Neither is able to explain, in terms understandable by the other, the necessary requirements, limitations, gaps, and potential solutions that are an acceptable fit. Executives, Managers and Technologists each go their own way out of frustration with one another. And the alignment of business processes and strategy with Information Technology goes by the wayside. Information Technology success comes from having a common understanding. Everyone on the team needs to take a look at the total picture and approach the solution with the same view and goal. If this occurs, it is possible to align business processes and Information Technology needs with the overall strategy and goals of an organization. The result is motivated employees, satisfied customers, and reduced costs.

2.3 Keep "IT" Simple

We have found many organizations have a tendency to complicate their Information Technology environment. It is our belief that Information Technology should not and does not need to be complicated. We believe organizations should focus on keeping "IT" simple. By simplifying and consolidating an organization's Information Technology there is [2]:

- Reduced or lowered costs,
- Improved efficiency and increased consistency,
- Easier overall administration,
- Ability to respond quicker to change, and
- Better use resources (hardware, software and people).

Some Keep "IT" Simple" recommendations are:

- Standardize on hardware and software,
- Develop and follow policies and procedures,
- Document your network infrastructure,
- Purchase and use proven products from well-known and reliable vendors,
- Select and integrate application systems prudently, and • Limit business workstation use to business use only.

It is our experience that the more complex the environment, the more complicated it becomes as well as inflexible. This results in additional time and effort needed to maintain and/or change the environment increasing operational and maintenance costs.

By keeping IT simple we have found funds can be reallocated from maintenance and routine operational activities to spending on strategic information technology and/or operational needs that support the overall organizational objectives and goals. How can the preceding competitive strategy concepts be applied to the strategic role of information systems? Information technology can be used to implement a variety of competitive strategies. These include the five basic competitive strategies (differentiation, cost, innovation, growth, alliance), as well as other ways that companies can use information systems strategically to gain a competitive edge. For example:

1) Lower Costs
2) Differentiate
3) Innovate
4) Promote Growth
5) Develop Alliances

6) Improve quality and efficiency
7) Build an IT platform
8) Other strategies
   - use inter organizational information systems to create switching costs that lock in customers and suppliers.
   - use investments in IT to build barriers to entry against industry outsiders.
   - use IT components to make substitution of competing products unattractive.

3. Reengineering Business Processes

One of the most popular competitive strategies today is business process reengineering (BPR), most often simply called reengineering. Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in cost, quality, speed, and service. BPR combines a strategy of promoting business innovation with a strategy of making major improvements to business processes so that a company can become a much stronger and more successful competitor in the marketplace.

3.1 How to Implement Business Process Reengineering in Your Business?

The following steps (Davenport, 1992) can help BPR realize its core principles of customer satisfaction, reduced costs of business and increased competitiveness [3].

Business vision and objectives: Any BPR activity needs to begin with a clearly defined and measurable objectives. Whether the goal is reducing costs, improving quality of product, or increasing efficiency, the framework for what needs to be achieved has to be decided upon at the outset, in line with the company's vision and mission.

Identification and slacking processes: Once a clear goal is in mind, all processes need to be studied and those seen as 'slacking' or that can be improved need to be identified. Among these, those processes with direct impact on the company's output or those that clash with the company's mission become part of the 'red' list. This clear identification makes the difference between BPR success and failure.

Understand and measure the 'red' processes: With a list of slacking processes in hand, it is imperative to identify how they were identified as such. Are they taking too much time to complete? Is the quality of the outcome being compromised?

Whatever the issue, each process must be judged objectively either against industry standards or ethically obtained competitor best practices.

Information system and technology capabilities: An efficient and relevant IT system is an essential BPR enabler. Without such a system, it is not possible to keep a check on all factors affecting the change. Before setting out on a radical BPR activity, it is vital to set in place information systems that can deal with the magnitude of the change.

Design, build and test the new prototype: Before any new product is launched, a prototype is tested out. A failure at a testing stage should never be implemented at a larger scale. BPR projects fail more often than not for a variety of reasons but a basic reason is the inability to identify and accept any limitations at the testing stage. Among other factors, both the management's attitude towards the new way of work and the employees' outlook towards the change should be carefully assessed.

Adapting the organization: Managing change brought about by BPR activities is the final effort towards a successful project. Providing updated documentation, organizational structures, governance models as well as updated charts of authority and responsibility leave little room for confusion and allow a smooth transition into the new way of work.

Business process reengineering is a radical change activity that cannot be repeated if it goes wrong the first time. It is often a high-risk activity that involves monetary investment and a risk of demotivated employees. In is essential to have buy in all the way from top management down and it should have a broad functional scope.

It Is Important to Acknowledge and understand that BPR is not a fool proof method of success. As with all activities it runs the risk of failure [4].

A BPR program can be successful if:

- Customer needs are made the priority and this vision is used to appropriately direct business practices.
- There are cost advantages to be achieved that help the organization become more competitive in its industry
- A strategic view of all operational processes is taken with relevant questions being asked about the established way of work and how it can be developed over the long term into more efficient business practices.
- There is a willingness to look beyond tasks and traditional functional boundaries with a focus outcome. Through this, entire processes can be eliminated or amalgamated into fewer but more relevant and powerful processes throughout the organization.
- There is a real desire to simplify the way of work by objectively assessing all activities and tasks and eliminating any that add less value and more complexity.

A BPR program will fail if:

- It is seen as a way to make minor adjustments and improvements to existing processes. If there is no clear willingness to put all existing process onto the chopping block, there is no chance of success.

- It is seen as a one-time cost cutting exercise. In reality, cost reductions are often a handy by product of the activity but not the primary concern. It is also not a one-time activity but an ongoing change in mind-set
- There is no success in gaining dedicated long-term commitment from management and the employees. Bringing people on-board is a difficult task and many BPR initiatives never take off because enough effort is not put into securing support
- There is less effort to redesign and more to automate.
- One department is prioritized at the expense of the process. There needs to be an openness towards studying every single process in detail and a willingness to change whatever is needed to achieve overall efficiency.
- There is too much internal focus and not enough of an eye on the industry and what competitor best practices can be used as benchmarks.

4. Information Technology and Competitive Advantage

Although the objective of any Information IT business unit is the enhancement of modern firm's performance - through the improvement of the quality of managerial decisions - in the absence of an adequate alignment between IT and Business objectives, the attainment of the firm's agility status is jeopardized, and consequently, the chances of achieving the IT-Business competitive advantage are reduced.

The strategic role of information systems involves using information technology to develop products, services, and capabilities that give a company strategic advantages over the competitive forces it faces in the global marketplace. This creates strategic information systems, information systems that support or shape the competitive position and strategies of an enterprise. So, a strategic information system can be any kind sentence of information system (TPS, MIS, DSS, etc.) that helps an organization:

1) Gain a competitive advantage
2) Reduce a competitive disadvantage
3) Meet other strategic enterprise objectives

Information technology emerges as an essential asset of modern firms' competitive advantage, because it connects all business functions and supports managerial decision processes - both essential conditions for the attainment of the organization agility level.

In any company, IT has a dominant effect on competitive advantages in either cost or differentiation. The technology also affects value activity themselves or allows companies to gain competitive advantage by utilizing changes in competitive scope. Porter (1996) stated; the IT is affecting competition in three fundamental ways:

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

In the last decade many scholars were trying to develop the idea of IT as a source of competitive advantage have been focusing on IT capabilities as a source of competitive advantage. Overview indicates on four different relationships:

1) IT has a direct and positive effect on firm performance/ competitive advantage;
2) IT has a direct and negative effect on firm performance/competitive advantage;
3) There is no connection and no effect between IT and firm performance/competitive advantage; and
4) IT has a contingent effect on firm performance/competitive advantage.

- IT as a resource can contribute to improved growth and productivity. However, the question of whether IT can be a source of competitive advantage remains unresolved since they discovered that IT spending was not correlated with competitive advantage.
- IT capabilities have greater overall profitability (firm performance).

4.1 Value Chain

An important concept that can help a manager identify opportunities for strategic information systems is the value chain concept as developed by Michael Porter. This concept:

1) Views a firm as a series or "chain," of basic activities that add value to its products and services and thus, add a margin of value to the firm.
2) Some business activities are viewed as primary activities, and others are support activities. This framework can highlight where competitive strategies can best be applied in a business.
3) Managerial end users should try to develop strategic information systems for those activities that add the most value to a company's product or services, and thus to the overall business value of the firm.

The model highlights specific activities in the business where competitive strategies can be best applied and where information systems are most likely to have a strategic impact. By creating/adding value and thus creating competitive advantages, information systems could contribute to each part of an organization's value chain and extended value chain (including interactions/ties with external partners and strategic alliances). By leveraging on the Internet technologies, organizations could also create a value web or a hub structure, both of them look at improving the efficiency and the effectiveness of value chain and supply chain by digitally connecting customers, suppliers, partners; by reducing the information gaps/errors along the chain (especially demand and supply); and by bettering communication, cooperation and collaboration.

4.2 Internet Value Chains

The value chain concept helps a company evaluate how to use information technology strategically. Value chains can also be used to strategically position a company's Internet based applications to gain competitive advantage. The value chain model can be used to outline several ways that a:

1) Company's Internet connections with its customers could provide business benefits and opportunities for competitive advantage.
2) Company's Internet connections with its suppliers could be used for competitive advantage.
3) Company's internal operations can benefit strategically from Internet-based applications.

Table 1: Operational Definitions of Observed Variable

Variables	*Operational definition*	*Sources*
Information technology ***adoption***	**Information technology** infrastructure • Information technology hardware establishment • Information technology software purchasing and maintenance • Information technology staffing • Implementing new information technology applications	Sircar et al (2000); Bharadwaj(2000)
	Organizational structure • Employee empowerment • Business function integration • Work activities coordination • Departmental operations mobility • Decision making quick response	Flippo (1966); Mintzberg (1979); Porrass & Robertson (1992); Zaltman et al.(1973)
	Strategic alignment • Aligning information technology strategies to business strategies • Developing information technology projects to support business strategies • Updating information technology applications for business strategic goals • Deploying information technology strategies for business processes	Venkatraman(1989); Palmer &Markus (2000); Reich & Benbasat(1996)
	Individual learning • Providing information technology related training • Being familiar with information technology applications • Adapting to use information technology applications • Possessing information technology knowledge and skills • Less resistance to information technology applications	Barrett (1995); Scott Morton (1995); Grover et al. (1999); Zahra & George (2002); Chonko et al.(2003)
Service innovation practices	**Process innovation** • New external service processes • New internal service development processes • New internal administration processes	Zaltman et al. (1973); Davenport & Short (1990)
	Product innovation • Service modifications • Service line extensions • Service repositioning • New service launch	Avlonitis et al. (2001)
Competitive advantage	**External advantage** • Entering a new market • Obtaining higher competitive advantage • Providing better services quality than competitors	Avlonitis et al. (2001); Atuahene-Gima (1996)
	Internal advantage • Increasing staff job satisfaction • Enhancing staff experience and domain knowledge • Uplifting staff innovative capability	Van Riel et al. (2004); Atuahene-Gima (1996)

5. Framework for Competitive Analysis

According to Michael Porter, a firm can survive and succeed in the long run if it successfully develops strategies to confront five competitive forces that shape the structure of competition in its industry. These include:

1) Rivalry of competitors within its industry
2) Threat of new entrants
3) Threat of substitutes
4) Bargaining power of customers
5) Bargaining power of suppliers

Porter advanced the idea that competition in any industry is rooted in its principal economic structure, so that it is more than a superficial game of moves and countermoves among participating firms. This approach is reflected in the framework he proposed to explain; i.e. the dynamics of competition in an industry.

A Variety of Competitive Strategies Can Be Developed to Help a Firm Confront These Competitive Forces.

As IT impacts the products, services, or operations of a business, it may change the relationship between an industry and its suppliers. For example, the use of complex production line systems by the auto industry is forcing robots' producers to become much more quality conscious. When industries become much more dependent upon IT, the bargaining power of the IT supplier will become an important force for a firm to consider planning strategy. It also changes the level of sophistication of some industries' suppliers.

IT also affects the buyer bargaining power of industries, such as new products, services, and distribution channels. For example, buyers in the banking industry can now choose products and services from several channels. The buyer industry relationship has been fundamentally changed by Automated teller machine (ATMs), point-of-sale terminals (POSs), and electronic home banking.

Table 2: Variety of Competitive Strategies

Variety of Competitive Strategies	
Cost Leadership Strategy	**Become a low cost producer of products and services** - Find ways to help suppliers or customers reduce their costs - Increase the costs of competitors.
Differentiation Strategy	**Develop ways to differentiate products and services from competitors** - Reduce the differentiation advantages of competitors.
Innovation Strategy	**Find new ways of doing business:** a) develop new products & services b) enter new markets or marketing segments. c) establish new business alliances d) find new ways of producing products/services e) find new ways of distributing products/services
Growth Strategies	**Significantly expand the company's capacity to produce goods and services** - Expand into global markets - Diversify into new products and services - Integrate into related products and services.
Alliance Strategies	Establish new business linkages and alliances with customers, suppliers, competitors, consultants and other companies (mergers, acquisitions, joint ventures, forming virtual companies, etc.).

On the other hand, IT affects the rate of new entry into industries by raising the barrier to delay competitor entry by providing new service or product features that appeal to customers. For example, in the banking industry, IT-based access to banking services has seriously eroded the traditional entry barriers enjoyed by many branch offices. In the distribution industry, IT has created new entry barriers by requiring investment in extensive computer and telecommunication networks that are used to control costs in large-scale multiplication distribution facilities. In effect, IT has created a new scale- economy barrier which the new entrant must overcome in order to price competitively and still be profitable.

Finally, IT changes industry structure by affecting the rivalry bases among intra-industry competitors. By introducing a new competitive weapon into various settings, IT sparks outbreaks of firm warfare. For example, recently,
ICICI bank has introduced TV banking and i-zone to serve the customers as a new weapon to improve the bank's position in its competitive environment [6].

6. Conclusion

Information technology can change the way businesses compete. For this reason, you should view information systems strategically, that is, as vital competitive networks, as a means of organizational renewal, and as a necessary investment in technologies that help an enterprise achieve its strategic objectives.

The evidence also suggests that turning investment in ICT into higher productivity is not straightforward. It typically requires complementary investments and changes, e.g. in human capital, organizational change and innovation. Moreover, ICT-related changes are part of a process of search and experimentation, where some firms succeed and grow and others fail and disappear. Countries with a business environment that enables this process of creative destruction may be better able to seize benefits from ICT than countries where such changes are more difficult and slower to occur. As a result, small businesses are investing in information and communication technologies to expand information systems applications to support their business strategy and thereby establish a competitive advantage based on the unique capability created in their markets. Consequently, alignment between an organization's business strategy and its information systems strategy positively affects business performance.

References

[1] Lad Enterprizes, Inc., View of Information Technology's Relationship To Business, www.ladenterprizes.com, June 2008

[2] Lad Enterprizes, Inc., View of Information Technology's Relationship To Business, www.ladenterprizes.com, June 2008

[3] Internet: http://www.entrepreneurialinsights.com/business-competitive-business-processreengineering-bpr/

[4] Internet: http://www.entrepreneurialinsights.com/business-competitive-business-processreengineering-bpr/

[5] Internet: http://www.informationr.net/ir/123/paper314.html

[6] Poolad Daneshvar et. al. Review of Information Technology Effect on Competitive Advantage-Strategic Perspective, International Journal of Engineering Science and Technology Vol. 2(11), 2010, 6248-6256.

[7] Dedrick, J., Kraemer, K. L., & Xu, S. (2004). Information technology payoff in e-business environments: An international perspective on value creation of e-business in the financial services industry. Journal of Management Information Systems, 21(1), 1754.

[8] Gerstein, M., & Reisman, H. (1982). Creating Competitive Advantage with Computer Technology. Journal of Business Strategy, 3(1), 53-60.

[9] Grant, R.M. (1991). The resource-based theory of competitive advantages: implications for strategy formulation. California Management Review, 33(3), 1435.

[10] Ankit Bhatnagar. (2006). Strategic Information Systems Planning: Alignment of 'IS/IT' Planning and Business Planning, Unitec New Zealand.

[11] Porter, M. E. (1996). What Is a Strategy? Harvard Business Review, November–December, 1996

[12] Porter, M. E. (2001). Strategy and the Internet. Harvard Business Review, Vol. 79, No. 3

[13] Chaffey, D. (2002). E-business and E-C management. England: Prentice-Hall.

[14] Henderson, J. C., & Venkatraman, N. (1993). Strategic alignment: Leveraging information technology for transforming organizations. IBM System Journal,32(1),4-16.

[15] Johnston, H., & Carrico, S. (1988). Developing capabilities to use information strategically. MIS Quarterly, 12(1), 37-48.

[16] 4] Melville, N.,& Kraemer, K., & Gurbaxani, V. (2004). Review: Information technology and organizational performance: An integrative model of IT business value. MIS Quarterly, 28(2), 283-322.

[17] [15] Scott Morton, M.S. (1991). The Corporation of the 1990s: Information Technology and Organisational Transformation. Oxford University Press, New York.

Author Profile

Mr. Dhruv Dixit is pursuing Bachelor of Computer Application from **IMS Ghaziabad (University Courses Campus)** since 2017.

Ms. Bindu Trikha is working as an Assistant professor, **IMS Ghaziabad University courses Campus**. She has an approximate 15 years of academic experience.