

Technological environment

Technology, Innovation



Assignment on “ Technological Environment" Management of Technology

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Technological environment is one of those environments which have a direct

impact on business but business has nothing to control over technological

change perhaps it has to take prompt action to cope up with the changing

environment of Technology. How management reacts to the influences of the

technological environment is the key to its business success. Management

can monitor the changes in technological environment and plan accordingly,

or can just react as each situation develops and hope to survive. Successful

companies are the ones who see trends developing and plan in advance to

deal with the anticipated changes. And it needs the proper utilization of

efficient and effective managerial skill. Definitions of Technological

Environment: Technological Environment means the development in the field

of technology which affects business by new inventions of productions and

other improvements in techniques to perform the business work. In other word, External factors in technology that impact business operations. Changes in technology affect how a company will do business. A business may have to dramatically change their operating strategy as a result of changes in the technological environment. Types of Technology: General Perspective: Technology can be classified in several ways. For example, blueprints, machinery, equipment and other capital goods are sometimes referred to as hard technology while soft technology includes management know-how, finance, marketing and administrative techniques. When a relatively primitive technology is used in the production process, the technology is usually referred to as labor-intensive. A highly advanced technology, on the other hand, is generally termed capital-intensive. Business Perspective: The way that businesses function both in and out of the office has changed drastically. Thanks to advances in computer, information and communication technology. Companies now use a variety of mobile devices, software and various applications that employees can use for marketing and networking, as well as research and development, for their goods and services. * Internet- the Internet, perhaps more than any other factor, has changed the way that companies do business. Most companies have websites, which allow them to reach a larger audience and attract customers and employees from all over the world. In addition, businesses are now utilizing social-networking websites such as Facebook, LinkedIn and Twitter, enabling them to communicate directly with customers with news and updates. These websites are interactive, which means that companies can also receive immediate feedback on new products from customers,

speeding the process of research and development. Email, video conferencing and online chat rooms have also made it easier for businesses to become more globalized, communicating quickly and easily with clients and co-workers regardless of their location. * Mobile Devices- The Internet resources listed above are not just available on an office computer. Many companies provide their employees with other mobile devices such as laptops, tablet computers, PDAs and smart phones. These devices are portable and enable workers to stay constantly connected and updated with their work. They also make it more possible for employees to have a " mobile office," working from any location and allowing them to travel or live in an area other than where the business is actually located. Most mobile devices also have an enormous number of applications available such as productivity tools, locators that utilize GPS functions and other organizational applications that help employees download, type, share and even print documents remotely from their device. * Software- Depending on the type of business, the software used by companies will vary. However, many companies can benefit from several types of software and applications. For example, Voice Over Internet Protocol (VoIP) software, when installed, allows businesses to make phone calls and have conferences over the Internet rather than use the traditional analog signal. Most business software is designed to make specific tasks, such as budgeting, accounting and communication, easier, faster and more cost effective. They also help with more advanced tasks, such as translation for companies that are moving into the global marketplace, website design and monitoring and managing of web services.

Functions of Technological Environment in Business: - The shortening of

product life cycles (Technology becoming obsolete and getting replaced by newer models more rapidly). This may cause you to need to keep your equipment up to date, or constantly improve your product and add new features to it. - Technology adopted by rival companies. This may force you to upgrade your business to keep up with them. - R&D activities that may improve or enhance the features/effectiveness of your product or service. - Changing attitudes and expectations of customers (for example, if you design a new type of television, people may expect it to be HD and/or digital). The thing about these factors is that they can set barriers to entry (the newest Technology tends to be quite expensive to procure). They can also determine minimum efficient production level and influence outsourcing decisions. Furthermore, changes in the technological can affect cost (efficient production, lowers the unit costs of production), quality (introduce new and better features), and result in new innovations. The Advantages and Disadvantages of Technology: General Perspective: The level of the technology keeps on improving. Technology has really changed people's lives. There are lots of improvements people are now using because of technology. Over the years, there have been many advancements and improvements that technology offers us. But do they really give us the proper advantages, or are we paying a price for it? * Communication Our means of communication has greatly improved in the dawn of the modern technology. We now have so many hi-tech gadgets that we use for everyday communicating with people from all over the world. The telephone is a very helpful mean tool for us to talk with people from remote places, then came out the cellular phones, which we can take with us wherever we go. Now, we

are given the privilege to use computers and the internet that has such a wide variety of easy communication offers. It is one of the reasons why we should be thankful for technology. The disadvantage of this is that too many people can communicate with us all at the same time. It can create scams and spamming in a lot of ways. The youth has also been very much addicted to gadgets that they get to spend too much time with it. * Health There have been lots of advantages with technology when it comes to health. Our lives will never be the same again after the breakthroughs of many medicines and other discoveries. Lengthening our lives is very easy these days. We can choose whether we want to live a longer life, and there are certain methods for that. * Production The production has also been increased. Now, we can create materials in just minutes with multiple productions at a time. This is what the modern machines contribute to our society. A disadvantage of this is the energy that it uses. It consumes a lot of energy to run the machines. And so, we need more fuel, and it will then leave a lot of waste and pollution to our environment. It is the most destructive price for our today's technology. Our ways of living has also been improved potentially. But still, there have been a lot of people who lost their jobs because man power has been replaced by machines. Also, if one wants to work with modern equipments, he cannot start work at hand because he has to undergo extreme training. It can be a disadvantage for people who wants to start the job soon so that they can get the payment. We cannot avoid these disadvantages that go along with the advantages of technology. There are so many improvements we are having now, but still, we need to comply with what they cost in return. It is all part of the gambling we do with the

environment for the sake of living an easier life. Business Perspective: Perhaps no other factor has had as large of an impact on the shape of the private business world in modern times than the introduction of new technology. In the private sector, new technology has upturned whole industries and changed the very fabric of our world. It has created much wealth, but the process is not entirely without its drawbacks. * Creative Destruction Possibly, the most important work done on the role of technology in the private sector was by the Austrian economist Joseph Schumpeter. He theorised on the impact of what he called "creative destruction" in the business world. This phrase describes the process by which new technology upturns older players in the business world allowing new competitors to rise and create new wealth for the economy. This process brings prosperity, but also disruption. * Centralization and Decentralization Technology takes the blame for both the centralization and the decentralization of the overall economy. During the 19th and early 20th centuries, new technology led to the creation of large industrial corporations that centralized the economy under their dominance. In the later part of the 20th century and continuing today, newer information technology led to a process of decentralization in which smaller companies could shape the economy. Both processes have taken criticism. * Competition The differences in fortune between companies that can adapt to new technology and those that cannot can be very dramatic. Companies that use the newest technology in their business practices, and have adopted their strategies to optimise its benefits, are those that tend to dominate the landscape. Repeatedly, the most effective means of beating competitors has been new technology. * Booms and

Busts A period of great economic growth, called a boom, often follows the introduction of major new technology. Because the effects of new technology are uncertain, these booms can also turn into busts when people realize that the positive effects of the new technology were overstated and a market correction is necessary. A recent boom and bust cycle, some argue, occurred in the late 1990s and early 2000s with new Internet companies. Components of Technology which Has Changed the Business Environment : Businesses are constantly under pressure to keep up with ever-changing technology advancements. While smart phones allow business communications to occur from virtually anywhere, social media is enabling marketers to directly reach their target audience on a whole new level. Several major technological changes have had significant impacts on the present and future for businesses. * Websites Websites not only serve as a resource for contact and other information about a business, but are actually a means to advertise to anyone who visits or stumbles upon the site. Consumers searching online for a certain service or product may be directed to a business's website that they may not have ever visited otherwise. The increasing popularity of business websites has driven down the costs to get one: A basic business website can be put up for less than \$10 a month in hosting fees as of mid-2010. On the other hand, major corporate sites that utilize a lot of animation and have hundreds of pages can cost tens of thousands. * Email Email has changed the way business communication is done by offering another way to reach colleagues, customers and vendors. More importantly, though, is the ability of email to reach customers through the use of email marketing, which now has its own industry and service providers. Email marketing firms

provide their clients with metrics reports that include click-through rates, as well as forward and open percentages, thereby demonstrating increases in the spread of their sales messages to their clients. * Smart Phones The overwhelming popularity of smart phones continues to integrate into office environments. Smart phones such as the BlackBerry, iPhone and Droid provide on-the-go access to email, Internet, scheduling and calendars, and can even provide access to presentations and invoices through the use of downloadable applications. BlackBerrys can even serve as an extension of an office phone line. * Videoconferencing Teleconference capabilities have allowed businesses to communicate with clients from all parts of the world, but now video calling from a computer provides the face-to-face contact that's important in business. Internet-based voice and video calling services and applications such as Skype, iChat and Yahoo! Voice require users to download an application program. System requirements include a webcam, microphone and Internet connectivity. * Social Media Social media is changing the way business market themselves. With numerous social media sites, including Facebook, Twitter, MySpace and YouTube, businesses can control their marketing message in a non-traditional environment. More and more companies are embracing social media as a new way to reach consumers directly and quickly, and with almost zero costs. Technological impact on the Global Business Environment: Technology has had a tremendous impact upon the global business environment. Communication, transportation and production efficiency are various areas of business which have been enhanced by the development and improvement of technology. As continual enhancements are made, the world continues to "grow smaller"

and businesses have further reach than ever. * Computers The most important technological development to impact the global business environment is the world of computers. There are various programs which help maintain records of inventories and shipments. Email allows for instantaneous communication almost anywhere in the world. Besides its speed, email is easily forwarded and retained. The communication in the global business environment is improved with the use of email. The impact of computers on the global business environment is wide-ranging and also includes the Internet, which is a useful tool for international companies. By using the Internet, companies across the world can perform research and learn more about partners and suppliers. * Conference Calls and Video Conferencing Conference calls allow people in multiple locations to be involved in the same conversation. Video conferencing provides the same service, but with the added benefit of all parties being able to actually see each other. Both of these forms of communication have a definite impact on the global business environment. With either form of technology, a parent company in Norway can have a conversation with a raw material supplier in Brazil and a manufacturing plant in Taiwan. This improves communication on a global scale and enables all parties to understand specific plans and agreements. * Transportation The shipment of raw materials and finished products is absolutely vital to any business, but particularly those with an international scope. Transportation technology enables a company on one continent to send its raw materials or products to another company in a different continent. Technological advancements in airplanes, cargo ships and railways allow for quicker, cheaper delivery, which impacts business by

making global distribution more feasible. * Manufacturing

Technology Increased efficiency of manufacturing plants has a certain impact on the global business environment. By having the capacity to produce materials and products more quickly and efficiently, a company is able to produce quantities needed to supply global demand. Robotic technologies and factory lines have enhanced the speed at which materials and products are manufactured. For a company to be a player in the global business field, it must be able to keep up with demand. * Shipment Tracking Corporations now have the ability to track shipments virtually anywhere across the world. Global Positioning Systems (GPS) allow accurate tracking. The implication of this technology on the global business environment is the ability to let customers know exactly where their shipments are at any given time. This technology creates secure relationships within the global business field. |

Impact of Technological Changes in Business: Changes in the technological environment have had some of the most dramatic effects on business. A company may be thoroughly committed to a particular type of technology, and may have made major investments in equipment and training only to see a new, more innovative and cost-effective technology emerge. Indeed, the managing director of multinational organization manufacturing heavy machinery once said that the hardest part of his job had nothing to do with unions, pay or products, but with whether or not to spend money on the latest technologically improved equipment. Computer technology has had an enormous impact on education and health care, to name but two areas affected. The advancements in medical technology, for example, have contributed to longevity in many societies. In addition, the introduction of

robots in many factories has reduced the need for labor, and the use of VCR's and microcomputers has become commonplace in many homes and businesses. Unfortunately, there is a negative side to technological progress. The introduction of nuclear weapons, for example, has made the destruction of the human race a frightening possibility. In addition, factories using modern technologies have polluted both air and water and contributed to various environmental and health-related problems.

Transfer of Technology:

Technology is a critical factor in economic development. Because of the advances of international communication, the increasing economic interdependence of nations, and the serious scarcity of vital natural resources, the transfer of technology has become an important preoccupation of both industrialized and developing countries. For many industrialized countries, the changes in the technological environment over the last 30 years have been immense particularly in such areas as chemicals, drugs, and electronics. It is vital that organizations stay abreast of these changes - not only because this will allow them to incorporate new and innovative designs into their products, but also because it will give them a firmer base from which to anticipate and counteract competition from other organizations. When the Gillette Company developed a superior stainless steel razor blade, it feared that such a superior product might mean fewer replacements and sales. Thus, the company decided not to market it. Instead, Gillette sold the technology to Wilkinson, a British garden tool manufacturer, thinking that Wilkinson would use the technology only in the production of garden tools. When Wilkinson Sword Blades were introduced and sold quickly, Gillette understood the magnitude of its mistake. The

transfer of technology is essential for attaining a high level of industrial capability and competitiveness. Multinational corporations are playing an increasingly important role in technology transfer because they invest abroad to expand production, marketing and research activities. There is also a growing consciousness amongst governments of the need to increase technology transfer to the developing countries to help stabilize their economic and social conditions. Technological environments of Developing Countries: In spite of the many differences in social, political, cultural, geographic and economic conditions, there are some common characteristics in the technological environments of developing countries. The most common technology transfer from industrialized to developing countries has been in agriculture and health care. As a result of improved health care systems, infant mortality rates have been cut while the incidence of once common diseases such as malaria and typhoid has been reduced in Latin America, south-east Asia and Africa (although the incidents of the AIDS virus has increased alarmingly). Similarly, agricultural technology has increased agricultural productivity in Brazil, India and elsewhere. However, in most developing countries, technology has made little impact on the productive systems, income distribution and living conditions of the majority of the population. Technology transfer is a complex, time-consuming and costly process, and the successful implementation of such a process demands continuous communication and co-operation between the parties involved. Furthermore, technology transfer cannot be effective if it experiences conflict with the economic and social needs of the recipient country. The agricultural development of north-eastern Brazil, for example,

was largely financed by international banks and financial organizations in the 1960's. Much of this region had been inhabited by Brazilian aborigines but it was owned by a small number of wealthy landowners. The introduction of large-scale mechanical agricultural technology in areas of the tropical rain forest of the Amazon has caused serious environmental damage such as erosion of tropical topsoil and the destruction of the natural environment of numerous birds and animals, and has displaced a large number of the local inhabitants of the forests. Technology transfer may become a serious source of conflict between donor and recipient countries. The recipient country may feel that the donor is trying to dominate it through technology, capital and production. Dependence on foreign technology can be viewed as a serious threat to economic independence. Countries that export technology may experience different problems. For the seller of technology, the technology transfer can result in unemployment in the home country and future loss of technological superiority. For example, Japan transferred modern steel production technology to South Korea in the early 1970's. As labor and production costs in Japan increased, the Korean steel industry began to take over a significant portion of the previously Japanese-controlled international market. Some Japanese executives are now complaining that the cost of technology transfer has been much greater than the income received through the sale of technology. Technology can be transferred from person to person, industry to industry and government to government, although the government of any country generally plays the most important role in facilitating or impeding the transfer process. Contacts amongst students from different countries are also a means of technology transfer as are

journals, books, technical and professional publications, trade magazines and product pamphlets. Furthermore, multinational corporations play an important role in technology transfer by transferring information and technology from the parent company to subsidiaries in other countries, training foreign employees, etc. Conclusion: One of the key characteristics of the technological environment is that the infrastructure is very expensive. It is usually a national government who funds the projects that allow telephone and cell phone networks to be constructed. The degree to which a region has an advanced technological environment is often related to the health of the economic environment which would contain the companies that are making money, and paying taxes, to support the government funds spent on the infrastructure. References: 1. <http://www.businessdictionary.com/definition/technological-environment.html#ixzz28oBN8hk8> 2. n. page. Web. 9 Oct. 2012.