

Technology and Business Environment

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Abstract : Technology is defined as application of scientific knowledge for practical uses, to solve problems and for specific functions using machinery, tools etc. Technological environment has a considerable impact on the business. The pace of change in technology in a particular industry influences the firms working and technology development. There are certain industries like information and technology and information and technology enabled Services, Electronics etc. where technology changes very fast. Even though the firm is into consumer durables segment or manufacturing Fast Moving Consumer Goods, they also innovate and try to offer something new to retain the customers.

Index Terms - Technology, Economy, Capital Investment, Employees.

I. INTRODUCTION

Technology is a complex set of knowledge, ideas and methods and is likely to be the result of a variety of activities - both internal and external. Technological process tends to be a gradual process consisting of a small increments lying along a continuous path. Technology plays an important role in economic and social development of a society. The purpose of technology is to intervene in the world to produce something new. It achieves this through intellectual and design based practices that involve multiple sources of input (natural, conceptual, emotional, imagined, etc.) In technology the most observed quality is taking good decisions based on incomplete data and approximate models. Technology affects industry in many ways. It can intensify competition in an industry and can also erase competitive advantage of well - established firms. It can change industry structure or create completely new industries.

II. TECHNOLOGICAL BUSINESS ENVIRONMENT

The Technological Business Environment can be discussed under three broad areas as follows.

2.1 Technology and Society

2.1.1 Technology reaches to people through business

Technology helps in innovations and new discoveries, which is converted into goods and services through business. Every organization strives to make better products and improve its service offering. This could be possible only due to technology. The economic growth of many countries depends on technology like that of USA, UK, Germany, France and Japan.

2.1.2 Complex System

Technology has resulted in complexity sophisticated and modern machines do work faster and better than human beings. But if they fail, then the functioning of the entire organization gets affected. There is also an interdependence of systems. For example, failure of power supply will affect every other function like television and radio broadcasting, production, working of machines, consumer service and so on. It is therefore necessary to keep the whole system working all the time.

2.1.3 Increased consumers expectations

Technology has contributed to the emergence of affluent societies. People want not only more of same things but also newer things. There is expectation of getting new product options, better quality, safety, comfort and regular supply of the product. This leads to increased investment in Research and development. High consumer's expectations pose a challenge as well as an opportunity to the business organizations.

2.1.4 Social Change

Technological changes create new jobs and make old jobs irrelevant. Employees have to cope up with the new skills and new jobs. People shift from one place to another in search of better jobs. This results in new geographical distributions of population. Technology helps to iron out social differences but it has created status difference. People working in multinational corporations behave like a class apart. Such people are better paid than local companies. They enjoy high standard of living and connect themselves with western culture.

2.2 Technology and Economy

2.2.1 Increased Productivity

Technology has contributed to increased productivity in terms of more production at lower cost. Manufacturing concerns are now capable of producing goods in a shorter period of time and with fewer defects. Quality control programs like "six sigma" are designed to improve quality and to eliminate defects. Improvement in productivity has led to increase in real wages of employees and reduced product prices.

2.2.2 Allocation of funds to R&D

Research and development (R&D) assume considerable importance in organizations as technology advances. In this context, firm is required to decide about- the allocation of resources to R&D, transfer of technology from the laboratory to the market place, replacement of the old technology with new, time factor and decision about its own R&D or to outsource technology. In present world, product life cycles have become shorter, organization prefer to use technologies that are commonly available so may prefer to outsource R&D.

2.2.3 Jobs become intellectual

With the advent of technology, jobs tend to become more intellectual. Introduction of new technology dislocated some workers unless they are well-trained to work on new machines. This puts obligation on organizations to retain its employees and equip them with technical advancement. Along with upgrading jobs, technology has its impact on human relations. Technology lays down the requirements for much of the human interaction in organizations.

2.2.4 Problem in employee's retention

Techno structure has created the problem of employee's retention. The traditional incentives fail to motivate highly skilled workers. They are instead motivated by opportunities which offer challenges or growth and achievements. Retaining such employees for long is a difficult task. These professional employees are known for organizational rootlessness and job- hopping.

2.2.5 Increased capital investment

Technology demands huge investment of capital. It necessities massive investment in acquiring, discovering new ideas and their adoption, educating, training and retaining the managers and other related areas. This needs efficient financial management. There is need for qualified and competent financial managers who can assume responsibility in financial management and can use technology in managing finances.

2.2.6 Impact on products

Products have a life cycle of their own. A typical product is subject to introductory, growth, maturity, decline and abandonment stage. The products which may be in vogue today may become obsolete tomorrow due to pace of technical changes. For example pager, transistor, radio, telegrams all have been things used in the past and replaced by smart phones, laptops, home theaters etc.

2.3 Technology and plant level changes

2.3.1 Influence organisation structure

Technology has considerable influence on organization structure, chain of command and span of control of managers. Matrix organisation structure is more common in companies where technology is fast changing. Besides technology, there are other factors which influence organisation structure like history and background of a company, Vision and Mission, top level management value system, nature of product, scale of operation etc.

2.3.2 Increased Risks

Organizations invest time and financial resources in developing technology. If the pace of change in technology is very fast then it may be difficult to reap benefits of the investment made. Too much reliance on critical staff also increases business risk. In case they leave the organization and join competitors, then organization may find difficult to cope up with such situations.

2.3.3 Growth of E-business

E-Business through Internet is made possible through technology. E-Business emphasizes integration of systems, processes, organizations, value chains and markets. The integration operates through Internet and build new relationships between businesses and customers. E-business provides convenience in conducting business worldwide, efficiency in distribution, advertising and sales promotion.

2.3.4 Impact on marketing

Technological changes have drastically changed the way goods are being marketed. Due to E-commerce, entire world has become one market. The way companies manage to attract customers online to place order and efficiency with which they manage their supply chain is greatly influenced by technology.

III. CONCLUSION

Technology is a high-risk, costly and uncertain activity. The world has reached a stage in which many of the inventions and discoveries in various areas have already taken place. To achieve major breakthrough which have social relevance and profit potential for the firm, increased investment in research must be made. There are also constraints on the technological growth like it leads to pollution, depletion of non-renewable resources and social institutions impede technology. For success and social acceptance any organization cannot overlook these constraints.

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