# ROLE OF COMMUNICATION TECHNOLOGY AND THE IMPACT OF INFORMATION TECHNOLOGY ON BUSINESS

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**Abstract:**

There is an old truth which is said a spiritual tradition that compares the action of every individual to a ripple spreading across the world and then on to the cosmos. This seems to be the best way to describe information technology (IT) and the assurance towards the quality of potential excellence. Beyond all the hype and jargon of the information, application of computers in contest towards business has made the place of work to revolutionize. In a broader sense to think globally the international market and how it works today.

Communication technology and information technology in a wider sense looks into the different base of working culture. IT works and can be made to work for us. It is intended to give an action without a caution preview of the amazing potential that lies for the immediate information available easily to all of us.

In this study, you will come across the origin of communication, its evolution into the more advanced world of networking and its application in the day to day world of business and commerce. As always, the aim here is to provide a basic field of knowledge from which u can embark on a fascinating voyage of discovery, as millions across the world are doing. Discovering how to make communication and information technology work for our career as a result of making a positive change in this changing scenario.

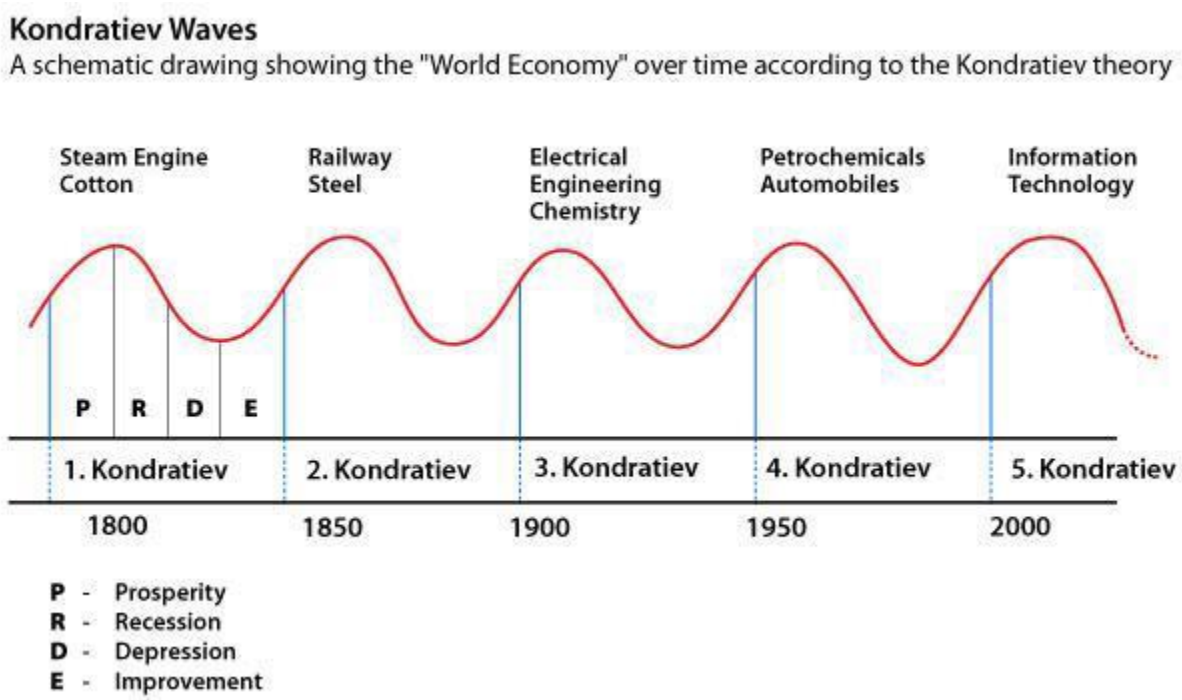
Today the world thinks of digitalization and cashless economy of which we cannot think without computer integration and networking. This can bring new waves and a foray into the world of IT.

**Keywords:** Information Technology(IT), Kondratiev wave, binary code, geostationary satellites, packet switching, market revolution.

## Introduction:

History repeats itself. Empirical evidence suggests that the economic development and growth in many countries as followed a 50 year long cycle of ups and downs over the last two hundred years. These are called kondratiev cycles or waves after the Russian economist who first discovered their existence. These cycles are

driven primarily by technological change. They attribute upward movements in these cycles to synergy achieved amongst a number of technologies. These shifts radically alter and change the nature and organization of societies, business and commerce.




**Wave 1:** steam engine, cotton.

**Wave 2:** railway, steel.

**Wave 3:** electrical engineering chemistry.

**Wave 4:** automobiles, petrochemicals.

**Wave 5:** Information technology.

The fifth wave clearly indicates the combination of technologies in accelerated for the economic development in the world.

The scenario towards technology is that the new growth of this modern generation is called as information technology. Nevertheless all of us in one way or the other have already felt the impact of information technology today. ATMs, checkout counters at super market computerized tickets are practical applications of IT technology in India. Mobile phone is the practical manifestation of information technology in day to day life in the organization that we work for. The key element of information age is the transformation of our ideas that is through our communication to the computers and the technology in which we live, work and learns.

Restricting our business into using information technology to accomplish things in an improved manner. This in turn will affect lifestyles of people as well as the nature and conduct of business and commerce.

The human element is a factor that they differ from each other; they have the ability to convert inputs into information and the ability to communicate this store of information to the remaining people and the future generation. Human beings are far better than the other species living in the world.

**Union of technologies:** Computer and communication technologies, with their independently evolved networks, are now combining to provide a synergy that will have a major impact on the gathering, use and dissemination of information as well as the behavior of the individuals, organizations and societies. In a sense, those two technologies complement the information processing and information communication skills of human beings in a fairly basic way. Thus parallels between the human brain and computer communications synergy are quite close.

The first truly long distance communication system was the telegraph system. It did not involve physical movement of the message. It was based on a binary code consisting of dot and a dash. A major revolution in communication to place with the invention on telephone by graham Bell. At the turn of the century Marconi demonstrated wireless radio transmission. Then came into the Radar and geostationary satellites, the major advance in communication technology was fiber optic cables using light for transmission of messages. The genesis of computer was a proper integration of technologies and communication networks into the IT networks. The networking revolution has to do with a depth of information services linked with various sources, components and concepts such as circuit switching, packet switching, internet networking structure, communication networks, road networks, linkages in various technologies and flexible transport.

The Impact of IT on Business.

**1. Routine Business communication.**

Writing letters, phoning clients, sending e-mails are routine activities in any business. Information Technology has revolutionized the way of the new generation. The digitization the network now provides for voice, image, data, video and TV to be combine in several way to satisfy the needs for business communication. Depending upon the sophistication of the user and the prices he is willing to pay, many of these services are already available in varying degrees in a country like India.

The e-mail option works out to be the lowest cost alternative. The hardware required for e-mail can also serve for sending faxes from the computer. E-mail is widespread in India as it is having minimum charges towards the internet.

The current e-mail users in India about 200.3 millions. In addition mal reception and access to data bases for procurement and for selling ones products and services would also become available in Internet.

Relative cost of different options depends upon investment cost, computer, modem, scanner, e-fax its incremental cost I relation with Operating expenses, printing cost, postage cost etc.,

**2. IT and Manufacturing.**

One f the earliest uses of computers was on the shop floor where computers was on the shop floor where computers were used to programme machines for producing various parts. The programming based control of machine operations directly substituted labour. It also led to a set of machines that could automatically change the tools required and permit the machines that mould automatically change the tools required and permit the machine to carry out different operations in a pre-determined sequence. Jobs which earlier required movement of several machines could now be handled by a single machine operator. Following this step, was the use of computers for design, it made significant reductions in the cost of computing. The ability to design products faster and produce products faster led to a closer integration of the production and design functions. Consequently, there was a bowering of the boundaries between them. Economies of scope i.e., producing smaller quantities of a larger number of products became important. Markets like the automobile market went on to become fragmented with larger number of companies.

At the same time, stores procurement , inventory control which were discrete organizations in connection to manufacturing also go automated. Pressure on cutting cost increased. In this connection inventory function and the supplier chain were joined with market needs to reduce the costs of production significantly. The pressure to adapt quickly to changing market needs, improve quality and the need to optimize investments in manufacturing came into existence.

As a result of these developments the complexity of the coordination and management functions within a typical manufacturing set up intruded considerably. The different functions that were separated clearly in the earlier manufacturing set ups were now increasing integrated into smaller diverse groups and networks between groups. This has been made possible because of the lower costs of coordination brought about by revolution.

The nature of the jobs also changed, at the worker level, the job involved several tasks, instead of one, the ability to work as a team came into conscience with job contents varying from time to time and with each production run. Workers also had job satisfaction of seeing the complete job throughout from beginning to end something that was not available in the earlier days of mass production and specialization of functions.

The evaluation of performance has become easier since task related parameters are measured objectively in an IT based setup. The expertise embedded in the information network also empowers workers to take many of the decisions that were earlier taken b the supervisors.

The factor that automation would dehumanizes the work place have to come true. IT has shifted the focus back to the Hun dimension amidst the complex coordination structures that are emerging in the industrial world. Computers have eliminated may middle man jobs. The reorienting terms of skills and capabilities for the jobs, however have become fairly complex. The focus has shifted from similar routine operations towards non routine widely varying task profiles requiring an ability to adapt to changing requirements quickly. At a higher level the links between production and other functions such as marketing Research and development and a need to look at role of manufacturing, the company has emerged as major need.

**3. IT and markets.**

IT has a pivotal role in the area of marketing , customer buying practices can be directly captured through IT technology at the point of purchase. This has major implications for stocking, distribution and pricing practices. Information from scattered outlets can be made available instantaneously at a central, intermediate or local level. Complex tasks like the fixing of prices, stocking and inventory decisions can be coordinative more efficiently .A trend of more local autonomy for routine decisions ,without compromising the monitoring role at the intermediate and higher level is expected .

IT also makes it possible for central overseeing and for looking at and analyzing the actual trends in consumer behavior instantaneously .the intention of the company being responsive to the needs of the customers can actually be realized. IT , through searches an networks like the internet , can also access available information an what the competitors are doing and provide valuable insights therein .

Customer contact can be done electronically. Databases can be created to target very specific categories of people , depending upon the nature and type of product that is to be sold .IT can help on travelling business . Marketing through the internet could replace much of the elaborate infrastructure that companies currently have to keep in touch with the customers.

Easier direct contact between customers and users will eliminate some of the middlemen. New service providers on the on internet who provide service aims are at specific users have emerged . IT of course cannot provide substitution of goods and services with information . Goods and services would still have to be produce and delivered to the customer .However, IT can facilitate quicker and more efficient delivery .Electronic marketing , ordering goods and services through the local network ,e- reservations for travel , movies, restaurants are all the growing marketing possibilities through IT network .

The other area of importance is the linking up of suppliers and customers into a value chain . Here changes in customers' requirements can automatically be translated into orders for products and there after raw materials that go into the production of these products . It is therefore possible to establish a real time link between customers preferences as exhibited in the form sales data as well as with suppliers of products and raw

materials. The electronically linked market places is cost associated with procurement at both consumer level and the manufacturer level . The superior co-ordination is possible by IT reduced cost therein , are also likely to make companies reduce internal production and buy as much as possible from outside.

Since the networking on Information technology has advanced marketing can be done easily and efficiently, much of the incentive will be setup for captive production. Companies can instead concentrate on areas that are critical to their long term survival. Value added services in the form of specific data bases and advisory services may also be available over the network for helping the decision making process.

**4. IT and the Accounting Function.**

When mainframe computer and even distributed computing was in vogue the shift I the centre of power was towards the systems analyst who was familiar with the hardware and software aspects of computers. Management accountants had very often only a subsidiary and secondary role to play.

When personal computers came into picture and user friendly software, the focus has now shifted back to the accountant many of whom today have fairly high skills associated with the use of the PC and the information network.

There has been a decrease in manpower at the lower levels and some reduction at the middle level also, because of automation of the routine accounting functions. At all levels, s in the case of manufacturing, there has been an enlargement in the scope of the job. The accountant now sees himself as a facilitator in the process of helping important stake holders in the company and in being able to relate changes in the company to measure of financial performance. There is a change in focus from the discipline of accounting or finance towards its integration with other areas. The boundaries of the profession are therefore enlarging, to same extent, becoming more inter disciplinary in nature. The emergence of specializations like activity based costing, where costs are more clearly estimated, on the basis of detailed process going on in the production plant and within the organization, is indicative of this fashion.

**5. IT and the Service Sector.**

IT has had a major impact on the service sector. The bank of today in our country is like one of the developed country and is recognizable. Front end computers linked together in a network today provide global services for practically any financial transaction.

Travel agencies are linked to global reservation system to facilitate, routing ticketing and pricing possibilities.

The insurance sector has had radical change with custom built insurance packages for consumer needs. Financial transactions take place in very large volume at very high speeds in which billions of dollars are

moved around the world in seconds. The electronic cash has replaced traditional cash, cheque and credit card system.

Retail sellers, grocery stores and a host of other services can be made available more easily through the network. IT also contributes to lowering of entry barriers into service industry. Even small scale local service providers can compute with large companies. As more people and organizations get connected, these entry barriers are likely to fall further.

**6. IT and the structure of Business and the Economy**

Organizations evolve out of a need for coordinating activities of multiple individuals in order to realize a specific task. Complex tasks like building satellites requires specialized knowledge. This task is always made up into break-ups can be termed a differention.

Organisation achieve this through something called as integrators. The key element in this structure is information providing for mentoring. The growth in networking will create jobs in all industries. The electronic industry has a significant expansion.

In a networked organization work in no where only with physical location of the industry. The networked organization is therefore going to be very different in terms of working condition.

**7. IT law and the Government.**

The rules and regulation is got a major change after the IT revolution both nationally and internationally. This going to effect the frequency spectrum for mobile communication and more much the heavy duty fixed communication to optical fibre or satellite. International pressure for mobile communication revolution is in the current world and is likely ganging the momentum.

The Corporate Governance has to make may changes in the corporate administrative section and to bring many amendments along with cyber laws and Information Technology Act to avoid fraudulent and Cyber Crimes.

8.Intellectual Property Rights

Technical idea and their copy rights were included in Intellectual property rights. Previously ideas were not having copy rights but this made problems in the field of software protecting data base technology. This idea was emerged by IT industry for security and privacy. This will be benefiting rich countries.

The developed countries take a lot of benefit from this as they can sell the rights.

**Conclusion**

For the government of India the opportunities to use IT to accelerate the process of development are immense, the management of natural resources, environment, education, health became very strong.

The various wings of government are now using the most advanced PC's do networking and provide efficient service to the Indian consumers.

This, more than anything else, is the greatest challenge by calling t as IT revolution. India will pay a major role in Information Technology in the coming years.

In terms of pure technological change it will become transcontinental communication with other continents.

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Thus all the conventional methods of communication has turned into technological revolution and a better place to live.

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