



THE ROLE OF INFORMATION TECHNOLOGY AND SOCIETY IN INDIA

¹Smt. C. Divya and ²Mr. P. Harish Reddy

¹Assistant Professor, Department of Computer Applications, SGS Arts College TTD, (A), Tirupati, Andhra Pradesh, India

²Assistant Professor, Department of Computer Applications, SGS Arts College TTD, (A), Tirupati, Andhra Pradesh, India

Abstract

The Information Technology (IT) sector in India is a global powerhouse, generating over \$250 billion in revenue and driving massive social transformation. It encompasses IT services, software development, and Business Process Management (BPM), playing a pivotal role in the nation's transition into a digital-first society. Information technology has deeply integrated into the cultural, political, and daily life of Indian society. Its core societal impacts include, Digital Inclusion: Initiatives like the Digital India program provide universally accessible digital resources, cloud-based public services, and portals in various Indian languages. Financial Revolution: The proliferation of smartphones and broadband connectivity has democratized finance, allowing millions to transact using real-time digital payment systems. Education and Skilling: Technology supports interactive and cooperative learning, while a robust network of Indian Institutes of Information Technology (IIITs) ensures a steady stream of highly skilled IT professionals E-Governance: ICT infrastructure enables transparent communication, electronic voting systems, and direct access to government schemes and citizen entitlements. The IT & BPM sector has become one of the strongest pillars of India's economy, contributing significantly to growth, employment, and public welfare. In April 2025, the industry recorded 16 per cent YoY growth in hiring, driven by the rising adoption of artificial intelligence, cloud modernisation, and the expansion of Global Capability Centres (GCCs). The India AI Mission receives an allocation of more than Rs. 10,300 crore (US\$ 1.19 billion) over five years, supported by the deployment of 38,000 GPUs. The tech and AI ecosystem employs 6 million people. The main objective of this paper Information Technology and Society in India.

Key Words: Information, Technology, Global, Powerhouse, Contributing, Artificial

INTRODUCTION

Information is a valuable and costly asset that must be planned, protected, preserved and controlled as other valuable assets such as people, money, machines, facilities, etc. A major shift of the power of technologies is to focus on the power of information content. As we reach the threshold of 21st century, managing information involves professional approach to deal with the global dynamic interactive environment with the new policy of liberalization and globalization the professional in an information-based society. Information Technology is the technology portrayed as a major force for managerial and organizational changes.

Importance of Information Technology

The relationship between information and socio-economic development was ignored until the 1970s in many developed countries and is still not recognized even today in some of the developing countries. Nonetheless information is one of the major yardsticks to measure socio-economic development of the country and hence its effective management using the latest technological tools is prerequisite for any nation. Information Technologies now hold the potential to change our working and learning patterns, our business, social relationships, academic research institutions and even our cultural spheres. As a part of Information Technology telecommunication has become a major business and it holds the key for the growing.



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Information Technology, Governance and Economic Development

The inter-connections between Information Technology (IT), Governance and Economic Development are very important. All the three in their own right are of great contemporary significance. Information Technology facilitates better administration and governance and good governance which, in turn, helps accelerate economic development.

Information technology (IT) is an example of a general-purpose technology that has the potential to play an important role in economic growth, as well as other dimensions of economic and social development. This paper reviews several interrelated aspects of the role of information technology in the evolution of India's economy. It considers the unexpected success of India's software export sector and the spillovers of this success into various Information Technology enabled services, attempts to make Information Technology and its benefits available to India's rural masses, e-commerce for the country's growing middle class, the use and impacts of Information Technology in India's manufacturing sector, and various forms of e-governance, including internal systems as well as citizen interfaces. The paper concludes with an overall assessment of these different facets of Information Technology in the context of the Indian economy.

Information Technology may have a special role to play in growth and development simply because of empirical characteristics that apply at the current time. In particular, the recent and continuing rapid innovation in Information Technology make it a dynamic sector that is an attractive candidate as a contributor to growth for that reason alone, much as the automobile industry was targeted by the Japanese after World War II. On the other hand, there may be features of Information Technology that make it attractive from a theoretical perspective on economic growth. For example, Information Technology may be one of the sectors in which countries such as India have, or can develop, a comparative advantage. Even if this is so, IT is likely to share this characteristic with several other sectors.¹

Information Society is a much-used expression. The term has been characterised by various dimensions. Several authors have tried to define and interpret this term according to their own perceptions. What strikes one in reading the voluminous literature on the Information Society is that "so many writers operate with underdeveloped definitions on their subject. They write copiously about particular features of the 'Information Society', but are vague about their operational criteria. Eager to make sense of changes in information, they rush to interpret these in terms of different forms of economic production, new form of social interaction, innovative process of production, or whatever. As they do so, they very often fail to set out clearly in what ways and why information is becoming more central today, so critical indeed that it is ushering in a new type of society". One wonders just what is about information that makes so many scholars to think that it is at the core of modern age! Let us try to examine some of the significant definitions provided for the term Information Society in the literature and analyse their main attributes.

The growing awareness that information behaves as an active economic resource, like capital, plant, or human resources, has focussed attention on shifts in occupational activity within developed nations. The state of information in economy has pervasive effects on the working of the economy generally. It has intensified impacts on those sectors that provide information products or services, such as press, television, radio, film, mail, libraries, banks, and other information providers. The establishment of information markets brings about changing conceptions of public and private information as well as the property rights associated with marketable information.²

It is an old saying the knowledge is power, but new and now trend is information is power. Those who have access to information and the necessary technology can transform it into useful knowledge. The contemporary knowledge worker is one who makes effective use of information in order to master knowledge about knowledge i.e., meta-knowledge. The concept of Information Technology (IT) helps to increase knowledge, skills, capabilities, positive work attitude, and values at both organizational and societal levels. Information Technology is the science and skills of all aspects of computing, data storage and communications. It is a new rapidly growing area that is radically changing the world by making possible new ways of doing business-making entertainment and creating art.



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Information is a valuable and costly asset that must be planned, protected, preserved and controlled as other valuable assets such as people, money, machines, facilities, etc. A major shift of the power of technologies is to focus on the power of information content. As we reach the threshold of 21st century, managing information involves professional approach to deal with the global dynamic interactive environment with the new policy of liberalization and globalization the professional in an information-based society. Information Technology is the technology portrayed as a major force for managerial and organizational changes. The world today is in transition from industrial age to information age. Computer and communication systems combined to be called as Information Technology are critical in the operation of every business today. The IT revolution is making a tremendous impact on the industry and trade by relentless technology innovation, massive growth in computer power world wide networks and ever-growing electronic factories. The convergence of telecom and computers in networks has further advanced the scope of communication equipment bringing a wide range of improved products and emerging service industries for all countries of the world. It injects efficiency and transparency into the entire economic reforms programme presently being implemented in many countries, including India. Information technology is the engine used to drive useful information systems to the society. This includes computer, software, internet, intranet and telecommunication systems. Information Technology provides the means for collection.³

OBJECTIVE OF STUDY

The core objective of Information Technology (IT) in Indian society is as follows

1. To identify the origin of the concept "Information technology and Society in India".
2. To study the E-Governance & Public Service Delivery in India
3. To study the Economic Development & Employment in India
4. To focus on the Social Empowerment & Education in India

SOURCE OF DATA

The study is especially supported secondary data. The source of secondary data is collected using Books, Journals, Newspapers and Websites.

ORIGIN OF THE CONCEPT INFORMATION TECHNOLOGY AND SOCIETY IN INDIA

The origin of Information Technology (IT) and society in India stems from the convergence of state-sponsored self-reliance policies and the 1970s microelectronics revolution. Historically, this transition reshaped the occupational structure, turning an agrarian economy into an information-centric, knowledge-based society deeply reliant on global digital collaboration. The evolution and social impact of this concept in India are detailed across several academic and foundational documents.

Historical & Critical Perspective

Early Indian Information Technology traces back to pre- and post-independence quests for technological self-reliance, culminating in the formal establishment of the software export industry in Mumbai (1967–1974). You can read a complete historical overview.

Dimensions of the Knowledge Society

Explores the sociological impact of the microprocessor, telecommunications, and the rapid shift to "information workers" as the predominant occupational structure. These structural changes are covered in India.



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Societal Implications & Ethics

Information Technology significantly redefined geographical boundaries, requiring changes to privacy, workplace ethics, and information distribution. To explore these impacts on the Indian populace.⁴

E-GOVERNANCE & PUBLIC SERVICE DELIVERY IN INDIA

E-governance in India uses Information and Communication Technology (ICT) to deliver public services transparently, efficiently, and affordably. Flagship initiatives like the Digital India programme and UMANG have expanded digital access, reduced administrative delays, and streamlined welfare delivery. India's e-governance framework is driven by several key components, platforms, and objectives.

Core Infrastructure & Platforms

UMANG: A unified mobile app offering access to hundreds of central and state government services, including bill payments, pensions, and certificate applications.

Digi Locker: A digital document wallet that allows citizens to securely store, share, and verify authentic documents like Aadhaar, PAN, and academic certificates.

Aadhaar: The foundational digital identity program used for biometric authentication, targeting efficiency, and Direct Benefit Transfers (DBT)

Common Service Centres (CSCs): Physical access points equipped with digital tools in rural and remote areas to bridge the digital divide and provide G2C (Government to Citizen) services.

Expected Benefits of Digital Governance

Efficiency & Transparency: Digitizing records and processes establishes an immutable digital trail, effectively minimizing bureaucratic delays and deterring corrupt practices.

Reduced Leakage: Direct Benefit Transfer (DBT) systems eliminate duplicate beneficiaries and ensure welfare funds reach the intended recipients directly.

Accessibility: Services are available round-the-clock, enabling citizens to access them from home, mobile devices, or localized service centres.

Challenges to Overcome

Digital Divide: Low computer literacy and inadequate infrastructure in remote, rural areas can impede equitable access.

Data Security: Protecting citizen data and ensuring privacy remain top priorities as the volume of digital transactions increases.⁵

ECONOMIC DEVELOPMENT & EMPLOYMENT IN INDIA

Economic development and employment in India are intrinsically linked, cantered on the challenge of translating rapid GDP growth into abundant, high-quality jobs. While the country boasts a massive labour force, systemic issues like structural transition and informal labour present ongoing policy challenges.



Employment Characteristics

The Informal Sector: A vast majority of India's workers operate in the unorganized or informal sector, which often lacks job security, fixed wages, and social security benefits.

The "Jobless Growth" Debate: Periods of high GDP growth in India have sometimes coincided with disproportionately low job creation, particularly in manufacturing. This necessitates a focus on productive employment generation to match the rising labour force

Types of Employment: Workers in India are typically categorized into three main groups: self-employed (the largest group), regular wage/salaried employees, and casual wage labourers

Primary Sectors of Employment

Agriculture: Despite contributing a smaller share to the overall GDP, agriculture remains the single largest employer, sustaining livelihoods for nearly half of the workforce.

Manufacturing & Industry: Driving industrialization, this sector is critical for absorbing surplus labour from agriculture and producing value-added goods, though its direct employment share has room to grow.

Services: Comprising IT, finance, trade, and transportation, this sector has been the primary engine of India's economic growth and a major generator of formal, urban employment.

Government & Policy Interventions

Skill Development: Initiatives like the Skill India Mission focus on vocational training and upskilling to meet the demands of a modern, technology-driven economy.

Labor Reforms: Structural updates to labour laws aim to strike a balance between industry competitiveness, ease of doing business, and worker welfare/social security.⁶

SOCIAL EMPOWERMENT & EDUCATION IN INDIA

Social empowerment and education in India represent the foundational processes of equipping marginalized individuals and communities with the knowledge, rights, and resources required to overcome systemic inequalities, achieve self-reliance, and participate fully in national development.

Right to Education: Universal access to free and compulsory education is guaranteed by the Constitution, forming the baseline for critical thinking and informed citizenship.

Gender Equality: Educational attainment is arguably the most effective tool to combat gender-based discrimination, enabling women and girls to secure economic independence and assert their fundamental rights.

Marginalized Upliftment: Targeted educational programs and scholarships aim to integrate Scheduled Castes (SCs), Scheduled Tribes (STs), and Persons with Disabilities (PwDs) into mainstream opportunities while preserving their cultural identities.



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Awareness and Advocacy: Education fosters civic awareness, helping individuals understand their constitutional rights and engage actively in community decision-making and democratic processes.⁷

CONCLUSION

This paper has provided a review and overview of various facets of Information Technology in India's society. The most obvious of these is the Information Technology sector itself, including Information Technology enabled services such as business process outsourcing. This sector has proved to be resilient and innovative, continuing to expand and upgrade its offerings. The export orientation of the sector has contributed to its competitive discipline and success, though that success has never been a forgone conclusion. Information Technology is the engine used to drive useful information systems. This includes computer, software, internet, intranet and telecommunication systems. Information Technology and society provide the means for collection, storing, encoding, processing, analyzing, transmitting, receiving and printing text, audio, or video information. This universal applicability of information systems has created unprecedented demand for qualified Information Technology professionals. The projected demand for trained Information Technology professionals and society is estimated at over 5,00,000 per year in India itself. All over the world information technology has become the most important part of all technological curricula in society. Education can be an effective tool in promoting women to become agents of change in India, influencing. Development in terms of economic, social, health and political factors which contribute to and enhance women's empowerment. Education empowers women with information, skills and self-confidence, allowing them to challenge and change systems of inequality, gain economic independence, improve health outcomes and participate in governance. Yet, its scope is limited by the economic, social and infrastructure barriers, and regional disparities which tends to obstruct access and impact. By implementing targeted interventions - including improving access to quality education, vocational training, curricula and policy - policymakers can harness the full potential of education to drive gender equality. Investing in women's education can help address this disparity, empowering an educated and skilled female labour force that can contribute towards a more inclusive and equitable society, work towards its sustainable development goals and play an active part in determining the future of its citizens.

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