

Economic Development through Information Technology in India

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I INTRODUCTION

What contribution can information technology (IT) make to India's overall economic development? This paper offers some perspectives that can help answer of this question as using concepts and analysis from economic theory. It examines the theory and evidence for comparative advantage, complementarities, and a special role in the innovation process as factors that make IT special. The paper also considering opportunities for future growth in India's IT sector, existing and potential constraints and possible policy responses that can help IT contribute to broader economic development. In this paper, I assume a basic familiarity with the general structure and performance of the Indian economy and the economic reform process that has been taking place through the last decade or more. However, I provide a brief review of the industry in this introduction.

The era of 21st century is often regarded as an era of technology. Today, Technology plays a very important role in our life. It is being seen as a basis of growth of an economy. IT has connected the world globally and is now changing our life style and social consciousness dynamically.

We are living in an age of remarkable technological change that is forcing us to think very hard about the linkages between technology and economic development. The harder we think about it and we more realize that technological innovation is almost certainly the key driver of long-term economic growth.

We are living in an age of remarkable technological change that is forcing us to think very hard about the linkages between technology and economic development. The harder we think about it, the more we realize that technological innovation is almost certainly the key driver of long-term economic growth. We further realize that the innovation process must be supported by a complex set of social institutions. Although markets have a great deal to do with innovation, innovation is not purely a market-driven phenomenon. Innovating economies require an interconnected set of market and nonmarket institutions to make the innovation process work effectively, and for this reason, governments need an innovation strategy if they wish to foster highly innovative economic systems.

II ECONOMIC GROWTH THEORY AND THE ROLE OF TECHNOLOGY

Economic theory offers a series of textbook approaches to understanding economic change. One of the first was initiated in 1776 by Adam Smith (Smith 1981), who emphasized the role of the division of labor in promoting rising output per person. He stressed that increasing specialization, mediated mainly by market forces, would lead to rising efficiency in production, and therefore to rising living standards. Smith focused on the role of market institutions, efficiency in transactions, and effective property rights in promoting high levels of economic well-being. Understandably, Smith's model of the division of labor did not draw primary attention to innovation since he was living at the time when the Industrial Revolution was just gaining force. The full import of sustained innovations across many economic sectors could still not be seen.

Understanding long-term economic growth requires understanding technological innovation. But the economics profession is somewhat odd. The technically challenging part of the Solow growth models lies in solving a differential equation for how fast the capital stock grows rather than in interpreting the mysterious process of technological change. And so, for the many years following Solow's initial contributions, economists studied the role of savings and investment as the central feature of economic growth, rather than focusing on the sources of long-term technological change. This began to change only in the 1980s.

III MAJOR ROLE OF INFORMATION TECHNOLOGY IN AGRICULTURE SECTOR FOR ECONOMIC GROWTH

Information Technology (IT) has long been viewed as having great potential for improving decision making in agriculture. In all phases of the agricultural industry, information technologies are vital to the management and success of a business. Information Technology is rapidly becoming more and more visible in society and agriculture.

Information Technologies represent a way for developing world nations to foster economic development, improve levels of Agriculture, Education

and Training as well as address gender issues within society. Infrastructure technology development is also vital for entrepreneurship and small business development. In many emerging nations, it is a major challenge to gain access to capital and market information. Developing nations specifically do not have functioning infrastructure or much in the way of financial resources.

The Indian economy has undergone a structural change over the last decade with shares of agriculture, manufacturing and services in the gross domestic product (GDP). Science and Technology has played an important role in bringing about this transformation in Indian economy which is showing a shift from a predominantly agriculture based economy to manufacturing and services based economy and is now increasingly integrating with the world economy to become globally competitive as demonstrated by its increasing share in world exports.

Development and growth of agriculture that can also benefit the cultivators are limited. Many solutions, mostly related to technology inputs and infrastructure implemented earlier are loosing to deliver incremental benefits in present circumstances.

There is now an urgent need to convert agriculture into agri-businesses, which are economically viable and sustainable in future. In this situation the Information Technology offers new hopes.

Many sectors of economy have benefited by the use of Information Technology. The same can also happen with agriculture sector. Both Government as well as Private Sector organizations are working to develop new models for Information Technology applications in agriculture.

Today with the opening of global economy both physical and time distance between production and consumption is required to be reduced. This requires very-very efficient management of Agri-business Value Chain.

IV COMPARATIVE ANALYSIS OF INFORMATION TECHNOLOGY IN AGRICULTURE SECTOR

With help of information technology Farmer benefited National Agriculture Insurance Scheme. With help of graph we can show comparison National level ,State level and division level. There are huge differences in size of states. Land and Agriculture scheme are the most important factors of production in any agrarian economy. In spite of having larger average size of holding the food grain productivity in Jabalpur division. Eight district and many block in Jabalpur division. There are different types of soil and irrigation facility. Because of regional disparities very difficult to implement National agriculture insurance scheme. But with the help if information Technology Farmer benefited National Agriculture Insurance Scheme and

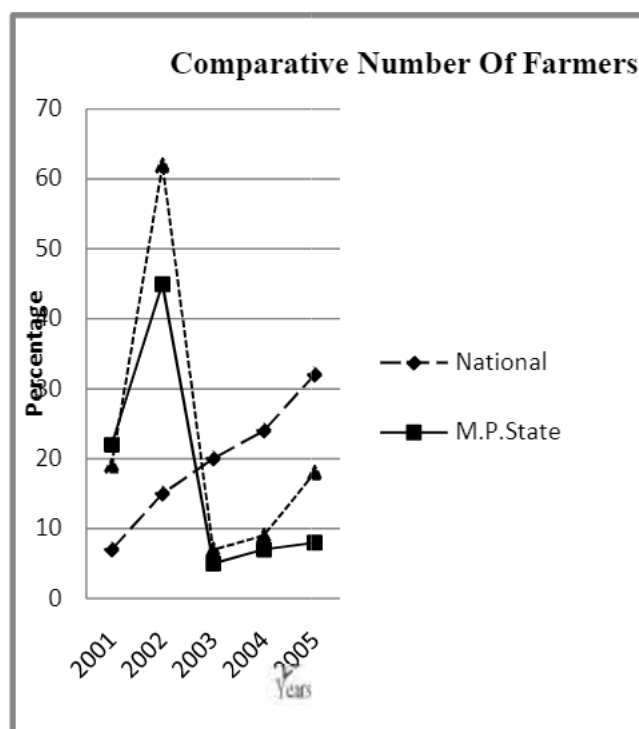
other agriculture related area like fertilizer, raining, Crops protection etc.

Beneficiary Farmer %

Season-Ravi

No	Year	No. of Farmers			Percentage of No. of Farmers		
		National	M.P.	Jabalpur Division	National	M.P.	Jabalpur Division
1	2001	453325	138818	5513	7.5	22.3	18.6
2	2002	926392	282007	18393	15.4	45.2	62.2
3	2003	1210288	37441	1181	20.1	6.0	4.0
4	2004	1526462	57114	2071	25.3	9.2	7.0
5	2005	1916554	108352	2418	31.8	17.4	8.2
Total		6033021	623732	29576	100	100	100

Source %& Economics Survey and National Agriculture Insurance Scheme-Bhopal

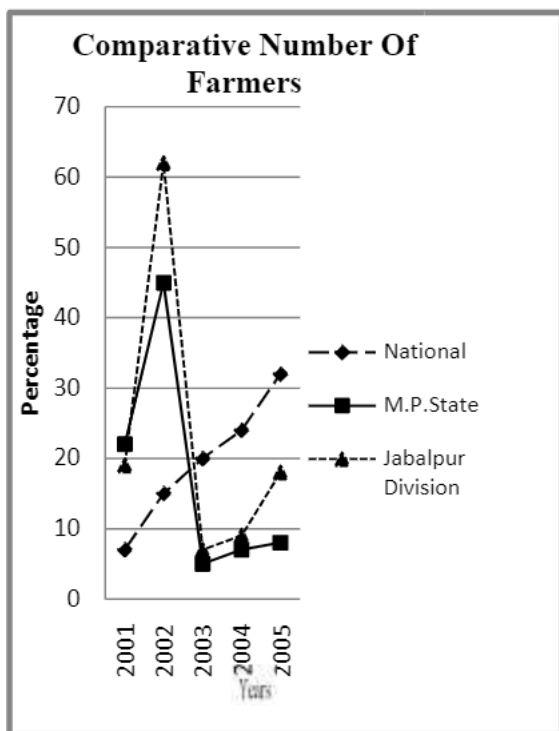


BeneficiaryFarmer %

Season-Kharif

No.	Year	No. of Farmers			Percentage of No. of Farmers		
		National	M.P.	Jabalpur Division	National	M.P.	Jabalpur Division
1	2001	3145776	259141	4580	23.8	23.3	3.6
2	2002	4337041	617594	59705	32.8	55.6	47.1
3	2003	1617802	12307	445	12.3	1.1	0.4
4	2004	2280276	202187	61860	17.3	18.2	48.8
5	2005	1823556	19887	201	13.8	1.8	0.2
Total		13204451	1111116	126791	100.0	100.0	100.0

Source %& Economics Survey and National Agriculture Insurance Scheme-Bhopal



V CONCLUSION

A central finding of economics over the past fifty years has been that technological advancement is critical to long-term economic growth. More recent research distinguishes between the crucial roles for technological diffusion in the catch-up phase of economic development and innovation once economies reach a fairly high level of development. India's great challenge in this regard is to move from adoption to innovation as the engine of technological advancement. Yet the social systems that best foster technological innovation do not come into existence without an explicit effort to create them. Creating a successful innovation system is a challenge that requires focus, attention, and institutional creativity. There is no doubt

that India has everything that it needs to become a central site of science-based innovation in the twenty-first century world economy. This chapter has highlighted some of the issues it must face in achieving this aim. As the region progresses, we predict that one of twenty-first-century's biggest transitions will occur when both China and India begin to make dramatic contributions to global science and technology and thereby dramatic contributions to the welfare of the world. When this happens, the structure of the world economy will change in new and promising ways.

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