

TO EXAMINE THE ROLE OF ICT IN SOCIAL ECONOMIC DEVELOPMENT IN RELEVANCE WITH BUSINESS GROWTH

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ABSTRACT

Information technology consists of the application and study of computers and any kind of telecommunications that are capable of retrieving, sending, and storing data. Since IT is going mobile with the deployment of reliable and faster internet services, tech-driven transactions are very common. IT is known to automate routine and simple jobs like advanced processes and word processing like scheduling, production and logistics. Hence, IT helps businesses to operate profitably and efficiently.

Information and Communication technology (ICT) is perceived as a key factor for production with a new and knowledge-based economy in the modern perspective. Innovation, technology and knowledge have been the vital factor in a lot of studies for economic stability. Importance of IT for economic growth has been highlighted in modern growth theory. This study is mainly aimed to focus on the impact of ICT on social and economic growth. This study is also aimed to find out the relation between social and business growth with the role of ICT. It will help in improving knowledge of the effects of ICT on economic growth.

Keywords: ICT, Information and Communication Technology, Information Technology, IT, social economic development, economic growth

1. Introduction

Over the past couple of decades, technological advancements have significantly improved the competitiveness of the corporate and economic world. Companies have used computers, software and internet services to transform their operations from local markets to global and national ones. A lot of companies have shown response to such changes with automation in their operations and gathering industry insights for their own benefits. Businesses have been flexible with technology by adopting better and latest technical advances for their processes.

Economic growth refers to the rise in inflation-adjusted value of the services and goods over time produced by the economy. It is traditionally considered as a growth percentage of real GDP. Usually, growth is estimated in terms of inflation on goods and services produced. National income accounting is widely used to measure economic growth and it is determined as the annual change in percentage of GDP.

1.1 Background

IT is very important for economic growth as a thriving sector in its own way as it improves exports and employment. The industry may also play a vital role in enhancing economic growth in a country by making industry sectors more efficient by helping them to improve quality of production and reduce cost. Economic growth and IT are also linked when service sectors can deliver services in greater geographical regions.

There are chances to improve government services with the beginning of IT to help back-office solutions and improve efficiency in record management. Sectors like utilities and transport can be managed and improved with specialised solutions. Countries encouraging the growth of the IT industry often witness a close relation between economic growth and IT. The entry barriers are not that great for the IT sector as for other sectors and they may need a bit of capital expenditure. With skilled scientists and engineers, a country may have a competitive benefit in IT solutions.

2. Literature Reviews

ICT is a very important part of all aspects of the modern world. It has changed how we used to communicate together, how we do business, find the needed details, work, manage social lives, and work with government agencies. An information and communication technology solution affects daily lives of people and impacts macro-economic growth which ultimately impacts society with improvements in standard of living and infrastructure. To determine the existing research landscape on the impact of ICT on social and economic growth, we searched some literature for existing models and frameworks in relevance to business growth.

Tallon& Kraemer (2000) presented a well-conceived conceptual model related to economic growth and payoffs and ICT. However, there is a lack of conceptual models which focus on both economic and social development simultaneously. Overall, it was possible to find out only six frameworks which were once published to explain the impact of information and communication technologies on some aspects of social and economic growth. These are briefly discussed for their publication.

Another conceptual framework was proposed by Madon (2000) on the interaction between socioeconomic growth and the internet in developing economies. The researcher developed the

model on the basis of anecdotal evidence, literature, and conjecture. It shows the overall positive impact of the internet on social well-being (like education, health and eradication of poverty), economic growth (like economic productivity), sustainable development, and political well-being (like democracy). The author focuses on the value of intermediary bodies like policies taken by the government for the impact of the internet on social and economic growth.

Uttama (2012) brought a model which explained the impact of FDI on social and economic growth of ASEAN countries. According to the author, FDI is a strong driving force for socio-economic growth in the product market, capital market, labour market, etc. which ultimately improves employment, income, human development, and productivity. A broad framework has been proposed by Roztocki&Weistroffer (2016) associating socioeconomic growth and ICT. The framework discusses ICT like internet, computing resources, GPS, mobile telephony, and Wi-Fi to enable corporate services and activities like e-government, e-commerce, online teaching, and online social networks. It further suggests that socioeconomic growth of companies, people and country is affected by these business activities. These can be seen in health, education, quality of life, and income of the people and global resources and competitiveness of the companies and GDP, political freedom, esteem, wealth and labour market of the country.

Ashraf et al. (2017) introduced a framework on ICT-based socioeconomic growth at community level. The researchers especially looked into three community centres in Bangladesh which provided social and economic programs to communities and people in poor situations. It also consists of social limitations which may pose obstacles in growth. Hence, ICT may serve as a mode of socioeconomic growth, there are social constraints like mobility and religious perceptions on women which should be managed to attain desired goals for access to information, social status, job opportunities, and social awareness.

Roztocki et al. (2020) introduced a framework connecting adoption of enterprise systems for social and economic growth in economies in transition stage or those economies recently transitioned to a market-based system from a central economic system. It suggests that implementations of ES enable activities of the businesses affecting socio-economic growth, especially at company level. Palvia et al. (2018) recently introduced a framework on the basis of Sen (1999) approach. This framework was also built with inspiration from the previous framework by Mason (2000) focusing on the effect of IT on social and economic growth.

2.1 Research Gap

In terms of emerging, transition, and developing countries, there are different frameworks. However, it is found that a lot of those aspects are applicable mainly to highly developed countries. The reason why a lot of research and frameworks are based on less developed

countries is probably because they seem to need socioeconomic development significantly. Socioeconomic growth is a constant process in all societies and countries and ICT might have an impact in all such contexts despite having changes in degree and type of growth. Hence, this study is designed to associate social and economic development with business growth with the role of ICT.

2.2 Research Question

- What is the role of ICT on social economic growth?
- How can ICT correlate social economic development with business growth and sustainability?

2.3 Significance of Research

Social economic development is a procedure of transformation or improvement in social and economic conditions from various dimensions covering individuals, organisations, or societies. In this cutting-edge world, social activities are correlated with ICT and it has a capability to improve sustainability by providing better services in the field of healthcare, agriculture, education, communication, pharmaceutical among others. From an economic perspective, ICT can act as a face changer tool for organisations to sustain in a competitive world by using innovative and attractive measures to engage their stakeholders.

2.4 Research Objectives

- The main intention of the research is to determine the role of ICT in social economic development.
- The means by which ICT can correlate social economic development with business growth and sustainability.

3. Research Methodology

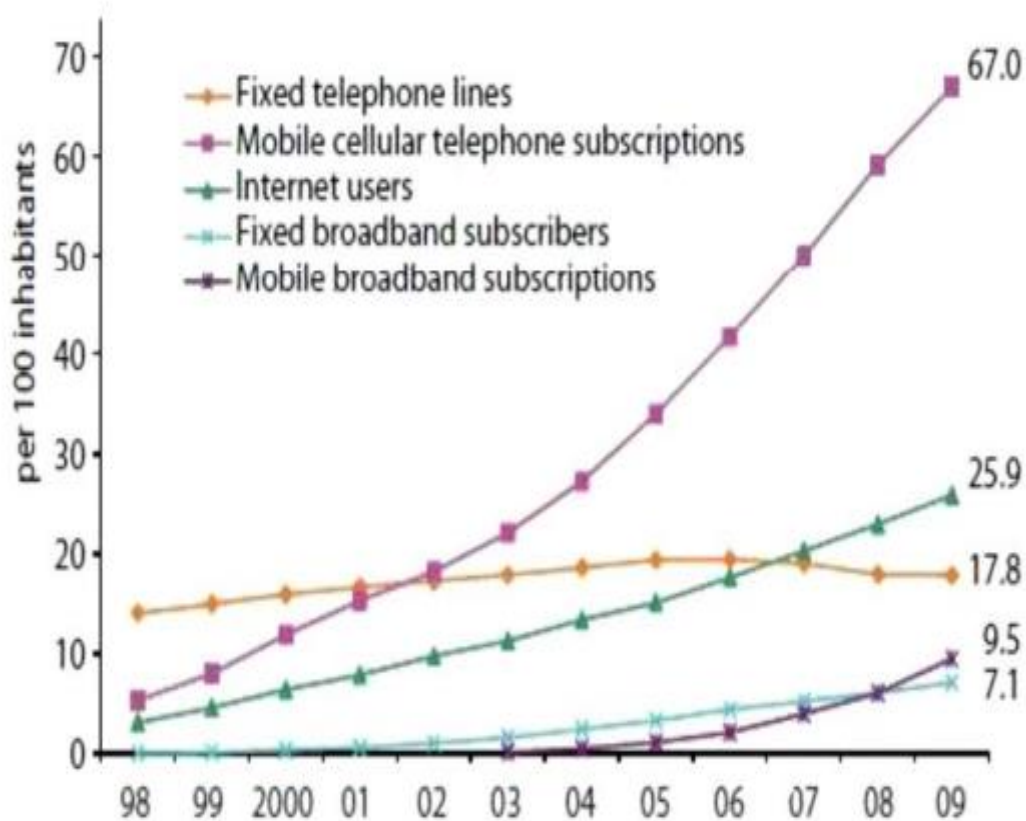
In order to fulfil above research objectives, this study is based on secondary data gathered from various studies which have proposed strategies to determine social economic development with the role of ICT. This study has gathered data from various research papers, studies published in peer-reviewed journals and databases like Scopus, Research Gate, Google Scholar, etc.

4. Analysis of Study

ICT consists of all the technologies important to manage broadcast media, telecommunications, smart BMS, audio-visual systems, and network-based monitoring and control measures. Even

though ICT is usually known as an extended form of IT, it has a broader scope than IT. ICT is defined as a kind of technology used to process, transmit, create, store, share, display, or exchange details with electronic media, according to UNESCO. Apart from earlier technologies like TV and radio, it also includes modern technologies like computer, network, cellular phone, software, hardware, and satellite systems, along with several applications and services like video conferencing. Recently, ICT has been useful to define the conjunction of various technologies and using basic lines of transmission holding different types of communication and data and formats. ICT is applied in various sectors which is shown in Figure 1

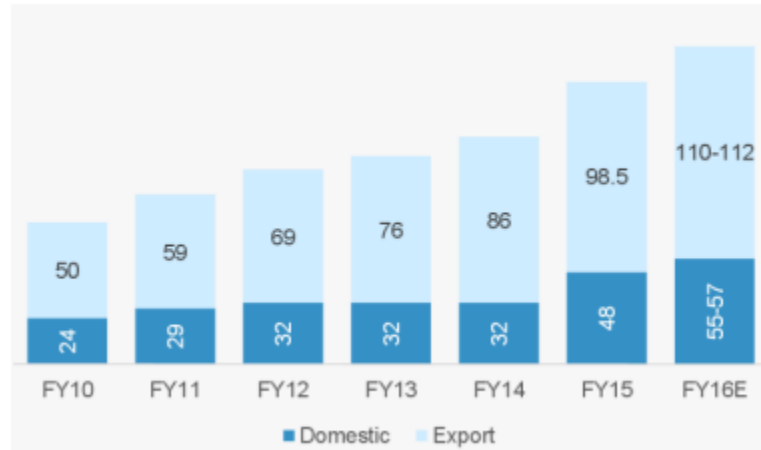
Figure 1 – Sectors where ICT is applicable



Source – Agarwal et al. (2018)

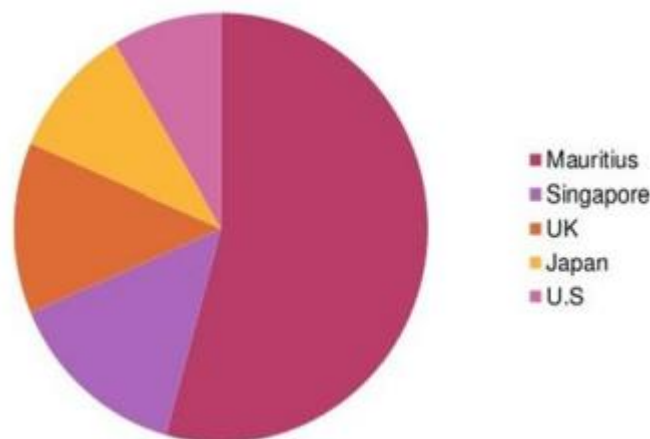
There has been a great contribution of the IT industry observed in GDP of India, i.e., from 1.2% in the year 1998 to 7.7% in the year 2017. The IT sector achieved US\$160 billion in the year 2017 as revenue from export recorded at US\$99 billion and domestic at \$48 billion, with around 13% of growth, according to NASSCOM. Figure 2 shows the size of the IT industry in the Indian market and Figure 3 illustrates FDI inflow from top 5 countries in India.

Figure 2 – IT Industry market size in India (in Billion USD)



Source - Agarwal et al. (2018)

Figure 3 – FDI Inflow from top 5 countries in India



Source - Agarwal et al. (2018)

4.1. Role of ICT on Social Economic Growth

ICT can possibly be used in every industry. The actual effect of ICT on social economic development is still a matter of debate especially in business growth. It goes without saying that the IT sector has been a very dynamic industry in a lot of developed nations and it stood out as software exports in India despite low levels of development and income in India. The IT industry has really led to a great demand in the education sector in India, especially for computer science and engineering.

4.1.1. Job Market

The ICT industry is all set to be one of the leading employers in India. With around 9200 tech start-ups, India stood third among the leading start-up hubs globally in 2017-18. IT jobs are expected to witness 22% growth in coming years in India. The job prospects in ICT are all set to be highly encouraging and positive for the future in India both in the long and short term. Currently, ICT companies have served over 2/3rds of Fortune 500 companies and generated 40 lakh direct jobs in the nation. Around 3 million new jobs are expected to be generated by 2025. Around 1,70,000 new jobs have been added by the ICT industry in the financial year 2017-18. A large-scale layoff has been reported and contradicted publicly by NASSCOM. Around 600,000 new jobs were added by ICT over the past three years with over 3.9 million employees (Agarwal et al., 2018).

4.1.2. GDP Growth

There is a significant rise in internet penetration with rise in GDP growth in developing markets. The economy of India has seen an impressive growth of 8.2% in the beginning of 2018-19 owing to great core performance and base. At existing prices in the year 2018-19, GDP is estimated to be Rs. 44.33 lakh crore over Rs. 38.97 lakh crore in the financial year 2017-18 with a CAGR of 13.8%. GDP growth was projected to be 6.7% in 2017-18 and growth of 7.3% and 7.5% were expected in 2018-19 and 2019-20 respectively. There is a higher growth rate as compared to 7.5%. Going ahead, it takes significant contributions from various domestic industries and support to sustain a higher growth rate as compared to trend growth of up to 7.5% (Agarwal et al., 2018).

4.1.3. Emergence of new industries and services

A lot of public services have been provided over mobile devices and online. Cloud computing is another great transition for modernization. Hence, significant growth support should be available from sustainable recovery in private investment and consumption. Government expenditure might also be very useful for growth of new industries and services.

4.1.4. Transformation of workforce

There are companies like Amazon which have developed various micro-work platforms to split tasks into small parts to outsource to contract employees. Digital transformation is the key driving force for innovative and strategic use of technologies and it is really transforming the way work is done. With the entry of new generations into the workforce, the departments in ICT are all set to meet their goals for smooth, high-quality communications and collaborations.

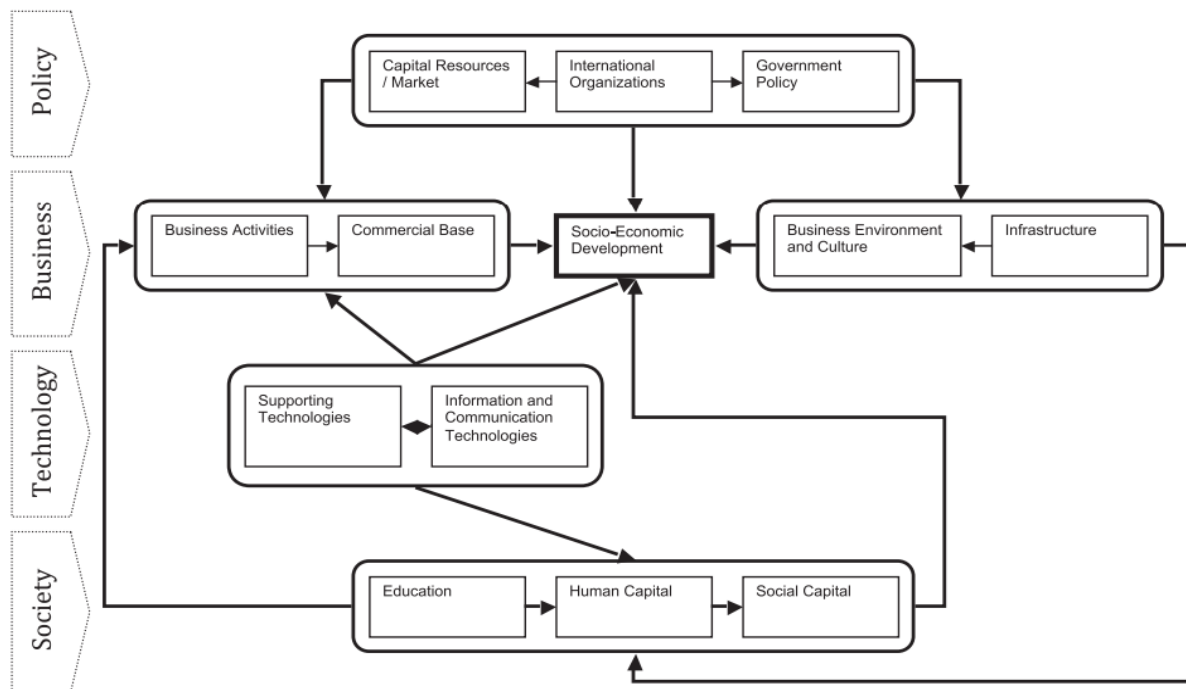
4.1.5. Innovation

Over 95% of businesses are online in developing countries. They have achieved new ways to attract customers and stay afloat. Basically, technology is related to changing innovations and trends in the world which revolutionised the way we live. Technology is also a great contributor in the smallest scale.

4.2. How ICT can Correlate Social Economic Development with Business Growth and Sustainability?

As discussed earlier, socioeconomic growth is defined as the process of improvements or changes in economic or social conditions of an organisation, society, individual, or country as a whole (Roztocki&Weistroffer, 2016). Hence, socio economic development can be analysed at organisational, individual and national levels. It is observed that socioeconomic growth is very important and proper definition of socioeconomic growth varies in studies and is the subject of discussion for economists. There are four major dimensions of socio-economic growth – technology, society, policy, and businesses and these dimensions represent explanatory or independent variables which reflect on changes in response or dependent variable. Figure 4 summarised all of these dimensions in social and economic growth.

Figure 4 – Four Dimensions for ICT in Social Economic Development



4.2.1. Policy

There are three key areas included in this dimension for policy changes and socioeconomic growth – global organisations, government, and market/capital resources. The market or capital resources are referred to the overall structure and availability to finance corporate activities. These resources are capable of enabling government bodies and businesses to finance the expansion or creation of services or production. There is a strong bearing of the way these capital markets are regulated and operated on corporate functions.

Companies across the world are influential on socioeconomic growth as they have substantial resources to organise bailouts and evaluate load conditions for upset economies (Broome et al., 2017) with great potential of capital resources. In addition, organisations across the world relying on international agreements may try power over specific countries and impose changes to local policies of the government (Broome et al., 2017). According to Béland and Orenstein (2013), organisations across the world are subject to policy changes and strategies. They may show consistent ideology over the short time periods and it is not easy to suggest their policies to be stable. Global organisations are known to generate international benchmarks like the World Bank to measure national performance in different issues. This benchmarking can be a great source of indirect strength in global politics (Broome et al., 2017).

4.2.2. Business

In this dimension, business activities and base from such activities and the foundation for these activities are differentiated. Business activities are conducted by entities like companies, institutions, and people for financial gains. Business activities are classified into productive and residential ones by Segessenmann&Crevoisier (2016). Residential activities are based on local customers while productive ones are based on additional local demand to generate revenue from a specific region. Various theories have been developed with extensive studies of economic activities in major cities (Haig, 1926).

Also known as economic base, commercial base consists of overall business activities and it also facilitates specific business activities that generate revenue (Roztocki&Weistroffer, 2016). The core theme for the economic base is that the economy is held by exports in a given region to external parts of the region and this outside demand drives the economy (Nesse, 2014).

4.2.3. Society

This dimension consists of social capital, education, and human capital. Education is defined as the “long-term acquisition of knowledge, abilities, and skills promoting fulfilment and personal growth, community enrichment, and economic viability at both community and personal level”

by Degnan & Jacobs (1998). This definition showed that education can be done in informal and formal settings, within and outside universities and schools.

Human capital is defined as “skills, knowledge, aptitude, attitude, and other traits” which are acquired and helped in specific work or production resulting in economic value (Goode, 1959). Human capital is the knowledge and skill base important to come up with a given output. It takes financial expenses and time to create and maintain the same. These investments on health and education are constantly hard to differentiate (Schultz, 1961). Social capital is defined as the ability to access people vital to achieve success in a project. Social capital is provided to groups or people and its source is based on the content and structure of social relations (Baron & Markman, 2003; Adler & Kwon, 2002).

4.2.4. Technology

ICT is covered in this dimension along with emerging technologies enabling companies and people to make the most of ICT. The technology is meant to change over time and issues explained in technological terms and it is framed in terms like manufacturing, major arts, invention, industry, machine, and applied sciences (Schatzberg, 2006). In addition, in a narrow sense, technology can be considered as a symbol of procedures and machineries (Borgmann, 2006). ICT is the term which is widely considered as a synonym and extension of IT. ICT is broadly conceived as a combination of communication, software, and hardware networks (Borgmann, 2006). It enables storage, processing, capture, and transfer of electronic information. Supporting technologies and ICT are known to work along with sustaining socioeconomic growth and corporate activities.

5. Results

The ICT-based socioeconomic growth and multi-dimensional framework has inspired academia in the area of “ICT for development (ICT4D)”. Researchers are recommended to further investigate the existing framework and look for more dimensions that should be included along with relationships and concepts not included in this study. A better theoretical foundation can be prepared to justify relations in this framework. Using current theories or developing new ones is very helpful as a lot of studies on socio-economic growth don't have theoretical lenses (Sein et al., 2018).

It is also observed that gathering the effect of global organisations, government, and financing available, and policy dimension is worthy of further studies. The role of MNCs and global organisations is very interesting in socioeconomic development. There might be a negative impact of foreign capital in the long term. For instance, Tausch (2010) claimed that there is a

significant rise in unemployment and inequality due to penetration of MNC which reduces expectancy of life and plays a vital role in emigration rate to less expenditures on social security.

It is strongly believed that further investigation should be framed in the role of internet and communication technologies in development with the perspective of multiple stakeholders. This way, it is important to understand the effect of ICT and success of ICT in a wider context with stakeholders' engagement. The authors are also interested in avoiding the dominating role of ICT experts.

6. Conclusion

This study is focused on the impact of ICT on socio economic growth of the country. It is observed that there is a significant impact of the use of ICT on economic growth of most countries. The measures showed the positive effect of ICT in different countries. There is the strongest effect of ICT use index in high income nations on real per capita GDP among others while it has the lowest impact on low-income countries. At the same time, ICT is very important as a means for economic prosperity. Hence, for all countries, it is important to improve the use index of ICT with the rise in internet users, mobile subscription and broadband subscribers for economic growth.

In addition, governments should also provide up-to-date information, education and structures to society to make the best use of ICT. It can help expand the job market in India as a lot of people are landing jobs with global ICT organisations and are leading better lifestyles. FDI has also played a vital role in significant growth of the industry in India over the years.

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