International Journal of New Media Studies
(81-85)
ISSN : 2394-4331

THE CONTRIBUTION OF INFORMATION AND COMMUNICATION TECHNOLOGIES TO ECONOMIC GROWTH: CHALLENGES AND PROSPECTS

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Abstract
Information and communication technologies (ICTs) play a catalytic role in dissemination of information, knowledge transfer, social empowerment, healthcare, capacity building, improved governance and ultimately economic growth of the country. Connectivity is increasingly bringing market information, financial services, education and health service to remote and rural areas, and also changing the way companies do business, transforming public service delivery and democratizing innovation. Economies can benefit from ICTs by focusing on social production, social consumption and social services. These are the vehicles to advance the cause of freedom and democracy which propagates knowledge and mutual understanding. This paper explores how ICTs can contribute to economic growth of a country and stresses upon the various challenges ahead in the evolution of the ICT ecosystem.

Keywords:
Connectivity, democracy, economic growth, empowerment, governance.

INTRODUCTION

Information and communication technologies (ICTs) are very persuasive technological tools for the effective dissemination of information or knowledge gained over the years across various sections of society. These have a potential for economic growth and social empowerment when utilized properly, which lead to development. ICTs are an expanding assembly of technologies used to amass, accumulate and share information between people using multiple devices and multiple media. ICTs are supporting economic growth vigorously and all have now acknowledged that there is a direct correlation between the use of ICTs and economic growth. ICTs have the capacity to unravel some of our greatest economic, social and environmental challenges. This growing global communications fabric is intelligent, adaptive and extremely innovative and its impact can be felt at both the micro and macroeconomic levels. ICTs touch nearly every industry sector with innovative, personalized and proficient ways. ICTs has been conceptualised mostly as a monolithic and homogeneous entity (Sein & Harindranath, 2004).

ICTs are a range of electronic technologies which access, create, store, transmit, manipulate and disseminate the knowledge base by bringing value addition to it by managing information in a creative manner. ICTs when converged in new configurations are flexible, enabling and competent of transforming organisations and redefining social relations. The range of technologies is increasing all the time and there is a convergence between the new technologies and conventional media (Michiels & Van Crowder, 2001).

ICTS AND ECONOMIC GROWTH

ICTs expedite information-flow by overcoming many infrastructural constraints and are the tools for achieving the goal of sustainable economic development. ICTs are already demonstrating its potential to provide people with the services and information they need to grow both their production and their standard of living. The revolution in internet and mobile communications is providing a lifeline to all the communities around the developing world. From different studies it has been found that when internet penetration elevates GDP increases. Although the global economic downturn has had an impact on business growth and individual consumption, ICTs investment has acted as an enabler of global recovery and trade. Economic growth is the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product.

However, even after sixty seven years of independence, India is lagging behind developed

countries in terms of necessary infrastructure and services such as transportation, health, education and government services. In India rural areas are information-poor and suffering with severe poverty, illiteracy, lack of services and facilities, lack of employment opportunities and backwardness. This engenders a politically and ethically appalling disparity of services and opportunities for rural populations and stops them from participating appropriately and entirely in socio-economic and political life of the nation.

One of the main causes for the discriminatory distribution of economic gains between the haves and have-nots is the gap in access to information. Increasing inequality harms economic growth. Inequality in wealth, income and information is negatively correlated with subsequent economic growth. A strong demand for redistribution will occur in societies where much of the population does not have access to productive resources. Economics Nobel prize winner, 2013, Robert J. Shiller said that rising inequality in the United States and elsewhere is the most important problem (Christoffersen, 2014).

ICTs, the most dramatic game-changing technologies the world are playing strong role in socio-economic development of developing countries. ICTs can play an important role in bridging this digital divide by bridging the overall infrastructural gap and addresses other constraints faced by citizens. ICTs serve as an instrument of awareness creation and feedback giving citizens a voice in the nation's socio-political life. ICT has been one of the most effective instruments which can act as a channel of delivery of e-Government services including health and education. Through ICTs, all can connect with the local, regional and national economy and access markets, financial services and employment opportunities. ICT can give learners access to concepts that they previously could not grasp (Selinger, 2014).

New information and communications technologies (ICTs) are changing the manner companies do business, transforming public service delivery and democratizing innovation. Connectivity through the Internet and mobile phone is increasingly bringing market information, financial services, and health services to remote areas, and is helping to change people's lives in unprecedented ways.

Mobile connectivity has transformed daily life across the globe. The impact of mobile phones on markets shows that when farmers, traders and wholesalers have access to phones, markets becomes more dynamic. Products can be moved more quickly, resulting in product diversification and the whole community benefits. The rising demand in the Indian mobile phone industry is the main reason for the rapid growth in the telecom sector of the country. With low priced mobile phones and low-cost cellular services, a large number of Indian customers are able to afford cell phones. Apart from mobile phones, demand for personal computers is also increasing at a blistering pace due to rapid industrialization. The smartphone is the leading mode for individual internet access suggesting a good market potential for wireless broadband services (Financial Express, 2011).

ICTs make a significant direct contribution to GDP as an industry in its own right, whilst there is also indirect impact of this industry on the wider economy, both through raising productivity for highly mobile workers as well as in more informal areas such as small-holding based agriculture, fisheries etc. in developing markets. In addition to supporting productivity and innovation across various sectors, ICTs are also critical enablers of trade development. Such technologies are a tool that extends beyond basic infrastructure elements and build an additional layer on top of the physical infrastructure that provides end-to-end transactional services aimed at supporting economic development through simplifying, hosting and integrating activities at multi-sectoral levels, consequently, smoothing and coordinating global supply chains between a wide range of services and products on the one hand and a broad market on the other hand.

Economies tend to grow when there are open markets for trade, technology and ideas. ICTs offer access to the global markets, better technologies for delivering products and services, and new opportunities for tapping global knowledge. ICT offer the potential to share information across traditional barriers, to give a voice to traditionally unheard peoples, to provide valuable information that enhances economic, health and educational activities.

ICT must be used to accelerate the global recovery. It's the key infrastructure for the 21st

century. For developed nations, the impact of fixed-line broadband penetration is equally important to economic growth. Future broadband investments can generate new jobs and result in more additional GDP. Actually ICT facilitate productivity and growth in developing nations. By stimulating upstream capacities (R&D, product design, application development) as well as downstream services (logistics, transportation, etc), ICT acts as a multiplier for economic growth (Wong, 2001). As in the area of trade, ICTs can accelerate the flow of goods and services across national borders by making supply chains more efficient, collaboration richer, financial transactions faster, pricing more dynamic and processes transparent. Due to the effective competition, ICTs stimulate and improve trade by connecting people and places previously not connected and by bringing velocity to the progress of new ideas.

The ICT ecosystem is a rare combination of complex and dynamic relationships, where competitors can collaborate to push the envelope of innovation. The boundaries are fluid and the equilibrium constantly changes and stakeholders grow, adapt, specialize and innovate constantly. One of the best examples for how the new emerging structure of the ICTs industry is evolving can be seen with the rise of social media which empowers individuals to utilize the Internet for global collaboration, innovation and information sharing. Not only has it empowered and changed the lives of individuals, it has spawned new business models and changed the way goods are sold, content is provided, and value is created. Digital technology is leveraged to measure and control use, save energy, reduce cost and increase reliability. Cloud computing represents yet another example of multiple players collaborating with disruptive forces to create new ways of delivering services.

ICTs provide economic opportunities to both urban and rural populations and it increases productivity and makes the market work more efficiently. The fact that virtually all new mobile customers in the coming years will be in developing countries, and more specifically in rural areas, means that the ICT platform is reaching population with low levels of income and literacy. As a result, ICT is becoming the largest distribution platform of providing public and private services to millions of people in rural and poor areas.

New mobile technologies are profoundly changing the way in which people and businesses buy and sell goods and services. Mass-market smartphones, with touchscreens, fast connections and an array of feature-rich applications, are extending the convenience and interactivity of online commerce into the physical bricks and mortar world.

Widespread adoption of broadband in rural areas will have a multiplier effect over the long-term. It will help improve productivity in rural areas, help overcome the constraints of an inadequate transport infrastructure and overall improve the quality of life in rural areas. It is a known fact that wireless is the quickest and most efficient medium to provide broadband services in the access network. Market information, financial services, education and health services had largely been unavailable in those areas in the past due to lack of connectivity of any kind. Now the wireless platform is promoting new economic and social opportunities at all levels for the poor population. Obviously, new information and communications technologies (ICT), in particular high-speed internet, are changing the way companies do business, transforming public service delivery and democratizing innovation.

The mobile industry has scaled dramatically over the last decade. At the end of 2003, there were a little over one billion unique subscribers, meaning that just under one in six people had subscribed to a mobile service. By the end of 2013 this figure had increased to 3.4 billion unique subscribers: equivalent to just under half of the global population. Globally there were 6.9 billion SIM connections at the end of 2013, with an average of 1.8 active SIM cards per unique subscriber. While subscriber and connections growth rates are now slowing in developed markets, significant untapped potential remains in developing markets. It is no surprise that mobile has become a cornerstone of the global economy, both as an industry in its own right and as an enabler of opportunities in other sectors. In 2013 the total contribution from the mobile industry was equivalent to 3.6% of global GDP, while the mobile ecosystem directly supported 10.5 million jobs and contributed US$ 336 billion to public funding even before considering regulatory and spectrum fees (The Mobile Economy, 2014).

ICTs have played a crucial role in the global economy by providing an innovation platform for new services, opportunities and solutions. Mobile connectivity has transformed daily life across the globe by voice services and internet access. This brings financial services within the reach of previously unbanked and under banked populations, driving economic growth and promoting financial inclusion.

ICTs are also overcoming cost barriers and developing innovative new solutions to deploy networks in more remote and challenging environments, especially in developing regions. The industry is already competitive and significant price reductions over recent years have helped to drive strong subscriber growth across the world. However, ICTs have the potential to deliver larger benefits to society in the future by connecting almost anything and anyone means connecting the physical and digital worlds. This convergence will unleash a new dimension of services that improve the quality of consumers' lives and the productivity of enterprises. Many industry sectors are increasingly digitising and mobilising their products and services, reducing costs and providing compelling new experiences for consumers. Consequently, ICTs had a profound socio-economic impact on the economies of every country in the world which is not only deep but broad, spanning many aspects of economic, political and social life, making a striking contribution to everything from cross-sector innovation to GDP growth. ICTs have become one of the basic building blocks of modern society (Smamy, 2012).

However, despite the thunderous growth in ICT technology, main problems in adoption of ICT in rural segments are ICT illiteracy, unavailability of relevant and localised contents in their own languages, uneasy and unaffordable accessibility. Apart from universal and affordable access to ICTs, greater emphasis must be to the availability and relevance of services and content in local language or multi-media accessible format as per needs of target beneficiaries. In addition, capacity building of various stakeholders to use ICTs is essential for rural development. This requires a shift in focus away from purely technology related issues to the evolution of policies, strategies and planning that ensure cross-sectorial and multi-stakeholder involvement and engagement including most of all the local communities and target beneficiaries. Both content and capacity building are essential to achieve the promised impact of ICT on economic growth of a country.

Besides the limitations of existing telecom infrastructure in developing countries, the principal constraints in adopting and using ICT applications, especially for small businesses, include lack of capacity to assess returns and costs of using ICT, and a shortage of and inability to retain ICT-skilled labour. Also there are other challenges ahead in the evolution of the ICT ecosystem. As business paradigms change, the issues of privacy, security and quality of service are becoming increasingly important. Even so in spite of these challenges, ICT's capability to deliver an economic growth dividend is motivating.

CONCLUSION

ICTs have played a catalytic role in dissemination of information, knowledge transfer, healthcare, capacity building, improved governance and ultimately economic growth of the country. Economies can benefit from ICTs by focusing on social production, social consumption and social services. These are the vehicles to advance the cause of freedom and democracy which propagates knowledge and mutual understanding. Therefore it can be said that ICTs boost economic growth by supporting the processes of growth, enhancing the key sectors of an economy, increasing productivity, improving networking, and by the growth of the ICT sector.

REFERENCES

[1] Christoffersen, John (2014). Rising inequality 'most important problem,' says Nobel-winning economist. *St. Louis Post-Dispatch*. Retrieved July 22, 2014, from http://www.stltoday.com/ business/local/rising-inequality-most-important-problem-says-nobel-winning-economist/article_a5065957-05c3-5ac0-ba5b-dab91c22973a.html

[2] Financial Express. (2011). Smartphones Preferred Over PCs for Surfing Web: Survey. Retrieved June 5, 2014, from http://archive.financialexpress.com/news/smartphones-preferred-over-pcs-for-surfing-web-survey/839106

[3] Michiels, S.I. & Van Crowder, L. (2001). Discovering the 'Magic Box': Local Appropriation of Information

and Communication Technologies (ICTs), SDRE, FAO, Rome.

[4] Sein, Maung, K. & Harindranath, G. (2004). Conceptualising the ICT Artifact: Towards Understanding the role of ICT in National Development. The Information Society, 20(1).

[5] Selinger, Michelle. (2014). The Impact and Role of ICT in the Delivery of Education and Training in Africa. Retrieved August 17, 2014, from www.britishcouncil.org

[6] Swamy, Raju Narayana (2012). Integrating ICT in Teacher Education: An Inevitable Step towards Improving the Quality of Education, University News, 50(6), 1-6.

[7] The Mobile Economy. (2014). Retrieved November 12, 2014, from http://www.gsmamobileeconomy.com/GSMA_ME_Report_2014_R2_WEB.pdf

[8] Wong, Poh Kam (2001). The Contribution of Information Technology to the Rapid Economic Growth of Singapore, World Institute for Development Economics Research.