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"IMPACT OF DIGITALIZATIONAND E-COMMERCE FOR GENERATING EMPLOYMENT OPPORTUNITIES IN DEVELOPING COUNTRIES IN 21ST CENTURY"

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Abstract

The objective of the paper is to investigate the impact of digitization on economic growth and its potential for creating employment opportunities. Digitization being a key economic driver in the present world it is important to integrate the economy by creating digital markets. Firms, prices and productivity are the three benefits derived by an economy. It is found in large economies internet accounts for about 3.4% of GDP on average along with stable employment generation. During global downturn 6 million jobs were created worldwide by the digitization effects and 94% were from emerging economies and 6% from North America and Western Europe.

This showcases the potential of the digitization in creating employment opportunities. Researches show developing economies has more possibilities of gaining advantages of e-commerce than the developed economies as developing economies have wider scope of reducing inefficiencies and increase production. In India, increasing internet penetration, rapid technology adoption and high sale of technical gadgets like smartphones, tablets, etc , have led to an attractive online customer base and unprecedented growth of e-commerce.

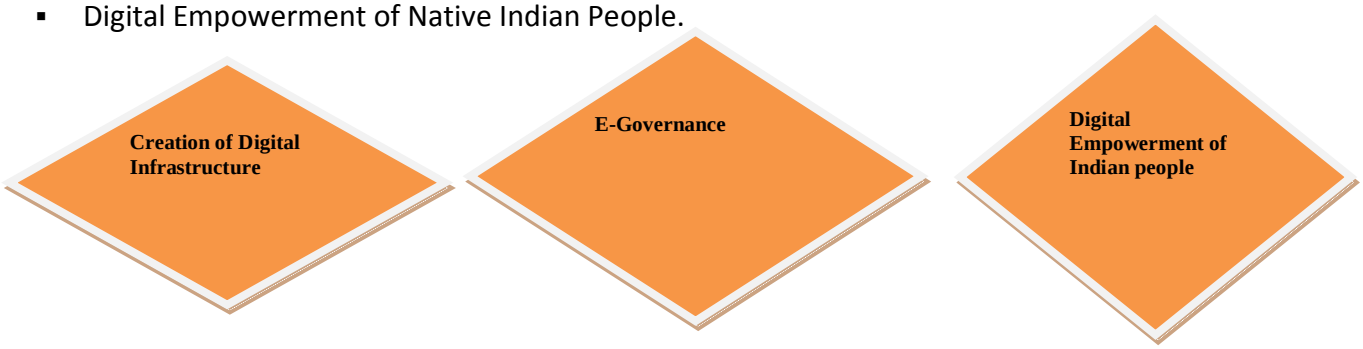
Domestic policies regarding telecommunication, financial services and distribution and delivery would provide inputs for e-commerce trade related negotiations. Studies show that 2.6 jobs are created by internet for every job lost for internet. The paper discusses the different countries' digital contribution and the employment created with the e-commerce growth. Impact of internet is evaluated around two components: consumption & expenditure and supply.

Keywords: digitization, economic growth, e-commerce, employment.

Introduction

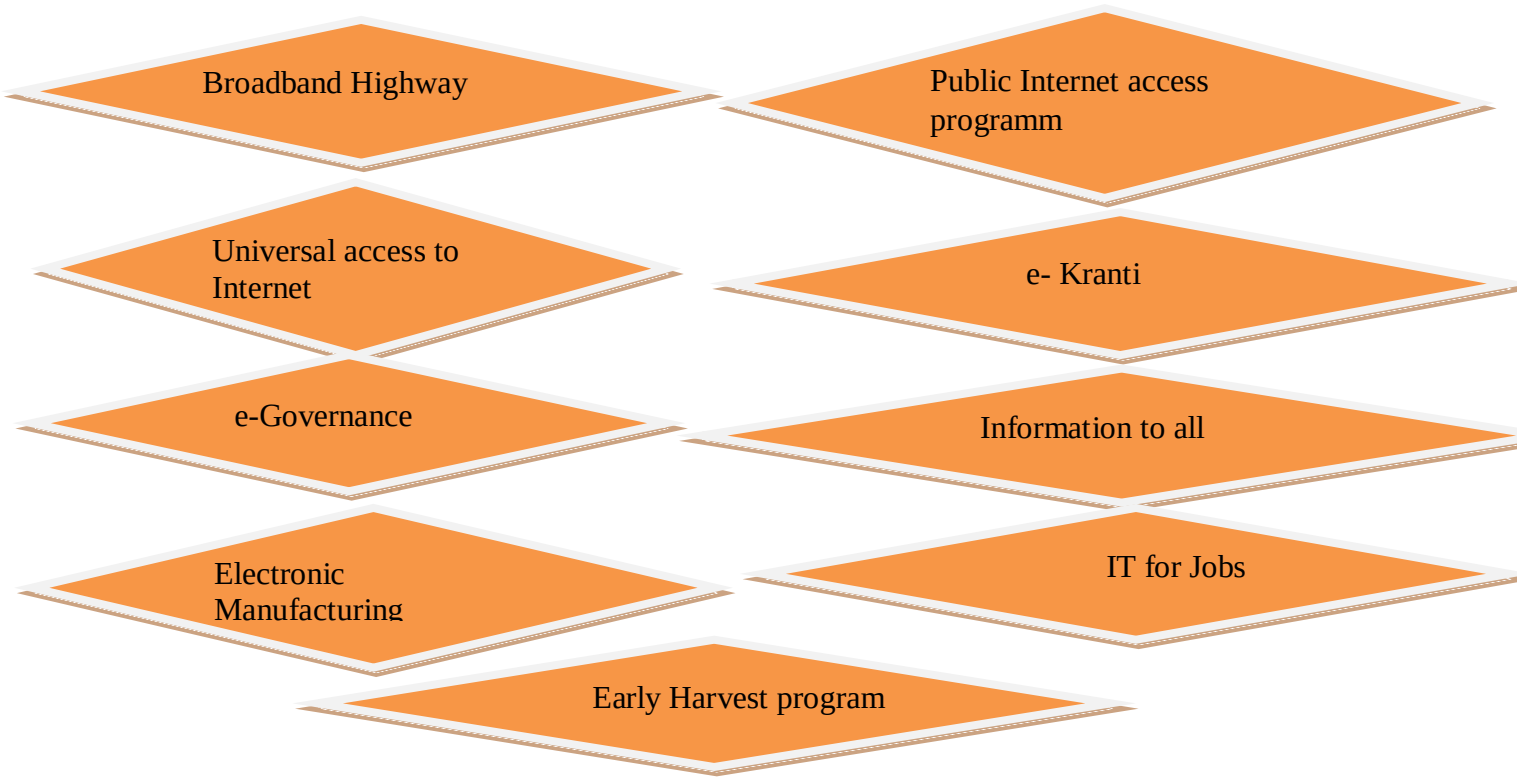
Digital India is a campaign launched by the Government of India by Prime Minister NarendraModi on 1 July 2015 to ensure that Government services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology.The initiative includes plans to connect rural areas with high-speed internet networks. Digital India programme is focused on three key ideas:-

- Creation of Digital Infrastructure and Electronic Manufacturing in Native india.
- Delivery of all Government Services electronically (E-Governance).
- Digital Empowerment of Native Indian People.



The Digital India programme is focused on fulfilling three vision areas through 9 “pillars” or focus areas, which lay down objectives in areas such as skill development, e-governance, mobile / broadband connectivity, etc. These 9 pillars are supplemented by initiatives that are operating at various levels. All the initiatives have been launched and are in various phases of implementation while significant progress has been achieved on some of these initiatives, such as Smart Cities, Jandhan, PAHAL, etc. in the last 6-12 months.

Pillars of the Digital India



The program has now moved from the planning phase towards execution and significant progress has been made in implementation of the various initiatives. However, some challenges have been faced during the execution which needs to be addressed.

Digital Infrastructure

The Information Communication and Technology (ICT) sector is an essential part of the digital infrastructure requirement to ensure availability of telecom, broadband, computers and software across the country. India’s ICT readiness has remained low, ranking 131 in the ICT Development Index in 2015. The Digital India program aims to increase reach of digital infrastructure through an extensive broadband and mobile network in order to enable electronic delivery of government services to citizens. For this, the development of a strong digital and telecom infrastructure backbone is critical. The government has taken several initiatives to improve the digital infrastructure in the country which are in various stages of implementation. These initiatives extend beyond physical infrastructure and also address

software and security infrastructure as all the three aspects are required in tandem to ensure the success of Digital India.The key enablers to development of digital infrastructure in India have been cloud computing and usage of analytics.

Cloud computing

Cloud computing is a type of Internet -based computing that provides shared computer processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources (e.g., computer networks, servers, storage, applications and services), which can be rapidly provisioned and released with minimal management effort. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in either privately owned, or third-party data centers. Cloud computing relies on sharing of resources to achieve coherence and economy of scale, similar to a utility over an electricity network.

The government plans to use cloud technologies to enable seamless integration between various departments and delivery of services to the citizens. DigiLocker, for instance, is a cloud service which allows citizens to use a shareable cloud space to upload, store and share documents. As on date, the space available per user is 1 GB and the number of users is over 3.96 million11. TheDigiLocker service is also being linked to governmental departments to enable users to pull documents in a digital format. In May 2016, the government also made it mandatory for CBSE mark sheets to be made available in a digital format which can be uploaded and linked to DigiLocker.

Use of Analytics

India has more internet users than English language speakers; as a result regional language keyboards are vital for deeper internet penetration. Local language content needs to get digitized. China has already developed and standardized local language keyboards. Government can help by providing the standard templates for every language that can then be commercialized by using PPP model. An Indian based company, Data Xgen Technologies Pvt Ltd, has launched world's first free linguistic email address under the name 'DATAMAIL' which allows to create email ids in 8 Indian languages, English; and 3 foreign languages – Arabic, Russian and Chinese. Over the period of time the email service in 22 languages will be offered by Data XGen Technologies.

The Indian government initiated a data repository called the Electronic Transaction Aggregation and Analysis Layer (e-taal), which provides real time transaction data of citizens with various departments and agencies of the government along with a quick analysis of the information in graphical form. The e-taal portal currently provides data on over 3,100 e-services that can be analysed across geographies.This data can be used by government agencies to assist in decision making in real-time.

SundarPichai, SatyaNadella, Elon Musk researched about Digital India and its preparedness to create jobs opportunities in the information sector. He concluded that creating new jobs should be continued with shifting more workers into high productivity jobs in order to provide long term push to the technological sector in India. **Microsoft CEO, SatyaNadella** intends to become India's partner in Digital India program. He said that his company will set up low cost broadband technology services to 5lakhs villages across the country. **Prof. Singh** began with the basic overview of what Digital India entails and led a discussion of conceptual structure of the program and examined the impact of "Digital India" initiative on

the technological sector of India. He concluded that this initiative has to be supplemented with amendments in labor laws of India to make it a successful campaign.

Services provided by Digital India Program

DigiLocker

Digital Locker facility will help citizens to digitally store their important documents like PAN card, passport, mark sheets and degree certificates. Digital Locker will provide secure access to Government issued documents. It uses authenticity services provided by Aadhaar. It is aimed at eliminating the use of physical documents and enables the sharing of verified electronic documents across government agencies. Three key stakeholders of DigiLocker are Citizen, Issuer and requester.

e- Kranti

The national level e-Governance programme called National e-Governance Plan was initiaited in 2006. There were 31 Mission Mode Projects under National e-Governance Plan covering a wide range of domains, viz. agriculture, land records, health, education, passports, police, courts, municipalities, commercial taxes, treasuries etc. 24 Mission Mode Projects have been implemented and started delivering either full or partial range of envisaged services. All new and on-going e-Governance projects as well as the existing projects, which are being revamped, should now follow the key principles of e-Kranti namely 'Transformation and not Translation', 'Integrated Services and not Individual Services', 'Government Process Reengineering (GPR) to be mandatory in every MMP', 'ICT Infrastructure on Demand', 'Cloud by Default', 'Mobile First', 'Fast Tracking Approvals', 'Mandating Standards and Protocols', 'Language Localization', 'National GIS (Geo-Spatial Information System)', 'Security and Electronic Data Preservation'. The portfolio of Mission Mode Projects has increased from 31 to 44 MMPs. Many new social sector projects namely Women and Child Development, Social Benefits, Financial Inclusion, Urban Governance, eBhasha…etc have been added as new MMPs under e-Kranti

Attendance.gov.in

Attendance.gov.in is a website, launched by PM NarendraModi on 1 July 2015 to keep a record of the attendance of Government employees on a real-time basis. This initiative started with implementation of a common Biometric Attendance System (BAS) in the central government offices located in Delhi.

MyGov.in

MyGov.in is a platform to share inputs and ideas on matters of policy and governance. It is a platform for citizen engagement in governance, through a "Discuss", "Do" and "Disseminate" approach.

SBM Mobile app

Swachh Bharat Mission (SBM) Mobile app is being used by people and Government organisations for achieving Shreyank the goals of *Swachh Bharat* Mission.

eSign framework

eSign framework allows citizens to digitally sign a document online using Aadhaar authentication.

e-Hospital

The eHospital application provides important services such as online registration, payment of fees and appointment, online diagnostic reports, enquiring availability of blood online etc.

National Scholarship Portal

National Scholarship Portal is a one step solution for end to end scholarship process right from submission of student application, verification, sanction and disbursal to end beneficiary for all the scholarships provided by the Government of India.

e-Sampark

e-Sampark is a mechanism to contact citizens electronically, sending informational and public service messages via e-mails, SMSs and outbound dialing

Challenges in Digital India Program

Delay in development of infrastructure

One of the biggest challenges faced by the Digital India programme is the slow progress of infrastructure development:TheBharatNet project was approved in October 2011, with a two year implementation target. As of 2016, under 40% of the target has been achieved. Spectrum availability in Indian metros is about a tenth of the same in cities in developed countries. This has put a major roadblock in providing high speed data services. • Public Wi-Fi penetration remains low.

Contracting

Implementation of the Digital India program has been hampered by contracting challenges such as the following: Several projects assigned to PSUs are delayed given challenges related to skills, experience and technical capabilities. • Several RFPs issued by the government are not picked up by competent private sector organizations since they are not commercially feasible

High level of digital illiteracy

Digital illiteracy is prevalent in most of the towns and villages in India. Cities have adopted digitalization but limited to certain extent. Full fledged digitalization is cashless transaction on daily basis, use of internet services to get government certificates. This requires administration changes, Taxation changes and change in public mentality. So it's a team work which includes citizen's responsibility and support to the new system

Connectivity to remote areas

It is a mammoth task to have connectivity with each and every village, town and city. The problem of connectivity is a complex issue because every state has different laws pertaining to its execution. Also it is challenging for the central authorities to make a database where such a huge information can be stored.For Digital India to have a large scale impact on citizens across the nation, the digital divide needs to be addressed through last mile connectivity in remote rural areas. Currently, over 55,000 villages remain deprived of mobile connectivity. This is largely due to the fact that providing mobile connectivity in such locations is not commercially viable for service providers.

Compatibility with center state databases

Every state has different internet protocols because every state is diversified. Diversified not only in the sense of religion but also in language. Hence software compatibility with the center is a crucial issue. Information shall be saved carefully.

Data security

With the proliferation of cloud-based services like DigiLocker, data security has emerged as a major challenge. The recent data breach in August 2016, in which debit card data for more than 3.2 million subscribers was stolen highlights the importance of implementing foolproof security systems

Conclusion

The adoption of next generation technologies under Digital India such as telepresence will help reduce costs and also have a positive impact on the environment. The progress made in these projects and across the three vision areas of Digital India has started to show an impact on the lives of citizens and on businesses. Several applications and services that have been developed have seen significant adoption. The cloud storage service, DigiLocker, is now being used by four million users.Digital India' initiative is a refreshing move and quite the need of the hour for the weakened technological sector.

The Government of India hopes to achieve growth on multiple fronts with the Digital India Programme. The Digital India program is likely to benefit citizens over the next few years by generating employment opportunities, increasing speed and quality of service delivery and enhancing social and financial conclusion. Businesses will benefit by realizing higher productivity, an improved ease of doing business and a boost in innovation and investments. The MyGov application which provides a platform for citizens to interact with the government is used by over one million users to interact with the government. While the usage of smartphones and the internet has increased, digital literacy and awareness is still low and is an area that requires enhanced focus. The government has initiated several programs like the National Digital Literacy Mission (NDLM) and Skill India program to increase IT awareness and literacy. To further strengthen the development of infrastructure, services, capacity building and enhance their impact, the government needs to take steps across multiple functional areas

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