Digitally Enabled Economic Transformations

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Abstract:
Digital India today becomes a major innovative program for the economic development of the country. The vision of digital system is the development of a country through electronic technology and for creating more job opportunities. The drive behind the concept is to build participative, transparent and responsive system. It helps to remodel India into a knowledgeable economy and digitally empowered society, to ensure that government services are made available to citizens electronically by improving online infrastructure and by increasing internet connectivity. Faceless, Paperless, Cashless is main focus of Digital India.

Inspite of these, problems exist in the way of its successful implementation like digital illiteracy, poor infrastructure, low internet speed, lack of coordination among various departments, issue pertaining to taxation etc. These challenges need to be addressed in order to realize the full potential of this programme. Hence, an attempt has been made in this paper to analyze the impact of digital era on the economic transformations in our country.

Keywords: Digital India, Digital Literacy, Indian Economy, Services, e-Governance. Author

Introduction:
India has emerged as one of the pre-eminent nations of the world to use digital technology to transform the lives of its citizens. Digital India is an umbrella programme that covers multiple projects of various Central Ministries/Departments and States and Union Territories (UTs). The Government had launched the India BPO Promotion Scheme (IBPS) and the North East BPO Promotion Scheme (NEBPS) under the Digital India programme, with the aim of creating employment opportunities and dispersal of the Information Technology and Information Technology Enabled Services (ITES) industry in small cities and towns by incentivising the setting up of Business Process Outsourcing (BPO) and ITES operations by providing financial support of up to ₹ 1 lakh per seat in the form of viability gap funding towards capital and operational expenditures. Under IBPS and NEBPS, 246 BPO/ITES units have started operations covering 27 States/UTs and are providing direct employment to persons.

Some of the facilities provided under Digital India programme are, digital locker, e-mandi, e-education, e-hospitals, e-banking, e-government, e-sign, etc.

Digital India: Objectives
Digital India has multifold objectives like to:
1. Create digital infrastructure across the country.
2. Spread the net-connectivity in all the parts of the country.
3. Develop Digital-IDs for all the citizens.
4. Initiate Digital literacy among the people.
5. Start Digital-Locker facility in the nation.
6. Develop and establish next generation network (NGN).
7. Self-dependency in electronics manufacturing.
8. Improved mobile connectivity for all.
9. To develop Indian manufactured mechanism for Cyber Security.
11. Real Time Information of market to Business entities and farmers.
12. Advance weather information to farmers.
13. Increase social awareness through digital applications.
14. Increase the reach-ability of education across India by e-education system.
15. Make Healthy India by Tele-Medicine arrangement across the country.
17. Open the access of market for all by Online Marketing Facility.
20. Develop digital security system for safe and secure society.

The components of Digital India

Digital India is a complex program that reduces the manual working of multiple departments. Digital India program is a use of computer technology and mobile applications for taking up of Government services quickly. There are three vision areas viz. Creating Digital infrastructure, Providing of services digitally, Digital literacy and Nine Pillars for the implementation of digital program in India (Shobana, P, 2021).

Pillars of digital India

The nine pillars of digital India are as follows

1. Broadband Highways:

First pillar objective is to connect high speed broadband highways for connecting all the villages, government departments, institutes and universities. National optical fiber network (NOFN) funded by Universal services obligation fund, has set the process for connecting broadband networks to the country’s gram panchayats.

This covers three sub components, namely Broadband for All – Rural, Broadband for All – Urban and National Information Infrastructure (NII). Under Broadband for All Rural, objective is to cover village Panchayats. Under Broadband for All Urban, Virtual Network Operators would be leveraged for service delivery and communication infrastructure in new urban development and buildings. National Information Infrastructure would integrate the networks like SWAN, NKN and NOFN along with cloud enabled National and State Data Centres. It will also have provision for horizontal connectivity to 100, 50, 20 and 5 government offices/ service outlets at state, district, block and panchayat levels respectively.

2. Universal Access to Phones:

The second pillar, focuses on network penetration and filling the gaps in connectivity in the country to mobile access or network with the help of internet coverage through network technologies like 3G, 4G and 5G and further government is focusing on 6G network connectivity in future period. The initiative is
working to widen the reach of its delivery of internet coverage in Indian towns and hamlets. This covers three sub components, namely Broadband for All Rural, Broadband for All Urban and National Information Infrastructure.

3. Public Internet Access Program:

The two components of third pillar are common service centres (CSC) and Post office as Multi service centres. This Pillar focuses on connecting the National Rural internet mission. It consists of those technologies that support effective cost, security, services, connectivity that delivers remote access to any information or service available across the domain. This change in technology will open new doors of e-services to every citizen i.e. e-governance. E-Governance is an easy services delivery program government started for connecting with the public.

The public Internet Access program is one of the most significant initiatives under the nine pillars of the digital India mission. It will empower every citizen by providing them with digitally accessible services.

- The post office has been around for centuries, and now they’re expanding to serve the everyday needs of Indian citizens. The CSC (Common Service Centers) and Post Offices function as multi-centers so that people can quickly obtain all government e-services.
- DeitY has implemented Common Service Centers and increased its access to every village in India.
- The CSC successor CSC 2.0, was launched in 2015 to expand its strength across India to all gram panchayats. Now, there is CSC 3.0 DSP (District Wise Service Provider).
- The number of total CSC centers has reached more than 43 lakhs.

Some of the examples are

- Form Simplification, reduction
- Online applications and tracking, Interface between departments
- Use of online repositories e.g. school certificates, voter ID cards, etc.
- Integration of services and platforms – UIDAI, Payment Gateway, Mobile Platform, EDI
- Electronic Databases – all databases and information to be electronic, not manual
- Workflow automation inside government
- Public Grievance Redressal - using IT to automate, respond, analyse data to identify and resolve persistent problems – largely process improvements
- To be implemented across government - critical for transformation.

4. E-Governance - Reforming Government through Technology:

Fourth pillar, E- Governance is a re-engineering process of government business using IT to improve its processes and policies. This pillar is formed by government for transforming government to e-government and its governance to e-governance. E-Governance is the situation where the interaction with the government can be done through one counter, 24 x 7 without waiting in queues at government offices. Each citizen can make a contact with government through a website where all forms, laws, news and other information will be available.

E-governance is the application of information and communication technology for delivering government services, exchange of information, communication transactions, integration of various stand alone systems and services between government-to-citizen (G2C), government-to-business (G2B), government-to-government (G2G), government-to-employees (G2E) as well as back-office processes and interactions within the entire government frame work. Through e-governance, government services are
made available to citizens in a convenient, efficient, and transparent manner. The three main target groups that can be distinguished in governance concepts are government, citizens, and business/interest groups. In e-governance, there are no distinct boundaries.

Benefits of e-governance include: reduction in corruption, high transparency, increased convenience, growth in GDP, direct participation of constituents, reduction in overall cost and expand reach of government. To help guide the government through technology the following steps are important for transformation process.

- Electronic Databases- all the database should be converted from manual to electronic.
- Workflow computerization- the workflow across all the Indian agencies and departments should be electronic and updated automatically. This will enable efficiency and visibility across all the citizens of the country.
- Public Grievance Redressal – government and its departments should be capable of analysing, automating and responding to data in case of problems that arrive persistently. This will not only save time but also help in the process.
- Departments and Ministries are implementing IT to deliver government services more efficiently in the various government departments.
- Digitizing government with the implementation of technologies and guidelines like; online application and tracking facility, form made easy by reducing unnecessary fields, and the mandate of online documentation.
- To make the documentation availability simple yet secure. The Government of India is mandating the use of open API for data submission, using UIDI systems like Adhaar for identity, and making all the databases available in electronic form.
- To resolve the common issues coming due to weak infrastructure, IT is mandatory for data automation.


Under fifth pillar, The Government of India has been attempting continuously to provide citizens better services. Government of India launched various projects at Central and State level projects for the overall development of a country.

**eKranti:** eKranti means electronic delivery of services to public. This Kranti focuses on providing information and knowledge to people regarding health, farming, rights, financial services electronically with easy access. Government of India has allocates 5 billion for eKranti projects in the country.

- The mission of e-Kranti is to change how citizens interact with government services by ensuring that all the services are deliverable electronically.
- The digitization of government services deliverability is now more efficient, transparent, and reliable.
- e-Kranti is one of the vital pillars out of all 9 columns of digital India.
- The mission promotes emerging technologies for the efficiency of government e-services.

With already 31 projects of e-government Mission Mode, it is expected to add 10 more to e-Kranti. This includes:
• Technology for Education – All the schools are expected to be connected through a mutual network that is e-Education. Free Wi-Fi will be given to all schools including primary schools. This will bring the literacy to next level.

• Technology for Health – this will cover consultation for everyone online. E-Healthcare also includes ordering medicines online and viewing medical records over the internet.

• Technology for Planning- this Mission Mode project will be in line with the GIS based decision. This will be used during project conceptualizing, planning and during the design and development stage.

• Technology for Farmers- using technology, farmers will be able to generate real information about their inputs and can even order online. Hey would even be advanced loan and relief money would be transferred online.

• Technology for Security- in case of emergency services or disaster relief environment, it will provide services to citizens and minimize the loss.

• Technology for Financial Inclusion- mobile banking, use of micro ATM and post offices will be strengthened by use of technology.

• Technology for Justice- this will cover e-courts, e-jails, e-police and e-prosecution.

• Technology for Cyber Security- this centre caters to making a secure cyber space through National Cyber Security Co-ordination Center Ongoing Programme (NeGP)

6. Information for All:
   
   The sixth pillar, for implementation of Digital India project in India is availability of information for all. Two way communication system between government and citizens. Availability platform for open data makes easier for the citizens to take the benefit of all services under a single system of information. Government of India has launched a web based online site for public access for quicker and easier access and interaction. Government started data.gov.in website for interacting with public. MyGov.in is a website implemented by government of India as a platform for citizens to engage in governance. The basic motive of this to provide the citizens of India with all the information they need. It also makes communication with the government much easier than physically going to different government departments to gather information.

   • Online Hosting of Information & reports
   • Government star effectively draws in through online networking. This will inform the citizens about any new developments or news and vice versa.
   • Online informing is about informing the citizens about special programs or occasions by way of SMS or e-mails.
   • All this will exhaust a huge amount of existing base which will also demand additional resources. Thus the mission “Information for all” breaks the barrier between government services and Indian citizens to shorten the communication gap. The idea that came to fruition is that citizens can get everything they need in one place, with just a few clicks or taps on their phone screens.
   • The Government uses e-mail, Telegram, and text messages as a platform to deliver information, not just social media platforms.
   • Online hosting of documents and information: With the abundance of information on today’s global web, it is vital to make sure that everyone has access. Hosting documents and files online will give
citizens easy open-source access and encourage them in their search for truth with ease and convenience.

7. **Electronic Manufacturing:**

The seventh Pillar focuses on promoting manufacturing of electronics in the country and not to be imported from outside the country. This will promote and develops industrialization in India. This fabulous aim can be achieved only by the coordination between the following actions: By making suitable changes in taxation system by the government for motivating the industrial sector for manufacturing electronics, development of Skills and talent, by enhancing and providing fund to researchers across the country for research in manufacturing of electronics. Electronics Marketing will require coordination from various focused territories: Fab-less Design, VSATs, Smart Energy meters, and micro ATM’s fields etc.

8. **IT for Jobs:**

This eight pillar focuses on providing training to youth for developing their skills required for jobs opportunities in IT sector. There are four components for completing this aim. (a). First component is to provide training to youngsters to build them eligible for getting jobs in IT sector. (b). The second component is to establish BPO’s in every north eastern states to enable ICT growth in these sectors. (c). The third component is to train service delivery agents to run viable business delivering IT services. (d). IT parks are established by government of India in different states for the development of skills and talent of youth in the country like IT Park in Chandigarh, Bharat Electronics limited in Panchkula (Haryana).

**Early Harvest Programs:**

This ninth pillar focuses on the generation of short timeline projects which replaces manual services by transformation of manual services to e-services. These includes Wi-Fi in all schools, colleges and Universities, IT platform for messages, Public Wi-Fi hotspot, Biometric attendance ,Government greetings to e-greetings, SMS based weather information .

**Opportunities of digital India campaign:**

a) The Digital India initiative will create approx $1-trillion business opportunities related to communications, IT and IT-enabled services, telecom and manufacturing of electronics. Digital India program brings or opens up an excess of opportunities for technology companies such as broadband infrastructure building: generate identity solutions, system of payment and online delivery system etc.

b) After the launching of Digital India, people are much connected with the government and their schemes. Consequently citizens of the country are enjoying the benefits of government schemes like Mudra Yojna, Ujjwala Yojna, Pradhan Mantri Krishi Bima Yojna.

c) Digital India programme provides business opportunities initially in the following sectors:

- **Electronic Manufacturing:** Investment in electronic infrastructure and providing skill development opportunities for private sector through telecom and electronics.
- **Information and Communication Technology:** Required IT trainer to train people in villages and small town, training for service delivery agent. Jobs for IT experts, software developer and network experts.
National e-governance department: Opportunities for senior consultant and IT consultant generated.

Healthcare: Telemedicine and remote health plan will create huge opportunity for universal accessibility to quality healthcare.

Cyber security: Cyber security is important area of focus where abundant opportunities are available. It is necessary that all type and size of organizations should invest significantly in securing their products and services.

Telecom: Provide training to Rural workforce on telecom and telecom related services (TSP’s)

Infrastructure: To establish broadband and integrate the network and cloud infrastructure for better connectivity creates many opportunity for networking experts and related organizations.

Agriculture: “Digital India” is also promoting the Agriculture sector of the country. Momentarily farmer of the country also get assistance by digital India. They can get the explicit information regarding weather conditions and take decision accordingly. On the other hand they can also get the authentic news of Agro-market like rate of Crops and agro-commodity. So farmer cannot be cheated by third party at market place. Employment generation is another bright aspect of this project.

Economy: Digital economy has great power to change the lives of millions of Indian people. It is a tool which could provide the opportunity for country to expand its role and

Marketing: Numerous opportunities related to the marketing such as Digital process of advertisement, e–business, online shopping etc.

Finance: Finding new way from online banking to digital wallet, crowd funding, low cost commercial transaction

Some of the transformative digital platforms under Digital India include Bharat Interface for Money- Unified Payment Interface (BHIM-UPI), Government e-Marketplace (GeM), Goods and Services Tax Network (GSTN), Digital Locker (DigiLocker), Unified Mobile App for New-Age Governance (UMANG), Jeevan Pramaan, e-Hospital, MyGov, e-National Agriculture Market (e-NAM), Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) and National Scholarship Portal (NSP). These solutions are indigenously developed and based on low-cost technology. Some of the key initiatives undertaken by Ministry of Electronics and Information Technology (MeitY) under Digital India programme across the country is as follows:

Aadhaar: Aadhaar provides 12 digit biometric and demographic based identity that is unique, lifelong, online and authenticable. The Unique Identification Authority of India was created with the objective to issue Unique Identification numbers (UID), called ‘Aadhaar’, to all the residents of India. The UID had to be (a) robust enough to eliminate duplicate and fake identities, and (b) verifiable and authenticable in an easy, cost-effective way. The Authority has so far issued more than 124 crore Aadhaar numbers to the residents of India.

Common Services Centres : CSCs are offering government and business services in digital mode in rural areas through Village Level Entrepreneurs (VLEs). CSCs are functional (including urban & rural areas) across the country.

DigiLocker: Digital Locker provides an ecosystem with collection of repositories and gateways for issuers to upload the documents in the digital repositories. Digital Locker has more than 13.7 crore users and more than 562 crore documents are made available through DigiLocker from 2,311 issuer organisations. e-NAM has integrated 585 agricultural mandis and has undertaken transaction of orders worth Rs 70,000 crore.
**Unified Mobile Application for New-age Governance (UMANG)** – for providing government services to citizens through mobile. More than 1668 e-Services and over 20,197 bill payment services are made available at UMANG.

**e-Sign**: e-Sign service facilitates instant signing of forms/documents online by citizens in a legally acceptable form. The services are being leveraged by various applications using OTP based authentication services of UIDAI. More than 31.08 crore e-Sign issued by all agencies wherein, 7.01 Crore e-Sign issued by CDAC.

**MyGov** – It is a citizen engagement platform that is developed to facilitate participatory governance. Presently, over 2.76+ crore users are registered with MyGov, participating in various activities hosted on MyGov platform.

**MeriPehchaan** – National Single Sign-on (NSSO) platform called MeriPehchaan has been launched in July 2022 to facilitate / provide citizens ease of access to government portals. Total 4419 services of various Ministries/States integrated with NSSO.

**Digital Village**: MeitY has also initiated the ‘Digital Village Pilot Project” in October, 2018. 700 Gram Panchayats (GPs)/Village with atleast one Gram Panchayat/Village per District per State/UT are being covered under the project. The digital services being offered are Digital Health Services, Education Service, Financial Services, Skill Development, Solar panel powered street lights including Government to Citizens Services (G2C), Business to Citizen (B2C) Services.

**National Rollout of eDistrict MMP**: e-District is a Mission Mode Project (MMP) that aims at electronic delivery of identified high volume citizen centric services at the district or sub-district level. Presently 4,671 e-services have been launched in 709 districts across India.

**Open Government Data Platform** – To facilitate data sharing and promote innovation over non-personal data, Open Government Data platform has been developed. More than 5.93 lakh datasets across 12,940+ catalogues are published. The platform has facilitated 94.8 lakh downloads.

**eHospital/ Online Registration System (ORS)**: e-Hospital application is the Hospital Management Information System for internal workflows and processes of hospitals. Currently, 753 Hospitals have been on-boarded on e-Hospital and ORS has been adopted by 557 hospitals across the country with over 68 lakh appointments booked from ORS.

**CO-WIN** - It is an open platform for management of registration, appointment scheduling & managing vaccination certificates for Covid-19. It has registered 110 crore persons and has facilitated administration of 220 crore doses of vaccinations.

**Aarogya Setu** is a digital service, primarily a mobile application, developed by the Government of India and is aimed at protecting the citizens during COVID-19. It is designed to augment the initiatives of the Government of India by informing the people of their potential risk of COVID-19 infection and the best practices to be followed to stay healthy, as well as providing them relevant and curated medical advisories, as per MoHFW and ICMR guidelines, pertaining to the COVID-19 pandemic. Aarogya Setu enables early identification and prevention of potential risk of infection, through contact tracing, and thus acts as a shield for you, your family and your community. In addition, when you take the self-assessment test on the Aarogya Setu app, by correlating the symptoms that you report along with your location information, the Government of India will have the ability to identify potential hotspots (where disease may be spreading) early enough, so that necessary interventions can be done to control and mitigate the spread of COVID-19.
• **Jeevan Pramaan**: Jeevan Pramaan envisages to digitize the whole process of securing the life certificate for Pensioner. With this initiative, the pensioner is no more required to physically present himself or herself in front of disbursing agency or the certification authority. Over 685.42 lakh Digital Life certificates have been processed since 2014.

• **NCOG-GIS Applications**: National Centre of Geo-informatics (NCoG) project, is a GIS platform developed for sharing, collaboration, location based analytics and decision support system for Departments. So far, 659 applications across various domains are operational.

• **National Knowledge Network**: A high speed data communication network has been established to interconnect Institution of higher learning, and research. So far, 1752 links to Institutions have been commissioned and made operational. 522 NKN links have been connected to NIC district centers across India.

• **Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)**: The Government has approved a new scheme titled “Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)” to usher in digital literacy in rural India by covering 6 Crore rural households (one person per household). It has 6.63 crore registered candidates and out of this, 5.69 crore candidates have been trained and 4.22 crore have been certified.

• **Unified Payment Interface (UPI)** is the leading digital payment platform. It has onboarded 376 banks and has facilitated 730 crore transactions (by volume) worth Rs 11.9 lakh crore.

• **FutureSkills Prime**: MeitY in collaboration with NASSCOM has initiated a programme titled FutureSkills PRIME. The programme is aimed at re-skilling/ up-skilling of IT professionals in 10 new/emerging technologies which include Augmented/Virtual Reality, Internet of Things, Big Data Analytics, Artificial Intelligence, Robotic Process Automation, Additive Manufacturing/ 3D Printing, Cloud Computing, Social & Mobile, Cyber Security and Blockchain.

• **Cyber Security**: The Government has taken necessary measures to tackle challenges with regard to data privacy and data security through administering the Information Technology (IT) Act, 2000 which has necessary provisions for data privacy and data security. India has made it to the top 10 in Global Cyber security Index (GCI) 2020 launched by the International Telecommunication Union (ITU) on June 29, 2021, moving up 37 places to rank as the tenth best country in the world on key cyber safety parameters. The Government has set up National Centres of Excellence at the Indian Institute of Technology (IIT) Bombay for technology solutions in internal security and at the IIT Kanpur for flexible electronics. The Government has also set up a Centre of Excellence in Bengaluru in collaboration with the National Association of Software and Services Companies (NASSCOM) Internet of Things (IoT). Those measures are also expected to bring cutting technologies.

• **MeghRaj**: In order to utilise and harness the benefits of Cloud Computing, the Government has embarked upon an ambitious initiative – GI Cloud, which has been named MeghRaj. The focus of this initiative is to accelerate delivery of e-services in the country, while optimising ICT spending of the Government.

• **SWAYAM**: The education system is poised to be transformed by use of SWAYAM, providing more than 2,000 open courses, and SWAYAMPRABHA, a group of 32 DTH TV channels devoted to telecasting of high-quality educational programmes.

• **Electronics Manufacturing**: Electronic Manufacturing Clusters (EMC): Under EMC scheme, 19 Greenfield EMCs and 3 Common Facility Centres (CFCs) measuring an area of 3,464 acres with project
cost of Rs. 3,732 crore including Government Grant-in-aid of Rs. 1,529 crore have been approved in 15 states across the country. Based on closure of receipt of applications under EMC scheme, MeitY notified Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme on 1st April, 2020 for further strengthening the infrastructure base for electronics industry in the country and deepening the electronics value chain. The Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) dated 1 April 2020 will help offset the disability for domestic manufacturing of electronic components and semiconductors to strengthen the electronics manufacturing ecosystem in the country. Production-Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing dated 1 April 2020 offers a production-linked incentive to boost domestic manufacturing and attract large investments in mobile phone manufacturing and specified electronic components, including Assembly, Testing, Marking and Packaging (ATMP) units.

New techno-economic paradigms:

IT innovations have already had a transformational effect on production, services, and business processes round the world, and now a constellation of recent technologies--including quantum computing, smart dust, brain-computer interfaces, autonomous vehicles, and 3D printing are emerging. The unending Digital Revolution and new techno-economic paradigms will challenge the organizations and individuals to redefine and upgrade their systems, in order to acquire new skills, and foster new mindsets. Therefore, it is necessary that the rise within the digital transactions remain holistic thereby supporting growth with scalable processing platform.

The robust development of information and communication technologies (ICTs), coupled with the spread of the Internet, has led to the emergence of a new concept – ‘big data’ (a set of approaches, methods, and tools for the analysis of large volumes of structured and unstructured data).

Impact of Digitalization on society

Major impacts are as follows:

1) **Impact on Education**- With the help of Digitalization, country has improved the coverage of education. Now, e-education system has not only increased the coverage area but also rejuvenated interest in studies. Most of the school, colleges and universities are using digital mechanism in teaching like use of smart board, laptop, tab, videos etc.

2) **Impact on Employment**- The main aim of digital India is to start electronic manufacturing in India itself. On the other hand so many projects are also coming under the umbrella of digital India like Health care information system, Bharat-Net, Village digital automation etc. Hence lots of job opportunities have come and many more will come in future.

3) **Impact on Health**- Health is a very major issue and Digitalization also addressed this concern. By digital India program all Indian villages and backward areas where medical facility was not available previously are now equipped with Tele Medicine system. By this way public is getting proper treatment by expert doctors of big hospitals.

4) **Impact on empowerment**- Digitalization is mainly working for the betterment of underprivileged section of the society e.g. millions of poor people have open Jan dhan accounts within a week which resulted in direct benefit transfer of millions of people in a few weeks time. There are many special awareness campaigns running for the weaker section of the society on social media, Radio, TV etc.
5) **Impact on skill enhancement**- Digitalization process requires highly skilled manpower. So government is paying much attention towards skill development. They have also established skill development centers on public private partnership basis.

6) **Impact on clean society**- Digital India is not only for technical development but has touched all the dimensions of human life. Digitalization is also spreading consciousness about clean & hygienic environment. Digital India program also launched mobile app for swachh bharat abhiyan.

7) **Impact on rural communication**- Under the umbrella of Digital India, government and private companies have started several programs for connecting rural and remote areas by Internet and mobile network. Bharat-Net is an example of rural connects initiative.

8) **Impact on safety and security**- Digitalization is trying to make social life easy by inventing new technologies which can prevent the society against the risks like upgraded GPS system is making transport smooth, digital locker is providing safety to important documents, real time information system is enabling farmers for risk free agricultural business and accurate price of crops, strong cyber security for risk free online trade and banking transactions.

**Conclusion**

From the technological viewpoint, digital economy is a result of overlap in fundamental breakthroughs in the development of many sectors of intellectual activity, including: the creation of cyber-physical and cyber-biological systems, whole new materials, new means of production, information technologies, genetic engineering, renewable sources of energy, etc. The shift to the digital economy is characterized by technological explosions, which are referred to the combination of technologies that enable creating new products and services that, on the one hand, create and put in place new spheres of activity and, on the other hand, eliminate or radically transform existing sectors of the economy.

The new technologies hold great promise. They create new avenues and opportunities for a more prosperous future. But they also pose new challenges. While digital technologies have dazzled with the brilliance and prowess of their applications, they have so far not fully delivered the expected dividend in higher productivity growth. Indeed, aggregate productivity growth has slowed in the past couple of decades in many economies. Consequently, economic growth has trended lower. To realize the promise of today’s smart machines, policies need to be smarter too.

At the same time, income inequality and related disparities have increased, particularly in advanced economies, stoking social discontent and political ferment. Across economies, there is uneven participation in the new opportunities created by digital transformation. Many are being left behind, across industries and firms, the workforce, and different segments of society.

Firms at the technological frontier have broken away from the rest, acquiring dominance in increasingly concentrated markets and capturing the lion’s share of the returns from the new technologies. While productivity growth in these firms has been strong, it has stagnated or slowed in other firms, depressing aggregate productivity growth. Increasing automation of low- to middle-skill tasks has shifted labor demand toward higher-level skills, hurting wages and jobs at the lower end of the skill spectrum. With the new technologies favoring capital, winner-take-all business outcomes, and higher-level skills, the distribution of both capital and labor income has tended to become more unequal, and income has been shifting from labor to capital.

**References**


