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## RESEARCH ARTICLE

#### INDIAN DIGITAL ECONOMY - OPPORTUNITIES AND CHALLENGES

## \*Ramija, B.

Assistant Professor, Sri Padmavathi Mahila Visvavidyalayam, Tirupati

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#### **ABSTRACT**

Every day people, businesses, organizations, communities and the Government use digital technology to make decisions, to make goods and to deliver services more efficiently and more quickly. The digital economy refers to both the digital access of goods and services, and the use of digital technology to help businesses. Digital economy is a term that is often used to cover this activity, but is hard to define. The Indian digital economy is not a conventionally marketed economic activity, and GDP figures do not take account of economic benefits of the digital economy, such as time saved, increased choice, and lower cost of products. Technology is going to revolutionize or is already revolutionizing business, transforming virtually all aspects of the economy and society. The digital economy is the new productivity platform that some experts regard as the third industrial revolution. Digital revolution, also known as The Internet Economy or Internet of Everything is expected to generate new market growth opportunities. Digital economy describes the range of economic and social activities that are enabled by information and communications technologies. It includes activities like banking, buying and selling, and accessing education or entertainment using the internet and connected devices. The digital economy is not separate to the economy. It impacts all industries and business types and influences the way we interact with each other every day. It also recognizes that as sectors become data driven their economic structures change, industry boundaries blur, and the basis of competition changes. To move towards a digital India and achieve a better growing economy.

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# INTRODUCTION

**Digital:** Digital is a new way of engaging with customers. And for others still, it represents an entirely new way of doing business.

**Digital Economy:** "Digital economy" is intertwined with the traditional economy making a clear delineation harder. Economy refers to an economy that is based on digital computing technologies. The digital economy is also sometimes called the Internet Economy, the New Economy, or Web Economy.

Abraham Lincoln rightly said, "Government of the people, by the people, for the people, shall not perish from the earth." Whatever the government benefits from digital economy, directly have a positive impact on every citizen's life.

# **Objectives**

• Objective of the paper is to understand Digital Economy, Sharing, challenges, opportunities.

## \*Corresponding author: Ramija, B.,

Assistant Professor, Sri Padmavathi Mahila Visvavidyalayam, Tirupati

- It also aims to understanding the Government benefit from digital economy.
- The paper analyses sharing the digital system in India.
- It will help to conclude that the present and future era of the digital systems.

## **METHODOLOGY**

The paper is based on secondary data. The data has been collected from internet, articles, News papers etc. Graph and percentile method has been used to analyze the data.

Components of Digital Economy: The digital economy consists of various components, which include Government policy and regulation internet, The World Wide Web and electricity infrastructure, Telecommunication industry, Digital service providers, E-business and e-commerce industry, Information and knowledge management systems, Intellectual property rights, Human capital and knowledge workers, Research and development and emerging technologies.

Recent changes in digital economy

- Decreasing share of traditional desktop, laptop computers.
- Growing importance of mobile equipment and services.
- Smart phones, tablets, wireless data service, wifi.
- Growing importance of computing services.
- "Cloud" services, distributed computing.
- Growing importance of other "tech" equipment.
- Communications equipment, electro-medical equipment, instruments.

#### **Sharing economy**

- Internet provides a platform for sharing information and collaborating.
- Use Internet and information technology for "digital matching"
- Use IT systems on web/mobile apps to facilitate peer-to-peer transactions.
- Offer workers flexibility in deciding working hours.
- Rely on workers to use their own tools/assets.
- Considerable interest in whether/how activities are measured.
- Firms appear to be included in business registers and surveys.
- Captured by administrative/tax data used to create business registers.
- Workers are often "independent contractors" rather than employees.
- Income reported to tax authorities, but well-known problems of underreporting that may require adjustments.

Government benefit from digital economy: By Implementing digital payment methods, like Digital Point of Sale (Digital POS), Unified Payments Interface (UPI), mobile wallets, Mobile Point of Sale (MPOS), etc., our country is moving towards creating a digital economy that will benefit the people and the government in various ways. Some of the primary advantages that government witnesses from the digital economy are,

Removal of Black Economy: When the transactions are made digitally, they can be easily monitored. Any payment made by any customer to any merchant will be recorded. This way, there will be no means for illegal transactions to occur. By restricting the cash-based transactions and using only digital payments, the government can efficiently expel the black economy.

**Increase in Revenues:** This is one of the most obvious and common benefits of the digital economy. When the transactions are digitized, monitoring sales and taxes becomes convenient. Since each transaction is recorded, the customers will get a bill for their purchase, and the merchants are bound to pay the sales tax to the government. This, in turn, increases the revenue of the government – thus resulting in growth of the overall financial status of the country.

**Empowerment to People:** One of the biggest advantages of moving towards digital economy is that it gives an empowerment to the citizens. When the payments move digital, each and every individual is bound to have a bank account, a mobile phone, etc. This way, the government can easily transfer the subsidies directly to Aadhaar-linked bank

accounts of people. In short, people no longer have to wait to receive the incentives and subsidies that they are bound to receive from the government.

Paves the way to E-governance: The quicker, safer, and more efficient alternative to traditional governance, e-governance will be the ultimate outcome of the digital economy. From birth certificate to death certificate, everything is available online – thus it is convenient for people to access the information they need on the go. Digital economy will definitely pave a way to e-governance, where delivery of all government services would be done electronically.

**Creation of new jobs:** The digital economy has a lot of potentials to enhance job opportunities in new markets as well as increasing employment opportunities in some of the existing occupations in the government. This way, the unemployment rate in the country is bound to decrease.

## **Opportunities**

**Digital technology is spreading at a rapid pace and so are crimes:** As per the HBR Digital Evolution Index 2017, at present, on the planet, more people have access to a mobile phone than to a toilet. While an increase was observed in cross-border flows of digitally transmitted data, incidents of cyber attacks have also increased widely with a much deeper impact. The data breach report of a potential 120 Min user of Internet data provider reliance Jio is the most recent incidence.

• Digital players have begin to dominate the market

As per stock prices on July 6 2017, the most valuable companies globally were Apple, Alphabet, Microsoft, Amazon, and Facebook. China's Alibaba gained the seventh position, overall.

 Digital technologies will change the way work is done

As stated in the HBR Digital Evolution Index 2017, "Automation, big data, and artificial intelligence enabled by the application of digital technologies could affect 50% of the world economy." The present technology has the potential to automate over 1 billion jobs worth \$14.6 Trillion.

Public policy is essential to the success of the digital economy

Globally, economists should adopt public-private policies to foster innovation in a digital economy, including India. Also, they must encourage better integration of automation, data, and new technologies into the legacy economy. Steps must be taken to introduce skills required to thrive in a digital economy at early levels, specifically at schools.

• Identifying a country's unique drivers of digital momentum is necessary

Considering factors such as the current state of digital economy and country size, growth drivers for digital economy must be identified and amplified. While developed economies need to priorities on innovation, developing economies should focus on institution.

**Challenges:** The digital global economy will continue to expand and diversify in 2017. New technologies, customer

with new habits and global threats will open opportunities and threats for businesses in different sectors. This article summarizes some of them.

#### Technologies

In the next couple of years, Block chain technologies will consolidate and be applied to different and innovative increasing transparency uses decentralization of information. New models will challenge how organizations store and manage data transactions and enable internet based companies develop new financial products and services. The expansion of internet of things will create zillions of data sources capable of measuring and combining physical and digital data to create and expand products and services, such as Biometrics authentication. Quantum computing will open new opportunities for a real-time based economy and mobile devices will have computing power.

#### • New competitors

After an early and atomized stage of fin techs entering the financial market, new large competitors will form digital banks and challenge conventional industries. Smaller fin techs will probably specialize in specific sectors and will concede space to large corporations such as Apple, Google and Facebook which will focus on online payments and general financial services to their clients.

## New regulations

New regulations such as the second version of Payments Service Directive (PSD2) and the General Data Protection Directive aim to transform the financial industry and stimulate competition in the financial sector and provide more security against fraud. In a more competitive, diversified and open market, companies will struggle to offer services at lower rates.

#### • New customers

Millennial and following native digital generations will tackle current digital challenges differently. The Robotization of the economy and new measures like the universal income become a reality. Citizens spend less time working and increase their capacity to consume. The debate about privacy will enter in a new phase and individual users will count on newer resources to exploit their personal data, such as personal data lockers. On the one hand, individuals will be less afraid of trading their data, and data collectors will have to pay more for the personal data they can collect.

#### • New business models

A world without cash will become a reality soon. All transactions being digital will help companies gather a complete picture of their market and understand more clearly market opportunities. A completely digital world will make financial services more transparent and accessible, and will create opportunities for a multimodal explosion like augmented reality, will allow customers to analyze the value of a building or calculate the cost of a mortgage for a specific car. Data

marketplaces will enable new business to acquire data they do not produce and generate new products and services. Crowd funding will leave space for crowd lending.

## • New global threats

New global threats will continue to expand and transform the economy. The sharing economy will find a better legal framework and continue to advance. Massive hacking will force countries and companies to heavily invest in security and political systems will suffer recurring crisis derived from the persistent security crisis.

## Measurement and classification challenges

- Data and Privacy
- Internet access and Governance
- Work and Wage effects
- Skill, Capability, Infrastructure gaps
- Policy-making for a Digital era
- Cyber security

Demonetization impact on Indian Economy: On November 8, 2016, the Indian government declared that the 500 and 1000 rupee notes will be stripped of their status as legal tender effective from midnight. These notes accounted for 86 percent of the country's cash supply by value. Citizens were given time till December 31, 2016 to deposit their old currency notes and exchange them for the new currency notes of rupee 500 and 2000. The government's aim was to root out counterfeit currency, fight tax evasion, curb inflation, eliminate black money and terror-funding, and to promote a cashless economy. When a currency note of a particular denomination ceases to be a legal tender, it is termed as demonetization. Legal tender refers to money which can be legally used to make payments of debts or other obligations. A creditor is obliged by law to receive such money in payment of due debt to him.

The term demonetization is not new to the Indian economy. The highest denomination note ever printed by the Reserve Bank of India was the 10,000 rupee note in 1938 and again in 1954. It was demonetized first in 1946 and then in 1978. Since not many people had access to such notes at the time, this did not have a big impact on the country. The latest round of demonetization has undoubtedly affected the common public and bankers. It has had many short term effects which are visible. The long term effects are yet to be experienced and felt

On gross domestic product (GDP): The Indian economy is a cash-driven economy and demonetization has largely affected its growth. The GDP growth rate of 8.01% in 2015-2016 fell to 7.11% in 2016-2017 after demonetization. This was largely due to less availability of cash in cash-intensive industries like manufacturing and construction. It has also adversely impacted the primary function of banks to issue loans and has put pressure on them as current account holder's demand0 large sums of cash.

On daily wage workers: A major portion of the Indian workforce is a part of the informal economy. They use cash to meet all their expenses and demonetization has resulted in a lot of them losing their jobs due to unavailability of cash.

According to CMIE's Consumer Pyramids Household Surveys (CPHS), approximately 1.5 million jobs were lost during the final quarter of the financial year 2016-17. The estimated employment during this period was 405 million as compared to 406.5 million during the previous four months.

On small scale industries: Businesses like the textile industry, salons, restaurants, and seasonal businesses are low capital enterprises and work on the basis of liquidity preference. Demonetization gravely impacted their revenue collection and threatened their existence to an extent.

**On black money:** Though only a small portion of black money is stored in the form of cash and majority is in the form of physical assets like gold, land, and building, demonetization of the rupee 500 and 1000 notes might take out a lot of black money from the economy.

On the general economic situation: Till months after demonetization the general economic situation was disturbed. The public had to queue up outside banks to exchange their old currency for new ones. Households lacked liquidity and could not do transactions for daily items. Small shopkeepers who only accepted cash went into losses and some even shut down.

On inflation: The Reserve Bank of India (RBI) considers the Wholesale price index (WPI) and the Consumer Price Index (CPI) to measure inflation. Demonetization is expected to reduce inflation as consumers have cut down on spending and aggregate demand has considerably fallen. According to government press releases, the official WPI for 'All Commodities' (Base: 2004-05=100) for the month of December, 2016 declined by 0.2 percent to 182.8 (provisional) from 183.1 (provisional) for the previous month. The index started rising during the month of January and rose by 1.0 percent to 184.6 (provisional) from 182.8 (provisional) for the previous month. This may be correlated with the availability of cash with people who led to increased spending.

On terror funding: Demonetization was aimed as a clean-up of the economy where Fake Indian Currency Notes (FICN) would be checked. It is aimed at rendering all fake notes of rupees 500 and 1000 useless and thus drastically affecting illegal funding of terror groups in Jammu and Kashmir, states in the North-East, and Naxalism-influenced states.

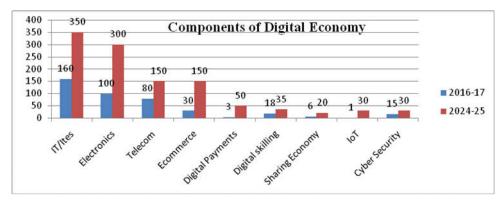
**On political parties:** Many Political Parties use large amounts of undeclared cash to campaign for elections and meet other requirements. Due to Demonetization such acts might get restricted to an extent and parties will have to formulate new strategies.

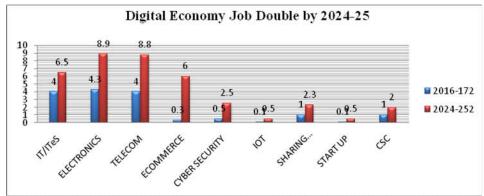
Towards a digital economy: Absence of liquid cash has led to people making transactions using cheques or account transfers. They have also switched to virtual wallets like Paytm which allows electronic transfer of money. All this might result in a digital economy where transactions are being recorded and the economy has more white money. This might increase the government's tax revenue.

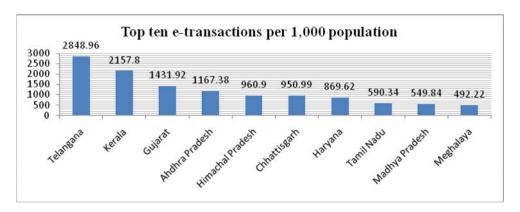
#### RESULTS

 However, as the popularity of the internet and social media forums continue to rise, and people, especially Gen Y, become more and more attuned to digital

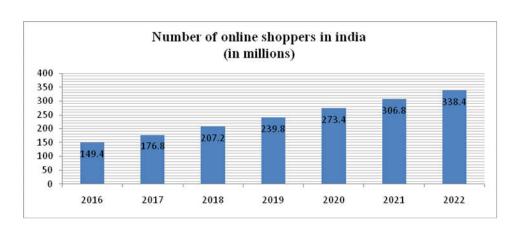
- interaction, digital means of payment is likely to become an integral part of the daily lives of people and organizations.
- The anticipated increase in tourism, hospitality, retail and hospital sectors is also expected to spur furniture demand in the country. The rise in demand of residential realty is as huge as 20% and the home furniture market is expected to witness the fastest growth over the next five years, followed by the office and institutional segments.
- Various services under the Pradhan Mantri Jan-Dhan Yojana, the government's financial inclusion programme recorded the third highest e-transactions during the two-month period with over 10.47 crore transactions for services such including banking facility locator, SMS-based information, etc.
- The Department of Electronics and Information Technology had launched the eTaal platform in 2014 for providing a real-time aggregated view of e-services being delivered across different states and levels of the government. These transactions are not limited to digital payments and other financial transactions conducted across government services such as utility bill payments, tax payments, and traffic challan payments among others. The eTaal platform automatically pulls the e-transaction count from applications that are integrated with it.
- Demonetization has been praised as well as criticized on various grounds. There has been a lot of opposition regarding the implementation of this policy. In the short run, there have been problems related to liquidity crunch, unemployment, loss of growth momentum, and a temporary halt to major economic activities. All this is evident from the data provided by the RBI.
- According to data sourced from the Electronic Transaction Aggregation & Analysis Layer, or eTaal platform, Telangana led with 2,848.96 transactions per 1,000 people, which is over five times the national average of 527.82 transactions. This was calculated on the basis of individual data of the 29 states available on the Information and Technology Ministry platform.
- This was followed by Kerala, which had 2,157.8 transactions per 1,000 people, and Gujarat at 1,431.92 transactions. In fact, the total number of transactions per 1,000 people in these top three states was more than the total of the remaining states in the top 10 list. According to number of transactions for every 1,000 people during the calendar year 2016, while Telangana and Kerala were the top two states as well, Gujarat was replaced by Andhra Pradesh.
- Cash continues to be an attractive means of payment because the payer and the payee do not have to pay any additional charges and is anonymous. The reason why digital payment has not become popular with small merchants in India is cost and poor infrastructure. At the least, merchants have to pay for a POS machine.
- The World Payments Report, prepared by Capgemini and BNP Paribas, estimates that global non-cash volumes will increase 10.1% to 426.3 billion in 2015. The highest growth is likely to be in Emerging Asia (31.9%), Central Europe, the Middle East and Africa (15.7%) and mature Asia-Pacific (11.6%). For digitization to grow and to include all sections of the people in all areas of the country, there is a need for

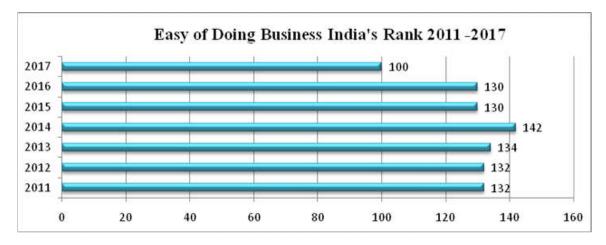






Global Risks Report	East Asia and the Pacific  The risks of greatest concern for doing business	
27		Rank
Cyber attacks		1
Asset bubbles		2
Fiscal crises		3
Unemployment or underemployment		4
		4.5





more value added services, better internet connectivity, regulatory support, and market education.

- The FDI enterprise under Make in India has already resulted in a 60 per cent growth in inflows and it is this campaign of the government with the objective of high quality standard that is steadily attracting international capital and technological investment in India thus facilitating localized production.
- Digital economy completely changes the way people have been doing business for years now. With the evolution of the internet in the past 2-3 decades, digital economy has been growing profusely across various countries.
- The digital economy, apart from making transactions and payments easier, is expected to create new market growth opportunities and jobs.
- Some experts even anticipate that the digital economy will become the most significant business opportunity in the next few years. However, the let-down here is that according to the World Bank, "nearly a billion Indians are still not able to tap the benefits of a digital economy."
- India comprises of 15 per cent of the world population, and with a growth rate of 7 to 8 per cent, India can very well become the second largest economy by 2030. To achieve this, the government considers the digital economy as the primary growth enabler.
- This poses a huge opportunity for companies developing local language apps and sites, search interfaces, video streaming and broadcasting, download managers, among many others. At the same time, it presents challenges to prevalent go-to-market models and will require significant retooling of approach for Internet-centric businesses.
- Studies say that there would be close to 130 million online shoppers in India by the end of 2017. People are spending hours, socializing and sharing nearly 2 and a half hours of their time spent online per day is on social media sites. If you're a business owner, all these people doing all these things online presents loads of potential for you.
- The improvement in India's economic fundamentals has accelerated in the year 2015 with the combined impact of strong government reforms, Reserve Bank of India's (RBI) inflation focus supported by benign global commodity prices.
- India has emerged as the fastest growing major economy in the world as per the Central Statistics

- Organization (CSO) and International Monetary Fund (IMF).
- Governments must allow electronic commerce to grow up in an environment driven by markets, not burdened with extensive regulation, taxation or censorship. While government actions will not stop the growth of electronic commerce, if they are too intrusive, progress can be substantially impeded.
- Where possible, rules for the Internet and electronic commerce should result from private collection action, not government regulation.
- Governments do have a role to play in supporting the creation of a predictable legal environment globally for doing business on the Internet, but must exercise this role in a non-bureaucratic fashion.
- Greater competition in telecommunications and broadcast industries should be encouraged so that highbandwidth services are brought to homes and offices around the world and so that the new converged market place of broadcast, telephony and the Internet operate based on laws of competition and consumer choice rather than those of government regulation.
- Should be no discriminatory taxation against Internet commerce. The Internet should function as a seamless global marketplace with no artificial barriers erected by governments.
- India for the first time moved into the top 100 in the World Bank's Ease of Doing Business global rankings on the back of sustained business reforms over the past several years. This was announced by the World Bank Group's latest Doing Business 2018: Reforming to Create Jobs report. Last year the report had ranked India at 130.
- The report also recognizes India as one of the top 10 improvers in this year's assessment, having implemented reforms in 8 out of 10 *Doing Business* indicators. India is the only large country this year to have achieved such a significant shift.
- India's score went from 56.05 in Doing Business 2017 to 60.76 in Doing Business 2018. This means last year India improved its business regulations in absolute terms indicating that the country is continuing its steady shift towards best practice in business regulation.
- The digital economy will foster change and some Upheaval. The Industrial Revolution brought great economic and social benefit, but it also brought about massive dislocations of people, increased industrial

- pollution, unhealthy child labor and unsafe work environments.
- Societies were often slow in responding to these negative side effects similarly, the digital economy may bring potential invasions of privacy, easier access by children to pornographic and violent materials and hate speech, more sophisticated and far-reaching criminal activity and a host of other as-yet unknown problems.

#### Conclusion

India will be the largest consumer of digital technologies in times to come. Another reason is that the world-over, there are several channels of communication to access goods and services and digital channel happens to be the latest and the most convenient. The private sector and government, working together, must address these problems in ways that make the Internet a safe environment while not impeding its commercial development. Digital revolution, also known as 'The Internet Economy' or Internet of Everything (IoE) is expected to generate new market growth opportunities, jobs and become the biggest business opportunity of mankind in the next 30 to 40 years. We need to be ready, as an economy and a community, to respond to change and to grasp the opportunities of the digital economy. New and emerging digital technologies are changing the way industries and business work. There are many instances where the market is adjusting well to digital transformation. The long term effects of Demonetization are yet to be ascertained. It is expected that it can improve the Indian economy in the long run by increasing tax compliance, financial inclusion, consequently improving the state of the economy. It can boost the GDP by increasing the availability of funds for lending and also by reducing transaction costs if the economy moves to digital modes of payments.

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