

Digital Economy: The Modern Way of Economy

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Abstract:

The digital economy refers to a broad range of economic activities that use digitized information and knowledge as key factors of production. The internet, cloud computing, big data, fintech, and other new digital technologies are used to collect, store, analyze, and share information digitally and transform social interactions. Financial technologies have given rise to new ways of delivering financial services, particularly in facilitating payment and lending; it promotes financial inclusion in many developing Asian countries. Digital economy is one of the fundamental inventions of mankind. It has become so important that the modern economy is described as the digital economy. Although some organizations and individuals use technologies to simply execute existing tasks on the computer, the digital economy is more advanced than that. It's not simply using a computer to perform tasks traditionally done manually or analog devices. Instead, the digital economy highlights the opportunity and the need for organizations and individuals to use technologies to execute those tasks better, faster and often differently than before.

Key words: Global, Transformation, Internet, Digital India, Technology

The world as we know it is continually changing, and one of the fundamental drivers is digital transformation. As its core, digital transformation is not about internet unicorns. It is about using the latest technology to do what you already do but better. The global economy is undergoing a digital transformation as well. And it is happening at breakneck speed. So, the digital economy refers to an economy that is based on digital computing technologies like e-wallet, e-coupon, e-gift card and so on. The digital economy is also sometimes called the internet

economy. In the last decade of 20th century Nicholas Negroponte (1995) used a metaphor of shifting from processing atoms to processing bits. “The problem is simple. When information is embodied in atoms, there is a need for all sorts of industrial-age means and huge operations for delivery. But suddenly, when the focus shifts to bits, the traditional big guys are no longer needed. Do- it yourself publishing on the Internet makes sense. It does not for a paper copy.”

With the rapid growth of digital economy, improving transformation and communication technologies resolve the cost of communication market transactions, and also promote the development of new product such as data service researching. These technologies changed the way of modern business and multinational transaction. Since the 1990s, with the rapid development of information technologies and the popularity of Internet, International trade has built up a new way of virtual transactions. The digital economy has changed the business model and integrated the global value chain. Enabled by technology and social trends, the digitalization of the economy is changing the way in which economic agents behave. Not long ago, most people would use a travel agent to book a vacation, and go to a “brick and mortar” store to buy a new pair of shoes or rent a DVD or VHS tape to watch the latest movies. Today, we can do this from the comfort of our homes. We can search on the internet and compare hundreds of hotel prices ourselves, rent someone’s home for our vacation, buy products from all over the world and stream endless videos without ever leaving the house. While the final products have not drastically changed, a movie is still a movie after all, digital technologies and new business models are altering the way goods and services are delivered and consumed. The digital economy has enabled retailers to allow customers to people online orders (often fulfilled from a local store) and has made it easier for retailers to gather and analyze data on customers, to provide personalized service and advertising.

As far as the workplace is concerned in the case of digital economy, the signs are positive. For as noisy as our personal lives may be when it comes to communication, the workplace is beginning to adapt rather handsomely to the digital economy. Once upon a time, the only way a business could ensure staffs were sufficiently trained was to send them on lengthy courses. If the training was relevant and well delivered, this method worked, but was often than not, it created two problems. Firstly, it took the employees in question away from their jobs-often

for extended periods. Secondly, the training was usually delivered in one great big chunk, making it hard to digest and even harder to retain. Learning in the digital economy is all about harnessing the power of content and the many ways in which it can be distributed. Training is now delivered in bite-sized chunks that can be devoured whenever people feel most compelled to learn. And, such content available on devices that are forever by our side, the ability to learn on the go and in any environment is liberating. Digital economy encourages tight collaboration and with working environments that mix working from home freelancers with traditional office staff, things are far simpler. Processes are handled by software, while the hierarchy of a business is made clear and the ability for multi-skilled workers to break free from the boundaries of their roles to explore other avenues and peers within the business. Perhaps the most performed outcome of the digital economy is how it has enabled virtually anyone to reach a colossal audience. Previously, the ability to speak to the masses was only available to those with the marketing budgets big enough to afford TV advertising spots. Now, open the Facebook app on your Smartphone, hit the 'Live' button and you can instantly live video streaming to the world- no broadcast truck or satellite dish required. Computing power has finally reached the point where businesses can take advantage of incredibly small devices and low-cost software to reach massive audience. Thus the digital economy has mobilized employees, leveled the commercial playing field and put the power of leadership into all of our hands safely. The digital economy will continue to offer ever more exciting opportunities for businesses of all sizes.

The advent of the Internet brought major changes first to the entertainment, news advertising and the retail industries. In those industries, the first major digital players initially started from traditional business models, adopting them to better end-user equipment and more extensive interconnection through the Internet. For example, online intermediaries that allowed the discovery, scale, and purchase of goods and services such as vehicles, homes, and jobs were another early category. Other digital players specialized in the online selling of traditional services (for example, online insurance brokers). Retailers then began selling digital products and services, like downloadable and streaming music and movies, executable code games and services based on data processing, increasingly blurring the line between goods and services as businesses continued to develop. Online advertising similarly started from traditional advertising

business models, becoming more sophisticated as the potential of digital technology became fully integrated into the industry. New online services enabling a sharing and service economy have also appeared, allowing people to rent out their homes, vehicles and skills to third parties. Sectors as diverse as retail, logistics and education have changed and keep changing due to the spread of digital economy. The digital economy has enabled retailers to allow customers to place online orders (often fulfilled from a local store) and has made it easier for retailers to gather and analyze data on customers, to provide personalized service and advertising. It has also enabled retailers to manage logistics and supply stores with products, which has had a significant, positive impact on productivity. Gone are the days where retailers could simply open their doors to hearing crowds. With increasing adoption of Google Home, Amazon's Alexa, and Paytm Mall, algorithms are already making decisions on our behalf. By Amazon's Alexa in the US, where you can order virtually and product with a simple vocal command, which will be delivered to your door with free shipping and returns. Devices places orders for customer based on their preferences, such as price sensitivity, preferences for premium or locally produced goods, or level of urgency. Customers hate queues and self-checkouts. Amazon killed two birds with one stone, introducing Amazon Go, a convenience store with no cashier or self checkout system. Amazon also reduced opportunities for in-store theft: when an item is placed in the customer's basket, the purchase is registered as they walked out the door. The traditional approach to loss prevention (warning signs, bag checks, and extra staff) is less important in a digital economy where customers shared their private data with retailers. "In 2007, American Book store made dollar 17 billion in sales. It was dollar 11 billion by 2017- not because people were reading less, but because they were reading differently. Sure enough, over the decade 250,000 jobs vanished in book store and print shops. Yes 300000 Americans are now working for Amazon alone, but those jobs require different skills, offer different opportunities, and are located in different places. "

The logistic sector has been transformed by digital economy, which enables the tracking of both vehicles and cargo across continents, the provision of information to customers and facilitates the development of new operational processes such as Just In Time delivery in the manufacturing sector. Vehicle telemetry also helps maximized fuel efficiency, ensure efficient

use of the transport network and support fleet maintenance activities. The information collected by fleets can also be used to create datasets with commercial value. In transport, digitalization can significantly improve traffic and transport management through more accurate information on traffic and infrastructure conditions and on the location of vehicles and / or goods. Better access to and sharing of digital transport (traffic, travel, vehicle, cargo etc.) data for both public and private stakeholders along the supply chain can foster seamless information flows, and open up wide range of new business opportunities:

- Shippers would benefit from better information on available transport services.
- Factories would have information on goods arrival time to optimize their inventory management and production.
- Logistics service providers would be able to optimize transport operation in real time and to interact to unexpected events.
- Public authorities could benefit from more accurate and reliable information on infrastructure use and cargo, thereby contributing to better efficiency and operational safety to networks.

Banks, insurance providers and other companies, including non-traditional payment service providers, increasingly enable customers to manage their finances, conduct transactions and access new product online, although they still continue to support branch networks for operations. Better use of data also allows growth in customer insights and associated products, such as personalized spending analysis, which can be used to generate advertising revenue. The digital economy has also made it easier to track indices and manage investment portfolios and has enabled specialist businesses such as high-frequency trading. The RBI has defined financial inclusion as “providing access to a wide range of financial services at a reasonable cost”. A study by global payments technology firm Visa Inc. reports that achieving the goal of Digital India will help to bring more people into the formal financial fold and create more jobs. “The job of bank teller didn’t die-it evolved, requiring new and more complex skills. Right now, there are nearly six million job openings, and we estimate more than three million of them are middle-class jobs”.

India's financial inclusion policy, Pradhan Mantri Jan Dhan Yojna has shown qualitative results. The account-opening drive reached 221 million accounts, as an April 2016. The plan also envisages access to insurance, credit and pension facilities and channeling of all government benefits directly into the beneficiaries' bank account. In addition the RBI has strengthened the UPI in order to facilitate digital money transfers. In line with the digital strategy, the government has granted permission to a couple of payment banks, thereby kick-starting the initiative. Thus Digital India and financial inclusion are closely connected. With increase Internet usage and penetration, the Digital India initiative, facilitating proper payments infrastructures, will pave the way for a seamless digital economy. The government has outlined its vision in this regard and highlighted three core areas-increased trust on setting up the required infrastructure as a utility to each and every citizen, provision of services on demand and governance and lastly, digital empowerment of the citizens. The advent of biometrics technology- based Aadhar card will be the big disruptor in the financial technology segment. An 'Aadhar' card has a 12-digit individual identification number. The Aadhar enabled Payment System (AEPs), allows online interoperable financial inclusion transaction at points of sale (Micro ATM) through the business correspondent of any bank using 'Aadhar' authentication. In this context, digital platforms are likely to diver financial services to both the unbanked and the under banked population, especially in rural/remote regions, at a low cost, and subsequently increase digital financial access to the vast swathes of the country's population. The use of digital channels can bring down the transaction costs in a great way.

The digital economy has enhanced design and development as well as the ability to monitor production processes in factories and control robots, which has enabled greater precision in design and development and ongoing product refinement. The products being produced are also increasingly knowledge-intensive. In the automobile Industry, for example, it is estimated that 90% of new features in cars have a significant software component. On farms, system can monitor crops and animals, and soil/environment quality. Increasingly, routine processes and agricultural equipment can be managed through automated systems. Remote sensing is another big data resource to support the development of derived weather products (radar), improved hydrology and watershed management, soil health, crop coverage and crop health estimates

among other applications. This is now Unmanned Aerial Vehicles (UAVs) that can capture multispectral images to assess crop health, damaged and yield far more accurately than satellites. The greatest impact Digital Agriculture will have is on democratization of market pricing and compressing transaction costs so that farmers capture a higher portion of the product's market value. With the Direct Benefit Transfer system and UID Aadhar, to support transfer of government subsidies to citizens, India is uniquely positioned to leverage these platforms to support the earlier intervention around soil health, Prime Minister Krishi Sinchayee Yojna, National markets and wealth Indexed insurance. Mobile money is the last key intervention that has unlocked tremendous opportunities for rural consumer in Africa and will do the same for India. Paper money is expensive and risky to rural consumers but mobile money is safer, especially for women, and costs less to transfer. Mobile money allows rural consumers to bypass poor infrastructures to support saving and access credit.

As the digital economy spreads, universities, tutor services and other education service providers are able to provide courses remotely without the need for face to face interaction through technologies such as video conferencing and streaming and online collaboration portals, which enables them to tap into global demand and leverage brands in a way not previously possible. There is no doubt that e-learning which is kind of education that takes place through the internet is becoming more and more popular, it establishes for the environment for delivering the educational material in an easy and low price way. It all goes under the umbrella of digital economy that promises for a better future and education. One of the most important educational tools is online learning. It has become an essential way for acquiring knowledge through either enrolling in credited courses; where students enrolled in tertiary education or to take professional training certificate preparation. The advancement of educational technology has enabled online education to become more accessible. Students only need a computer internet and basic IT skills.

The digital economy is revolutionizing the healthcare sector, from enabling remote diagnosis to enhancing system deficiencies and patient experience through electronic health records. It also allows opportunities for advertising, for example of drugs and other treatments. In the developed world, healthcare is becoming central and lies at the heart of the digital economy. Populations are growing, life expectancy is increasing, technology is advancing and

medical science is rapidly advancing. This presents a challenge to modern societies in terms of how to make healthcare systems more efficient, effective and sustainable whilst working within the constraints of national economic budgets. Digital technologies allied of new and more innovative way of working may be seen as a solution to provide high quality health outcomes within financial constraints. This heralds a new research agenda and set of challenges for multidisciplinary teams of researchers working across business technology, health and engineering disciplines. This research pillar, as part of the Digital Business research cluster focuses on complex problems related to the integration of health and social care. Social technical, systems thinking and modeling approaches are being utilized to help analyze, define, develop and implement new strategies for integrating health and social care organizations with a particular focus on the adoption, implementation and adoption of new digital technologies and information systems.

The digital economy has given rise to a number of new business models. In the words of Zoe Baird, “Now, as wireless networks connect the planet, and entire companies exist in the cloud, digital technology is no longer viewed as another arrow in the corporate quiver, but rather the very foundation upon which all functions are built, modern enterprises must both leverage digital technology and develop a culture that values its significance within the organizations.”

As more and more business across various industries embrace new digital technologies, the economy is becoming increasingly digitalized. Online shopping and e-commerce are mainstream channels for consumption, and products themselves are moving from tangible mediums (CDs, videos, books) to digital ones. Thus, the digital economy first relates to something referred to as global consumption-meaning that for many products, such as videos, music, clothing and electronics, individuals are no longer restricted to purchasing products from local retailers, but rather can purchase from anywhere in the world using online platforms. Second, not only are individuals global consumers, but they are also increasingly producing many goods and services themselves-referred to in the national accounts as household production. Third, the digital economy has resulted in the proliferation of digital intermediary platforms, such as e-Bay, Amazon, Uber and Airbnb. Fourth, the digital economy is changing the way people for goods and services – in fact; it is changing the nature of money. The

emergence and growth of crypto currencies are raising many questions about regulation and security and may lead to a significant transformation of financial industries. So, the digital economy as a new way of economy creates immense opportunities across the lives of those individual and impacts nearly all industries they interact with, including financial services, retail, media, travel hospitality and healthcare.

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