The Digital Economy

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9th February, 2021

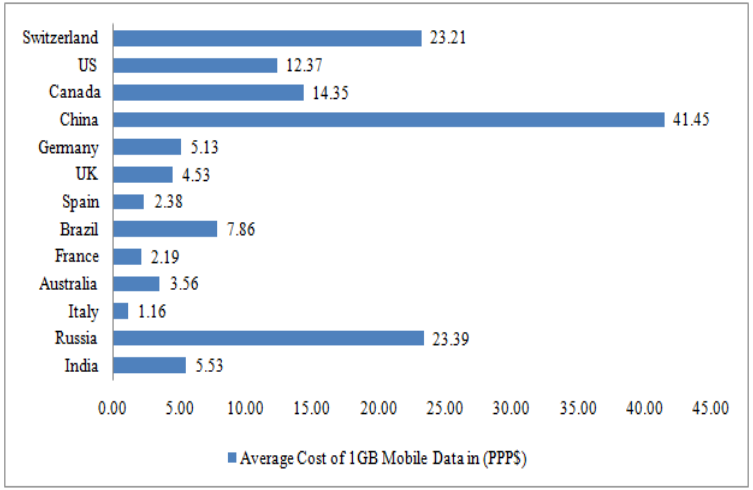
Agenda

- Overview of India's Digital Economy and the Impact of Covid-19
- A comparison Digital Growth Trajectories – India versus Japan
- The Osaka Track
- Partnerships between India and Japan – ongoing and potential

India: Data and the Digital Economy

- India is a mobile first economy: As on June 2020, India was home to 726.01 million mobile internet subscribers compared to a meagre 23.05 million fixedline internet subscribers
- The digital economy in India is estimated to create over USD 1 trillion in economic value by 2025
- India is among the cheapest data markets in the world. The average cost of 1GB of mobile data at PPP levels is USD 5.53
- Data consumption in India is amongst the highest in the world, estimated at an average of 12GB per person per month in 2019
- Between 2014 and 2018, India's international internet bandwidth increased by 62.7 percent per annum
- India has witnessed the launch of over 55000 startups to-date with 34 unicorns in the Indian start-up ecosystem.

Average cost of 1GB of mobile data is selected countries in 2019 (PPP $)



Source: Compiled from Statista and cable.co.uk

Covid19 – A Disruption Driving India Towards Digital Economy

- The pandemic was an inflection point for India's digital economy
- The average traffic per smartphone user increased from 13.5GB per month in 2019 to 15.7GB per month in 2020. The global average in comparison is around 9.4GB
- Unprecedented increase in the use of e-commerce, online education apps, digital payments, social media, matchmaking, entertainment and video calling applications
- Indian states increased the use of robots and drones (Jharkhand, Karnataka)
- Regulatory changes brought about by the government to adapt to new business models and other changes in the digital ecosystem (e.g. RBI's new Umbrella Entity for Digital Payments)

An online portal for government procurements, similar to private e-commerce portals like Amazon or Flipkart. All vendors can register on the portal, and the government then invites online tenders from authorized vendors. This process has reduced corruption and brought more transparency to bear on the system

App for essential health services
This initiative allow to trace and track patients, and ensure safety of citizens. Our government's swift action helped track us

The $10 billion startup also introduced free 'Live Classes' on its app recently. The feature is aimed to replicate a classroom-like environment online, and is different from the usual pre-recorded videos on BYJU'S. "It allows students to attend scheduled classes periodically and they love that. The feature is meant to replicate the regularity of school

Evolution of Communications and the Digital Ecosystem in India

India is a leader in ICT enabled outsourcing services. The Government's efforts in extending fibre-optic backbones to rural areas and enabling greater economies of scale is expected to result in lower costs and greater affordability and likely to narrow the gap in ICT access between rural and urban areas

Evolution of Mobile Technologies

- India is a mobile first economy
- A relative latecomer in the launch successive generations of mobile technologies
- 2G and 3G services were commercially launched in 1995 and 2008 respectively.
- The time lapse between 3G and 4G was reduced to 4 years
- While 3G is mostly phased out, incumbent operators still support over 350 million 2G subscribers
- The expected launch of 5G is 2021, though the spectrum auctions are yet to be held

Evolution of Fixed Line Internet Infrastructure

- The bulk of fixed line infrastructure is provided state-owned BSNL and other public sector enterprises including Railtel, PowerGrid, etc.
- Bharat Net is India's flagship program to provide broadband connectivity in rural areas.
- India's Internet Exchange was established by the Government in 2008. The Mumbai Convergence Hub, which was launched only in 2014, has grown into the largest Internet Exchange Point in South Asia

The Digital Ecosystem

- Amongst the largest markets for social media companies including Facebook and Twitter. Average Time Spent on Social Media is 2 hours and 36
- India e-commerce will reach US$ 99 billion by 2024, growing at a 27% CAGR over 2019-24, with grocery and fashion/apparel likely to be the key drivers of incremental growth.
- Pioneer in fintech applications
- Very high uptake of online education
- Concerted efforts towards e-governance

Government Policy and Trade Openness

- Digital India and StartUp India – flagship programs to create a digitally empowered society in India
- National Digital Communications Policy (2018) and National Broadband Mission (2020) focusing on building the country's fibre backbone
- Srikrishna Draft Personal Data Protection Bill 2018 to provide a framework for data privacy
- E-Commerce Policies, RBI regulations on regulation of digital payment entities, regulations for e-pharmacies, labour laws for gig workers, etc.

New Technologies

- IoT investments in India were close to USD 5Bn in 2019, and this is expected to go up to USD 15Bn in 2021. Building an ecosystem for standardisation of IoT products and services
- With Indian AR and VR industries poised to grow to US$ 5.9 billion and US$ 0.5 billion, respectively, by 2022. Applications already present in media, agriculture and health.
- 2,286 Artificial Intelligence startups in India as on April 2020

Evolution of Communications and Digital Ecosystem in Japan

Japan is an ICT leader, not only in terms of developing, piloting and adopting the latest technologies, but also as an active participant in international standards-setting bodies

Evolution of Mobile Technologies

- Leader in high-speed mobile - was the first to launch 3G in 2001
- By 2008, 100 per cent of the population was already covered by 3G
- 2G services were terminated in 2012
- Japan was one of the first countries to deploy LTE in 2010. LTE-Advanced services offering download speeds of 370 Mbps were launched in 2015
- 5G spectrum was awarded in 2019. The deployment of 5G networks in 2020

Evolution of Fixed Line Internet Infrastructure

- By 2015, broadband infrastructure (3.5G, satellite internet, 3.9G, DSL, optics fibre/FTTH, etc.) penetration had already reached 100 per cent in Japan, Ultrahigh-speed broadband service, with download speeds of 30 Mbps or more, was available to 99.98 per cent Japanese households
- Japan is the main hub for interregional and trans-Pacific submarine systems, with 17 cable landing stations. There are 16 Internet Exchange Points (IXPs) and the Japan Network Access Point (JPNAP) is the biggest IXP in the Asia Pacific region in terms of traffic.

The Digital Ecosystem

- One of the largest mobile app markets in the world
- In fiscal year 2019, the cross-border e-commerce market in Japan was valued at around 317.5 billion Japanese yen.
- Social media penetration in Japan stood at 65% in January 2020. Average time on social media per day is 46 minutes
- Popular use of online education apps

Government Policy and Trade Openness

- Strategy forecasting IoT-based society named “IoT Comprehensive Strategy” in 2017.
- Japan Data Protection Bill: The Act on the Protection of Personal Information ("APPI") enacted approximately 10 years ago but was recently amended and the amendments came into force on 30 May 2017.
- Japan proposed a regime of Data Free Flow with Trust (DFFT).
- Japan’s Society 5.0 initiative was to create a socio-economic model fully incorporating technological innovations of the fourth industrial revolution

New Technologies

- A Culture of Innovation: Japan ranked 6th out of 141 countries for business competitiveness in the WEF index with high scores for technological savvy and innovation capability.
- A maturing StartUp Ecosystem, 282 AI startups as on April 2020
- Thriving market for IoT with applications for telecom transportation management, telemetering, digital signage,
- Industry revenue for Virtual Reality is USD1.75 million
- Five of the top 10 global producers are Japanese with estimated 30% market share worldwide

Osaka Declaration on Data Free Flow with Trust: India's Position

- The Osaka Declaration on the Digital Economy (2019) was an effort towards international rule making for the digital economy, especially on data flows and e-commerce with safeguards for intellectual property, personal information and cyber security. It hoped to provide political impetus to negotiations on e-commerce at the WTO. It emphasized on the principle of Data Free Flow with Trust (DFFT) to enhance cross border data flows. With the exception of India, Indonesia and South Africa, all other member countries in the G20 signed the Declaration
- ICRIER's research (2019) estimates that a 1 percent decline in cross border data flows is likely to reduce the volume of trade by US$ 696.71million, on average
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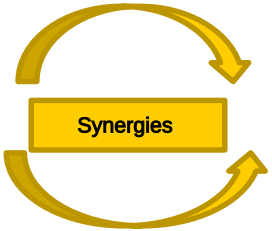
Some of the arguments provided by the government of non-signatories were

a) Data should be discussed within the WTO as a part of the consensus –based decision making process
b) The Osaka Track could undermine multilateral talks taking place under the WTO Work Program on Electronic Commerce
c) It is important to preserve the policy space of developing countries with regards to data governance, given the key role it plays on development
d) Data is a part of national wealth

Synergies and Collaboration between India and Japan

Japan: Evolving Digital Economy towards "Society 5.0"

- Reduction of Greenhouse gas (GHG) emissions
- Increased production and reduced loss of foodstuffs
- Migration of costs associated with ageing society
- Promotion of sustainable Industrialization
- Redistribution of Wealth , correction of regional inequality



India: National Strategy for Artificial Intelligence (# AIforAll)

- Increased access and affordability of quality healthcare
- Enhanced farmers ' income, increased farm productivity and reduction of wastage
- Improved access and quality of education
- Efficient and connectivity for the burgeoning urban population, and
- Smarter and safer modes of transportation and better traffic and congestion problems .

To encourage joint research activities, scientific meetings, conferences, research workshops and partnerships MOU between AI Research Center (AIRC) at the National Institute of Advance Science and Technology (AIST) Japan and IIT - Hyderabad was signed.

BSNL and NTT- AT of Japan have recently signed an MoU on cooperation in Telecommunication. NASSCOM, India and the Prefecture Government of Hiroshima have established the first "IT Corridor" in Japan to "co - create" for global markets leveraging Japanese strengths in hardware and Indian strengths in software

India and Japan signed a pact to cooperate across 5G, telecom security, submarine optical fiber cable and smart cities, spectrum management, high altitude platform for broadband in unconnected areas, disaster management and public safety

MeitY Startup Hub & JETRO signed a partnership agreement to strengthen the Indian & Japanese tech startup ecosystem on 20 Jan, 2020. Under which Meity Startup Hub aims to support Japanese tech - startups in India by providing a soft landing sector - specific tech. incubation platforms for 6 months free of cost.

On October 29, 2018, a Memorandum of Cooperation (MOC) on a Japan - India Digital Partnership between the Ministry of Economy, Trade and Industry (METI) and the Ministry of Electronics and Information Technology, India was signed

NEC, a Japanese company, laid the submarine optical fiber cables between Chennai and Andaman & Nicobar, a project inaugurated by Prime Minister Narendra Modi in August 2020.

Japanese Investments in India

Investment by Japanese Venture Capital Funds in Indian Businesses

Company Name	Latest Fund Size	Focus Sector
AET Fund	$50M	Media and entertainment space, Ecommerce and Real Estate
Beenos	$60M	Ecommerce, Real estate tech, enterprise tech
Incubate Fund	$53M	Ecommerce, Real estate tech, travel tech
Mistletoe	NA	Consumer service, foodtech, healthtech
Soft Bank	$108 Bn	Travel tech, Transport tech, Enterprise tech

Source: Datalabs by Inc42's

- The Japan-India Fund was set up in November 2019 to accelerate complimentary business collaboration between Indian startups and Japanese companies
- According to a report in 2019 by Inc42's DataLabs, Japanese investors have funded as many as 105 Indian startups, spread across 157 deals between 2014 and the first half of 2019
- Several Japanese venture capitalists like Soft Bank Group Corp. (has committed to invest $10 billion in the Indian market by 2024), Incubate Fund, Beenext, Anew Holdings, Rebright Partners, GREE Ventures, and Mistletoe are increasing their Indian portfolios
- Sojitz announced on January 29, 2019 that they aim to create a new business in collaboration with prominent startups that handles AI and IoT through investment in Bengaluru-based VC "3one4 Capital".
- Covid-19 dampened the spirit of Japanese investors. However, by August 2020, almost 200 companies expressed their interest in India

Thank You!

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