

**Who is who and what is whose:
The power of data in a ubiquitous digital world**

MANOJ DHARMARAJAN

Controller, Govt. of India

**“It is not enough that we Succeed.
Others must fail” Francois de
Rochefocauld.**

**French Nobleman
of the 18th century**



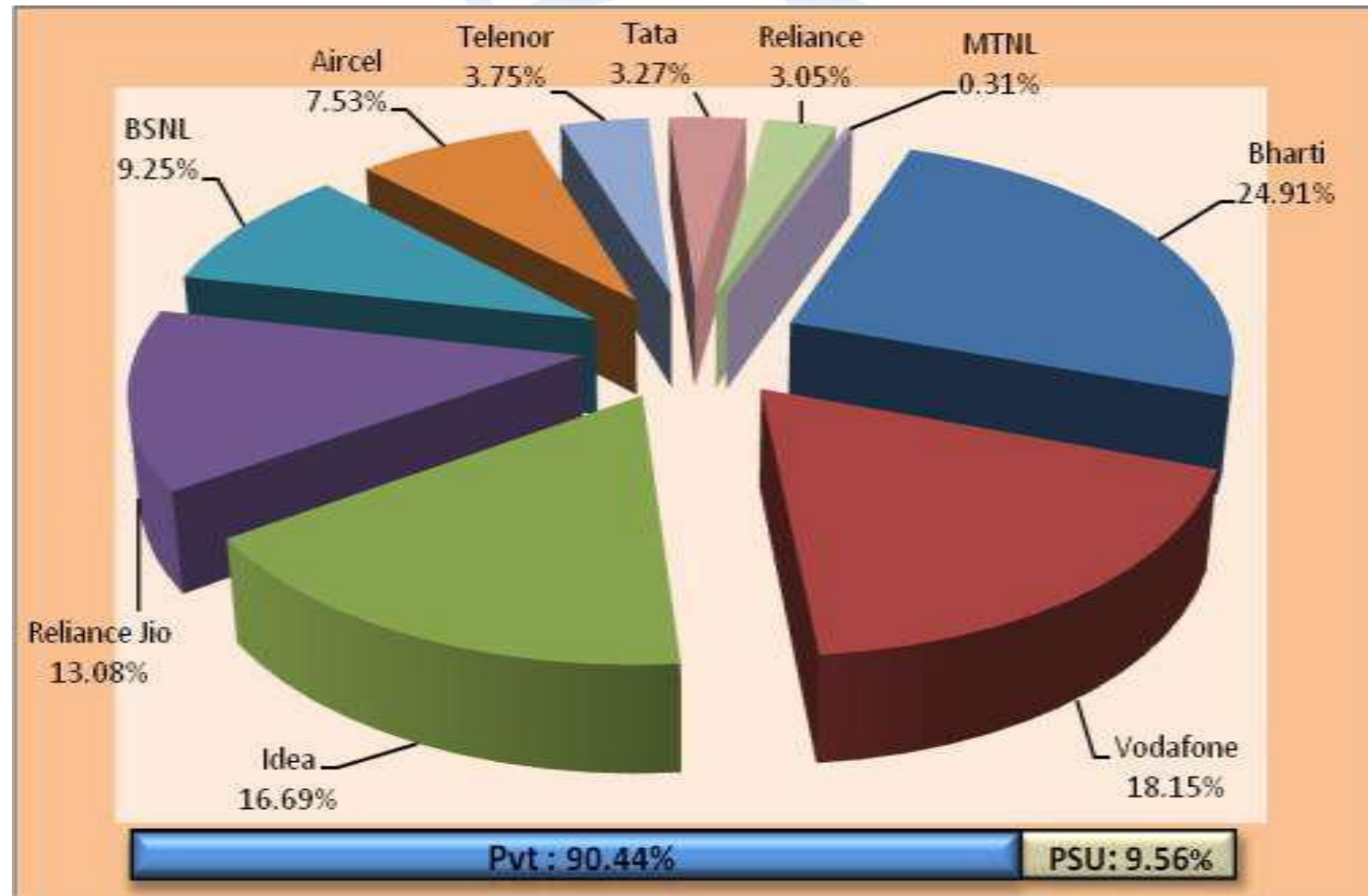
Mobile users

- **2015 – 4.8 billion**
- **2020 – 5.5 billion**
- **2020 - >11.6 billion mobile connected devices**
- **Average speed from 2.0 mbps to 6.5 mbps**
- **2020 – Video to represent 75% of mobile data**
- **2020 – Mobile traffic growth from 495 mb/month to 3.3 GB per month**

Highlights of Telecom Subscription

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1162.47	23.41	1185.88
Net Addition in November, 2017 (Million)	-15.73	-0.12	-15.84
Monthly Growth Rate	-1.33%	-0.49%	-1.32%
Urban Telephone Subscribers (Million)	664.94	19.95	684.89
Net Addition in November, 2017 (Million)	-12.58	-0.07	-12.65
Monthly Growth Rate	-1.86%	-0.36%	-1.81%
Rural Telephone Subscribers (Million)	497.53	3.47	500.99
Net Addition in November, 2017 (Million)	-3.15	-0.04	-3.19
Monthly Growth Rate	-0.63%	-1.25%	-0.63%
Overall Tele-density*(%)	89.81	1.81	91.61
Urban Tele-density*(%)	162.84	4.88	167.72
Rural Tele-density*(%)	56.15	0.39	56.54
Share of Urban Subscribers	57.20%	85.20%	57.75%
Share of Rural Subscribers	42.80%	14.80%	42.25%
Broadband Subscribers (Million)	332.85	17.85	350.70

Service provider wise market share



Broadband subscribers

Segment	Broadband subscribers (in million)		Monthly growth rate in the month of Nov-17
	As on 31 st October, 2017	As on 30 th November, 2017	
Wired subscribers	17.98	17.85	-0.71
Mobile devices users (Phones and dongles)	321.73	332.40	3.31
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to- Point Radio & VSAT)	0.45	0.45	0.74
Total	340.16	350.70	3.10

5G

- **India on its way to hitch the 5G bandwagon**
- **M/s. Airtel has already tested massive mi-mo in Mumbai as a precursor to 5G**
- **5G will entail increase in data volume upto 1000 times**
- **connected devices is also expected increase 10 times**

BIG DATA

- Amount of data created to reach 180 Zetta Bytes in 2025(Globally)
- India has one of the largest data gathered
- 90% of digital information has been created during the last 2 years
- Massive digitalization of records under way
- Land revenue records
- Public distribution system

- **70 million passports**
- **Direct credit of subsidy(Direct Benefit Transfer)**
- **Bio-metric finger printing of all citizens aka Aadhaar**
- **Total No. of aadhar enrollment as of December '17 is 1.1 billion**
- **Digitilization of MCA 21(companies data)**

- **In many networks today, youtube accounts for upto 70% of all video traffic**
- **Netflix's share of video traffic can reach as high as 20%**
- **292 billion GB in Mobile traffic alone by 2019**

- **The major impact will be on ;**
 - **Data volume**
 - **Processing power required**
 - **Data storage facilities**
- **Big Data also motivates researches from various and diverse fields as Physics, Economics etc..**
- **It is an opportunity to invent new algorithms and to detect useful patterns and co-relations present in large chunks of data.**
- **4Vs volume, Velocity, Variety and Veracity**

- **The protection of the data stored is an integral part.**
- **Technology intended for storing data**
- **Processing power**
- **Affordability is a key challenge**
- **80% of the country lives on lesser than \$3 a day.**

- **Very little percolation down to the rural areas. Even today only 2% of rural Indians (out of 900 million rural population) have high speed internet.**
- **Internet is defined as 512 KBPS and above.**
- **Only 30% of the urban Indians have Broad Band connectivity.**
- **Major challenges in extending high technology to the last mile.**
- **Data collection and compilation from the rural Areas is also difficult**
- **30000 uncovered villages**

- **Private access service providers held 90.44% of the market share, while the rest is with the government providers**

Aadhaar

- **Largest identity programme in the world**
- **UIDAI was created for this purpose**
- **12 digit unique identification for all the residents**
- **The card is based on biometrics – fingerprint and iris recognition**
- **Aids 2 FA. Factor authentication.**

- **“What you have “ – mobile**
- **“What you are” – biometrics**

Aadhaar

- **Total saturation percentage is 91.7% and over 99% of adult population has been assigned a Aadhaar number**
- **AEPS(Aadhaar Enabled Payment System) now connected with 119 banks**
- **338 million transactions have taken place using digital identity**
- **Aadhaar Pay, a digital payment system is being readied**

- **Will eliminate the need of card, pin, password or mobile with the customer**
- **Aadhaar Act 2016 has provisions for protection of data and privacy**

Benefits

- **Operators like Airtel, Vodafone, Reliance Jio now using Aadhaar instead of paper identification(KYC)**
- **saves a lot of cost overhead**
- **Improves confidence and trust in identification**
- **authentication accuracy**
- **direct receipt of benefits by the less privileged**
- **used for opening bank accounts**
- **Jeevan Praman for pensioners**

Benefits

- **Government has saved over \$400 million while cutting down various channels**
- **Savings of \$150 million by detecting fake IDs**
- **move towards mobile financial inclusion**
- **mobile banking**
- **557 million unbanked population has now come down to 233 million in 2015**
- **Shift towards a cashless society**

Benefits

- **Authentication offers OTP(One Time Password) on the cellphone of the user as additional security**
- **India has become the “ OTP Nation”**

Critique

- **Compulsion for everyone to use this has been challenged in Courts**
- **Living in India is becoming harder and harder without an Aadhaar number**
- **slow pace in linking Cards with Bank Accounts**
- **Central Identities Data Repository(CIDR)**
- **A honeypot of sensitive data vulnerable to exploitation**

Aadhaar data breach: UIDAI must address privacy concerns urgently; simply denying leak not enough

A report in [The Tribune](#) on Thursday revealed that access to any Aadhaar holder's details could be gained, through a mere payment of Rs 500, via an anonymous service on Whatsapp. As per the report, the payment allowed the person to be designated as an 'agent', which in turn granted him access to the grievance redressal system.

Entering an Aadhaar number into the system revealed the holder's information, including name, date of birth, address, PIN, photo, phone number, e-mail. About one billion Aadhaar holders' details can be accessed this way. The report alleged that a further payment of Rs 300 allowed printing of an Aadhaar card, using just the holder's number. [representational image. CNN-News18](#)

The Unique Identification Authority of India's (UIDAI) response to this report has been to deny the media report, stating that there was no data breach and that the biometric data was secure. Moreover, the response goes on to state that a 'mere display' of demographic details cannot be misused.

This [response to an obvious data breach](#) and violation of privacy is extremely worrying. It is yet another reiteration of the privacy concerns with Aadhaar, and the constant denial of privacy concerns by the UIDAI instead of sitting up and addressing the problem at hand.

Critique

- **The alleged breach.**
- **Claims of personal identity available for \$8**
- **The mandate to link almost everything with Aadhaar .
Otherwise, services will be withdrawn including bank accounts, investments and mobile services.**
- **Spawned humour. Marriage certificate, romance etc**

Critique

- **Privacy is a major issue.**
- **Could mean one centralised point of failure**

Security and ownership of data

- **Whether the data protection rights of individuals are being protected**
- **To establish the ownership of the data**
- **Under-estimation by the consumers about the value of their personal data and the scale and use of the data being collected**
- **Creation of National Customer Preference Register(NCPR)-receipt of commercial communications**

Breach of security

- **Reported 4149 breaches during 2016 exposing over 4.2 billion records**
- **composed of email addresses(42.6%), passwords (38.1%), names and usernames(35.1 and 21.6%) and addresses (20.4%)**
- **Could lead to identity theft, financial loss, loss to reputation, disturbance of mental peace and threat to physical safety**

Major regulatory challenges

- **Indian telecom industry is reeling under a total debt of \$70 billion ,of which major portion is the debt incurred for buying spectrum in the auction**
- **to create affordable services for both the operators and the public as the country gets ready for 5 G , IOT etc**
- **leapfrogged from 3G to 4 G in a span of less than 5 years. The operators could not get the required capital gestation period of 15 years. Still reeling under the impact!**
- **Free calls and tariff wars ! Revenue consistently nosediving for all the operators !**

Regulatory challenges

- **Cross-border transfer of data**
- **exercise of jurisdiction over service providers that do not have a direct presence in the country**
- **The new General Data Protection Regulation (GDPR) adopted by the EU.**
- **To ensure confidentiality of electronic communications for both content and meta-data(time of a call and location)**

Data safety: few firms ready'

Only 33% have plans to comply with the EU rule: EY survey

SPECIAL CORRESPONDENT
HYDERABAD

With less than four months to go for the EU's General Data Protection Regulation to kick in, "too many companies are still not prepared" for the regime that would also cover Indian IT firms, according to a global survey.

"Asked to describe their company's current status with respect to complying with the GDPR, only 33% of respondents said that they have a plan, while 39% said they are not familiar with GDPR," according to EY's Global Forensic Data Analytics Survey 2018.

An initiative to unify data protection laws across the EU, GDPR would apply to all



Respondents included 40 participants from India.

firms, regardless of their location, that process personal data of people living in the EU. Once in force, the GDPR would require companies to notify a data breach within 72 hours of the event.

About 17% of respondents

said they had heard of GDPR, but had not yet taken any action. The balance 11% said: "We are studying the GDPR and its scope."

'Minimum €20 mn fine'

Violators could be fined up to 4% of annual global turnover or €20 million, whichever is greater, according to the report. A total of 745 respondents in 19 countries were interviewed for the survey, including 40 in India.

Partner and head - India & Emerging Markets, Fraud Investigation & Dispute Services of EY, Arpinder Singh said: "all contracts would come up for review." Indian IT firms ought to invest and comply before May, he said.

Aim to create a cashless society

- We aimed at \$25 billion digital transactions during the year.
- However, have fallen short.
- The number of credit cards is only 32 million(2% of the population)
- Debit cards have reached nearly 700 million

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ONLY 14.8 BILLION TRANSACTIONS DONE

India Still a Very Long Way from Meeting its e-Transaction Target

Pratik.Bhakta@timesgroup.com

Bengaluru: The government is set to fall drastically short of its ambitious target of 25 billion digital transactions for this financial year, but experts insist that its multipronged efforts to promote a less-cash economy have been not all in vain.

Only about 14.8 billion digital transactions were undertaken across India from April 1 to January 28, show data sourced from the Ministry of Electronics and Information Technology, or MeitY. This includes bank-to-bank electronic money transfers, digital wallet payments, Aadhaar-based transactions, and electronic toll payments.

Lack of adequate payments acceptance infrastructure, especially in the villages and small towns blamed

Finance Minister Arun Jaitley declared the 25-billion target in his Union Budget for 2017-18 a year ago as part of the government's push to digitise India's economy. A few bankers and payments industry executives said while the goal was too ambitious, it provided the digitisation efforts

The Digital Story

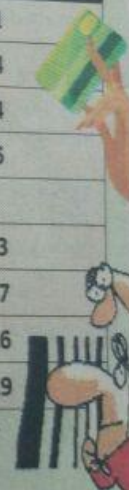
ALL NUMBERS IN MILLIONS

Month (2017)	No. of digital transactions*	No. of PoS terminals	No. of UPI transactions	No. of PPI transactions	No. of credit, debit card transactions
April	909.6	2.61	7	89.2	231.1
May	926.55	2.69	9.16	91.3	233.4
June	920.2	2.77	10.15	84.7	232.4
July	938	2.84	11.44	88.7	237.6
August	964.4	2.88	16.6	89.7	243
September	958.6	2.9	30.7	87.5	240.3
October	1048.3	2.95	76.7	96.2	255.7
November	1081.58	2.99	104.8	92.8	244.6
December	1150.28	NA	145.4	99.1	263.9

Source: RBI, NPCI, * Includes RBI's provisional figures along with Aadhaar Enabled Payment System numbers from NPCI but does not include electronic toll payments and other transactions for which data are not publicly available

"India needs another major disruption led by the government," said Ashvin Parekh, managing partner at Ashvin Parekh Advisory Services. "It could be in the form of disincentivising cash transactions. Unless there is a major disruption it is very difficult to change consumer behaviour." While transactions

tal wallets (or prepaid payments instruments) and credit and debit cards increased in urban and semi-urban clusters, cash remains the preferred mode of payment beyond those areas. Industry experts blame this on a lack of adequate payments acceptance infrastructure, especially in the villages and small towns, of card payment



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- **India is trying to progress at a breakneck pace**
- **Unless we are careful, we could end up breaking a few necks in the process.**

- **THANK YOU !**



