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Factsheet: Use of Data: Influence on Digital Financial Services

Diksha Singh, IFMR LEAD

"Robust customer data architecture is critical infrastructure for financial deepening in the country" - Committee on Comprehensive Financial Services for Small Businesses and Low Income Households

- Only 53 percent of adults in India have a bank account at a financial institution
- Family, friends and private moneylenders are a major source of credit, with only 6.4 percent of loans borrowed from a financial institution (Global Findex 2014)

Data is an essential element of financial services delivery. In India, a high proportion of cash transactions coupled with weak access to institutional finance equals a lack of formal credit/ payment histories for marginalized sections of society. On the other hand, with a Teledensity of 77 percent, mobile phones are nearly ubiquitous (TRAI, June 2015). This note examines the influence of non-conventional data sources and usage on the expansion of financial services.

Data Types	Intervention	Advantages
Alternative Data	Use of alternate payment history records to track payment behaviour of first-time/potential clients **Sources:** Utility (water, gas, telephone, cable) bills, rentals, and instalment payments for consumer goods and appliances	• Bridges information asymmetry between service providers and clients • Allows service providers to make more reliable assessments of applicants with sparse formal credit histories
Big Data	Use of large volumes of digital data to gain insights into individual and collective decisions and behaviour **Sources:** Call Data Records, Mobile Money transactions, Online Content such as social media, Government Statistics (census data, maps, satellite images)	• Data is available at no extra effort: collected as a by-product of everyday usage of digital devices such as mobile phones

Data analytics and Digital Finance: A few Applications

1. Promoting Financial Inclusion for 'Thin-files'

For first time borrowers, data analytics from mobile phone records, utility bill payments, mobile top-ups can be used to assess risk, determine propensity scores and assess risk.

CIGNIFI (Latin America, Africa, Asia): Partners with mobile network operators to analyse Call Data Records of clients in developing countries and converts these into credit and propensity scores. A propensity score is a type of scorecard that helps predict a consumer's propensity to open new or additional credit while helping maintain lower risk profiles.

Grameenphone's NIRVOY: Microinsurance product in which total insurance benefit to client is based on the amount of airtime used in the previous month. Uses location verification and 'friends and family' feature on mobile to validate information submitted by insurance subscriber.

2. *Product Design and Market Development*

Data mining opens up the possibility of customizing financial services to the needs of individuals and improving marketing strategies, thus promoting user uptake.

- Mobile operator Telenor, partnered with researchers from MIT to use mobile call records for targeting marketing campaigns. MIT researchers were 13 times better at converting customers to purchase the products. Of those who purchased "from MIT," 98% retained the service compared to 37% who purchased from Telenor. (CGAP, 2014)

3. *Agent Network Optimization and Liquidity Management*

Predictive analytics can help optimize the placement of agent networks, activity monitoring, demand prediction, customer activity tracking, and other tasks.

- Singapore's DBS bank used data analytics to optimize their ATM network placement and liquidity. Results: a 95% decrease in empty ATMs, and a 40% decrease in excess cash. (CGAP, 2014)
- MTN Uganda: Mines social network information to determine optimal agent location and manage float.

Other applications include better risk management using predictive analytics; using insights from consumer behaviour to encourage saving and other financial goals, among others.

Caveats on Data Usage

User Consent: Customers may not be fully aware of the implications of disclosing their data to a third party. A 2014 GSMA survey[1] on consumer perceptions on mobile privacy found that while "83 percent of mobile internet users have concerns about sharing their personal information when accessing the internet or apps from a mobile phone," but, "8 out of 10 users agree to privacy notices without reading them because they tend to be too long or legalistic."

'Aadhaar' and the Right to Privacy: Can collecting and storing of biometric and other information compromise a citizen's right to privacy? Do poor households value privacy of their personal and financial data? Critics argue that Aadhaar does not contain enough safeguards to ensure the privacy and security of individuals.

Access and Sharing: Is there a robust legal and regulatory framework around customer data (credit, payments, digital and off-line) access and sharing in India? The Mor Committee[2] recommends that TRAI, Central Electricity Regulatory Commission, and Credit Information Companies should come together to develop a framework for sharing of data between telecom companies, electrical utilities, and credit bureaus.

The above applications suggest that if done right, data analytics of this nature has tremendous potential to drive innovation in financial services, and promote access. However, as an emerging field, it is important to weigh in issues regarding consumer protection and grievances. It may not be enough to rely on informed consent alone to ensure that sure consumers' preferences regarding privacy are respected.

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[1] http://www.gsma.com/publicpolicy/wp-content/uploads/2014/02/MOBILE_PRIVACY_Consumer_research_insights_and_considerations_for_policymakers-Final.pdf
[2] https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/CFS070114RFL.pdf