Biometrics and financial inclusion

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The World Bank (2017) estimates that 1.1 billion people live without proof of identity.
Problem statement

Financially excluded due to lack of documentation

Percentage of adults without an account at a financial institution
Structure of presentation

• Identity

• What are biometrics and how do they fit into identity

• Use cases for biometrics

• Barriers

• Recommendations
Identity
What is identity?

*Identity is the collection of attributes about an individual or legal entity that can be distinguished as unique to that person or entity.*

- **Three-factor identity**
  - **Something a person knows**
    - Password
    - Pin
  - **Something a person has**
    - Identity document
    - Proof of address
    - Bank card
  - **Something a person is**
    - Biometrics

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Source:
What is digital identity

- When some or all of these attributes are captured and stored digitally the composite resulting is known as a *digital identity*
  - Example of digital identity: Identity card with chip storing information; identity information stored on a national database; Facebook
Biometrics
What are biometrics?

- Identification attributes based on **physical** or **behavioural** traits
- **Physical traits** refer to actual physiological aspects of a person, such as their fingerprints, facial features, or the sound of their voice.
- **Behavioural traits** refer to distinctive behaviours, habits, and micro-habits that distinguish a person.
- These biometrics traits can be used as part of a **digital identity**
How are biometric data captured and stored?

“A biometric template, or profile, is a statistical analysis of the measurement resulting in a specific reduced data set that can be used to represent the physical characteristics or features of an individual.”
How are they used?

Identification
Asks the question: *who is this person?*

Verification
Asks the question: *is this person who they say they are?*
Use cases
Use cases: What is so great about biometrics?

Robust identifier

- More accurate identifier than paper
- More protection from fraud
- Easy to store and manage

Inherent to the consumer

- Can’t lose your biometric (or can you?)
- Identity theft more difficult
Use cases

- How do biometrics stop fraud?

1. Register for grant
2. Try to register again under different name
3. Provide biometrics
4. Biometrics match another identity

- Steal identity card
- Use card at hospital
- Hospital scans fingerprint
- Biometrics don’t match
Use cases: the banking and financial services sector

- Being able to confidently identify your customers enhances understanding of consumer risk profiles
- More convenient for consumer
- Safer for consumer
- If linked to a national biometrics identity database, can reduce onboarding cost and increase efficiency through e-KYC
  - Aadhaar India
Barriers
Barriers

High capital cost
- Lack of harmonisation between departments limits use cases

Limited political will
- Failure to follow through and complete projects

Underdeveloped infrastructure
- Slow or absent network coverage limits usability

Lack of training and skills
- Staff not trained or skilled enough to use devices

Privacy and trust
- Citizens are concerned for their privacy
Recommendations
Siloed Biometric initiatives can be overcome by an interoperable and harmonized approach

This may be achieved through the harmonization and effective leveraging of components for improved implementation

The goal

Robust, affordable and harmonized national Biometric identity resource

The solution

Standardised templates

Accessing original biometric data via source code

Voting registration biometric

Government service/donor programme biometric

Health insurance sector biometric

Financial Service sector biometric

The current situation
Further recommendations

• Develop data protection and privacy legislation
• Conduct business feasibility studies to assess which biometrics options to use
• Ongoing training and mentoring of staff
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