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#### The Commonwealth Digital Identity Initiative

The GSMA Digital Identity programme has partnered with the World Bank's ID4D programme and Caribou Digital, to demonstrate the opportunities, address the barriers and highlight the value of mobile as an enabler of digital identification specifically for women and girls in the Commonwealth. GSMA's work will include research on the unique barriers that women and girls face when accessing or using identity systems, delivering projects that test new approaches to overcoming these barriers, and providing policy recommendations to promote inclusive digital identity systems. The initiative aims to contribute towards helping to meet the Commonwealth target of reducing the identity gap and providing access to a digitally enabled identity for every woman and girl in the Commonwealth by 2030. The Commonwealth Digital Identity Initiative is supported by the UK Department for International Development and Australia's Department of Foreign Affairs and Trade.

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## **Executive Summary**

According to the International Monetary Fund (IMF), unregistered small and medium enterprises (SMEs) comprise a significant portion of Nigeria's economy, accounting for as much as 65 per cent of GDP.1 Advancing the productivity and profitability of these informal businesses presents a significant opportunity for mobile network operators (MNOs). As the most ubiquitous technology in both urban and rural communities, mobile is uniquely positioned to deliver the critical services and information that SME owners need to grow their business, increase their customer base, make better-informed decisions, manage their day-today finances and contribute to the local economy.

Recent end-user research conducted by the GSMA Digital Identity programme<sup>2</sup> highlighted that informal business owners in Nigeria - many of which are women - often struggle to demonstrate their personal and business credentials to service providers and customers. As a result, they often lack access to market information and support. pay more for financial services (such as business loans or capital), experience inequitable business relationships with suppliers, and struggle to distinguish their business from less-reliable or fraudulent enterprises. These findings suggest that there is a need for new, digital approaches to identity. This would allow informal SME owners to authenticate the wide range of credentials that form their 'economic Identity', which account for their shifting, dynamic economic circumstances. Those who are unable to prove their creditworthiness or validate other vital information (for example their age, gender, income and transaction histories, business training, location and the quality of their products) are more likely to face barriers accessing formal services as well as relevant information or support.

SMEs and their owners generate significant amounts of digital and analogue information. This includes data generated by the usage of mobile phone products and services; financial transactions (including bank or savings deposits); online and digital profiles used to market products and services; buying or selling items on credit; and utility payments. However, this data is often held by separate companies for discrete services – or not stored at all. When this data sits in isolation or is not shared, SME owners struggle to evidence the breadth and strengths of their enterprises.

In this context, an 'economic ID' solution has significant potential. An economic ID describes an identity solution that can have relevance across different sectors and use-cases. In this setting, the above data can be collected, shared, and collated to build a rich profile of an SME and highlight the credibility of a business. This would provide MNOs, financial institutions, and other service providers with a richer understanding of their SME customers - allowing them to provide attractive products and services that meet the needs of SMEs, and significantly increase their customer base in this sector.

Business A.M. (2017) 'Nigeria's informal economy accounts for 65% of GDP - IME'

GSMA (2019) 'Digital identity opportunities for women Insights from Nigeria, Bangladesh, and Rwanda'



MNOs are well-positioned to take a leading role in establishing enabling economic ID solutions. In a setting where mobile phones are essential business tools, where digital and online markets are becoming increasingly important, and where MNOs are custodians of verifiable customer data and with extensive presence in SME communities, they are central actors in the data, infrastructure, and outreach components that are key to the success of any economic ID proposition.

This more nuanced approach to demonstrating the credibility of SMEs would have significant benefits for business owners. As many such informal entrepreneurs are women, this solution could be transformational: providing a group that is often financially-excluded with the tools and resources needed to grow their income and businesses. with positive multiplier effects on the lives of their families. The development of an economic ID solution might also incentivise small business owners to register for an official proof of identity - such as the National Identity Card - and to take steps to formalise their business.

This report highlights key findings from the GSMA Digital Identity programme's qualitative research in Nigeria. The project was designed to address the lack of understanding industry players have around the identity-related needs and pain points faced by informal business owners in Nigeria, and whether access to digital identities could provide improved access to new and/or more mature value-adding mobile services. In particular, the research aimed to inform the development of a product or service which prioritises the needs and requirements of women.

Through this research the GSMA has developed a clear roadmap with regard to product development. This begins with developing a Minimum Viable Product (MVP), in order to build the underpinning data sharing technology and to facilitate initial partnerships between data providers. It is proposed that this initial MVP is focused on a data-sharing pilot between an MNO and a financial service provider. Following this, the solution can be scaled quickly through the addition of further data-streams and additional partners. Initial discussions with endusers and wider service partners were positive, and confirmed the relevance of this roadmap - and the economic ID solution more broadly.

### Research approach

The study built on previous GSMA research. In particular, GSMA recently explored the potential of economic ID 'digital profiles' for smallholder farmers in Sri Lanka and Ghana<sup>3</sup> – linking to wider efforts to digitise the agricultural value chain. This previous work highlighted the

In order to confirm the usefulness of economic ID solutions for other, less formal, professions, this current study focuses on SME business owners in Lagos, Nigeria. Additional previous and recent research by the GSMA in Nigeria<sup>4</sup> highlighted the difficulties faced by such enterprises. In particular, they often struggle to businesses to service providers. An economic ID could allow such enterprises to demonstrate this credibility.

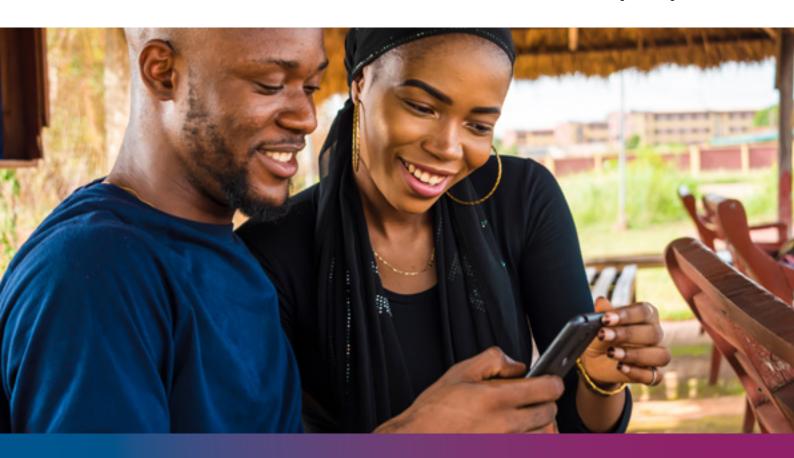
The study was split into two phases. In the first phase, interviews were conducted with key stakeholders in the identity ecosystem in order to understand the ID-related needs and realities of Nigerian SMEs. This included discussions with MNOs, financial service providers, local government, and a trade association. In parallel, a desk-based literature review was conducted to provide further context, to explore the behavioural barriers in the identity journey, and to identity potential economic ID concepts that were tested with research participants.

In the second phase, rapid prototyping and end-user research was conducted with micro and small business owners to validate and iterate the identified concepts. This comprised of 28 in-depth interviews and two focus group discussions with a sample of wholesalers and retailers - business types that account enterprises in Nigeria.<sup>5</sup> The research was conducted in two distinct SME-dominated areas Discussions took place in the business owner's shops, providing extensive observational data, and were undertaken until saturation was achieved.<sup>7</sup>

GSMA (2017) 'Digital Identity for Smallholder Farmers: Insights from Sri Lanka'; GSMA (2019) 'Mobile-enabled Economic Identities for Smallholder Farmers in Ghana' GSMA (2019) 'Digital identity opportunities for women Insights from Nigeria, Bangladesh, and Rwanda'

Small and Medium Enterprises Development Agency of Nigeria and NBS (2013) <u>Collaborative Survey</u> In Lagos, these informal businesses are usually clustered based on their business types. For example, typically shops that sell textiles are clustered in one location. Lagos was chosen as a study location due to the breadth of small business types

The number of interviews and focus group discussions was selected through an assessment of when saturation (the point at which no new information is forthcoming) had been reached.



## **Mobile Landscape**

Nigeria provides a significant opportunity to explore the development of a mobile-delivered economic ID. As the largest mobile market in West Africa, with over 98 million unique mobile subscribers, many in the population are tech-savvy and own multiple SIM cards in order to access the best connection or tariff. Mobile phones are an essential tool for SME owners - allowing them to communicate with suppliers, market products to customers, make payments and money transfers, and manage their business activities. Many research participants were keen to use their mobile for further business tasks, and saw the relevance of a mobile-driven economic ID.

"My mobile phone is like my second personality."

Printer cartridge shop owner, Male, Computer Village

"Without the invention of GSM [mobile phones] my business wouldn't exist."

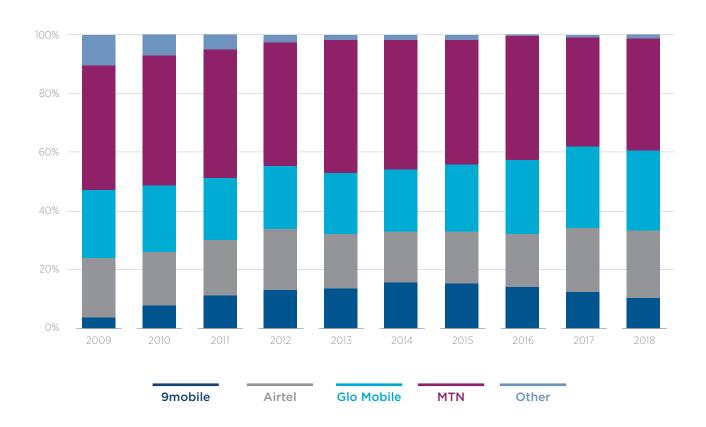
Computer hard drive business owner, Female, Computer Village

In 2017, overall subscriber penetration in West Africa reached 47 per cent with Nigeria contributing to more than half of the total subscribers. By 2025, it is estimated that 72 million new mobile subscribers will be added in West Africa<sup>8</sup> – with Nigerian users representing the largest share of new subscribers. The Nigerian MNO market is competitive, with

four main operators each with a market share of more than 10 per cent: MTN, Airtel, Glo Mobile and 9mobile (Figure 1). This context highlights the market-differentiator usefulness of a product or service, such as an economic ID, that is of significant relevance to a large and nationwide customer-base.

#### Figure 1

#### Market share, by mobile operator





The amount of data-driven services being accessed on mobile phones are also increasing. Nearly 59 per cent of mobile subscribers have access to mobile internet: whilst smartphone penetration and 3G and 4G coverage are growing. However, these advancements have not been equal. Women remain less likely to own a smartphone, and often have lower literacy and digital skills levels.9 As many SME owners are women, any mobile-driven economic ID must engage with these realities.

Related to this, mobile money - which in other countries has been a catalyst for women's financial inclusion<sup>10</sup> - has experienced slower growth in Nigeria. The Nigerian organisation 'Enhancing Financial Innovation and Access' (EFInA) notes that only 3.3 per cent of the adult population in Nigeria had used mobile money in 2018,<sup>11</sup> and these services are only provided by financial service providers. However, recent regulatory reforms that will allow MNOs to offer mobile money products and services by the end of 2019 are expected to drive significant progress in the sector.

Mobile phones are integral to the day-to-day operation, management, and growth of SMEs. They are used for supply chain management, product and business marketing (including via social media and online platforms), to manage finances through SMS bank notifications and financial applications, and to keep SME owners informed. Research participants also used basic calling and texting services to

keep in touch with customers and suppliers, and all had multiple SIM cards in order to benefit from various tariffs and to ensure strong network signal. Ownership of multiple handsets was also common - with one line used for business, and another used for personal or non-business activities.

"The phone is your shop. This physical shop has little to do with it these days."

**Computer Accessories Shop Owner, Male, Computer** Village

"When I'm on maternity leave I spend 3 months away, but I still run my business with my phone because of social media."

Computer and networking accessories business owner, Female, Computer Village

Beyond the above, Nigerian **Know Your Customer** (KYC) regulations require SIM cards to be registered ahead of activation. MNOs need to capture personal and biometric data of the SIM card user, and verify this information based on official identification documents provided by customers. KYC regulations are becoming increasingly robust, and are positioning MNOs as custodians of extensive customer data - a key proposition for product and service development, and of particular relevance for a data-driven economic ID proposition.

GSMA (2019), 'The Mobile Gender Gap Report 2019' GSMA (2017), 'Mapping the mobile money gender gap: Insights from Côte d'Ivoire and Mali'

EFInA Access to Financial Services in Nigeria 2018 Survey: https://www.efina.org.ng/wp-content/uploads/2019/01/A2F-2018-Key-Findings-11\_01\_19.pdf



## **Identity Landscape**

Nigeria has a fragmented identity landscape, with a range of different systems in place - none of which have reached scale. Penetration of the National ID Card (NID) is growing but remains low at roughly 30 per cent<sup>12</sup> nationwide, while voter's cards and driver's licenses remain commonly held and accepted identity documents.

See: id4d.worldbank.org/global-dataset

### The National ID Card (NID)

The NID is the most robust and official identity featuring the second iteration of the document required in order to access government services and support, and the document has significant highlighting its importance in conferring feelings of legitimacy, or of being a 'true Nigerian'.

The principal barriers to NID rollout are a perceived lack of 'need' of an NID and enrolment challenges, with the logistics of registering

a sizeable population resulting in sub-par experiences - including queues, and significant delays in issuing permanent NID cards. The difficulties of enrolment, and the lack of any guarantee of receiving an NID despite individual effort, dissuade many from attempting to register. This is particularly the case for women, who are disinclined from experiencing the above chaotic environment, and SME owners. The opportunity cost of enrolling is associated with a very real financial cost as individuals may be away from their businesses for several days.

Perhaps due to the various identity documents (ID) used in day-to-day life in Nigeria, the identification process has become highly negotiable. Outside of official or highly formal processes, largely government or financial services, individuals can access products and services through presenting various types of ID, a combination of ID documents, or no ID at all. Workarounds are common. In particular, 'vouching' - where an individual without the requisite ID calls a contact to verify their identity or trustworthiness - is a regular occurrence in Nigeria. Mobile phones therefore play an important role in identity journeys.

Previous research also highlighted the role of unofficial 'work IDs' used by SME owners and employees to signify their professional credentials. These documents and methods ranged from laminated or paper ID passes, produced by businesses or individuals to demonstrate authenticity or affiliation, through to uniforms, business cards, and photographs - often stored on mobile phones - of products sold, services offered, or business premises.

The complex nature of the identity landscape, and the reliability of workarounds (even if time-consuming or difficult), has inhibited the understanding of the role, benefits, or advantages of ID ownership. In addition, a concept of a single or otherwise-indispensable ID was not familiar to many participants of the previous research project in Nigeria.

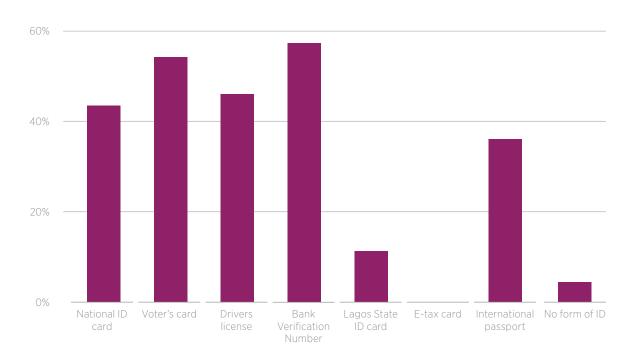
Building on this, identity is a particularly important topic for women in Nigeria. There is often a perception that women - as individuals and as business owners - have a lower need for ID due to their perceived economic position, or due to their ability to leverage workarounds such as using the ID of a male relative. However, this is likely a misperception and female entrepreneurs require ID for the same reasons as men. In fact, given perceived gender roles, women may have greater need of ID in order to demonstrate their value in the face of negative expectations, or to access services from biased providers.

The small business owners participating in our research were more likely than the average citizen to possess a National ID card, and were unlikely to have no form of ID at all (see Figure 2). However, discussions with financial service providers highlighted that a lack of official identity remains a barrier to SMEs more broadly. As a consequence, they are often relegated to Tier 1 or 'basic' products that do not require ID, despite having the (unevidenced) turnover and reliability to access higher-end capital and other products and services. This creates real challenges to business growth, and was an issue raised by many participants who require credit in order to grow their businesses. However, these individuals were reluctant to borrow from other credit sources due to high interest rates and lower protection, or because they have experienced the consequences of choosing expensive informal credit sources in order to meet short-term needs.



#### Figure 2

#### ID ownership among small business owners in our sample<sup>13</sup>



More broadly, female participants in particular were cautious about borrowing from a financial institution for various reasons. These included a lack of information about – or access to - financial services that are relevant and affordable for them, difficulties

in providing collateral, unstable turnover, perceived risk and a lack of information about procedure. Women would rather rely on their own savings or take loans from family or friends.

This data was provided through the research sample; the sample size was small and non-random



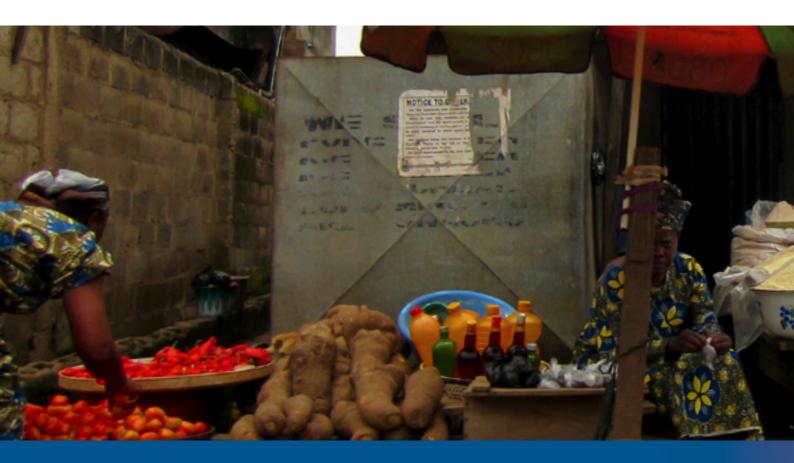
#### **Purse seller, Lagos Island**

Ada is a well-educated woman who left her work in a bank because she did not like working in an office. A friend encouraged her to start up her own business due to Ada's interest in fashion. The same friend provided her with some business advice as she setup her business.

Ada opened up a stall in Lagos Island with the money she had saved. Ada is very proud of her business achievements in the last two years. She buys her goods directly from China and supplies to wholesalers. She has a dual-SIM smartphone that she uses to communicate with her suppliers and customers. Most of her customers transfer directly to her bank account and she confirms each payment when she receives a notification. She hopes to expand her shop in the next few years. Her biggest challenge is accessing capital

to grow her business. She knows that she needs access to credit but is unsure about how to get it. She doesn't like sharing data and finds banks difficult to approach.

"My own problem is lack of capital and I don't know how to confront them because I'm kind of shy and banks are not approachable. I don't like sharing my issues with people."



## **The SME Context**

SMEs are believed to constitute more than 90 per cent of all businesses in Nigeria.<sup>14</sup> Many of these businesses operate in the informal economy, which is varied, extensive, and a major source of employment and income - particularly for women. The size of this sector highlights the need for service providers - including MNOs and local government - to strengthen their understanding of the needs and realities of SMEs in order to develop relevant products and services. These priorities could encourage partnerships and catalyse the scaling of an economic ID solution. Discussions with stakeholders as part of this research highlighted the need to better understand SME customers, who are often hard to reach. excluded (by design, or other factors) from current product or service offerings, and represent a very wide range of needs, requirements, and customer types.





### **Overview**

In particular, data that demonstrates the value, trustworthiness, or basic attributes or strengths of an SME was lacking - or limited. In situations where SMEs were customers of a particular service provider, this represented only one data-source and therefore presented limited information on the makeup or profile of an SME. This situation was complicated by the difficulties inherent in identifying an SME - whose small scale can often make them indistinguishable from individual customers.

More widely, service providers noted the difficulties with engaging SMEs, due to the same 'hassle factor'15 16 and opportunity cost that discouraged

SME owners from registering for a NID. Owners were unwilling to leave their businesses, even for a short period of time, in order to register for new services. In response, financial service providers and others have leveraged sales agents who meet SME owners where they are - in their markets, and in their businesses.

"Someone has to come to me to register, I won't go to a shop to register, it's a waste of my business time."

Handbags and shoes shop owner, Female, **Lagos Island** 

On particularly interesting study found that in times of scarcity and non-scarcity, the same people perform very differently on a range on cognitive tests (Shafir, E. and Mullainathan, S. (2013), Scarcity: Why having so Little means so much)

Beattie, A.E. (1982). 'Effect of Product Knowledge on Comparison, Memory, Evaluation, and choice: a model of expertise in consumer decision-making'



## **SME** archetypes

The research highlighted four different SME archetypes, and different aspects of any economic ID solution are likely to appeal across these groups.



### Slow adopters

"My children help me to connect to computer to do promos for my goods."

Handbag seller, Female, Lagos Island

Largely women, this group was particularly characterised by low mobile technology use and little access to financial services. They were reliant on their children or trusted individuals when using technology, and their peers and other trusted sources for information. As they make significant

contributions to their household finances, they are highly risk averse when making business decisions.

They focus on cash-based transactions, deposit money at the bank each day, and save daily via a financial agent. Although they distrusted new products, a particular driver of economic ID uptake would be the ability of any solution to increase their sales. In addition, they are likely to require guidance on growing their businesses due to their reliance on the same way of working for a long time.



## **Credit-constrained**

"I don't do much import because of lack of funds."

Computer hard drive seller, Women, Computer Village

"Some people have the zeal but no capital."

Handbag seller, Male, Lagos Island

Both men and women, this group are average users of mobile technology and although they have some access to financial services they particularly struggle to access credit. They may not be the most driven of entrepreneurs, as their wide customer base is largely outside of Lagos state.

This group rely on their phones to inform customers of available goods and new stock, as well as to confirm the receipt of bank transfers. They aspire to grow their business if suitable capital was made available. Related to this, a particular driver of economic ID uptake amongst this group would be its role in enabling the provision of transparent, flexible, and suitable loans (and other types of capital).



## **Digital promoters**

"I want customers to know I sell quality products." You need network for this business. I use online platforms like Jiji to build my network. I don't know the customers but they call me through that platform."

Computer hard drive seller, Male, Computer Village

"I send pictures of my products through WhatsApp to prove to customers that I have quality goods."

Purse seller, Woman, Lagos Island

Both men and women, 'digital promoters' are strong users of technology – but with slightly less access to financial products and services. Many of these were younger women, or women who had left office jobs (or other formal employment) in order to start a business. However, similar to other entrepreneurs. they're keen for any economic ID to drive sales.

Optimistic about the future, they were particularly open to new ideas - especially those leveraging technology, and are less risk averse than other entrepreneurs. They are using their mobile phones to promote their businesses, and here mobile is a central tool. However, this group are wary about sharing data.



### Influencers

"I currently have an app I use to collect small loans. Please where can I sign up for this product? You know I'm always looking for new digital products to access loan"

Accessories seller, Male, Lagos Island

This group, often men and frequently early adopters of new products and services, are strong users of mobile technology and have easier access to finance. Many in this group were heads of their respective households, and often the main income

provider. This group are confident in making decisions, and have embraced digital technology and mobile phones to grow their businesses. They are also strong influencers of others in their network, and have promoted the advantages of these tools for entrepreneurs.

Aligned with others, they're keen to grow their own businesses and are always looking for useful credit sources. This would be a strong driver of uptake for any economic ID solution, as long as the product (and any associated credit) was reasonably priced.

## Signalling trust and value

Nigerian SMEs employ a number of techniques to signal that they are trustworthy and credible businesses in a context of low trust and high competition, and within relatively homogeneous marketplaces. In particular, SMEs use a range of 'Credibility Enhancing Displays' (CREDs) and maintain extensive networks.

CREDs are situations in which an individual or entity strengthens their words with (often costly) actions to improve their likelihood of being believed, and can be found in many areas of human interaction.<sup>17</sup> However, the basic principle behind this is simple: actions, more than words, demonstrate someone's true status and beliefs - both their positive and negative nature.<sup>18</sup> CREDS are particularly valuable in suggesting new types of goods or services to potential customers, who can't directly see their value.

Research participants demonstrated a range of CREDs. These included personal dress, as appearance is vital - connoting formality and success. Some businesses, especially those working in the electronics sector in Computer Village, also reported extending warranties to customers to demonstrate value. Location is also vital to a business's perceived credibility. Markets in Lagos are clustered by business type, which on initial reflection has a negative impact: with businesses unable to monopolise customers, and reliant on differentiating themselves through driving down prices (and, therefore, profit). However, business owners in these locations are proud of being part of these communities, and consider their location in these marketplaces as a demonstrator of value and credibility to peers, customers, and service providers.

Related to this, SMEs also integrate themselves in a variety of networks in order to promote their trustworthiness and value. One commonly used method to signal credibility used in the Nigerian SME context is to join trade associations, which provide information and collective bargaining support, but can also convey legitimacy and quality.<sup>19</sup> This was confirmed in the study, with some business owners reliant on trade associations to provide protection in situations when their legitimacy is in question and also as a source of information about government regulations, taxes, and community well-being.

"I was unloading my goods, the police stopped me accusing me of counterfeit goods, I called the chairman of the association who vouched for mv goods."

Trade association member, Male, Lagos Island

People also build trusted networks through repeated interactions and word of mouth. Several research respondents reported relying on referrals from current to potential customers to increase their business, or on a good reputation among suppliers to access new services. These referrals are important as there is a strong culture of small businesses buying goods on credit in Lagos Island and Computer Village. This system is largely based on trust and past experiences.

To some extent, online platforms such as WhatsApp, Jumia and Jiji, have been used to build networks quickly and sell to new customers. However, even these are restricted by the same needs of demonstrating trust and credibility: WhatsApp connections work best with trusted customers, and Jumia and Jiji require SMEs to develop a customer network. Consequently, building a strong network of influential and well-connected champions is vital to small business success.

Henrich, J. (2009). The evolution of costly displays, cooperation and religion; credibility enhancing displays and their implications for cultural evolution

Jordan, J. J. (2017). Why Do We Hate Hypocrites? Evidence for a Theory of False Signaling

See: 'Trade unions and the informal economy; a critical analysis of informal workers organizing and the building of workers' power'



### Handbags and footwear seller, Lagos Island

Halima is a tech-savvy business owner with a shop in Lagos Island. She learned a lot about how to run a business when she worked as an apprentice for someone in the market. During that time, she learned how to speak to customers and sharpen her sales skills. After a few years she saved her money, gathered all she learned from her mentor, and started her own business.

Most of Halima's customers buy from her because she is listed on many different online marketplaces such as Jiji, Facebook, and WhatsApp. She keeps track of these platforms through her phone. Her challenge with using these platforms for marketing is that she always has to prove her credibility. This often takes several rounds of conversation with the customer, and customers refuse to pay until they receive the product and are satisfied with its authenticity. She's interested in a service that can shorten this process and save her time in proving her credibility to doubtful customers.

She has no interest in taking out a loan because she believes that taking out a loan comes with bad social recognition when you cannot meet your loan obligations. Her primary focus is getting new customers through increasing her visibility online.



## Overview of the **SME Economic ID**

The SME economic ID brings together extensive data sources in order to create an economic profile of an SME. This enables a more nuanced assessment of business strength, credibility, and trustworthiness than the less data-rich credit-scoring systems currently employed in many emerging markets - including Nigeria.

SMEs generate a significant amount of data whether from transactions with customers and suppliers, membership of trade associations or similar entitles, mobile top-up and mobile money data, from accessing services such as education, healthcare, or when purchasing products such as household or business utilities and entertainment including Cable-TV. While individual service providers tend to have relatively sparse data on SMEs, when combined the aggregate data can provide a strong insight into the strength of a business.

At the core of the solution is the consent granted by SMEs to share this combined data with service providers, customers, or other interested partners. This robust economic ID would then demonstrate their legitimacy, trustworthiness, and credibility

- allowing them to access better products and services, increase their customer-base, and grow their businesses.

With regard to the user experience, SME owners would verify their identity - through KYC data, ownership of an existing identity document (such as an NID) or through a mobile-based digital identity solution. They would then have access to a range of relevant services, discussed in more detail below. The economic ID is also cumulative - allowing service providers to better meet the needs of SMEs through developing more tailored services. These could range from better credit terms (through more effective credit scoring) to improved cross-selling, or bespoke extension services. This process is illustrated in Figure 3.

Figure 3

#### Overview of an economic ID solution



## **Economic Identity Solution**



**Big Data** is generated from individuals' usage of products and services and usage of partners' services (Cable TV,



and leveraging of data enables the development of a robust **economic identity** detailing the



A verified economic identity allows individuals to access products and services on their own terms and take control of independence



role in driving customer uptake, B2B services and partnerships, product development , and MNO strategy (including leveraging



## **Key products and services unlocked**

The primary value of the small business economic ID is to enable small businesses to benefit from services that they would not otherwise be able to access, and to allow them to signal their credibility to customers, suppliers, and other interested partners. A variety of service providers would also benefit from an economic ID, including:

- MNOs, who could use the small business economic ID to offer value added services (particularly credit or insurance), or to cross-sell small-business focused products.
- Financial Service Providers, who could use the small business economic ID to improve credit scores (drawing on new data), provide value added services and cross-sell products.
- Extension providers, who could better target and tailor information for small businesses.
- Trade associations, who can better support member businesses.
- **Government**, who can better provide services and support to small businesses.

Throughout the project, we explored SME owners' appetite for a number of additional services that could be unlocked through an economic ID solution. This included:

- **Send ID:** a vouching method that a business owner could use to prove her credibility and trustworthiness to providers and customers. This element is discussed further, below.
- Access to Insurance: SME business insurance that covers common marketplace accidents, such as fire or theft.
- Payment services: a service for business owners to receive payments from customers for purchases. This service could be linked to any mobile money offering.

- Business management: a supply chain management tool that business owners can use to track supplies from distributors and importers.
- **Digital marketplace:** a platform that business owners can use to expand their customer network by showcasing their products. Customers can also use this platform to 'vouch' for the quality of products through feedback and ratings. This can be a method of increasing trustworthiness between business owners and customers.
- Access to credit: an MNO or partnering provider could offer credit based on the economic ID of an SME

Research participants found both the financial and non-financial services to be of interest. although instinctively focused on the 'access credit' opportunity. Business owners were enthusiastic about accessing loans that could alleviate the stress they have around raising capital for their business. They often followed up with questions about the terms and conditions of the loan options.<sup>20</sup> Respondents were also interested in the 'Send ID' (explored in more detail at the end of this section), digital marketplace, and business management offerings - particularly noting that the first two could increase their customer-base.

"I like Send ID and Access to Credit. With Send ID people can know that I'm trustworthy and dependable. People will know about your business. With credit-it's money! I would use the money to grow my business!"

Computer accessories seller, Male, Computer Village

It is important to note that various informal loan systems exist in these markets. These informal loans are flexible, readily available and can have low costs. Business owners avoid formal loans from banks because there is the perception that the terms and conditions are rigid and that they have exorbitant fees.

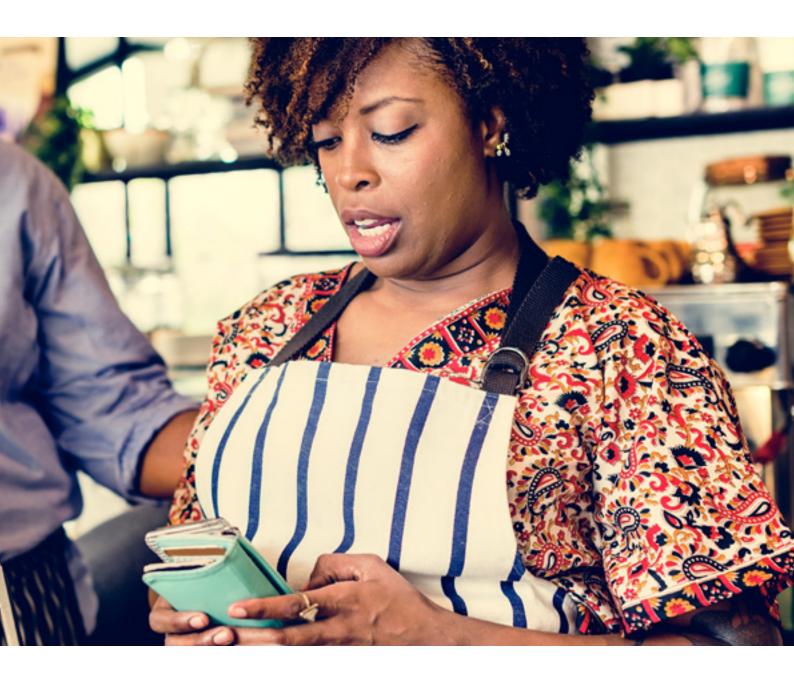




## Data sharing and consent

The economic ID is founded on leveraging data belonging to SMEs - and the individuals that own and operate these enterprises. Therefore, consent is an essential attribute of this system. Users must be comfortable sharing particular sources of data, and allowing that data to be shared with other service providers in order to generate a robust economic ID. Data portability, allowing users to take their economic ID elsewhere, may also be an important consideration.

Discussions regarding data focused on three components: the trustworthiness of any data source - particularly the ability for an individual or SME to manipulate this data; the usefulness of any data source as a foundation to any economic ID (or wider credit score); and the willingness of an individual to share that data with the entity responsible for an economic ID (or service partners). An overview of these elements can be found in Figure 4.



### Overview of potential economic ID data sources

Data source	Trustworthi- ness of data	Usefulness in building an Economic ID	Willingness of individual or SME to share	Further comments
Bank transaction history	High	High	Medium	Difficult to manipulate, and features extensive history of product usage
MNO transaction history	High	High	High	Strong history of usage in credit scores and segmentation; very hard to manipulate
Government business licences	High	High	High	Strong indicator of business credibility, and a lever for potential legal action; very hard to manipulate
Utility behaviour	High	Medium	High	Clear use cases (e.g. predicting the size of a business), but fairly untested; hard to manipulate
Digital inventory management tools	Low	Medium	Low	Strongly predictive of a businesses' organisation, but fairly untested; can be easily manipulated
Online marketplace history	Medium	Medium	High	Predictive of business size and customer satisfaction; can be manipulated, but reputable online marketplaces have appropriate checks in place
Distributor records	Low	Medium	Low	Predictive of business size and available capital; potentially highly open to manipulation given close and mutually-dependent business relationships
Peer or Custom- er Recommen- dations	Low	Medium	High	Recommendations from trusted individuals could predict trustworthiness; extremely open to manipulation
Trade association membership	Low	Medium	High	Demonstrates business type, and ability to pay dues; highly open to manipulation given close relationships
Social media behaviour	Medium	Low	High	Some potential to predict business type in other contexts; able to be manipulated – but relatively time-consuming to do so

Overall, although all participants were keen to share some forms of data - as long as the economic ID would deliver meaningful benefit - several business owners were reluctant to share their financial history and business revenue trends. Women entrepreneurs were also more cautious and selective in choosing which data they would want to share. This reaffirms the importance of ensuring that women have suitable information about the economic ID to ensure successful uptake. This is especially relevant for credit-constrained small business owners. This group are open to new ideas, but often need more information in order to evaluate the trustworthiness of any product or service.

"If it (the service) is real then I will give it to you. I will not want to share my financial history. Others are ok."

**SME Owner, Female, Lagos Island** 

While business owners were optimistic about sharing some sources of data, most indicated that MNOs would have to seek their consent before accessing data in the first instance. Similarly, participants felt that it would be necessary to seek their consent before sharing the data with a third party. Many mentioned that they would need to understand and see the benefits of sharing their data with other entities. In particular, participants generally felt that their data should not be shared with government institutions, such as tax offices.

However, effective engagement - perhaps highlighting the longer-term benefits, including access to government support, of government recognition – may prompt SME owners to shift their position here. In addition, although this research did not focus in particular detail on aspects of data privacy and security, it is clear from discussions that the development of any economic ID must start with these considerations in order to ensure transparency and trust.





## **Data collection**

There are two broad approaches to collecting the data on which the economic ID is founded (Figure 5):

- 1. Data could be sourced and held by a single organisation, for example an MNO: the data custodian would be able to use the data to provide better services (increasing associated income), and charge 'transaction' fees to other service providers keen to use the economic ID to verify their respective customers.
- 2. Data-providing organisations such as MNOs, financial service providers, distributors and suppliers, online service providers (such as digital marketplaces), and utility companies could connect through a network of application programming interfaces (APIs): no single business would bear the cost of the platform and all included organisations would benefit from offering better services to a wider range of customers: driving uptake, usage, and customer economic activity.

Figure 5

#### **Data sharing approaches**

Data can be sourced and held by one organisation



connect through a network of APIs

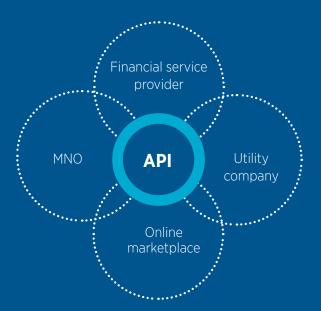


**Data-providing organisations could** 

Data custodian can use the data and charge a fee to service providers for access

No single business bears the cost of the platform, while all benefit from offering better services





Consent and customer ownership of data are key to both approaches, and both have strong business cases. Alongside both options, SMEs could pay to be validated using the economic ID solution. Both approaches are also scalable, a key requirement of

any economic ID product or service - particularly as the strength of this solution is directly linked to the depth of data that can be combined in order to demonstrate the value of an SME.



## **Economic ID registration**

Discussions with participants also focused on potential registration processes for the economic ID. These were broadly split into three areas: digital registration, such as through a USSD process; inperson, via an agent or similar individual; or through an aggregator, for example a trade association who could apply on behalf of one or more SMEs.

There were strong preferences to register digitally through a self-service option, or through an agent. Participants keen to register digitally were often time-scarce, with time spent away from their respective business resulting in lost income. In addition, many expressed trust in digital platforms due to their increasing presence in Nigeria.

"I'm the only one managing my office. Nobody likes stress. I might miss a customer if I leave my shop and go to an office to register."

Hard drive shop owner, Male, Computer Village

Those that preferred registering with an agent had a particular interest in having a personal contact, who they could meet if any issues arose. More widely, agents could serve as a consistent and hyper-local representative of the product. Agents, especially those that already have an established local presence, can be important and influential nodes in the customer acquisition journey. Agents may be

particularly relevant to untrusting small business owners that need more guidance in taking up a new product and credit constrained small business owners that are open to new products but need more information.

"I prefer registering with an agent because I will know them and I can see them every day if I have issues."

Fashion accessories shop owner, Male, Lagos Island

Leveraging existing agent networks may also increase initial adoption, and success. Studies have shown that positive in-person interactions between a borrower and a lender can significantly reduce default rates and increase satisfaction with the services rendered.<sup>21</sup>

Many small business owners were opposed to their trade association registering them for this product for several reasons. Some business owners in Computer Village felt that their trade association did not have strong influence in the community. Participants in Lagos Island believed that their trade association acted as a gatekeeper of information and may not be forthcoming when sharing complete information about the benefits of an economic ID.





#### Shoe seller, Lagos Island

Temitope used N60,000 (\$167) to start her business 10 years ago. She shares a shop with her friend in Balogun Market, Lagos Island. She chose to go into this business because it didn't need much initial money to start - she got her starting capital from her husband's 'my turn to eat today,' a rotating savings group. When she was just starting up the business she needed someone to introduce her to suppliers and show that she is trustworthy.

"A woman vouched for me based on [my] business relationship with her. Then she introduced me to a foreign supplier to buy goods."

Most of her customers are in Onitsha, located in the eastern part of Nigeria. These customers buy in large quantities and pay her through bank transfers. She uses her feature phone and smartphone to keep in touch with all her customers. Her children introduced her to WhatsApp and since then she has been able to send pictures to her customers in Onitsha as soon as she receives new items.

"This WhatsApp of a thing makes people not to come to Lagos. Without phone I don't think this business will be as it is. It reduces stress."

When considering registering for a new product or service, for her the most important aspects are the benefits and convenience that it can provide. She is a busy woman who needs to be at her shop at all times in order to not miss potential customers. Temitope saves daily through a bank's mobile agent. She likes that the agent comes to her shop every day to ask how she's doing and how her business has been that day.

"The only reason I save is because of him. When I see him, I will just start preparing my money to give him."

Her biggest stress now is credit. She wants to take out a loan to grow her business, but feels that she needs someone to walk her through the process. In particular, she wants to be sure that the loan is genuine and to be familiar with its terms and conditions.



## 'Send ID' and 'vouching'

Previous GSMA research<sup>22</sup> in Nigeria identified the importance of 'vouching' in the identity journey, whereby identity has a strong peer dimension. For example, if an individual does not have an identity document they often call a contact who brings their own identity - particularly an NID - to 'vouch' for that person. Similarly, vouching may replace an identity document completely if your counterpart doesn't have one. Who one knows really matters, with trust and social networks clearly important foundations to this mechanism of identity.

In a professional setting, vouching was used by SME owners in the study to demonstrate credibility and signal trust to new customers and service providers - echoing the above discussion regarding CREDs. Receiving a referral from an influential contact is essential in the informal market.

The concept of vouching could be digitised, and this was explored during the study. 'Send ID' would allow customers to send an SMS-based summary of their business credibility – the exact definition of this is yet to be defined - to a phone number that they enter. The 'credibility' of an SME could be verification that a specific individual is the business owner, that they are a member of a particular business group or trade association, or even that they have a suitable 'credit score' or similar. This role for mobile in demonstrating credibility was received well, particularly in order to highlight legitimacy and distinguish genuine businesses from their fraudulent counterparts.

"I sell a lot of goods online, and customer often don't trust it and think it's a scam. I believe that that 'send ID' option will help give credibility to doubters."

Handbags and shoes shop owner, Female, **Lagos Island** 



## **Economic** ID Roadmap

The research highlighted the relevance of an economic ID for SME owners in Nigeria, and a clear need to tackle the challenges encountered by SMEs in attempting to grow their businesses - particularly with a lack of ID, or NID. This provides a strong foundation to develop an initial Minimum Viable Product (MVP) in order to conduct more extensive user-experience testing, and offers some initial direction to scaling-up the potential solution.

When exploring the economic ID concept with SME business owners, there was some initial difficulty in explaining a complex product with an extensive back-end requirement. However, once understood. participants recognised the value of an economic ID product or service in increasing their abilities to convey legitimacy, trustworthiness, and credibility.

In addition, willingness to pay for an economic ID solution was strong across the sample of participants. Some noted that this was due to assuming that all mobile-delivered services had an associated fee. However, others were willing to pay due to the potential benefits afforded by an economic ID. Although most mentioned that they would not discard their current phone number. many were keen to purchase an additional SIM card if a competitor MNO provided such a product. Affordability, and clear and demonstrable benefits, were key drivers in encouraging willingness to pay for the solution, and any MVP - and wider roadmap - should engage with how best to market any economic ID product or service.





## **Developing a Minimum Viable Product**

The full SME economic ID discussed in the previous section of this report represents an end-point, when the solution is proven and functioning at scale and drawing on data from a variety of sources. As an initial step toward this, an MVP would focus on developing a proof-of-concept of the underpinning technical infrastructure - using two sources of data, and a limited suite of products or services (with the exact offering based on additional, and more extensive, customer research).

Based on participant discussions, and desk research, two data sources are strong initial candidates: financial service provider data and MNO data. Both are trustworthy, and fundamental data in building an economic ID. There was also a general willingness amongst SME owners to allow this data to be shared for a legitimate and clear purpose - and if consent is gained. An MVP would therefore comprise of a data sharing partnership between one or more MNOs and financial service providers, whereby customers of both services (or customers of one, and applying to the other) are able to consent to their data being shared between platforms.

This MVP is conceptually simple and technically possible, and has the potential to improve service provision by the MNO(s) and bank(s) - providing new income streams. Credit is a clear initial use

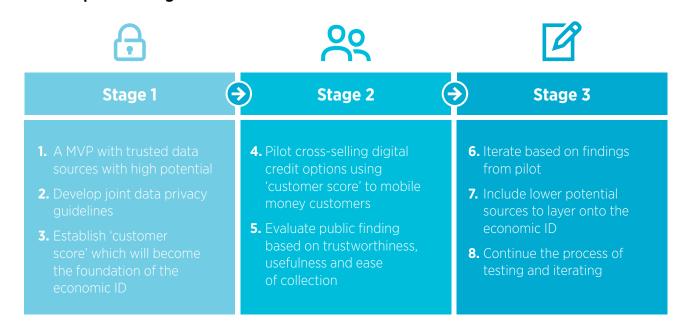
case for this partnership, with banks lacking data on small businesses 'stuck' on Tier 1 accounts, while MNOs have significant data on communication patterns, customer finances (through airtime and data top-ups), location, and other factors of interest to a credit-scoring institution. GSM-only credit scoring models are common in other markets, in particular in East Africa where they support digital credit offerings and are likely to strengthen bank credit-scores.<sup>23</sup>

Mobile money value added services also provide a valuable opportunity to strengthen the above model. Due to recent regulatory changes, MNOs are in the process of securing mobile money licenses. Therefore, developing an MVP ahead of the likely launch of mobile money products in Nigeria is a significant opportunity - particularly as MNOs are focusing on the technical requirements and logistics of this new suite of services.

Data sharing does not have to be extensive under this minimum viable product. Rather than sharing raw transaction data, parties can share specific indicators - for example a metric of communication strength, or a 'customer score'. These indicators would provide the predictive power of the raw data, without the requirement to share more sensitive or proprietary data.

Figure 7

### Roadmap of building an 'economic ID'



#### **Gender-disaggregated data streams**

Many customer-focused institutions will segment their userbase in order to serve bespoke products and tailored value propositions. In the context of MNOs and financial institutions these sub-segments are often defined by usage of a product or service, or revenue from a customer. Beyond this, genderdisaggregated data has been shown in various markets to provide more relevant insights that can contribute to product design. This data has the potential to uncover differences in the how products are used, as a result of gender roles and expectations.<sup>24</sup> For example, in Rwanda genderdisaggregated data showed that commercial bank loans to women averaged only around 20 per cent. The government adjusted its policies to allow for the expansion of agent networks in rural areas, where a majority of women are more likely to be unbanked. This change in policy led to a doubling of the number of financially included women to 42 per cent.<sup>25</sup>

In addition to segmenting data during product design, data should be monitored using genderfocused Key Performance Indicators (KPIs). These should be developed in order to assess the performance of any product or service amongst a female customer segment. In Nigeria, expert interviews highlighted that some financial institutions have begun to explore this by including KPIs that track the performance of female customer segments on their management dashboards. Through a gender-inclusive approach to monitoring uptake and usage of new products, institutions can ensure that they are best meeting the needs and requirements of women.

## **Driving uptake and usage**

Individuals' identities are important drivers of their actions. People tend to respond much more strongly to identity statements than to action statements (for example the slogan 'don't be a cheater' tends to eliminate cheating in a game, while 'don't cheat' has little effect).<sup>26</sup> Further, priming certain identities can in turn drastically affect people's behaviours. When a certain identity is made salient, people tend to act in the way that is expected of that identity. This can be true for both positive and negative stereotypes; one study found that priming Asian-American females with their racial identity (by writing it down) improved their score on subsequent tests, while priming them with their gender identity reduced their scores.<sup>27</sup> Similar experiments have found that making certain identities more salient can affect patience, risk aversion, and adherence to gender norms.<sup>28</sup>

This has two implications. The first is that framing this product as an identity (rather than a data sharing product) will likely be more effective at driving uptake and usage of the product, as this is an identity statement rather than an action statement. The second is that doing so may also have positive multiplier effects: by allowing small businesses to identify themselves as credible and trustworthy, they are likely to aspire to this identity, and behave as such. In addition, providing tangible identification touch-points for users - for example the 'Send ID' functionality, or an option to selfregister as a (user chosen) type of SME- could act as further drivers of uptake and usage.

Marketing also plays a key role, with the messaging, channel, and timing of promotional efforts of particular relevance:

Global Banking Alliance for Women (2015). 'The Value of Sex-Disaggregated Data'

<sup>25.</sup> 

<sup>26.</sup> 27. Bryan, C. J. et al. (2013), When Cheating Would Make You a Cheater: Implicating the Self Prevents Unethical Behavior

Shih, H. et al. (1999), Stereotype Susceptibility: Identity Salience and Shifts in Quantitative Performance

Benjamin, D. et al. (2007), Social Identity and Preferences

**Messaging:** how the economic ID is phrased and explained is vital, with a different framing of the same product having very different effects. For example, individuals tend to be more sensitive to losses than to equivalent gains<sup>29</sup> therefore framing not taking up the product as a current loss (e.g. 'you are losing out on ...') rather than a potential gain ('you could gain ...') is likely to be more effective. This framing has particular relevance to women, who tend to strike a more conservative balance between risk and reward than men. Therefore. women often want more information in order to be thorough when making a decision.<sup>30</sup>

Channels: Behavioural science has shown that the channels through which information is communicated to people affect their subsequent behaviour. In particular, people are more receptive towards information which passes through thought leaders in their communities. In the context of Nigerian SMEs, these thought leaders could be successful business people, trade association leaders, or other community figures.

**Timing:** As previously discussed, small business owners in Nigeria operate in a context of time and attention scarcity. Messaging - or messengers, such as agents - which arrives at a bad time (for example during busy sale periods, or when people are making important decisions), are thus less likely to lead to action. Timing that is sympathetic to daily routines is important. This could involve allowing sign-up processes that can be bundled with regular activities (e.g. when paying utilities), timing communications when people are most free, or using available data to predict periods of high take-up likelihood and sending trigger SMSs at these points.



## Female engagement strategies with a behavioural lens: lessons learned from the digital financial services market in Nigeria

Previous research on digital financial services regard to ensuring product or service uptake,

It is crucial to engage women early in the customer journey. Customers who are engaged active users. An effective way to promote engagement is by highlighting that the services and to demonstrate the value proposition early through appropriate communication channels.

In addition, a customer's onboarding experience determines their impression of the brand experiences delivered can be managed through continuous training of agents and

(including accounting for their significant household and professional responsibilities),

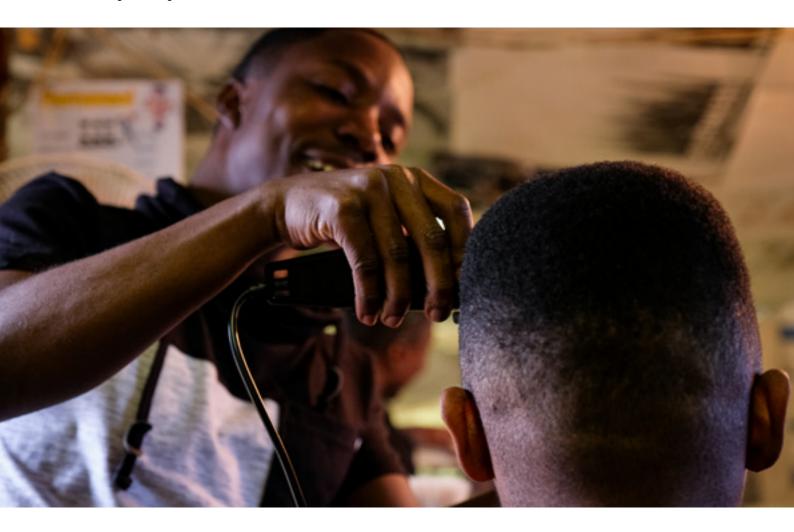
'nudged' to adopt new behaviours. When offering a new product or service, the target audience will have to switch from their current practice to using any new product. Obstacles example network failures or unclear processes, reducing an individual's cognitive load, is one method of 'nudging' customers away from old aspect is particularly important for the more risk averse SME archetypes identified, many of whom were women.

Kahneman, D. and Tversky, A. (1979), Prospect Theory: An Analysis of Decision Under Risk

Global banking Alliance for Women (2014) 'How Banks Can Profit from the Multi-Trillion Dollar Female Economy'

Leora Klapper and Pankhuri Dutt (2015) 'Digital financial solutions to advance women's economic participation





## **Moving to scale**

Following development and validation of a proofof-concept, further iteration would be needed - with additional data sources layered onto the MVP. This would begin with detailed assessment and evaluation of potential data sources - perhaps based on the trustworthiness, usefulness, and acceptability factors explored above; and the ease of collection at scale.

For example, particularly relevant sources of data - such as utility data - would be incorporated and validated. This validation could be achieved through research to confirm that the data can be collected, with permission; that it is trustworthy – including through using machine learning processes such as anomaly detection; and useful, through testing the

predictive power of the data perhaps through a supervised machine learning approach. Subsequent pilots would then focus on other sources of data, to confirm suitability. This would be a key part of moving toward scale.

Simultaneously, more institutions would be brought into the economic ID ecosystem, both through providing data and by accessing the economic ID solution. Piloting would confirm the suitability of institutions, and the consent required from users. Throughout, success in the product lies in reinforcing trust in this product between service providers and among the public - particularly in the absence of any particularly relevant industry standard.



## Conclusion

The research highlighted a clear interest in an economic ID concept amongst SME owners, including willingness to pay and a recognition that an ezconomic ID could fundamentally improve the financial - and broader standing of their enterprises. Similarly, MNOs - and other institutions - were broadly supportive of the concept, recognised its value, and confirmed the alignment of such a solution with their current and future priorities.

#### There is an important role for mobile technology in improving the situation of SMEs.

SMEs face three major challenges: demonstrating trust and value, and accessing the credit needed to strengthen and grow a business. A mobile-delivered economic ID, founded on MNO data, would significantly improve the situation of an SME in all

three of these areas. In particular, this builds on the existing centrality of mobile phones for many SMEs - usage which, in turn, builds and strengthens the economic ID concept.

### The ability to understand and meet SME needs lies in effectively collecting, reporting and analysing data.

An economic ID provides a significant opportunity to use data to better meet the needs of customers. particularly women who would otherwise be excluded from services. However, the data that informs the economic ID - and by association,

such products and services - must be relevant, meaningful, and accurate. This includes genderdisaggregated data, in order to ensure that the needs of women are met.

#### **Effective product governance is essential**

Partnerships between financial service providers and MNOs have increasingly become the norm in Nigeria. However, several such collaborations have fragmented due to misalignment of strategy and expectations. Therefore, important considerations

for success include: useful and accountable governance structures: an understanding of, and adherence, to the varying regulations relevant to both institutions; clear roles and responsibilities; and safeguarding of user data and privacy.

#### An enabling environment exists, but will need to evolve

Nigeria has made extensive progress in increasing the flexibility of KYC regulations, to the benefit of consumers and service providers. The introduction of a three-tiered KYC requirement has improved financial inclusion, and the recent shift to allow MNOs to hold payment service provider licenses will likely increase this success. However, there remain

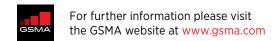
real challenges in meeting the needs of customers without ID – particularly women. An economic ID solution could significantly improve this situation; however, this product or service will require regulators to revisit the requirements of 'acceptable' ID in Nigeria.

## **Looking forward**

This research reaffirmed the relevance of an economic ID solution for many SME owners, and other entrepreneurs, in Nigeria. Building on the central role of mobile technology in the operations of such enterprises, there is a real opportunity for this solution to be led and delivered by MNOs in Nigeria. In 2019, the GSMA Digital Identity team aims to work with MNOs and other service providers to expand

and formalise the roadmap featured in this document, ahead of developing a proof-ofconcept. Beyond this, and as part of the GSMA Digital Identity Programme more widely, the team will also explore the relevance of economic ID concepts or solutions in other markets as well as the relevance of mobile-delivered digital identity solutions in countries across the Commonwealth.

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