Characterisation and Digital Maturity Assessment of MSMEs in Nigeria

Illustrated Report June 2024

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Co-funded by the European Union

Implemented by giz

DIGITAL TRANSFORMATION CENTER NIGERIA

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Published by:
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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As at June 2024

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Acknowledgment: The Research was carried out by Apodissi ltd, appointed by the Digital Transformation Center Nigeria. Author of the Report: Margherita Trestini, Apodissi General Manager.

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On behalf of The European Union (EU), German Federal Ministry for Economic Cooperation and Development (BMZ)

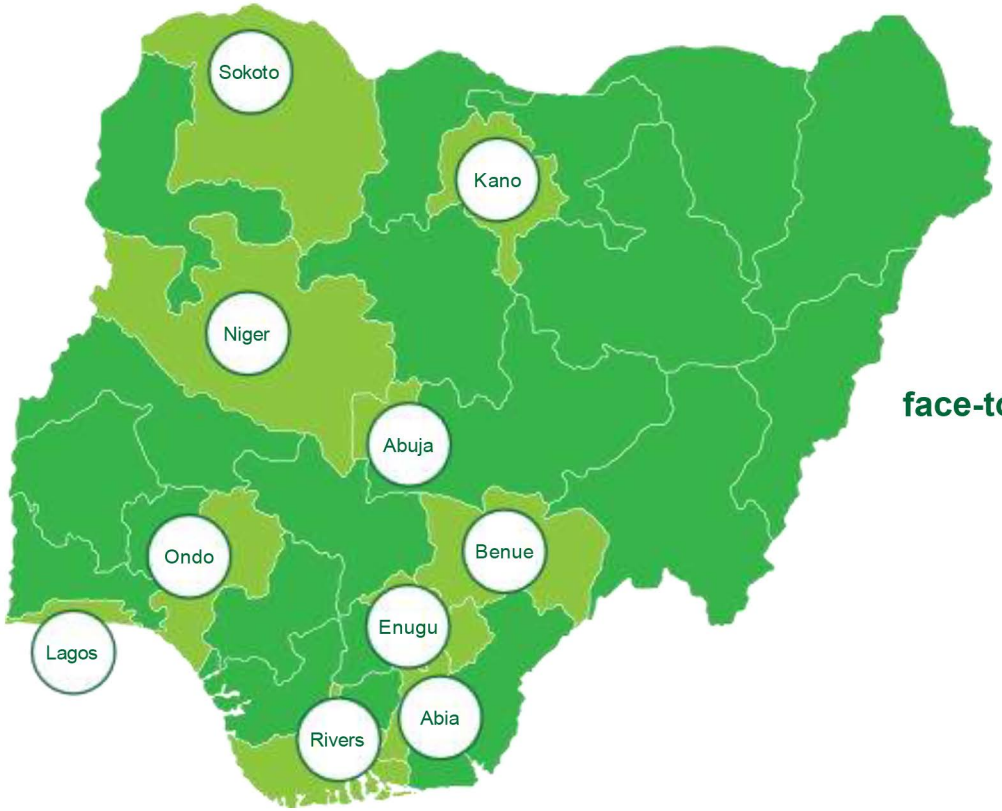
1. Research Objectives

The research aims at generating valuable insights into the level of digitalisation of MSMEs in Nigeria, profiling MSMEs' digital maturity and attitude to digitalisation (personas), evaluating demographic (i.e., age, gender), geographic and sectorial factors influencing digital uptake, identifying skill gaps, and drivers for change which can be leveraged for the successful growth of sustainable businesses which exploit technologies for development.

The research aimed at assessing the Nigerian MSMEs:

- Digital awareness and literacy
- Digital adoption level
- Perceived benefits, drivers vs risks and barriers of digitalisation
- Digitalisation support needs
- Entrepreneurial drive
- Business and Knowledge Network available
- Differences based on gender, age, education, location, sector and business size
- Define and characterise MSMEs personas based on their digital readiness
- Identify critical capacity building activities needed to facilitate non-tech MSMEsdigitalisation
- Provide recommendations on leverage points for systemic change (network reinforcement, policy adaptation, etc.)

The research has been conducted in 10 Nigerian States: Abia, Abuja, Benue, Enugu, Kano Lagos, Niger, Ondo, Rivers and Sokoto.
1,811 face-to-face interviews to MSMEs in three focus sectors: Green Economy (green energy, recycling, agriculture), Manufacturing and Trading.
The interviews have been conducted based on a structured questionnaire. Data collection was made through KoboCollect.
55 enumerators were engaged under the supervision of a senior at State level and 2 Apodissi Team Leaders.



1,811
face-to-face interviews

55
enumerators

2. Main Findings

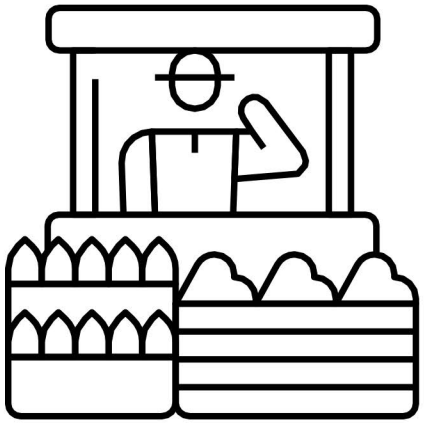
When it comes to business transactions, the majority of MSMEs prefer conducting them in person or over the phone. Nonetheless, WhatsApp is also commonly used to sell products and services. In terms of payment methods, digital options such as mobile banking, cash, and PoS are popular. Yet, face-to-face and telephone interactions are still the preferred modes for transactions.

Affordability is a key driver for the adoption of digital solutions among MSMEs. This economic factor significantly limits the uptake of high-end technologies like drones, databases, videoconferencing, big data, IoT, and robotics, which are often deemed too expensive.

Decision-making within MSMEs is primarily driven by the owners, who often make these decisions either independently or in conjunction with their colleagues. Trusted sources of information include colleagues and professional friends, highlighting the importance of peer networks in business operations.

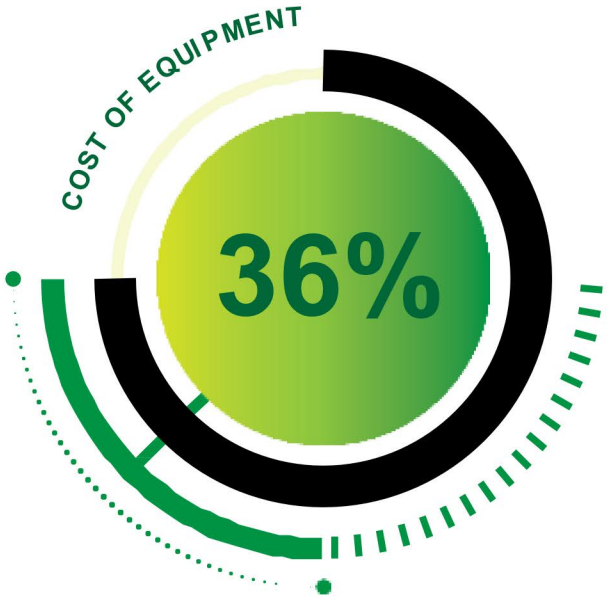
There is a notable demand for expert guidance among MSMEs, with about a fifth of them expressing the need for consultants or experts to help navigate the adoption of new digital solutions. Additionally, some MSMEs would benefit from information sessions or training on innovation and digital solutions.

Awareness of Digital Innovation Hubs is relatively low among MSMEs. Even among those who are aware of these hubs, the majority have never utilised their services. Despite this, MSMEs show a strong preference for local or Nigerian suppliers when it comes to sourcing innovation and technology.



MSMEs in Nigeria are grappling with a variety of critical challenges, including increasing costs (of raw materials, transportation, logistics), inflation, access to finance, equipment acquisition, and lack of power. These issues are creating significant barriers to their growth and sustainability.

72% of the respondents' mention **"Increasing Costs"** of raw materials, transportation/logistics, power etc, as the most significant challenge for MSMEs. Rising operational and production costs can squeeze profit margins and hinder business growth. It's particularly affecting MSMEs in Niger (38%) and Enugu State (33%) and mostly Medium companies (52%).



Moreover, **36%** of the respondents mention **Cost of Equipment** among their major challenges (especially by Manufacturing MSMEs, 9%): high costs associated with acquiring necessary equipment can be a barrier to improving productivity and efficiency.

3. MSMEs Challenges

59%

INFLATION

59% of the respondents mention Inflation: Inflation impacts the purchasing power of consumers and increases the cost of raw materials and other inputs, making it a major concern for Nigerian businesses.

48%

ACCESS TO FINANCE

48% of the respondents mentions Access to Finance: Difficulty in securing financing limits the ability of MSMEs to expand, invest in new technology, or manage cash flow effectively. Access to Finance is a more pressing challenge for the Green Economy MSMEs (29%) and in Abia (46%) and Ondo State (68%). Access to Finance is less of a challenge for Medium Enterprises (5%) while it is a serious challenge for Micro (25%) and Medium (23%).

41%

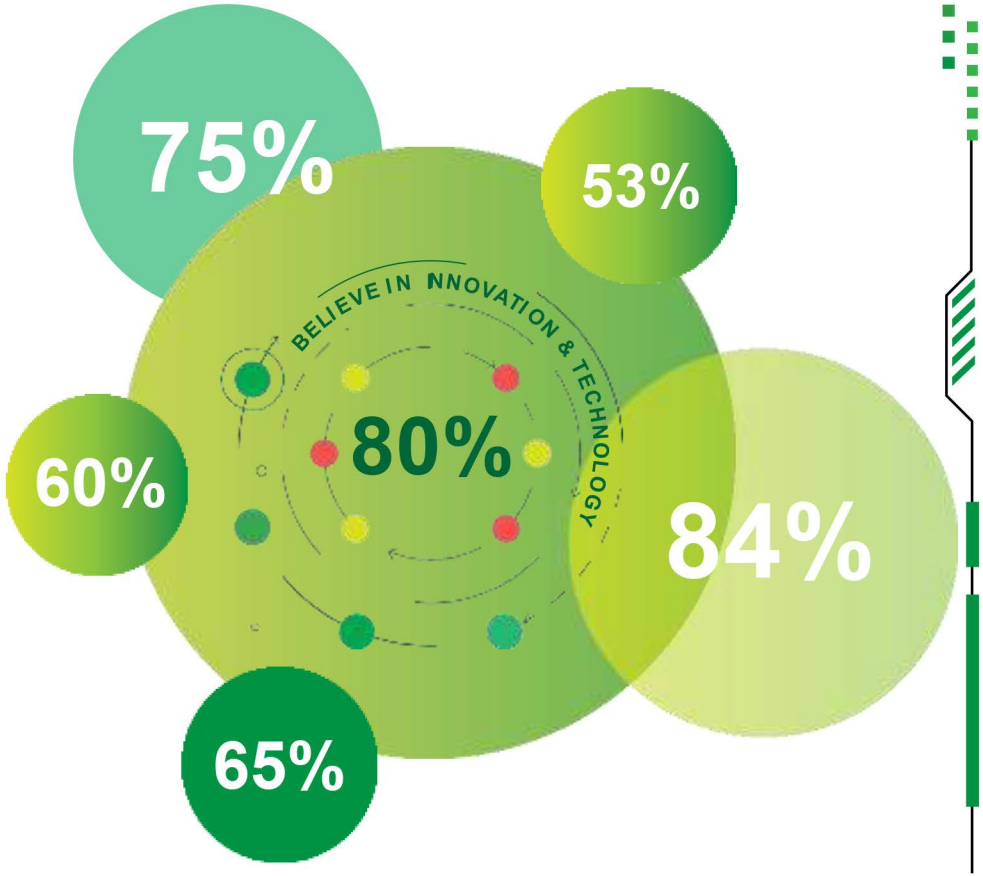
LACK OF ELECTRICITY/ BLACKOUTS

Infrastructural challenges like Lack of Electricity/Blackouts are mentioned by 41% of the respondents: Unreliable power supply disrupts operations and increases costs, especially because MSMEs need to invest in alternative power sources like generators. Lack of power is affecting more Manufacturing MSMEs (21%) and less Green Economy (10%) and Trading (9%).

4. Digital Technologies Awareness

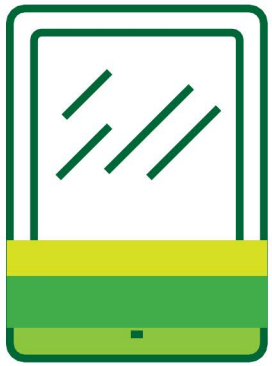
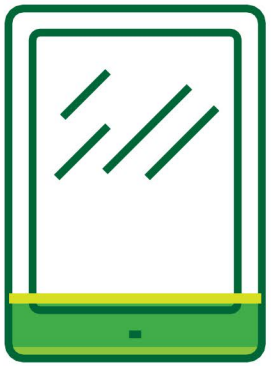
Awareness of high-end digital solutions remains low. Technologies such as drones, databases, big data, the Internet of Things (IoT), and robotics are not well known among MSMEs. This lack of awareness contributes to the low adoption rates of these advanced technologies.

Around 80% of the respondents believe that Innovation and Technology (such as internet, e-commerce platforms & mobile applications) can help manage the challenges that the Nigerian MSMEs Businesses face. Nevertheless the respondents are familiar with basic digital tools such as **Mobile Applications (84% of respondents), SMS (75%), USSD codes (65%), Email (60%) and Internet (53%).**



5. Digital Technologies Use

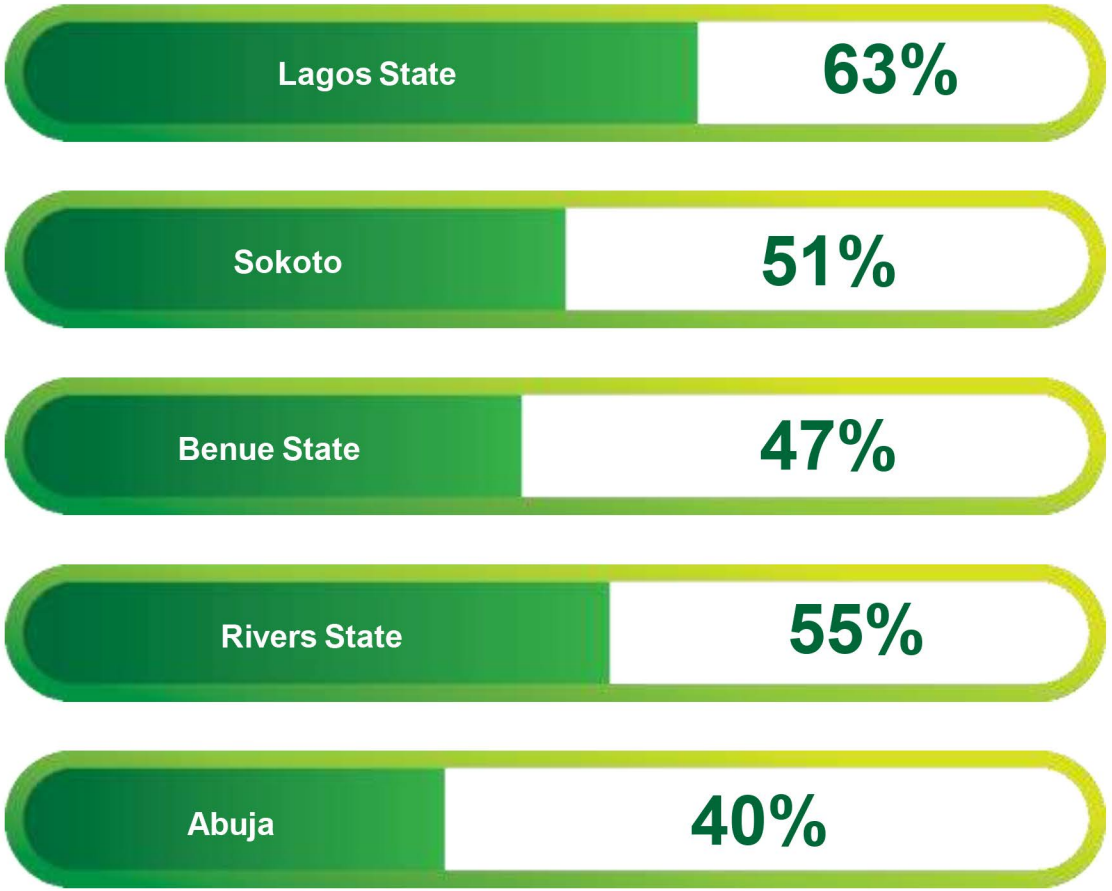
In terms of daily operations, MSMEs frequently use mobile applications, SMS, USSD codes, and less frequently email, and the internet. However, the overall internet penetration rate among MSMEs is still low, with many businesses lacking internet facilities. Interestingly, internet usage is somewhat better among younger entrepreneurs (aged 18-24) and those in the trading sector.

Daily Basis	Weekly Basis	Monthy Basis
		
55% Mobile Applications	**14%** Mobile Applications	**55%** Mobile Applications
17% SMSs	**22%** SMSs	**17%** SMSs
7% Email	**27%** Email	**7%** Email

6. Use of Internet

Remarkably 59% of businesses do NOT have internet connectivity: with 69% of the Green Economy businesses being off the internet, and 52% of the Manufacturing companies. The penetration is similar across the size of businesses.

More discrepancies are noticeable by State:



Mobile wireless is the most common type of internet connectivity, used by 43% of respondents. This suggests a high reliance on mobile networks for internet access, which may be due to the flexibility, widespread availability, and lower infrastructure requirements compared to other types.

7. MSMEs Personas Characterisation

Based on the insights collected it's possible to cluster MSMEs in three different Personas based on their knowledge, use, interest and attitude towards digital technologies adoption: 61% Reinventors, 27% Adaptors and 12% Sceptics.

Adaptors

27%

This describes MSMEs that are well placed to take advange of the digital transition and various digital tools for business operations. They prioritise productivity and efficiency and are receptive to tailored solutions aimed at enhancing productivity and fostering growth. Adaptors acknowledge the transformation power of innovation and technology.

Sceptics

12%

Want to avoid unnecessary risks, make informed decisions and protect thier business interests. They appear comfortable with status quo, and are unwilling to explore the digital transition for fear of change and its attendant consequences.

Reinventors

61%

These persons are willing to embrace new technologies and innovations to sharpen their competitive edge, increase quality of products, production capacity and ultimately revenue. They seek out information on new technologies and trends in the industry.

8. Reinventors

61% of the MSMES interviewed can be grouped as “Reinventors” based on their above average Internet connectivity, presence online, knowledge and daily use of innovation beyond mobile applications (i.e., e-mail; MS office).

They are also the ones willing to spend more on technology uptake (between 100,000 and 500,000 Naira and above), and to explore the possibility of adopting more advanced solutions such as: cloud computing, accounting and inventory management, customer service applications etc. They believe technologies will make their work easier, be more productive, increase sales and quality of their products and services. They are mostly among Small and Medium organisations, evenly distributed across the three sectors and States (with a low point in Ondo State).

Reinventors

61%

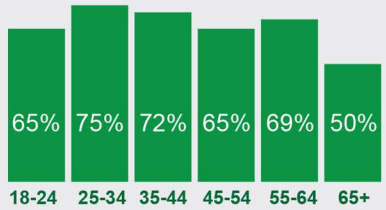
They are eager to use new technologies to stay competitive, improve products and increase revenue.

Attitudes

Reinventors are willing to embrace new technologies and innovations to sharpen their competitive edge, increase quality of products, production capacity and ultimately revenue. They seek out information on new technologies and trends in the industry.

Gender Owner

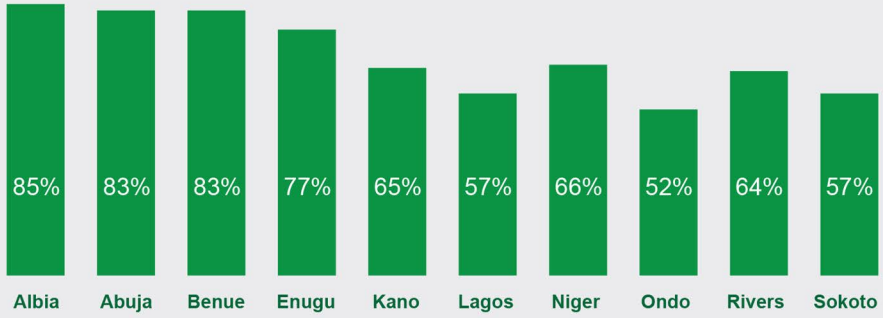
Age



Business Size

Sector Activity

State



Hear from a trader in Gwadabawa

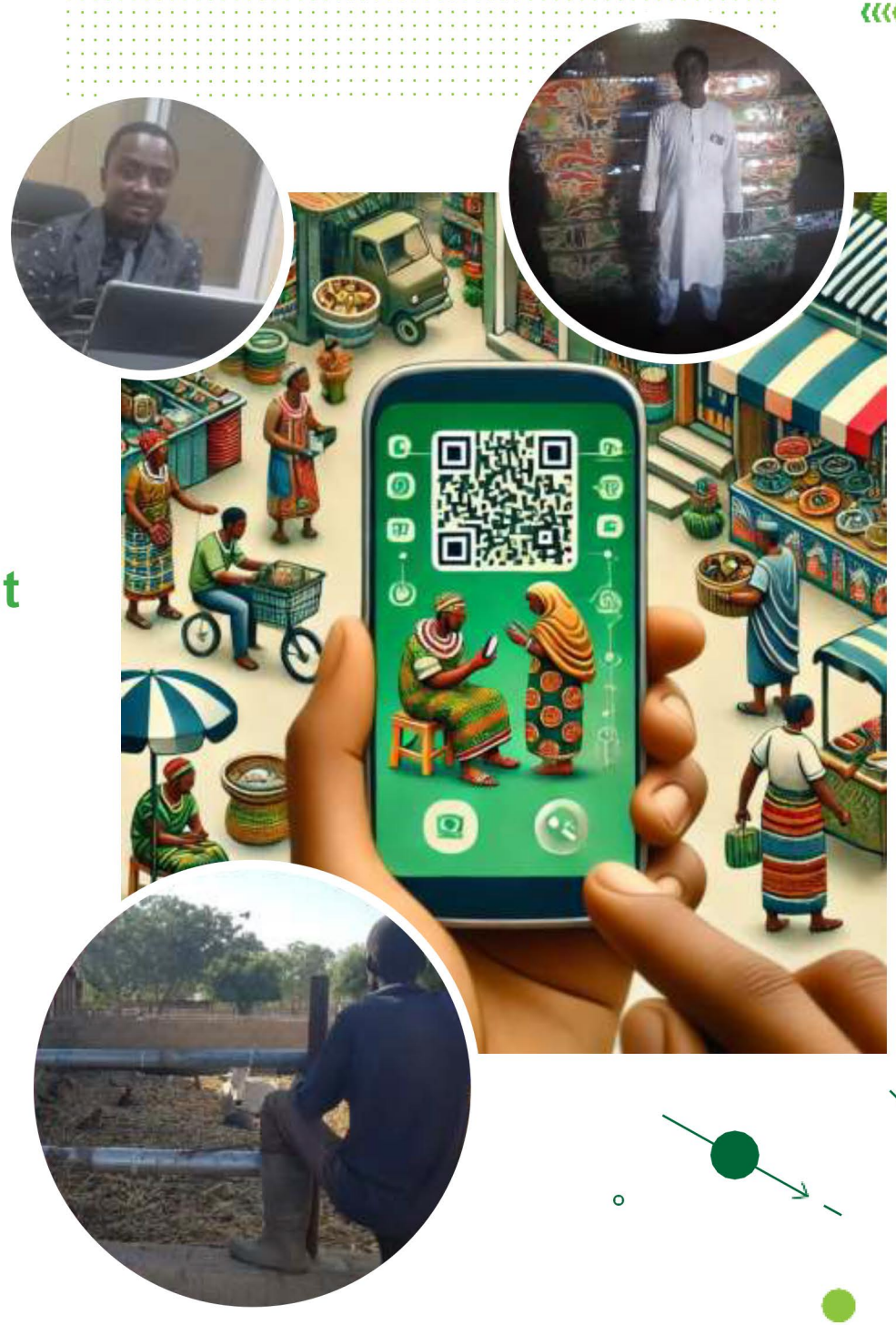
Ali, is based in Gwadabawa, a rural farmers community in Sokoto state. He explained that

“Leveraging the internet and social media platforms is crucial for me. I engaged with experts like Pretz, a Ugandan farmer, and Dr Daniel from Ghana, who utilise technology and internet resources extensively. They really helped me and provide me with valuable insights and guidance. Their expertise surpasses mine, making them invaluable sources of advice.”

Hear from a trader in Rivers

Godwin, a trader from Rivers state mentioned that

“in 2020, I sourced funding for this business, I won a grant from Tony Elumelu. It helped me a lot. In sourcing for the fund, I use email. Today, my WhatsApp is almost my office. I might not be in the office but ‘market go dey go’, through calls and chats”



Recommendation to support Reinventors digital uptake

“Reinventors” should be the primary target of the interventions with dedicated tailored consultancy services.

1. They should be offered advanced courses and certifications in productivity digital tools (i.e., accounting, inventory softwares), but also entry courses to emerging technologies such as: Cloud Computing, AI, machine learning, and cybersecurity to keep them at the forefront of innovation.
2. They are interested in exchanging knowledge: in order to foster innovation and collaboration, digital innovation hubs could be the space where “Reinventors” can collaborate, share best practices, and co-create solutions. Digital Innovation Hubs could also facilitate the matchmaking of Nigerian technology providers, such as innovators and startups with Reinventors.
3. Last but not least, “Reinventors” could be leveraged for peer-to-peer evangelisation, sharing success stories, and serving as technology ambassadors.

9. Adaptors

27% of the MSMES interviewed can be grouped as "Adaptors" based on limited Internet connectivity, limited presence online, knowledge and daily use of basic low entry technologies (i.e. WhatsApp, SMEs).

They are willing to spend up to 100,000 Naira on innovation and explore entry-level solutions such as email, Internet, and e-commerce platforms. Predominantly found among Micro and Small organizations, especially in the Green Economy Sector, they understand the benefits of digital technologies but need reassurance on reducing adoption risks. These «Adaptors» are open to innovation but lack the knowledge and resources to adopt it and are not well connected with knowledge sources like peer networks and associations.

Adaptors

27%

They utilise innovation and technological tools to boost productivity and growth

Attitudes

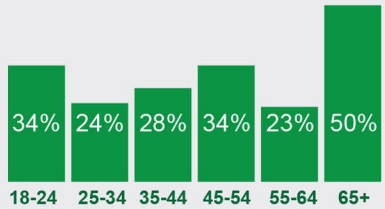
Adaptors are well placed to take advantage of the digital transition and various digital tools for business operations

They prioritise productivity and efficiency and are receptive to tailored solutions aimed at enhancing productivity and fostering growth

Adaptors acknowledge the transformative power of innovation and technology.

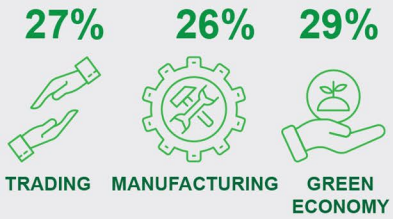
Gender Owner

Age

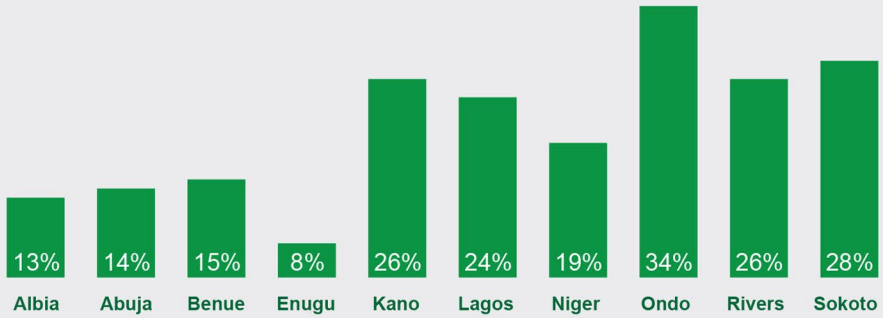


Business Size

Sector Activity



State



Hear from a trader in Alimosho

Balikis, a trader from Alimosho, an urban community in the Lagos State of Nigeria mentioned that,

“I use my dispatch riders for delivery so my customers and I communicate through my WhatsApp and I mostly use my mobile banking app for payment of goods supplied”

Hear from a trader in Rivers

Oby, a farmer from Oyigbo, a rural community in Rivers, states that,

“We use SMS to communicate with our suppliers and customers instead of going out regularly. We send messages and are usually used to source funding via email. WhatsApp helps us so much to network with our customers”

Recommendation to support Adaptors digital uptake

Adaptors need to be provided with basic digital literacy and skills Training to improve fundamental digital skills.

It would be advisable to offer training programs focused on basic digital tools, internet usage, and essential software applications. In order to improve their digitalisation, they would need:

1. Better access to digital infrastructure, reducing the financial barriers to digital adoption.
2. Subsidies or low-interest loans for purchasing digital infrastructure such as computers, broadband connections, and basic software.
3. Better access to knowledge providers. Digital Innovation Hubs could facilitate learning and support, creating peer-to-peer networks and mentorship programs where “Adaptors” can learn from “Reinventors” and other digitally advanced businesses.
4. Introduction to digital payments and e-commerce to enhance business operations and market reach through thematic learning programmes.

10. Sceptics

12% of the MSMES interviewed can be grouped as “Sceptics” based on no Internet connectivity, no presence online, use of cash rather than digital payments.

They are also the ones not willing to spend on innovation. They also showed they do not believe digital technologies can help solve their challenges. Most of the “Sceptics” are Micro (and to some extent Small) organisations, with a slightly higher penetration in the manufacturing sector. Counterintuitively, MSMEs in Lagos State seem to be more “Sceptics” than in other States, one reason could be given to the highest impact of inflation and costs resign their facing. Sceptics are not interested in innovation adoption.

Sceptics

12%

They are hesitant to change, preferring to avoid risks and maintain the status quo due to fear of potential consequences.

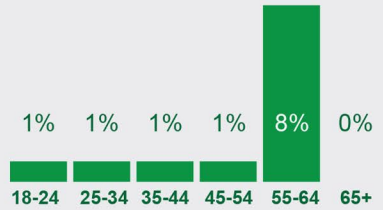
Attitudes

Sceptics want to avoid unnecessary risks, make informed decisions and protect their business interests

They appear comfortable with the status quo, and are unwilling to explore the digital transformation for fear of change and its attendant consequences.

Gender Owner

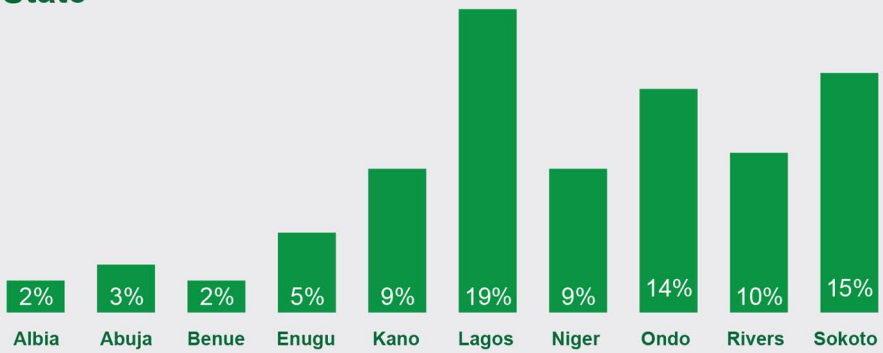
Age



Business Size

Sector Activity

State



Hear from a manufacturer in Enugu

“I do not think WhatsApp, the Internet, and USSD can solve the challenges my business is facing”

says John, owner of a manufacturing industry in Enugu state of Nigeria.

Hear from a manufacturer in Enugu

Rosita, a trader from Port Harcourt mentioned that,

“No application can effectively address the challenges inherent in delivery and logistics”

Recommendation to support Sceptics digital uptake

Raising awareness and interest in digital uptake for "Sceptics" will require significantly more effort compared to the other two groups.

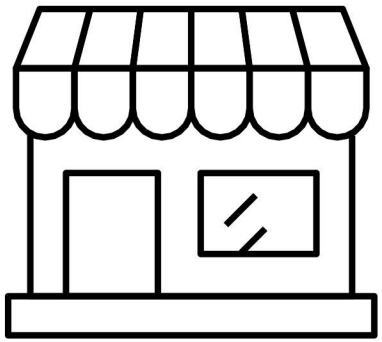
They need concrete and tangible results to be convinced, which means any actions to support their digitalisation may encounter more challenges and be more costly and time-consuming.

They would benefit from:

1. Awareness campaigns showcasing the tangible benefits of digital technologies through success stories and case studies;
2. Community-based easily accessible digital literacy programs to build basic digital skills within the community;
3. Initial exposure to digital tools, with the introduction of mobile-based and offline digital solutions that require minimal investment and infrastructure, such as SMS-based services and offline digital tools;
4. Trust-building initiatives to overcome mistrust and resistance, leveraging Reinventors as trusted community members to promote digital adoption and address concerns about security and reliability
5. Gradual Introduction to digital payments to ease the transition to digital transactions. Encourage the use of simple digital payment methods through incentives and support, gradually moving towards more comprehensive digital financial services.

11. Recommendations

- **Raising awareness is critical given the low digital technologies current understanding.** **Suggestion:** Implement targeted campaigns leveraging multiple channels (social media, local events, partnerships with local influencers) to ensure broader reach and engagement.
- **Raising Internet Connectivity, critical for digital uptake.** **Suggestion:** enhance Internet connectivity offering data bundles for MSMEs at attractive rates or through sponsorship by banking institutions, or by promoting community-owned satellite connections, or by utilising Digital Innovation Hubs or Chamber of Commerce/postal offices as internet access points.
- **Reducing technology acquisition barriers.** **Suggestion**: Promote low cost and open-source solutions (such as Odoo). Design leasing and subsidies programmes to reduce costs. Work technology retailers to promote hardware leasing (i.e., laptops). Explore partnerships with tech companies, technology providers, to provide software access in the initial phases to demonstrate value.
- **Promoting Online Visibility and Digital Tools.** **Suggestion:** Include case studies and success stories in training materials to show practical benefits. Offer follow-up support to ensure sustained adoption.
- **Offering tailor-made consultancy Services to facilitate digital transition.** **Suggestion:** Develop a directory of certified consultants who specialise in digital marketing and e-commerce for MSMEs.

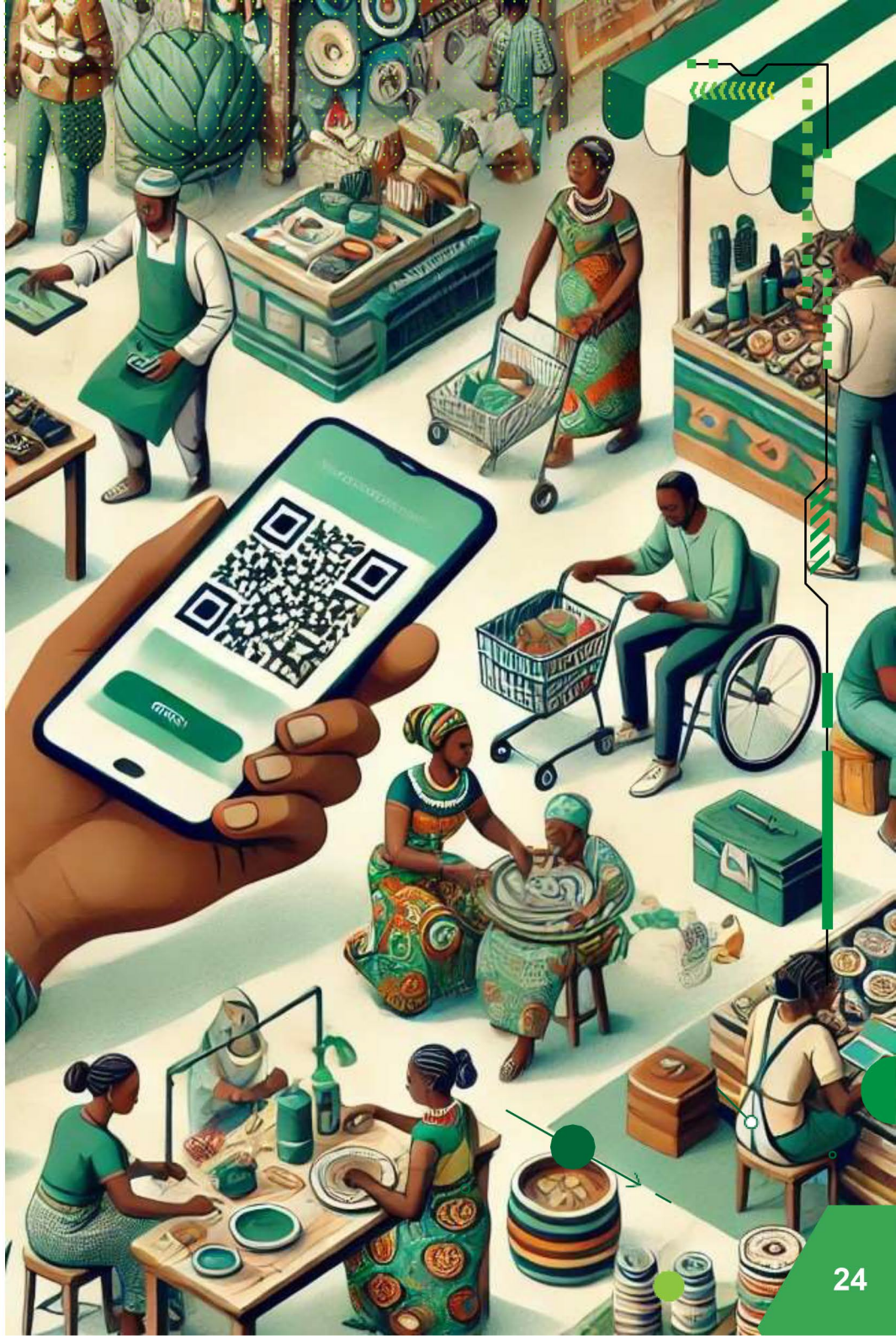


Recommendations

- **Promoting digital payments.** Leveraging existing trust and reach of financial institutions. Create bundled offers that combine digital payment solutions with other digital tools to provide comprehensive support.
- **Supporting mobile application integration.** Partner with local app developers to create and promote apps specifically designed for MSMEs, addressing their unique challenges. Facilitate the matchmaking of innovators with traditional MSMEs.
- **Encourage incremental adoption to encourage gradual adoption starting with familiar technologies. Provide a clear roadmap for MSMEs to follow, outlining the steps from basic to advanced technology adoption.**
- **Developing peer-to-peer support systems:** establish mentorship programs where more digitally mature businesses mentor others.
- **Providing education and training.** Develop modular training programs that can be customised based on the industry and specific needs of the business.

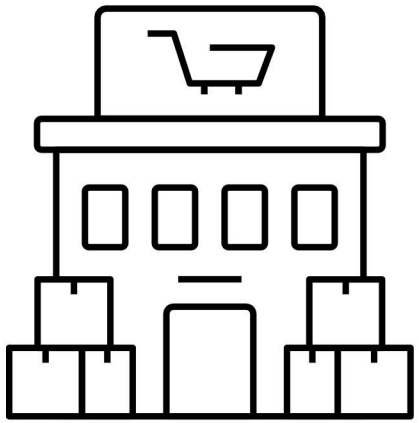
Recommendations

- **Ensuring a personalised approach:** Implement fellowship programs with clear objectives and measurable outcomes to track progress and adjust strategies as needed.
- **Focusing on Medium and Small organisations.** Targeting Small and Medium organisations first, starting with businesses willing to invest more. Collect data on the impact of digital adoption in medium organisations to build a strong case for smaller businesses.
- **Supporting local startups.** Create networking events and matchmaking platforms to connect MSMEs with local tech startups and service providers.
- **DIHs can play a critical role in providing customised support, space for peer-to-peer exchange, internet access etc.**
- **Engage public and private stakeholders in a common and strategically guided roadmap for MSMEs digitalisation to ensure synergic and complementary actions.**



Conclusion

The penetration and adoption of digital solutions and innovations among MSMEs in 10 states and across 3 sectors in Nigeria still leave much to be desired. Despite a clear interest in digital technologies, many MSMEs possess limited knowledge in this area.



The biggest challenge is the first step. Once an initial transition is made to digital technologies, there are **strong complementarities in technologies that can drive further adoption**. To make this step, and as they identify and adopt additional digital technologies, **MSMEs tend to leverage on external systems, support and advice**. This is partly to compensate for weak internal capacities but it is also on cost-grounds.

For example, digital platforms (e.g., social networks, e-commerce marketplaces etc.) provide significant scope to optimise certain operations at very low cost (e.g., business intelligence and data analytics services). Similarly, for managing digital security risks, MSMEs capitalise on external consultants or the security-by-design features of the digital products and services they use.

The **entry point for the digital transition for most MSMEs is in general administration or marketing functions,** where the digital gaps between MSMEs and larger firms in online interactions with the government, electronic invoicing, use of social media, and e-commerce, are smaller.

Connecting MSMEs with knowledge networks, through cooperation programmes (e.g., with large firms or online platforms), or MSME-lead public procurement (e.g., Small Business Innovation Research-type of programme) or BSOs (e.g., digital innovation hubs, business associations, clusters and co-working spaces);

This study provides a baseline, which should be further extended to other sectors, such as the creative industries, logistics, construction, and to the Nigerian States not included in this study. A larger sample size would provide a more relevant statistical basis. Additionally, a follow-up study post-implementation of the recommended actions would be beneficial to verify their effectiveness.

This publication was co-funded by the European Union. Its contents are the sole responsibility of GIZ Nigeria and can in no way be taken to reflect the views of the European Union.