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Digital Transformation Tools and Inclusive Growth of Micro-Enterprises in Ogun State, Nigeria

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Abstract:

This study examines the effect of digital transformation tools on the inclusive growth of micro-enterprises in Ogun State, Nigeria; focusing on digital payment adoption, e-commerce adoption and social media marketing. A survey research design was used and data was gathered from 127 micro enterprise operators by administering structured questionnaire. Cronbach's alpha coefficient of 0.768 was used to test the reliability of the instrument. Descriptive statistics, Pearson correlation and multiple regression analysis were used to analyse the data. The results showed that the dimensions of the digital transformation together accounted for 77.1% of the variance in inclusive growth ($R^2 = 0.771$, $F = 138.223$, $p < 0.001$). The adoption of digital payment was found to have a negative and insignificant impact on inclusive growth ($\beta = -0.058$, $p = 0.187$). The adoption of e-commerce, however, had a positive and significant influence ($\beta = 0.262$, $p < 0.001$) and social media marketing showed the highest positive influence ($\beta = 0.676$, $p < 0.001$). The study therefore concludes that the adoption of e-commerce and social media marketing are key factors that can contribute to inclusive growth of the micro-enterprises in Ogun State. To boost business growth and economic inclusion, the study calls for more investment in enhancing digital marketing skills, e-commerce platforms, and digital skills training. The study also recommends that financial institutions and fintech should make digital payment systems more accessible, affordable and reliable. Also, the service providers need to invest more in the network, especially in underserved and rural areas. The expansion of fibre networks, transmission facilities and base stations will increase the coverage and quality of the network, plus decrease congestion.

Keywords: Digital transformation, digital payment adoption, e-commerce adoption, social media marketing, inclusive growth, micro-enterprises.

1.0 INTRODUCTION

Micro enterprise is very dominant in the economy of Nigeria as it has very significant contributions in the generation of employment, poverty alleviation and development of the local economy. Frequently lacking in legal formalities and large capital investment, and with few employees, these enterprises are they key to livelihood support, especially in developing economies. However, even with their significance, many micro-enterprises in Nigeria are still struggling with various constraints including access to financing, weak technological capacity, lack of infrastructure support, restricted market access, and restricted growth (Igben & Ojoboh, 2024). Digital technologies have developed beyond recognition and now provide businesses of every size with new opportunities to boost their operational efficiency, reach new markets and connect more



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deeply with customers. Digital transformation is defined as making use of digital technologies to improve the performance of business processes, organisational structures and value creation activities for competitive performance (Matt *et al.*, 2015; Vial, 2019, Fischer *et al.*, 2020). It goes beyond using digital tools and is about changing the way of the organisation functioning, creating value and adjusting to market shifts (Verhoef *et al.*, 2021, Matarazzo *et al.*, 2021).

The recent research has shown that digital transformation can yield benefits on both the organizational front and the innovation, operational efficiency, customer and strategic flexibility levels of the organization (Peng & Tao, 2022; Ji *et al.*, 2022). The adoption of digital technologies including mobile payment systems, e-commerce platforms, social media marketing tools, cloud computing services, and digital financial solutions has helped small businesses to address some of the traditional challenges they face, such as geographical location, information asymmetry, and limited resources (Jafari-Sadeghi *et al.*, 2021; Matarazzo *et al.*, 2021). The need for digitalisation also became more pronounced during and after the COVID-19 pandemic, when businesses increasingly turned to digital platforms for operations and to ensure business continuity and customer engagement (Surahman *et al.*, 2023). Digital transformation is now playing an important role in inclusive growth in developing economies. Inclusive growth is economic growth that brings opportunities for a wide spectrum of the population and that is inclusive and equitable in terms of access to economic resources and benefits (Alice & Chrine, 2025). The potential of digital technologies to contribute to inclusive growth is realized through four pathways: through enabling access of micro-enterprises to new markets, enhancing productivity, through a digital value chain, and job creation for underserved populations (Verhoef *et al.*, 2021; Yang & Ming, 2024). In addition, digital platforms can enable financial inclusion by providing access to mobile banking, digital payments, and online financing, which will help lower the barriers to expanding businesses and ensure their sustainability.

The correlation of digital transformation with enterprise performance has been explored in various settings by a number of studies. As an illustration, Matarazzo *et al.* (2021) have discovered that digital abilities add to worth creation and aggressive advantage for small and medium-sized enterprises (SMEs). Likewise, Surahman *et al.* (2023) found that digital transformation and innovation have a positive effect on the performance of SMEs, especially in times of economic instability. Patro *et al.* (2026) also showed that digitalisation has a positive impact on organisational productivity and the operational results. The literature available, however, has been limited to larger organizations or SMEs in developed and emerging economies, with only a handful of empirical evidence on the effect of digitalization on Nigeria's micro-enterprises (Jafari-Sadeghi *et al.*, 202; Surahman *et al.*, 2023). In the last 10 years, Nigeria has seen a tremendous surge in digital adoption, which has been fueled by an increasing rate of internet penetration, mobile phone use, fintech innovations and government efforts to champion digital inclusion. However, the extent to which micro-enterprises have used digital technologies to grow their enterprises and to drive inclusive economic development is not well understood. This gap is especially noticeable at the state level, where local conditions, such as the availability of infrastructure and digital readiness, can affect the adoption and results of digital transformation projects.

The Technology-Organisation-Environment (TOE) Framework by Tornatzky and Fleischer (1990) is used as the basis for this study. The TOE framework identifies three interrelated factors: technological, organisational and environment, to understand the technology adoption. Technological context – availability and perceived benefits of digital technologies. The organisational context consists of the size of the firm, competence of the management, financial



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resources, competence of employees etc. The environmental context includes outside factors like competition, government policies, expectations of customers, and technology infrastructure. The TOE framework is especially well suited for the present research since it offers a broad explanation of the factors affecting micro-enterprise's decision to implement digital technologies and the impact of this decision on inclusive economic outcomes and business growth. It acknowledges that other factors, such as organisational readiness and environment, play a role in digital transformation as well, not just technology.

2.0 METHODOLOGY

This study adopted a quantitative research approach using a cross-sectional survey design. The survey design proved suitable as it allows to gather data from micro-enterprise owners and managers at a particular point in time and helps to analyze how digital transformation affects the inclusive development of the micro-enterprises. The design will be appropriate to evaluate the level of digital technology uptake and impact on enterprise growth outcomes. This study was carried out in Ogun State Nigeria. Ogun State is one of the major commercial and industrial centres in South-West Nigeria. The state's proximity to Lagos, the growth of digital connectivity, rising entrepreneurial activities and the concentration of micro-enterprises make it an appropriate state in which to investigate the impact of digital transformation on business growth and economic inclusion.

The study targeted owners and managers of micro-enterprises in Yewa South Local Government Area (LGA) of Ogun State, Nigeria. The study was restricted to trading, manufacturing, agricultural and service based enterprises. Micro enterprises were operationalized as those having less than 10 workforce as adopted by enterprise development agencies in Nigeria. Because of a lack of a comprehensive micro-enterprise database in the study area, a multistage sampling technique was used. In the first phase, the major commercial centres and business clusters of Yewa South Local Government Area were purposively selected depending on the level of concentration of the micro enterprises. The enterprises were categorized into four groups in the second stage, namely trade, manufacturing, agriculture and service, in order to ensure adequate representation. The respondents were then sampled using simple random sampling technique within the identified business clusters. Owners and managers of micro-enterprises in the selected areas were given 178 questionnaires. The 178 respondents were deemed to be adequate for the study, because they represented enough of the target population, and met the minimum sample size requirement for using inferential statistical techniques such as correlation and multiple regression analyses. Of the 178 questionnaires sent out 133 were returned, for a response rate of 74.72%. Data screening for completeness and consistency resulted in 127 questionnaires being suitable for analysis with an effective response rate of 71.35%. The final sample size was deemed to be sufficient to meet the aims of the study and the reliability of the statistical analysis carried out in SPSS package.



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3.0 RESULTS

Table 1:

Variables	B	Std. Error	B	T	p-value
Constant	0.931	1.098	-	0.848	0.398
Digital Payment Adoption (DPA)	-0.073	0.055	-0.058	-1.328	0.187
E-commerce Adoption (ECA)	0.287	0.069	0.262	4.174	0.000
Social Media Marketing (SMM)	0.722	0.066	0.676	10.903	0.000
Model Statistics					
R	0.878				
R ²	0.771				
Adjusted R ²	0.766				
F-value	138.223				
Sig. F	0.000				
Sample Size (N)	127				

Source: Survey field, 2026

4.0 RESULTS AND FINDINGS

The findings of the multiple regression analysis carried out to test the effect of Digital Payment Adoption (DPA), Ecommerce Adoption (ECA) and Social Media Marketing (SMM) on inclusive growth in micro enterprises in Ogun State Nigeria, are presented in the table above.

The model summary shows that the dimensions of digital transformation have a strong correlation with inclusive growth, as reflected by the correlation coefficient of the model ($R = 0.878$). The coefficient of determination ($R^2 = 0.771$) indicates that collectively, the variables Digital Payment Adoption, E-commerce Adoption and Social Media Marketing accounted for the inclusive growth of 77.1% of the variation in micro-enterprise. The model was further validated by R^2 value of 0.766 which is adjusted. The strong F statistic ($F = 138.223$, $p < 0.001$) suggests that all the variables of digital transformation have a significant effect on inclusive growth as a whole. The results corroborate the results of the Technology-Organisation-Environment (TOE) Framework that suggests that technological innovations increase the performance of an organization when technology is perceived as useful and compatible with an organization (Tornatzky & Fleischer, 1990). This finding aligns with the findings of Verhoef et al. (2021), Peng and Tao (2022), and Surahman et al. (2023) who reported that digital transformation has a significant impact on organisational growth, competition, and performance.

It also showed that the effect of Digital Payment Adoption on inclusive growth was negative and statistically insignificant ($\beta = -0.058$, $p = 0.187$). This means that the use of digital payment systems does not make appreciable contributions to the development and inclusiveness of microenterprises in Ogun State. While digital payment systems can streamline operations and improve transaction efficiency, they do not necessarily lead to higher sales, market growth, or customer acquisition. This result partly challenges the technological context of the TOE



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framework which states that there is a positive relationship between technological adoption and the organisational outcomes. This could be due to factors like poor internet access, high transaction fees, cybersecurity issues with the internet, and limited digital literacy among micro business owners. The discovery also resonates with the comments made by Obbo (2024) that infrastructural constraints and technological barriers are key challenges facing small businesses in realizing the advantages of digital transformation.

E-commerce Adoption, on the other hand, had a positive and statistically significant impact on inclusive growth ($\beta = 0.262$, $p < 0.001$). The findings also indicate that small businesses using online platforms for market access are more likely to see a positive impact on sales and business performance, as well as growth in the number of markets they can access, when they use these platforms. The results also show that small businesses that use online platforms for market access are likely to have more markets they can access and more sales when using these platforms, as well as improved business performance. This result is very much to support the technological aspect of TOE, as it shows that technologies that have clear commercial benefits aid organisational growth. The findings are in line with those of Matarazzo et al. (2021) which suggested that digital technologies deliver customer value and enhance business performance within small enterprises. It also aligns with the previous work of Jafari-Sadeghi et al. (2021) and Favoretto et al. (2022) that found digital transformation brings better market expansion, business opportunities and competitive advantage.

The results also showed inclusive growth to be most strongly positively influenced by Social Media Marketing ($\beta = 0.676$, $p < 0.001$). The high β value for social media marketing shows that it plays a more significant role in enterprise growth than the other dimensions of the digital transformation explored in this study. The discovery implies that, businesses which are proactive about its use of social media platforms such as customer engagement, product promotion, brand awareness, and relationship management are more likely to experience sustainable growth and enhanced business performance. The outcome confirms the TOE framework as their benefits can be seen, which promotes the adoption and use of social media technologies. The results align with the work of Yang and Ming (2024) and Patro et al. (2026) that revealed that digitalisation is a significant factor that enhances organisational performance and business sustainability. This outcome is also consistent with that of Zhang et al. (2021) who concluded that digital technologies help to make organisations more resilient and adaptable, thus facilitating long-term growth.

In comparison, Social Media Marketing ($\beta = 0.676$) is the most impactful determinant of inclusive growth, followed by E-commerce Adoption ($\beta = 0.262$) and Digital Payment Adoption ($\beta = -0.058$) which is statistically insignificant. This points to less growth in projects primarily aimed at streamlining transactions and more growth in projects that are geared toward improving the customer experience, market visibility, and sales generation. The discovery aligns with the notion of Vial (2019) and Chen and Tian (2022) that the value of digital transformation relies upon the part that digital technologies play in strategic business goals and the measurable organisational advantages that they bring.

In conclusion, the results show that the inclusive growth of micro enterprises is greatly improved with the digital transformation especially in E-commerce Adoption and Social Media Marketing. The outcomes support the propositions of the TOE framework by showing that technologies considered useful and value-creating are more likely to help the enterprise grow and becomes more competitive. Policymakers and enterprise development agencies therefore should take into account



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policies that boost digital marketing skills, increase access to e-commerce platforms and increase the digital skills of microenterprise operators to support inclusive economic growth.

Discussion of Findings

The study investigates the role of Digital Payment Adoption, E-commerce Adoption and Social Media Marketing Adoption towards the inclusive growth of micro-enterprises in Ogun State, Nigeria. The results showed that the size of the digital transformation is jointly explained 77.1% of the variation in inclusive growth; thus, digital technologies are important determinants of enterprise development and economic inclusion. The results of the significant F-statistic also demonstrate that the overall effect of these dimensions of digital transformation is a significant contribution to the growth results of micro-enterprises.

The results offer empirical evidence for the Technology-Organisation-Environment (TOE) framework proposed by Tornatzky and Fleischer (1990) that focuses on the technological context and the importance of the adoption and use of positive technologies to improve organisational performance and growth. The massive impact of E-commerce Adoption and Social Media Marketing highlight a high degree of benefit that micro-enterprises can gain from digital technologies that will enhance market access, customer interaction, business visibility and operation efficiency. This reinforces the main tenet of the TOE framework – that organizations benefit from a favorable technology outcome when the technology is advantageous and fits with the business goals.

The results of the study showed that the effect of Digital Payment Adoption on inclusive growth was not found to have any significant significance and had a negative effect. It does not fully validate the technological context of the TOE framework which assumes that the use of technology will increase the organisational outcomes generally. The outcome indicates that just implementing digital payment systems isn't enough to guarantee business expansion. Among micro enterprises, digital payment technologies can have limited benefits because of challenges like digital illiteracy, transaction costs, cyber security concerns, unstable network services and poor digital infrastructure.

The positive and significant impact of E-commerce Adoption is affirmed by the results of recent studies, which found that e-commerce commercial platforms promote small businesses' market reach, customer acquisition, sales performance, and business sustainability. This finding implies that the use of digital marketplaces and online sales channels offers micro-enterprises more access to broader markets and active involvement in economic activities. This is consistent with research that confirmed that e-commerce was one of the key factors in business growth, competitiveness, and economic inclusion in developing countries.

The result where Social Media Marketing appears as the strongest predictor of inclusive growth also align with the previous empirical studies that demonstrated the positive impact of social media on the engagement with customers, visibility of brands, efficiency in communication, and markets expansion. The positive effect obtained in this study is large, which means that the social media has a cost-effective function for micro-enterprises in promoting their products, attracting customers, building relationships and creating opportunities in business. This is a positive sign of the increasing awareness of social media as strategic digital media for enterprise development and sustainable competitiveness.

The study findings suggest that digital transformation has a significant impact on inclusive growth of the micro-enterprises, especially the E-commerce Adoption and Social Media Marketing. The



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results indicate that technologies that directly support market access, customer interaction and business growth are more likely to lead to higher growth results than those that are mainly developed to support transaction processing. The study, from the TOE framework, also shows that the potential of technology uptake is not related to digital technologies availability only, but also to their ability to deliver measurable economic value for enterprises. Thus, building digital marketing capacity, increasing the access and participation of micro-enterprises in e-commerce ecosystems and strengthening the enabling environment for the use of technologies is important.

5.0 CONCLUSION

This study tried to investigate the effects of Digital Payment Adoption (DPA), E-commerce Adoption (ECA), and Social Media Marketing Adoption (SMMA) toward the inclusive growth of micro-enterprises in Ogun State in Nigeria. The results showed that the dimension of digital transformation has a significant contribution to the growth and development of micro-enterprises, where the combined contribution of two dimensions is 77.1% to inclusive growth. The fact that digital technologies have become important drivers of enterprise development, economic participation, and business sustainability is illustrated.

The study found that there is significant and positive influence of Ecommerce Adoption and Social Media Marketing Adoption on inclusive growth. Their contributions underscore the role of digital channels in broadening market reach, enhancing customer engagement, augmenting business visibility, and boosting operational efficiency. The results highlight the importance of technologies that enable direct interactions with customers and increase market opportunities for micro-enterprises' growth and competitiveness.

On the other hand, Digital Payment Adoption was identified to have a negative and insignificant impact on inclusive growth. This implies that simply using digital payment innovations isn't sufficient to ensure business growth. Micro-enterprises might not get much return from digital payment systems due to challenges like digital illiteracy, transaction costs, cyber-security fears, inadequate network services, and inadequate digital infrastructure.

The results overall agree with the Technology-Organisation-Environment (TOE) framework, which suggests that digital technologies can improve organisational performance when they can deliver real economic benefits and help meet corporate goals. The study thus recommends that the participation of ecommerce should be strengthened, social media marketing practices should be empowered to ensure that micro businesses in Nigeria register inclusive growth and an enabling digital environment should be created.

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