



Exploring the Benefits of Technology Adoption on Business Performance among Unregistered SMEs: Insights from Nigeria

Ogbolu Gbemisola ^{a*} and Adelaja Ayotunde Adetola ^b

^a Teesside University International Business School, UK.

^b Department of Business Administration, Dorben Polytechnic, Abuja, Nigeria.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJEBA/2022/v22i2130701

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/89810>

Original Research Article

Received 17 May 2022
Accepted 26 July 2022
Published 05 August 2022

ABSTRACT

This study in its capacity explore the significance of technology adoption among unregistered small or micro businesses in the informal economy. To achieve this objective, initial observations were carried out by researchers over a time period on unregistered business owners operating in an informal economy. The study adopts an interview data collection method. The findings reveal that initially, these business owners had no intention of adopting technology into their business model. However, they did. Given this, the adopted technology (simple mobile phones) gave them some unprecedented opportunities over others in terms of work flexibility and expanded customer networks via referral. Unintentionally, the interview findings also reveal that with the simple technology adopted by this informal and unregistered businesses, customers were able to make business transactions from their comfort zone and enhance their individual security consciousness.

Keywords: *Technology adoption; informal economy; unregistered businesses; business performance; SMEs.*

1. INTRODUCTION

The role of technology in today's business cannot be undermined as it plays a significant role in enhancing operational activities and the overall firm's performance. Given this, scholars' interest has been to investigate the perception of technology usage, effectiveness, and perhaps the overall importance of firm's performance [1-3]. Literary evidence reveals that the available investigations are somehow tilted toward big registered firms or Small and Medium Enterprises (SMEs). Whereas, studies on unregistered SMEs or businesses that operate in microenvironments remain at their infancy stage.

Meanwhile, the contribution of these unregistered Small and Medium Enterprises (SMEs) is crucial, not just to the bigger beneficiary firms, but to the overall society where they operate [4,5]. Examples of these unregistered small businesses are not limited to the local waste disposals known as 'Mai Bowla' in the northern part of Nigeria or local water suppliers 'Mai Ruwa.' These local businesses, especially, the waste disposals outrightly perform some of the vital government role in society by going house to house to collect their waste and dispose them accordingly.

Meanwhile, waste collection and disposal are among the primary responsibilities which the local government ought to provide for the citizens. However, in Nigeria, due to unforeseeable factors, this responsibility has shifted from that of the government to individual citizens, specifically, those at the lower end of the economic ladder. The waste collection and disposal business, although not properly carried out by these individuals because they lack the needed equipment to do so.

Nevertheless, they engage in such business. What intrigues us to conduct this investigation is the amazing ways few of those waste disposals people uses simple mobile phone 'tech' to enhance their business performance to the extent of hiring people working for them which they pay wages or salary. Through unintended observations, we observed some of these Mai Bowla' making calls to their customers and their employees at the spot while they receive bank alert for the service rendered. Given this, the objective of this study is to explore service innovativeness and business performance via technology adoption among unregistered businesses.

2. LITERATURE REVIEW

2.1 Influencing Factors of Business Performance

The construct business performance is among the famous constructs in business management. Hence, there are numerous studies investigating factors that influence business performance. Examples of the available studies are not limited to Abualoush, Obeidat, Tarhini and Al-Badi [6], Ali and Anwar [7], Khan, Islam, Sheikh and Naeem [8], concluding the role of employees' effectiveness on business performance. Likewise, studies such as Albrecht, Bredahl and Marty [9], Anwar and Abdullah [10] and Yunis, Tarhini and Kassar [11], argue the crucial role of organizational resources in enhancing business performance. Further evidence reveals factors such as a managerial role, managerial competence, government policies, organizational culture and politics as well as the influence of technology on business or firm performance, specifically among multinational corporations (MNCs) and Small and Medium Scale Enterprise (SMEs) [11,12,13].

Meanwhile, of all the listed factors that influence firm or business performance, technology adoption is the concern of this investigation. The rationale behind exploring the role of technology in business performance lies in the fact that investigations on technology adoption keep yielding mixed evidence among bigger and registered firms [14]. Likewise, some scholars opine that technology adoption needs to be massive before its significant effect can be felt. However, prior observations from this study respondent prove otherwise.

2.2 Empirical Evidence of Technological Influence on Business Performance

Over the past few decades, the importance or significance of technology adoption to firm performance has been duly investigated. Examples of these studies are not limited to those of [15,11] arguing a significant importance of technology in the performance of firms, or SMEs. Similar investigations by Bouwman et al. [16], Li [17] and Khan et al. [18] opined that adopting the needed technologies to supplement business models, which have a significant effect on existing business models.

Awotunde et al. [19], Bapna and Umyarov [20], Horton et al. [21] and Sterling and LeRouge [22] posit technology adoption and usage enlarge business networks and unintended referral programs. Meanwhile, the study of Cai et al. [23] and van Esch and Cui [24] argue that with technology adoption and usage, customers could effortlessly patronize businesses of their choice at the comfort of their room while leaving feedback or publicly recommending such services to others who might want to try it out.

In the same vein, empirical evidence from the studies of AlHogail [25], Ghazali et al. [26] and Muangmee et al. [27] argue that technology adoption does not only enhances business performance; it also increases customers' loyalty, safety and trust.

3. METHODOLOGY

This study adopted a qualitative research method, where the needed research data is collected from the respondents via an unstructured interview research approach. However, before the main data collection, the lead researcher observed the behavioral pattern among the scavengers for over three months. During this time, the researchers established an informal relationship with several waste collectors and disposal operators. The rationale behind this act is to create a relaxed and comforting atmosphere for the data collection process with an unbiased view. The nature of the interview was so informal and unstructured. Hence, the respondents were relaxed and willing to give any information concerning technology usage and their business performance.

3.1 Demography of the Respondents

The age group of the respondents for this study is between the ages of 14 to 21. Forty percent of the respondent (2) were twenty-one years old. Twenty percent (1) is fourteen years of age, twenty percent (1) is seventeen (17) years of age and the last respondent is sixteen years old. The gender of the respondents interviewed is male; 100% respondents are male. They could be categorized as homeless because they have no formal house or any guidance about who is directly responsible for them. However, in groups, they have a rented room 'store-like they sleep at night.'

3.2 Interview Questions

The objective of the first question is to identify why and how they start the business. With this,

the time, why and how they start the waste disposal business was asked.

Question 1: for how long have you be in this business?

Most of the respondents, 'Mai bowla' said that they started the business of waste collection and disposal at a tender age of five (5) because they were once a street beggar, 'Álmajiri.' The term 'Álmajiri' is hausa word used in describing children who begs for foods and alms on the street. They also said that it is not in their thoughts or they know how to operate this business at the earlier stage, but the idea came from the migrants from the southwest and southeast as well as some wealthy men from the north who engage in office work and have little or no time to properly dispose of their waste.

According to Respondent 1:

"As long as I can remember, I grew up on the street and I found myself doing this business" ...

Meanwhile, Respondent 2 narrated that:

...If I should tell the truth, I started this business during the time I was a young boy of 5 years old. During that time, I roam about the streets doing Almajeri. However, my neighbors will call me to help them throw away their rubbish and I will be given food, sometimes money which I use for buying cookies. It's from there that those working-class people in my area saw me and started sending me to dump their refuse at dumpster. To cut short, the long story, I found myself dumping refuse for people and doing less begging. Some of the goods I received are used clothes, toys and other things like spoilt wrist watches and a TV remote, which I was happy to have because I play with them...

He further narrates that:

...As time goes on, I started demanding for money anytime I am to dump their refuse... That is how I start, he narrated.

Some will put their rubbish outside in a corner, put any amount they have underneath or beside it. Once I carry the stuff, I take my money. As the rubbish become more, I sought to have my wheelbarrow.

Question 2: why do you buy a mobile phone?

Initially, the respondents bought mobile phones because they enjoy listening to music. However, as their customers notice they have phones, they ask for their number, which they are happy to give. Despite giving out their phone numbers, since they are not familiar with its major benefits aside from listening to music and FM radio, they said they still perform their normal routine by knocking and advertising their service on the street as early as a quarter past seven in the morning. Their customers challenge them not to disturb their peace in the morning challenged that whenever they needed their services, they will call them.

According to Respondents 4 and 5, those customers can be 'wicked' at times, because after collecting our number they said they do not want to see us around and expect them to invite us to come.

Respondent 5 further states that,

...Before entering the street I plied, I must show the text messages sent to you from my customers which must tally with that of security men at the security post. Then only they can allow you in...

Meanwhile, respondent three narrates that he was given a small phone by his own customers because they are wealthy and capable to give it out. They gave him money to buy a sim card and instruct him that they will be needing his services every three days. The purpose is to communicate him when his services is needed. Meanwhile, this gave him a chance to ply other streets and route to collect debris.

Furthermore, he claimed to have extended this idea to those selling vegetables in the market. They will call him as soon as their debris piled up for him to dispose.

Question 3: How has a mobile phone helped your businesses?

Those interviewed narrates that using a mobile phone has helped their businesses a lot in several unaccountable ways. These includes having to schedule debris pickup without the need to be roaming about the street like others (pointing at those who don't know about their secret in using mobile phones). Also, they said the use of a mobile phone has helped them gain

lots of customer through their customers referral even without their consent. Additionally, the respondents all agree that the use of technology enables them to have flexible working hours.

For example, respondents 1, 3 and 4 say there is no time they don't work. This is because their customers can send them message anytime for business; they don't need to wait for us to come pick up the debris in the morning before they open. We go there at night and tidy up their shops. Whereas, those without mobile phones work only during the day and they get tired easily because they walk through the streets all day in search of business.

Respondent one says:

...As I am, I only supervise. My boys (pointing to those he employed) do the job for me since I use my phone to contact my customers, what they do is to package their waste, place it in an assessible location for my boys, then, I instruct them to carry. As you can see, I am running this business and, because I have the time to myself, I can do other businesses...

(respondent one).

4. RESULTS AND DISCUSSION

From the interview, it was observed that, indirectly, business owners unintentionally adopt mobile usage into their business model. Their intention was to listen to music. However, along the way, technology was used to enhance their productivity. The observation in this regard tallies with empirical evidence from the study of [2,3,11,15] claiming a significant effect of technology adoption on business performance among unregistered businesses.

Similarly, unintentionally, the interview result reveals customers, on the other hand, use the adopted technology by these informal and unregistered businesses to enhance their security measures. They do this by making sure these business operators visit strictly by invitation. Also, these business operators needed to verify their invitation by presenting a text message code that tallies with what is given to the security prior to their arrival. This protocol wards off illegal movement and uninvited guests who might disguise themselves as mai bowla to commit crime. Correlating the findings with regard to an earlier investigation by AlHogail [25],

Ghazali et al. [26], Muangmee et al. [27], where they posit that technology adoption and usage enhances business and customers' safety, loyalty and trust.

The third observed usage of technology from the interview is networking purposes. Although the mobile phones bought by these business owners are small phones with no social media applications or facilities, nevertheless, they are able to network with it by exchanging their phone numbers with potential customers outside residential areas, that is, in the marketplace. The observed scenario in this regard conforms to the networking usage of technology to enhance business performance by Awotunde et al. [19], Bapna and Umyarov [20], Horton et al. [21], and Sterling and LeRouge [22] who argue technology adoption and usage enhances business owners' social network; a vital tool that enhance and promote business performance [28].

Relating the influence of technology adoption on informal and unregistered businesses as documented in this study with other empirical investigations. It is evident that technology presents important innovative ways of conducting business that effectively influence business performance.

The findings thus imply that mobile technology usage among informal and unregistered businesses is crucial, like those businesses which are formal and registered. More so, as evident in this study, the adopted technology needs not to be special or big technology, it can be as simple as that which was investigated in this study to make a crucial difference in the business model.

4.1 Practical Implications

Given the observed findings from the interviews, it is evident that simple mobile technology has the power to alter business models in the informal sector. Likewise, it is a great tool that enhances business performance among the unregistered SMEs operators in the informal economy. Given this, empowering informal business operators with technology such as mobile technology is a great deal that will influence their business performance at the same time and ensure customers and societal safety.

4.2 Theoretical Implications

This study is among the pioneer investigations to explore the importance of mobile technology

among unregistered businesses in the informal economy. Given this, we unearth the significant contribution to the body of knowledge pertaining to literature availability in this regard.

Furthermore, the findings in this study reveal the importance of investigating technology adoption among informal and unregistered business. Hence, we urge future scholars to consider exploring this aspect quantitatively so that policy makers could have sufficient literary and empirical evidence to formulate the needed policies to support the informal economy and unregistered businesses.

5. CONCLUSION

This study explores the significant benefits of mobile technology adoption among unregistered SMEs operating in the informal sector. The findings after interviewing unregistered business operators in the informal industry reveal that a simple mobile phone has a significant effect on their business performance. These include business network expansion, work flexibility, and unintended effects such as customers' safety and comfort. All the observed importance of mobile phones among the unregistered businesses in the informal sector are well-documented advantages among the registered businesses operating in the formal sector.

6. LIMITATION AND RECOMMENDATIONS

Despite unearthing the significant influence of technology on informal and unregistered businesses, we acknowledge that the samples surveyed in this research might be small. Given this, we suggest a similar investigation with a larger sample size to unearth more significance of mobile technology adoption. Similarly, this study adopts a single approach to investigate the issue at hand. Given this, the findings might be subjective, specifically, the unintended findings of technology adoption and customers' safety. Given this, we suggest the inclusion of customers' opinions in future studies.

Given the findings from this investigation, we, therefore, make the following recommendations to governments and policy makers. These are:

- i. Empower the 'almajiris' who choose this type of informal and unregistered business as a means of curbing unemployment and social vices. The government could

empower them by getting them biodegradable plastic bags to package the debris and plastic and covered wheelbarrows to formalize their appearances.

- ii. The government could legalize this business and give the needed equipment on a smaller scale because, people using mobile phones to conduct their waste disposal business are invariably employing unemployed youths on the streets.
- iii. Since the Nigerian government could not perform all its duties, and it is being taken up by those at the lower helm of the economic ladder, the government should try and support them in the best possible ways they can.
- iv. For those unregistered businesses, we recommend them to adopt simple technology to enhance their business operations.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Elbashir MZ, Collier PA, Davern MJ. Measuring the effects of business intelligence systems: The relationship between business process and organizational performance. *International Journal of Accounting Information Systems*. 2008;9(3):135-153.
2. Salisu Y, Bakar LJA. Technological capability, relational capability and firms' performance: The role of learning capability. *Revista de Gestão*; 2019.
3. Wu SPJ, Straub DW, Liang TP. How information technology governance mechanisms and strategic alignment influence organizational performance. *MIS quarterly*. 2015;39(2):497-518.
4. Bonacich E. The other side of ethnic entrepreneurship: A dialogue with Waldinger, Aldrich, Ward and associates; 1993.
5. Maunganidze F. The role of government in the establishment and development of SMEs in Zimbabwe: Virtues and vices. *Journal of Business Administration and Education*. 2013;4(1).
6. Abualoush SH, Obeidat AM, Tarhini A, Al-Badi A. The role of employees' empowerment as an intermediary variable between knowledge management and information systems on employees' performance. *VINE Journal of Information and Knowledge Management Systems*; 2018.
7. Ali BJ, Anwar G. Organizational Learning as A Determining Factor in Firm Performance. *GOYA*. 2021;68(374).
8. Hameed Z, Khan IU, Islam T, Sheikh Z, Naeem RM. Do green HRM practices influence employees' environmental performance ? *International Journal of Manpower*; 2020.
9. Albrecht S, Breidahl E, Marty A. Organizational resources, organizational engagement climate, and employee engagement. *Career Development International*; 2018.
10. Anwar G, Abdullah NN. The impact of Human resource management practice on Organizational performance. *International journal of Engineering, Business and Management (IJEEM)*. 2021;5.
11. Yunis M, Tarhini A, Kassar A. The role of ICT and innovation in enhancing organizational performance: The catalysing effect of corporate entrepreneurship. *Journal of Business Research*. 2018;88:344-356.
12. El-Kassar AN, Singh SK. Green innovation and organizational performance: The influence of big data and the moderating role of management commitment and HR practices. *Technological Forecasting and Social Change*. 2019;144:483-498.
13. Paais M, Pattiruhu JR. Effect of motivation, leadership, and organizational culture on satisfaction and employee performance. *The Journal of Asian Finance, Economics and Business*. 2020;7(8):577-588.
14. Ramadani V, Hisrich RD, Abazi-Alili H, Dana LP, Panthi L, Abazi-Bexheti L. Product innovation and firm performance in transition economies: A multi-stage estimation approach. *Technological Forecasting and Social Change*. 2019;140: 271-280.
15. Donbesuur F, Ampong GOA, Owusu-Yirenkyi D, Chu I. Technological innovation, organizational innovation and international performance of SMEs: The

- moderating role of domestic institutional environment. *Technological Forecasting and Social Change*. 2020;161:120252.
16. Bouwman H, Nikou S, de Reuver M. Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs?. *Telecommunications Policy*. 2019;43(9):101828.
 17. Li F. The digital transformation of business models in the creative industries: A holistic framework and emerging trends. *Technovation*. 2020;92:102012.
 18. Khan IS, Ahmad MO, Majava J. Industry 4.0 and sustainable development: A systematic mapping of triple bottom line, Circular Economy and Sustainable Business Models perspectives. *Journal of Cleaner Production*. 2021;297:126655.
 19. Awotunde JB, Ogundokun RO, Ayo FE, Ajamu GJ, Adeniyi EA, Ogundokun EO. Social media acceptance and use among university students for learning purpose using UTAUT model. In *International conference on information systems architecture and technology*. 2019;91-102. Springer, Cham.
 20. Bapna R, Umyarov A. Do your online friends make you pay? A randomized field experiment on peer influence in online social networks. *Management Science*. 2015;61(8):1902-1920.
 21. Horton RP, Buck T, Waterson PE, Clegg, CW. Explaining intranet use with the technology acceptance model. *Journal of information technology*. 2001;16(4):237-249.
 22. Sterling R, LeRouge C. On-demand telemedicine as a disruptive health technology: qualitative study exploring emerging business models and strategies among early adopter organizations in the United States. *Journal of medical Internet research*. 2019;21(11):e14304.
 23. Cai R, Cain LN, Jeon H. Customers' perceptions of hotel AI-enabled voice assistants: does brand matter?. *International Journal of Contemporary Hospitality Management*, (ahead-of-print); 2022.
 24. van Esch P, Cui Y. Does consumer promiscuity influence purchase intent? The role of artificial intelligence (AI), change seeking, and pride. *Journal of the Association for Consumer Research*. 2021;6(3):394-401.
 25. AlHogail A. Improving IoT technology adoption through improving consumer trust. *Technologies*. 2018;6(3):64.
 26. Ghazali EM, Mutum DS, Chong JH, Nguyen B. Do consumers want mobile commerce? A closer look at M-shopping and technology adoption in Malaysia. *Asia Pacific Journal of Marketing and Logistics*. 2018;30(4):1064-1086.
 27. Muangmee C, Kot S, Meekaewkunchorn N, Kassakorn N, Khalid B. Factors determining the behavioral intention of using food delivery apps during COVID-19 pandemics. *Journal of Theoretical and Applied Electronic Commerce Research*. 2021;16(5):1297-1310.
 28. Sherer PD, Leblebici H. Bringing variety and change into strategic human resource management research. In *Research in personnel and human resources management*. Emerald Group Publishing Limited; 2001.

© 2022 Ogobolu and Adelaja; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/89810>