


Chapter 9

Big Data Analytics Adoption by Microfinance Banks in Ibadan Metropolis, Oyo State, Nigeria

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ABSTRACT

Micro Finance Banks (MFBs) generate enormous amounts of data from their daily business transactions, which has the potential to help them make better decisions. There is, however, a dearth of information on how well MFBs in Nigeria have adopted BDA. The present study investigated the level of adoption of big data analytics (BDA) by MFBs in Ibadan, the capital of Oyo State, Nigeria. Using a descriptive survey design, the study collected data from twenty-eight licensed microfinance banks in the metropolis. Data was analyzed using Microsoft Excel 2019 and Statistical Package for the Social Sciences (SPSS) Version 20. Findings, amongst others, revealed that the BDA adoption index of MFBs in Ibadan is low (1.93 on a scale of 1 to 4). It was recommended that the Central Bank of Nigeria could make policies that would promote, encourage, and mandate proper big data adoption among MFBs in Nigeria.

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INTRODUCTION

Explosion in digital footprints through the use of innovative technologies such as social media networks, e-commerce websites, the internet of things (IoT), transactional processing systems (TPS) and search engines by individuals and organizations have resulted in rapid generation of massive electronic data. Nonetheless, the amount of data generated is still expected to increase tremendously in the future (Clissa, 2022; Groenfeldt, 2012). This huge volume of data being generated at a very fast rate from various sources in different formats has resulted in what is now known as big data. Big data therefore, is typically characterized by its massive volume, variety of sources, rapid velocity, and diverse formats (Nadikattu, 2020). This has brought a dramatic change and opportunities in data processing and storage with tremendous potential to influence decision-making in business operations.

In the early 2000s, computer storage and processing power were faced with the challenge of handling the overwhelming volume of data being generated and that led to a data scalability crisis. The narrative has however changed now (Russom, 2011); big data which used to be a technical problem has now become a business opportunity (Lichy et al., 2017; Phillips, 2017). Perception of what data is has shifted from being a mere product of computer processes to being a valuable asset. Klynveld Peat Marwick Goerdeler (KPMG) International Cooperative (2019) reports that data is now perceived to be the most significant asset to organizations and businesses across the globe, and organizations are willing to invest heavily into its disruptive potential in order to discover useful insights through the use of relevant analytic processes.

Big Data Analytics (BDA) involves the process of transforming structured, semi-structured, and unstructured data from various sources and of various formats like call logs, mobile banking transactions, online user-generated content, blog posts, tweets, online searches, and images amongst others into useful information by using computational techniques to uncover trends and patterns in a dataset (Zakir et al., 2015). BDA helps to derive useful and actionable insights from data generated by an organization. It also helps to uncover trends and metrics that would otherwise be lost without analytics (Frankenfield, 2021). The potential benefit of BDA in every sector and industry has given it the edge to be considered a business solution (Ogbuokiri et al., 2015).

The use of BDA is now very prevalent in many industries, such as banking, manufacturing, technology, health, and education, where data is used and generated, either manually or electronically. Manufacturing companies, for example, record runtime, downtime, work queue for various machines, and this data can be analyzed to make better plans which will enable the machines to operate at their peak capacities. It is also being used by content companies to keep their users clicking, watching,

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