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2022/2023 PhD Thesis Abstract

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RT: **Big Data Analytics and Organisational Sustainability of Selected Healthcare Service Firms in Lagos State, Nigeria**

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AB: Organisational sustainability is the possibility that an organisation will survive and thrive in the future. Studies have shown that the sustainability of the healthcare service firms in Nigeria is being threatened as it is currently not meeting expectations of the stakeholders in terms of profitability and customer retention. Big data analytics (BDA) has been identified as a strategy that can enhance the sustainability of healthcare service firms since it helps them to access accurate data that can enhance decision-making for quality service delivery. Studies on big data analytics and organisational sustainability in public and private healthcare sectors have focused more on developed rather than developing nations like Nigeria. Therefore, this study investigated the effect of big data analytics (agility capability, data-driven decision making, business intelligence, information technology capability, Internet of Things (IoT) application software, and cloud computing) on organisational sustainability (profitability, competitive advantage, decision effectiveness, operational value, sales growth and customer retention) of selected healthcare service firms in Lagos State, Nigeria.

This study adopted a survey research design. The population was 3, 931 medical staff of four healthcare service facilities in Lagos State, Nigeria. A sample size of 676 staff was computed using Cochran's formula. The study adopted a simple random sampling technique. A structured and validated questionnaire was used to collect the data. Cronbach's alpha reliability coefficients for the constructs ranged from 0.76 to 0.96. A response rate of 83.3% was achieved. Data were analysed using descriptive and inferential (multiple and hierarchical regression analysis) statistics at 5% level of significance.

Findings revealed that big data analytics had a significant effect on organisational sustainability (Adj.R^2 = 0.98, F(6, 556) = 4442.17, $p < 0.05$). Also big data analytics had a significant effect on profitability (Adj.R^2 = 0.93, F(6, 556) = 1252.90, $p < 0.05$), competitive advantage (Adj.R^2 = 0.94, F(6, 556) = 1388.12, $p < 0.05$), decision effectiveness (Adj.R^2 = 0.93, F(6, 556) = 1234.05, $p < 0.05$), operational value (Adj.R^2 = 0.93, F(6, 556) = 1284.42, $p < 0.05$), sales growth (Adj.R^2 = 0.93, F(6, 556) = 1150.31, $p < 0.05$) and customer retention (Adj.R^2 = 0.93, F(6, 556) = 1317.38, $p < 0.05$). Firm readiness (β = -0.04, ΔR^2 = 0.00, ΔF = 14.15, $p < 0.05$) and firm size (β = -0.03, ΔR^2 = 0.00, ΔF = 7.78, $p < 0.05$) significantly moderated effect of BDA on organisational sustainability. Furthermore, the combination of firm size and firm readiness (β = -0.01, ΔR^2 = 0.00, ΔF = 17.81, $p < 0.05$) significantly moderated effect of BDA on organisational sustainability.

The study concluded that big data analytics enhanced organisational sustainability of selected health service firms in Lagos State, Nigeria. The study recommended that the management of selected healthcare service firms in Lagos State should embrace and invest in big data technologies like IoT, information technology, data driven decision making, business intelligence, and cloud computing to improve organisational sustainability.

Keywords: Cloud computing, Competitive advantage, Information technology capability, Operational value, Profitability

Word Count: 479

Abbreviations: RFN: Researcher's Full Name, RD: Researcher's Department, RS: Researcher's School, RE: Researcher's Email, RAE: Researcher's Alternate Email, RP: Researcher's Phone Contact, RT: Registered Title, MS: Main Supervisor, ME: Main Supervisor's E-mail Address, SP: Main Supervisor's Phone Contact, CS: Co-Supervisor, CE: Co-Supervisor's E-mail Address, CP: Co-Supervisor's Phone Contact, AB: Abstract

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