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The impact of COVID-19 on the banking sector's efficiency and growth trajectory (2023) *Journal of Financial Services Marketing*, .

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Abstract

The COVID-19 pandemic has had an unimaginable effect on global economies and threatens the efficiency and growth trajectory of the banking sector. The pandemic has disrupted the primary operations of the banking sector, as banks were compelled to close physical branches to adhere to social distancing guidelines. Given the importance of the banking sector to economic development, understanding the consequences of COVID-19 on efficiency and growth trajectory of this sector is crucial for ensuring its sustainability. By drawing data from annual reports of 13 publicly quoted banks in Nigeria from 2019q1 to 2021q2 (pre and post COVID-19), this study investigates the impact of COVID-19 pandemic on efficiency and growth trajectory of the banking sector. The data obtained were mainly analysed using DEA and LGCM. The DEA results show an upward trend in the average scores of technical efficiency, pure technical efficiency, and scale efficiency in both periods. The LGCM results reveal a statistically insignificant difference in banks' growth trajectory (rate of change) in both periods. Overall, our analyses suggest that the outbreak of COVID-19 does not threaten the efficiency and growth trajectory of the banking sector. However, the insignificant difference between the pre and post nationwide lockdown suggests that there is an insignificant improvement in the efficiency of the banking sector during the post nationwide lockdown period. These findings offer practical implications for banks, regulators, and policymakers regarding the unprecedented uncertainty caused by the COVID-19 pandemic. © 2023, The Author(s), under exclusive licence to Springer Nature Limited.

Author Keywords

Banking sector; COVID-19 pandemic; DEA; Latent growth curve modelling; Technical efficiency

References

- Abdul-Wahab, A.H., Haron, R.
 Efficiency of Qatari Banking Industry: An Empirical Investigation (2017) International Journal of Bank Marketing, 35 (2), pp. 298-318.
- · Adusei, M.

Determinants of Bank technical efficiency: Evidence from Rural and Community Banks in Ghana

(2016) Cogent Business and Management, 3, pp. 1-15.

- Aghimien, P.A., Kamarudin, F., Hamid, M., Noordin, B.
 Efficiency of Gulf Cooperation Council Banks: Empirical evidence using Data Envelopment Analysis
 - (2016) Review of International Business and Strategy, 26 (1), pp. 118-136.
- Ahmad, U.

Efficiency Analysis of Micro-financeinstitutions in Pakistan (2011) *Munich Personal RePEc Archive*, 34215, pp. 1-23.

Ajayi, T.A., Sosan, M.

The Evolution of Nigerian Banking System, Supervision and Current Challenges (2013) SSRN Electronic Journal, Available from

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- Ajide, K.B., Ibrahim, R.L., Alimi, O.Y.
 Estimating the Impacts of Lockdown on Covid-19 Cases in Nigeria
 (2020) Transportation Research Interdisciplinary Perspectives, 7, p. 100217.
- Akhtar, S., Alam, M., Ansari, M.S.
 Measuring the Performance of the Indian Banking Industry: Data Envelopment Window Analysis Approach (2021) Benchmarking: An International Journal, 29 (9), pp. 2842-2857.
- Arandara, A.M.P., Takahashi, S.

Productivity Analysis of Sri Lankan Cooperative Banks: Input Distance Function Approach

(2023) Asia-Pacific Journal of Regional Science, 7, pp. 93-117.

• Banker, R.D., Charnes, A., Cooper, W.W.

Some Models for Estimating Technical and Scale Inefficiencies in Data Envelopment Analysis

(1984) Management Science, 30 (9), pp. 1078-1092.

- Ben Mohamed, E., Meshabet, N., Jarraya, B.
 Determinants of Technical Efficiency of Islamic Banks in GCC Countries
 (2021) Journal of Islamic Accounting and Business Research, 12 (2), pp. 218-238.
- . Benston, G.J.

Branch Banking and Economies of Scale

(1965) The Journal of Finance, 20 (2), pp. 312-331.

• Berger, A.N., Humphrey, D.B.

Efficiency of Financial Institutions: International Survey and Directions for Future Research

(1997) European Journal of Operational Research, 98 (2), pp. 175-212.

- Birhanu, T., Bosho Deressa, S., Azadi, H., Viira, A.H., Van Passel, S., Witlox, F.
 Determinants of Commercial Bank Loan and Advance Disbursement: The Case of Private Ethiopian Commercial Banks
 (2021) International Journal of Bank Marketing, 39 (7), pp. 1227-1247.
- Boďa, M., Piklová, Z.

The Production or Intermediation Approach?: It Matters

(2018) Springer Proceedings in Business and Economics. Springer Proceedings in Business and Economics, pp. 111-120. Springer, Cham

Boubaker, S., Do, D.T., Hammami, H., Ly, K.C.

The Role of Bank Affiliation in Bank Efficiency: A Fuzzy Multi-Objective Data Envelopment Analysis Approach

(2022) Annals of Operations Research, 311 (2), pp. 611-639.

Boubaker, S., Le, T.D.Q., Ngo, T.

Managing Bank Performance Under COVID-19: A Novel Inverse DEA Efficiency Approach

(2023) International Transactions in Operational Research, 30 (5), pp. 2436-2452.

• Boubaker, S., Liu, Z., Zhan, Y.

Customer Relationships, Corporate Social Responsibility, and Stock Price Reaction: Lessons from China During Health Crisis Times (2022) *Finance Research Letters*, 47, p. 102699.

Boubaker, S., Nguyen, N., Trinh, V.Q., Vu, T.
 Market Reaction to the Russian Ukrainian war: A Global Analysis of the Banking

Industry

(2023) Review of Accounting and Finance, 22 (1), pp. 123-153.

• Byrne, B.M.

(2010) Structural equation modeling with AMOS: Basic concepts, applications, and programming,

2, Routledge, Taylor & Francis Group, New York

. Economic Report First Half of 2020

Central Bank of Nigeria 2020, Available from

• Chaity, N.S., Islam, K.M.Z.

Bank efficiency and practice of earnings management: A study on listed commercial banks of Bangladesh

(2021) Asian Journal of Accounting Research (In Press).,

• Charnes, A., Cooper, W.W., Rhodes, E.

Measuring the Efficiency of Decision Making Units

(1978) European Journal of Operational Research, 2 (6), pp. 429-444.

Coelli, T.

(1996) Centre for Efficiency and Productivity Analysis (CEPA) Working Papers., pp. 1-50. absalon.itslearning.com

• Cooper, W.W., Seiford, L.M., Zhu, J.

Data Envelopment Analysis: History, Models, and Interpretations

(2011) *International Series in Operations Research and Management Science*, pp. 1-39. Hillier FS, Price CC, Seiford LM, (eds), Springer, New York, NY

• Coulacoglousaklofske, C.D.H.

In: Psychometrics and Psychological Assessment

(2017) Advances in Latent Variable Mixture Modeling, pp. 67-88.

Amsterdam: Elsevier Inc

• Dagar, V., Khan, M.K., Alvarado, R., Usman, M., Zakari, A., Rehman, A., Murshed, M., Tillaguango, B.

Variations in Technical Efficiency of Farmers with Distinct Land Size Across Agro-Climatic Zones: Evidence from India

(2021) *Journal of Cleaner Production*, 315, p. 128109.

• Donatus, I.N., Chinyere, E.F.

Banking Sector Reforms and Sustainable Development in Nigeria

(2019) International Journal of Social & Management Sciences, 2 (1), pp. 96-109.

Duncan, T.E., Duncan, S.C.

The ABC's of LGM: An Introductory Guide to Latent Variable Growth Curve Modeling (2009) Soc Personal Psychol Compass, 3 (6), pp. 979-991.

• Elumilade, O.D.

Mergers & Acquisitions and Efficiency of Financial Intermediation in Nigeria Banks: An Empirical Analysis

(2010) International Journal of Business and Management, 5 (5), pp. 201-210.

• Farrell, M.J.

The Measurement of Productive Efficiency

(1957) Journal of the Royal Statistical Society. Series A (General)., 120 (3), pp. 253-290.

• Lessons Learnt from the COVID-19 Pandemic from a Financial Stability Perspective (2021) Financial Stability Board.,

Available from

 Gazi, M.A.I., Nahiduzzaman, M., Harymawan, I., Al Masud, A., Dhar, B.K.
 Impact of COVID-19 on Financial Performance and Profitability of Banking Sector in Special Reference to Private Commercial Banks: Empirical Evidence from Bangladesh

(2022) Sustainability (Switzerland), 14 (10), pp. 1-23.

- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E.
 (2014) Multivariate Data Analysis,
 7, Pearson Education Limited, New York City
- Hassan, I.O., Pearce, B., Raheem-Muhammedjayeoba, D. (2021) The Banking Regulation Review, Nigeria. Ikoyi, Lagos, Available from
- Ho, K.-C., Huang, H.Y., Pan, Z., Gu, Y.
 Modern Pandemic Crises and Default Risk: Worldwide Evidence
 (2023) Journal of International Financial Management & Accounting, 34 (2), pp. 211-242.
- . Hu, L., Bentler, P.M.

Evaluating Model Fit

(1995) Structural equation modeling: Concepts, issues, and applications, pp. 76-99. Hoyle RH, (ed), SAGE Publications, Thousand Oaks, CA

Jaiyeoba, H.B.

The Spillover Effects of Covid-19 on Halal Industry: An Overview and Way Forward (2021) *Halalsphere*, 1 (1), pp. 72-82.

- Jaiyeoba, H.B., Adewale, A.A., Ibrahim, K.
 Measuring Efficiencies of Bangladeshi and Indonesian Microfinance Institutions (2018) International Journal of Bank Marketing, 36 (2), pp. 305-321.
- Jelassi, M.M., Delhoumi, E.

What Explains the Technical Efficiency of Banks in Tunisia? Evidence from a Two-Stage Data Envelopment Analysis

(2021) Financial Innovation, 7 (1), pp. 2-26.

Keogh-brown, M.R., Tarp, H., Edmunds, W.J., Smith, R.D.
 The Impact of Covid-19, Associated Behaviours and Policies on the UK Economy: A Computable General Equilibrium Model
 (2020) SSM - Population Health, 12, p. 100651.

. Kipesha, E.F.

Production and Intermediation Efficiency of Microfinance Institutions in Tanzania (2013) Research Journal of Finance and Accounting, 4 (1), pp. 149-160.

Kola-Oyeneyinkuyoro, E.M.

Nigeria's banking sector: Thriving in the face of crisis (2020) *Mckinsey & Company*, Accessed 25 December 2021]. Available from

• Li, Z., Li, Y., Long, D.

Research on the Improvement of Technical Efficiency of China's Property Insurance Industry: A Fuzzy-Set Qualitative Comparative Analysis (2021) International Journal of Emerging Markets, 16 (6), pp. 1077-1104.

 Majeed, M.T., Zanib, A.
 Efficiency Analysis of Islamic Banks in Pakistan (2016) Humanomics, 32 (1), pp. 19-32.

Marathe, S., Wan, T.T.H., Zhang, J., Sherin, K.
 Factors Influencing Community Health Centers' Efficiency: A Latent Growth Curve

Modeling Approach

(2007) Journal of Medical Systems, 31 (5), pp. 365-374.

- Muritala, T.A., Ijaiya, M.A., Adekunle, A.O., Abidoye, M.K.
 Capitalization and Bank Performance: Evidence from Nigerian Banking Sector (2017) e-Finanse, 13 (4), pp. 67-75.
- Nguyen, M.-H., Khuc, Q.V., La, V.-P., Le, T.-T., Nguyen, Q.-L., Jin, R., Nguyen, P.-T., Vuong, Q.-H.

Mindsponge-Based Reasoning of Households' Financial Resilience During the COVID-19 Crisis

(2022) Journal of Risk and Financial Management, 15 (542), pp. 1-18.

 Osuagwu, E.S., Isola, W.A., Nwaogwugwu, I.C.
 Measuring Technical Efficiency and Productivity Change in the Nigerian Banking Sector: A Comparison of Non-parametric and Parametric Techniques (2018) African Development Review, 30 (4), pp. 490-501.

Oyekanmi, S.

Nigeria @ 60: The Banking Sector and the Nigerian economy. Nairametrics (2020) *Available From*,

Patel, A., Debnath, N.C., Mishra, A.K., Jain, S.
 Covid19-IBO: A Covid-19 Impact on Indian Banking Ontology Along with an Efficient Schema Matching Approach
 (2021) New Generation Computing, 39 (3-4), pp. 647-676.

- Piwowar-Sulej, K., Malik, S., Shobande, O.A., Singh, S., Dagar, V.
 A Contribution to Sustainable Human Resource Development in the Era of the COVID-19 Pandemic
 (2023) Journal of Business Ethics,
- Rajasekar, T., Deo, M.

Is There Any Efficiency Difference between Input and Output Oriented DEA Models: An Approach to Major Ports in India

(2014) Journal of Business & Economic Policy, 1 (2), pp. 18-28.

- (2020) Nigeria: Overview of Banking Regulations in Nigeria, Available from
- Riani, R., Ikhwan, I.

The impact of Covid-19 on the banking industry efficiency: Comparison between Indonesia and Malaysian banks

(2022) Asian Journal of Islamic Management (AJIM), 4 (1), pp. 43-58.

 Ronnie, O.C., Chris, O.I., Martin, E.C.
 Recent Developments and Trends in the Banking Sector in Nigeria (2020) Academic Leadership (online Journal), 21 (9), pp. 28-46.

• Rouse, P., Tripe, D.

Allocative and Technical Efficiency of New Zealand Banks (2016) *Meditari Accountancy Research*, 24 (4), pp. 574-587.

• Saad, N.

An Analysis on the Efficiency of Takaful and Insurance Companies in Malaysia: A non-parametric Approach

(2012) Review of Integrative Business & Economics, 1 (1), pp. 33-56.

Saka, A.N.A., Aboagye, A.Q.Q., Gemegah, A.
 Technical Efficiency of the Ghanaian Banking Industry and the Effects of the Entry

of Foreign Banks

(2012) Journal of African Business, 13 (3), pp. 232-243.

Salignac, F., Marjolin, A., Reeve, R., Muir, K.
 Conceptualizing and Measuring Financial Resilience: A Multidimensional Framework

(2019) Social Indicators Research, 145 (1), pp. 17-38.

• Salignac, F., Muir, K., Wong, J.

Are You Really Financially Excluded If You Choose Not to be Included? Insights from Social Exclusion, Resilience and Ecological Systems (2015) *Journal of Social Policy*, 45 (2), pp. 269-286.

- Salter, A.W., Tarko, V.
 (2017) Governing the Financial System: A Theory of Financial Resilience, Virginia
- Sang, N.M.
 Impact of the COVID-19 Pandemic on Bank Efficiency in Vietnam (2022) Banks and Bank Systems, 17 (1), pp. 13-23.
- Sealey, C.W., Lindley, J.T.
 Inputs, Outputs, and Theory of Production and Cost at Depository Financial Institutions
 (1977) The Journal of Finance, 32 (4), pp. 1251-1266.
- Shabir, M., Jiang, P., Wang, W., Işık, Ö. **COVID-19 Pandemic Impact on Banking Sector: A Cross-Country Analysis** (2023) *Journal of Multinational Financial Management*, 67, p. 100784.
- Shair, F., Shaorong, S., Kamran, H.W., Hussain, M.S., Nawaz, M.A., Nguyen, V.C.
 Assessing the Efficiency and Total Factor Productivity Growth of the Banking Industry: Do Environmental Concerns Matters?
 (2021) Environmental Science and Pollution Research, 28 (16), pp. 20822-20838.
- Shen, H., Fu, M., Pan, H., Yu, Z., Chen, Y.

 The Impact of the COVID-19 Pandemic on Firm Performance
 (2020) Emerging Markets Finance and Trade, 56 (10), pp. 2213-2230.
- Sundarakani, B., Onyia, O.P.
 Fast, Furious and Focused Approach to Covid-19 Response: An Examination of the Financial and Business Resilience of the UAE Logistics Industry
 (2021) Journal of Financial Services Marketing, 26 (4), pp. 237-258.
- Wijesiri, M., Meoli, M.

Productivity Change of Microfinance Institutions in Kenya: A bootstrap Malmquist Approach

(2015) Journal of Retailing and Consumer Services, 25, pp. 115-121.

· Wronka, C.

Impact of COVID-19 on Financial Institutions: Navigating the Global Emerging Patterns of Financial Crime

(2021) Journal of Financial Crime, 29 (2), pp. 476-490.

- Xiazi, X., Shabir, M.
 - Coronavirus Pandemic Impact on Bank Performance (2022) *Frontiers in Psychology*, 13, pp. 1-14.
- Zakari, A., Khan, I., Tan, D., Alvarado, R., Dagar, V.
 Energy Efficiency and Sustainable Development Goals (SDGs) (2022) Energy, 239, p. 122365.

Zenebe Lema, T.

Determinants of Bank Technical Efficiency: Evidence from Commercial Banks in Ethiopia

(2017) Cogent Business and Management, 4, pp. 1-13.

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