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Reviewing the relationship between financial technology and financial performance in banking sector

Mohamed Ibrahim Mugableh
Department of Finance & Banking Science, College of Administrative & Financial Sciences, Irbid National University, Jordan

* Corresponding Author: **Mohamed Ibrahim Mugableh**

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Abstract
This paper reviews the studies that examined the relationships between financial technology and financial performance in banking sector in different countries using different methodologies. The results showed that financial technology (FinTech) products significantly influenced financial performance in banking sector.

Keywords: Financial Technology (FinTech), panel data, financial performance

Introduction

Today, the world is witnessing the fourth industrial revolution, which produced a new approach represented in information technology, which has become applicable to all areas of life. This revolution had its role in overcoming the various difficulties (time, effort, and costs) faced by all sectors of the national economy, the most important of which is the banking sector, so that banking services provided by banks are available to all and not restricted to a particular group or a particular segment of society, as information technology and financial technology have proven their importance in overcoming obstacles and difficulties with the repercussions of the Corona pandemic, COVID-19 Pandemic, which exhausted the world and forced it to expand the approach of electronic banking transactions. In other words, the COVID-19 Pandemic helped to besiege the disease and reduce its spread, which helped the spread of banking technology such as electronic payment cards debt and credit cards, and many governments and institutions completed their systems (systems of requesting services, and making financial settlements) as technological solutions that contribute to controlling the expansion of the pandemic (Al-Ababneh *et al*., 2022; Bataineh *et al*., 2022; Bekhet and Mugableh, 2012; Bekhet and Mugableh, 2016; Mugableh, 2013; Mugableh, 2015a; Mugableh, 2015b; Mugableh, 2017; Mugableh, 2018; Mugableh, 2019a; Mugableh, 2019b; Mugableh, 2020a; Mugableh, 2020b; Mugableh, 2021a; Mugableh, 2021c; Mugableh and Hamouri, 2022; Mugableh and Oudat, 2018a; Mugableh and Oudat, 2018b) [1, 5, 6, 7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27].

Literature Review

Al-Azzawi and Al-Tmimi (2015) [2] assessed the impact of investment in information and communication technology on the profitability of Jordanian commercial banks. The researchers used the Cobb-Douglas model to assess the impact of investment in information and communication technology on the profitability of Jordanian commercial banks. Also, two measures of profitability were used: return on total assets and return on equity as dependent variables for this purpose. The annual reports of a sample of Jordanian commercial banks were relied on as a source of primary data, and SPSS was used as a statistical tool for arranging and analysing data. The study concluded that there is a positive impact of investment in information and technologies on the profitability of a sample of Jordanian commercial banks used in the research.

Almulla and Aljughaiman (2021) [3] examined the impact of financial technology services (FinTech) provided by banks on their financial performance, and the study also aimed to assess the differences between conventional banks (CBs) and Islamic banks (IBs) with regard to financial technology services, where the financial performance was expressed as return on assets. The study sample consisted of 40 banks listed in the financial markets of the United Arab Emirates, Saudi Arabia and Bahrain for a period of six years, during the period 2014-2019. The study used the Panel Data model, and the results showed a negative relationship between FinTech services and the financial performance of Islamic and commercial banks.

Barasa *et al.* (2017) [4] investigated the impact of internet banking on the financial performance of commercial banks in Kenya. The study used a descriptive survey design, targeting all 34 commercial banks in Kisumu city. Quantitative data were analyzed using descriptive statistics (frequency and percentages). Statistical analysis was conducted using SPSS, and the results demonstrated a positive impact of internet banking services on the financial performance of commercial banks. The study recommended the need to develop internet banking services to increase the financial performance of commercial banks.

Chen *et al*. (2021) [8] assessed the impact of FinTech products on the performance of commercial banks in China. The required data was collected through questionnaires distributed to customers and employees of commercial banks in China. The collected data were examined using the Structural Equation Modeling, and the results of the study found a positive and significant impact of financial services on customer satisfaction and on the quality of services provided by banks.

Farouk and Dandago (2015) [9] examined the impact of investment in information technology on the financial performance of 24 commercial banks in Nigeria for the period 2006-2010. The data was obtained from the Central Bank of Nigeria and the Nigeria Stock Exchange, and the independent variables included investment in information technology (Hardware, Software, ATM), and the dependent variables included return on total assets, return on equity and return per share. The study used the Panel Data model, and the results concluded that there is a positive impact of the independent variables on the dependent variables in the study. The study recommended the need to develop the information technology sector in banks to increase the profitability of commercial banks.

Gaudio *et al*. (2021) [10] analyzed the impact of information and communication technology (ICT) on the profits and risks of 28 commercial banks in the European Union during the period 1995-2015. The results showed that information and communication technology led to the achievement of financial stability in commercial banks.

Kemboi (2018) [11] examined the relationship between FinTech and the financial performance of 43 commercial banks in Kenya for the period 2013-2016. The independent variables included mobile banking, internet and agency banking. The results of the study showed that mobile banking, internet banking, and agency banking had a positive impact on the financial performance that was measured using the total return on assets of the commercial banks in the sample.

Mahboub (2018) [12] examined the impact of investment in information technology on the financial performance of banks operating in Lebanon. The sample consisted of 50 commercial banks for the period 2009-2016. The independent variables included ATMs, mobile banking, internet banking, debit, and credit cards. The study used the multivariate least squares model for the analysis process. The results of the study showed that ATMs and internet banking services do not affect the financial performance of banks, while there was a significant effect of phone banking and debit and credit cards on the financial performance of banks in Lebanon.

Conclusion

The study analyzed the impact of information and communication technology (ICT) on the profitability of Jordanian commercial banks using two profitability measures: return on total assets and return on equity as dependent variables. Annual reports from selected banks were utilized as primary data, and statistical analysis was performed using SPSS. The findings revealed a positive impact of ICT investments on the profitability of the banks in the study. This underscores the importance of ICT in enhancing bank performance. The study recommends continued investment in ICT to further improve profitability in the banking sector.

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