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Effect of Financial Technology on the Financial Performance of Selected Banks in India

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Abstract

Banks and other financial organisations have embraced the use of financial technology in their day-to-day operations. This has encouraged efficiency in banking operations, enabling cost reductions through the use of the Internet and electronic payments, among other things. The quality of services provided by banks around the world has consequently improved. Evidence demonstrates that development professionals consistently believe that the outreach brought about by Fintech will improve banks' financial performance. The independent variable for the study was financial technology operationalised as service banking, mobile banking, Internet banking, and ATMs. The control variables were economic growth represented by economic growth rate, exchange rate represented by the Indian Rupee, and interest rates measured as the average bank lending rate on a quarterly basis. The dependent variable was financial performance of the banking industry scaled as ROA. A period of five years, between April 2018 and March 2022, was studied through the gathering of secondary data. Descriptive research design was assumed, while multiple linear regressions model was applicable in the analysis of the relationship between the variables. The data was analysed by the application of SPSS version 23. The study constitutes that relinquishment of mobile banking, online or Internet banking, and agency banking impacted the financial performance of banks positively. The study concluded that banks should invest in financial technology to upgrade their operational efficiency and persuasiveness. The study also recommends that banks should mobilise their customers to adopt these technologies, as well as channel resources for the enhancement of technological infrastructure. Banks should also adopt further agency networks, as this widens their customer base, especially in the rural areas. It is the recommendation of this study that measures ought to be adopted that will enhance Internet banking, economic growth rate, and interest rate, as these measures have a substantial influence on the performance of the banking industry in India.

Keywords: Fintech, Financial Performance, Internet Banking

Introduction

The history of financial technology (Fintech) is extensive. The term 'Fintech' first appeared in print in the 1950s, according to Coad and Rao (2008). Innovation has continuously played a crucial role in the financial sector over the years in ways that a vast majority undervalue and may never notice. Due to its importance in an organisation's daily operations, financial performance is a management area that has been and will remain the attention of management executives and academics for a very long time. Bankers believed that the introduction of the Automated Teller Machine (ATM) by Barclays Bank in the UK in 1967 would allow for the automation of many labour-intensive information-related services provided by banks. Following that, practically all banks across a number of countries, including India, made significant investments in Information and Communication (ICT) solutions, including ATM and Point of Sale (POS) terminals. When a few private banks, particularly in India, began utilising ICT technologies in the late 1990s, Internet banking was likewise perceived as being unsecure. The invention of credit cards in the 1950s marked the

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beginning of widespread use of technological innovation. It appeared to be the biggest development in the banking industry, up until the 1960s, when ATMs replaced tellers and branches. By that point, it was clear that there would be more. Electronic stock exchanges began in the 1970s, and bank-centralised servers and more advanced information and record-keeping frameworks began to emerge in the 1980s. The 1990s saw a rapid rise in Internet and Web-based company plans of action. The business environment in the Indian financial sector is quite dynamic, which has been linked to accelerated technical advancement, greater competition, and globalisation. To cut expenses and expand their market, commercial banks have embraced the usage of financial technology platforms. In actuality, the financial system in India is dominated by banks. The technological agendas and implementation capacities among financial groups and individual banks, however, vary greatly. In addition, new security concerns like cybercrime, hacking, and so on have emerged with the development of new goods and business activities. In India, the use of banking technology thus brings about both new potential and difficulties.

Research Problem

Globally, it has been seen that the financial sector is using financial technology more and more. As a result, bank operations, including dealing in securities, developing new products, using the Internet and accepting electronic payments, have been more efficient. Costs have also been greatly reduced. The quality of services and products offered by banking organisations worldwide have consequently improved. Evidence demonstrates that development professionals consistently believe that the outreach brought about by Fintech will improve banks' financial performance. However, banks are unlikely to benefit from increased financial performance if the extent of access to financial technology is constrained (Neaime & Gaysset, 2018).

To address concerns about cost, income, and competition, banks in India have made significant investments in Fintech. The key question is whether financial institutions that have adopted fintech have comparative cost advantages over those that have not. The new system served as a framework for additional forms of online banking, including agency banking, Internet banking, mobile banking, and online services offered by ATMs, thanks to the introduction of VISA ATMs. All of this was done to make it easier to perform various duties, including Internet banking. The primary objective was to improve performance. Therefore, it is crucial to investigate how Fintech affects the financial results of banks in India. Furthermore, a majority of earlier studies employed other financial technology metrics than those that are suggested be used in the current study. This study addressed the research question: What impact does financial technology have on the financial performance of the banks in India?

Research Objective

To determine the impact of financial technologies on the financial performance of the selected banks in India.

Literature Review

Technology is essential to the financial sector. Technologies help the bank lower operating expenses, improve performance and efficiency, and lower credit risk. Additionally, the tools let the bank engage with and keep up ties with consumers (Cheng & Qu, 2020; Lee & Shin, 2018; Goldstein et al., 2019; Thakor, 2020). A new type of business, known as a Fintech company, has emerged as a result of the development of technologies in the banking sector. The Fintech company may offer financial products with features similar to those of banking products, thanks to the technology platform. The Fintech business furthermore offers fresh items (e.g., cryptocurrencies). Younger generations, such as the millennial generation, are aware of the new items (Junger & Mietzner, 2020; Pu et al., 2021). The buzzword of the moment is Fintech, a combination of the terms 'financial' and 'technology'. The Fintech research area has drawn a lot of scholars since 2015. The Fintech research field covers a wide range of subjects. The 'hot' sub-fields of the Fintech industry, for instance, include themes like mobile payments, peer-to-peer lending, banking digitalisation, technology (cloud, artificial intelligence, learning machines, and so on), Fintech start-up companies, Fintech business models, Fintech platforms, and so on. The ecosystem, company

model, investment choices, and problems of Fintech were systematised by Lee and Shin (2018). In their analysis of earlier studies, Sangwan et al. (2019) categorised Fintech into three connected perspectives: the financial industry, innovative technology, and regulation. The importance of disruptive technologies for the finance sector was highlighted in the review study by Milian et al. (2019). We searched for a specific publication on the elements of Fintech, but it does not seem to have been found by academics. We contend that there is research gap in the area of Fintech. We want to choose the best currently available papers to assess and propose the Fintech aspects, to fill this gap. For the upcoming study on the determinants of Fintech, we think it will be important to comprehend the Fintech elements.

Data Analysis

Descriptive Analysis

Dispersion quantified the degree to which the data were dispersed from the convergent point, while central tendency quantified the degree to which the data on each variable were concentrated at a central point. The mean and standard deviation are used to measure dispersion and the central tendency. The analysis was taken from SPSS on a quarterly basis for five years (2018 to 2022). The results from all the variables are displayed in Table 1.

Table 1: Descriptive Statistics

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
ROA	21	2.50	4.70	3.55	0.66
Agency Banking	21	10.16	12.32	11.56	0.64
Mobile Banking	21	16.08	17.86	17.09	0.41
ATMs	21	7.47	7.87	7.77	0.11
Internet Banking	21	6.93	7.37	7.21	0.13
Interest Rate	21	5.83	18.00	9.58	2.88
Economic Growth	21	0.09	0.12	0.10	0.00
Exchange Rate	21	75.13	103.51	90.83	9.51

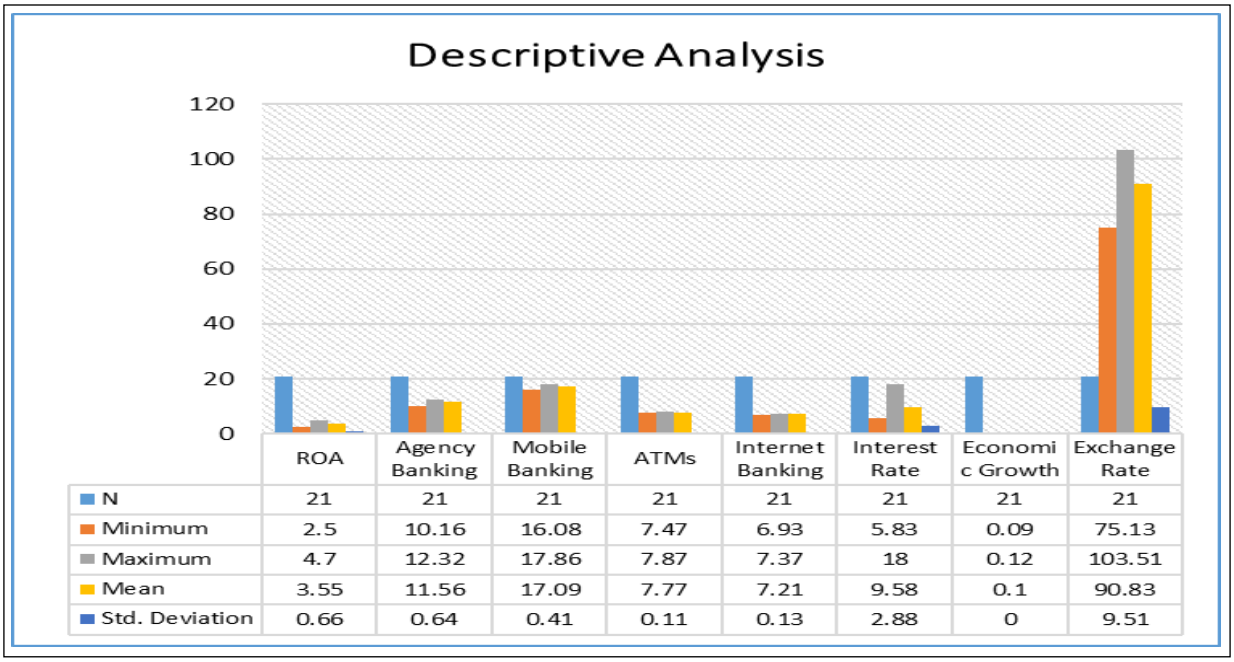

Fig. 1

Correlation Analysis

The association that exists between the variables is determined using correlation analysis. The study uses Pearson correlation to assess the linearity of the relationships between the variables. A correlation of one indicates a perfect positive correlation, whereas a correlation of 0 or a value close to zero indicates neither a relationship nor a strong association. The value −1 exhibits a perfect negative relationship, and values near it exhibit significant negative relationships. The Pearson correlation scores for the variables are displayed in Table 2.

We are interested in the relationship between the dependent and independent variables in the table. The relationship between agency banking and the financial performance of the banking sector is correlated (0.45), suggesting a moderately positive relationship between the two. This implies that the financial performance of the banking industry will increase as more transactions are made using mobile banking. Additionally, as indicated by the values 0.38 and 0.49, respectively, Internet banking and ATMs showed a moderately positive and significant correlation with performance. The p values are less than 0.05, indicating that the link is significant.

Positive correlation coefficients and p values less than 0.05 support the positive and substantial relationship between the economic growth rate and interest rates, and the financial performance of the banks in India. However, as shown by a negative coefficient and a p value less than 0.05, exchange rates showed a negative and significant association with the financial performance of the banking business. The correlation results also show that while there is a relationship between the independent variables, it is not strong enough to lead to multi-collinearity. The fact that no correlation between the independent variables was greater than 0.7 serves as proof of this.

Table 2: Correlation Analysis

		ROA	*Agency Banking*	*Mobile Banking*	*ATMs*	*Internet Banking*	*Interest Rate*	*Economic Growth*	*Exchange Rate*
ROA	Pearson Correlation Sig. (2-tailed)	1							
Agency Banking	Pearson Correlation Sig. (2-tailed)	0.45** 0.00	1						
Mobile Banking	Pearson Correlation Sig. (2-tailed)	0.49** 0.00	0.34* 0.00	1					
ATMs	Pearson Correlation Sig. (2-tailed)	0.38* 0.01	0.34* 0.00	0.24* 0.00	1				
Internet Banking	Pearson Correlation Sig. (2-tailed)	0.49** 0.00	0.38* 0.00	0.31* 0.00	0.96** 0.00	1			
Interest Rate	Pearson Correlation Sig. (2-tailed)	0.41** 0.00	0.32* 0.40	0.20 0.20	0.31 0.05	0.26 0.94	1		
Economic Growth	Pearson Correlation Sig. (2-tailed)	.050** 0.00	0.24* 0.00	0.28* 0.00	0.30* 0.00	0.29* 0.00	0.21 0.19	1	
Exchange Rate	Pearson Correlation Sig. (2-tailed)	−0.50** 0.00	0.26* 0.00	0.27* 0.00	0.24* 0.00	0.84** 0.00	0.24 0.12	0.20* 0.00	1

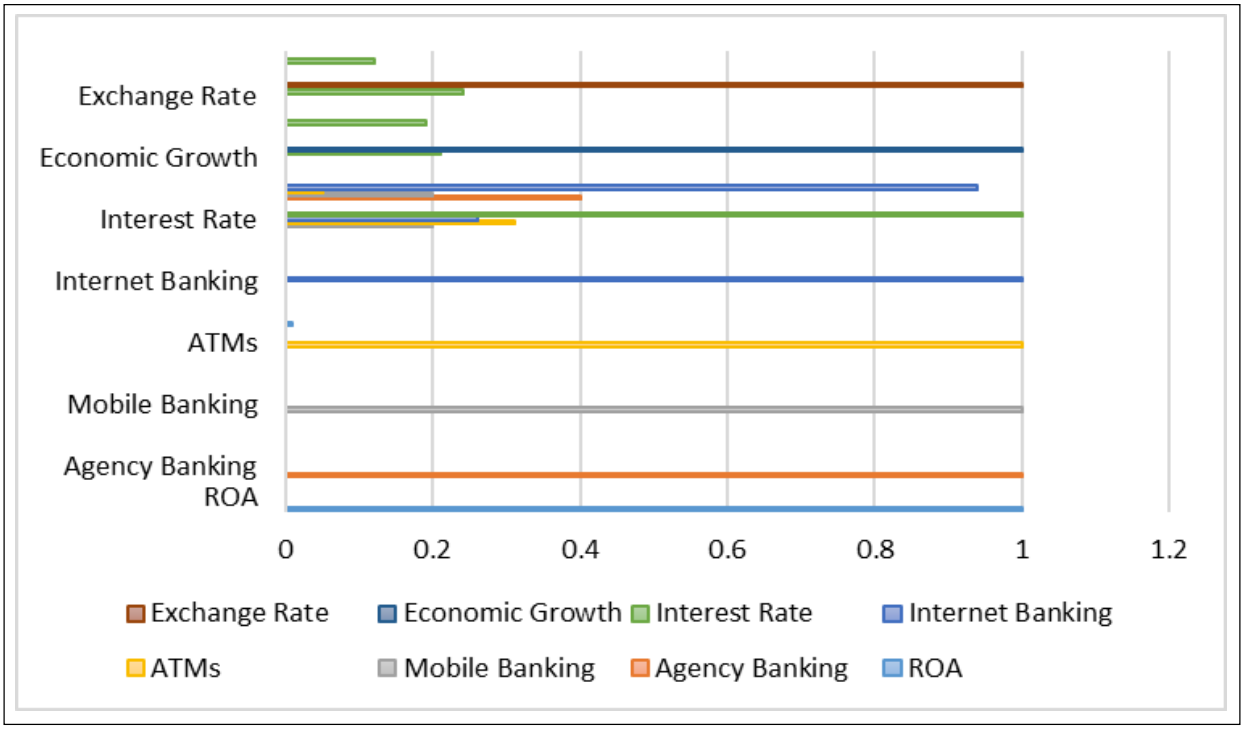

Fig. 2

Suggestions for Further Research

A study should be conducted on a related topic using a different model, such as the student t distribution model or the ordinal least square regression model, among other models, for statistical analysis. This would make it easier to compare the findings of this study with them and draw firm conclusions about the impact of financial technology on the financial performance of banks in India.

This study recommends that a follow-up study be conducted that takes into account primary data obtained through the use of interview guides or questionnaires and broadens the context to include various players in the financial sector to complement the current study, because it used secondary data to study financial technology and the financial performance of the banks in India.

The report also suggests that a similar study be conducted and that sample time be allotted for the study. This would guarantee thorough testing, and efficient and authenticated data collecting and data analysis using various models to determine whether there will be consistency in the outcomes and conclusions.

Conclusion

The study's findings support a number of conclusions. Only the number of transactions made through online banking, one of the four financial technology metrics included in this study, significantly improves the financial performance of Indian banks.

Although agency banking and mobile banking have a favourable impact on the financial performance of banks in India, this impact is not statistically significant and cannot be leveraged to improve financial performance of banks in India. The number of ATM transactions also showed a favourable but not statistically significant impact on the financial performance of the banks in India, suggesting that while the number of MFIs and ATM transactions have a favourable impact on financial performance, the impact is not statistically significant.

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