The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN 2312-9492 (Online), ISSN 2414-8970 (Print)

www.strategicjournals.com
Volume 11, Issue 4, Article 028

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The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN: 2312-9492 www.strategicjournals.com
Vol. 11, Iss.3, pp 443 – 453, October 19, 2024. www.strategicjournals.com, © Strategic Journals

DIGITAL BANKING AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KISII COUNTY

Vincent Nyauma, [1] Dr. Erastus Nyile, PhD [2] & Dr. Julius Miroga, PhD [3]

[1] Master Student, Jomo Kenyatta University of Agriculture and Technology, Kenya
[2,3] Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya

Accepted: October 5, 2024

DOI: http://dx.doi.org/10.61426/sjbcm.v11i4.3097

ABSTRACT

In Kisii County, Commercial banks have persistently sanctioned new banking innovation products for the financial services sector, influenced by evolving customer demands, novel financial products, technological progress, and the utilization of diverse distribution channels. Banks maintain competitiveness in distinct circumstances and adapt to the environment by introducing new goods, expanding existing offerings, and incorporating additional distribution channels. The study was anchored on theories namely; Schumpeter theory of innovation, Transaction theory of innovation, Circumvention theory of innovation and the theory of reasoned action. The study mainly sought to assess the influence of digital banking on financial performance of commercial banks in Kisii County. The study adopted descriptive correlational research design. The study targeted twenty-two (22) commercial banks which operates within Kisii County. The unit of analysis was 22 commercial banks and unit of observation was operation managers. CBK's annual banking report was the primary source document for secondary data. The study results indicated that there was a positive and significant relationship of digital banking and performance of commercial banks. The study recommends that the management of commercial banks in Kenya collaborate with digital service providers to foster synergy in extending and expediting the adoption of digital banking, ultimately enhancing financial performance.

Key Words; *Digital Banking, Technological Innovations and Financial Performance*

CITATION: Nyauma, V., Nyile, E., & Miroga, J. (2024). Digital banking and financial performance of commercial banks in kisii county. *The Strategic Journal of Business & Change Management,* 11 (4), 443 – 453. http://dx.doi.Org/10.61426/Sjbcm.v11i4.3097

INTRODUCTION

According to Hull (2018), they also make it easier for savers and borrowers to trade risks and maturity dates with one another with one another. Furthermore, by conducting borrower due diligence, banks decrease the knowledge asymmetry that exists between borrowers and investors, as well as savers, and they also reduce the transaction costs that are associated with lending (Abdelhafid & Buheji, 2019).

Banks play a crucial role in the economic development and stability of every nation; the efficiency with which they conduct their business operations is a matter of concern for enterprises, governments, and private citizens alike. Using financial performance criteria such as profitability, capital sufficiency, liquidity, and asset quality, it is possible to evaluate the operational success of each bank by analyzing the probability of its operational continuity (Dzhamalovna et al., 2020). This is the most effective method for evaluating the banking institution's operational success.

An evaluation of a company's financial position is intended to provide a clear picture of the firm's financial status, whereas financial performance is a subjective assessment of how well a company utilizes its assets from core activities to create income (Easwaran et al. 2021). (Wood, 2018) It is also possible to define it as a review of the overall financial status of an institution or the success of its policies and operations in terms of finances over a specific period of time. According to Weygandt et al. (2018), the income statement, balance sheet, and cash flow statement are the three components that make up an institution's yearly, quarterly, or monthly financial statements. These statements are where the institution's financial performance statistics are documented. There are a variety of quantitative indicators that can be utilized in order to analyses financial success. These metrics include financial viability, total cash earned, sales turnover, capitalization, and others. Measurement can also be accomplished through the utilization of financial parameters such as market value, liquidity, performance, cash flow, profitability, and debt ratios (Procházka, 2017).

In the modern era, technological breakthroughs and innovations have been of immense help to the business world. (Oliveira, Faria, Thomas, & Popovic, 2014) In recent decades, businesses have moved their focus to making information technology a basic component of their operations in order to acquire financial stability in corporate movements and higher competitive advantages. This shift in focus has occurred in order to benefit from higher levels of competitive advantages.

It was in the health insurance industry in the United Kingdom that the first creative process of invention took place. Hammer and Champy (2005) state that the transition was prompted by regulatory changes that required reconsideration as well as the necessity to restructure the business strategy in order to survive. Both of these factors worked together to encourage the transformation. Consequently, this led to the incorporation of information technology into the system of the organization, which in turn led to the sale of forty percent of the organization's operations. Due to the fact that they were able to rely on the information technology backbone, certain company activities, such as financial accounting, claim processing, and customer service, were outsourced to other countries as part of the creative process of innovation. It is possible to trace the origins of the financial restructuring of organizations in India back to the 1990s, when firms participated in activities such as mergers and acquisitions, capital injection through foreign direct investments, and outsourcing of some services (Revathy & Santhi, 2014).

In Indonesia, there are two studies that provide empirical evidence for mobile banking applications based on service quality. These studies are Susanto (2017) and Farah, Hasni, and Abbas (2018). For instance, Susanto (2017) investigates data from Indonesia and finds that mobile banking has a significant and positive impact on the level of service provided by commercial banks. The threshold of significance for this finding is 0.05.

Mobile banking deployment has the effect of increasing the total amount of banking transactions to Rp 6447 trillion, which is equivalent to RM 1.74 trillion. A study conducted by Farah, Hasni, and Abbas (2018) examines the utilization of mobile banking in the banking industry of Pakistan. This study reveals that the variables that were evaluated, which include trust in the bank, perceived risk, and performance expectations, are significantly significant to the adoption of mobile banking.

In a number of African countries, with the exception of South Africa, where personal computers and Internet connection are not easily accessible in many places, it is a well-known fact that cellular phones have been in great use. South Africa is one of the countries that has not encountered this phenomenon. In accordance with the findings of Nugroho and Miles (2009), mobile phones have been utilized as electronic pulses that can be utilized in a variety of transactions. It is conceivable that microfinance could find applications for such systems. It is highly likely that the aforementioned is an example of a financial invention that originated in undeveloped countries and was then transported to the industrial world. As stated in the Central Bank of Kenya Banking Sector Survey Innovation Survey (2020), one of the most important pillars of the Kenya Banking Sector Charter that was announced by the Central Bank of Kenya (CBK, 2019) was a strong emphasis on client centricity. The banking industry in Kenya is well-known for its adoption of technology, which has enabled it to satisfy the needs of customers for "anytime anywhere" financial services and to contribute to the enhancement of operational efficiency. As part of the process of aligning with the Charter, the industry has witnessed the diversification of products that are being adapted to fulfil the ever-changing needs of customers while simultaneously enhancing the competitive edge of institutions. There has been a movement in attention towards an alternative strategic currency, in which technology is considered as a revenue producer rather than a cost saver. This is despite the fact that institutions have been successful in leveraging technology to fulfil their objectives, mostly as a method for saving costs. Furthermore, with the beginning of the COVID-19 pandemic in the year 2020 and the subsequent disruptions to the lives and livelihoods of individuals in the economy, as well as the impact on businesses, including banks, it is evident that innovation will be an essential component in the process of being able to adjust to the new "business as usual."

Therefore, the creative process of innovation and financial success are tied to Kenya's financial performance. This is due to the fact that Kenya places a significant amount of emphasis on the business processes and activities that take place within the organization. According to Morogo (2015), the creative process of innovation gained popularity around the year 2020. This coincided with the beginning of a slowdown in the expansion of the banking sector and a consequent decrease in overall profitability, with only the largest banks benefiting. Consider the case of Chase Bank and Imperial Bank, both of which were placed in receivership as a result of their poor performance. In most cases, these are extremely small banks that had to pay a lot of money to keep their operations running and had not yet implemented efficient methods of providing services.

Digital banking denotes the utilization of the internet to access banking services, encompassing conventional functions such as balance enquiries, statement printing, fund transfers, and bill payments, in addition to contemporary services like electronic bill presentment and payment, all without necessitating a visit to a physical bank. The swift expansion and prevalence of the internet have generated significant opportunities and challenges for firms across diverse industries to market and distribute their products and services via this digital platform (Chau & Lai, 2003). In addition to the potential presented by this channel, banks and financial institutions globally have new obstacles concerning their operations, service delivery, and

competitive environment within the financial industry. In response to these issues, banks and financial institutions have adopted internet banking for service delivery (Chan & Lu, 2004). The objectives of introducing internet banking encompass cost reduction, enhancement of performance, greater accessibility, revenue augmentation, and client convenience.

From the customer's viewpoint, online banking provides a simple and effective means of managing personal money, as it is accessible 24/7 throughout the year without requiring a physical visit to a bank and can be utilized from various locations. Bradley and Stewart (2002); Chau and Lai (2003). Nyangosi (2011) contends that financial institutions implemented various electronic distribution methods to meet consumer expectations, hence enhancing customer satisfaction. Their study on the use of information technology in Kenyan banks, particularly regarding internet banking services, revealed that the incorporation of information technology into banking operations is essential for attaining enhanced customer satisfaction. Research indicates that consumers utilize bank websites to explore products, employ mobile banking for balance enquiries, access post-sale services, and execute transactions such as purchasing products, writing checks, paying bills, transferring funds, printing statements, and checking account balances online via computer (Acharya, 2009). This signifies that mobile banking is becoming progressively ubiquitous and essential in financial transactions. Currently, information and communication technology are essential to the banking sector, which is crucial for a strong economy (Ngumi, 2013).

Statement of the Problem

According to Mabrouk and Mamoghli (2010), there is still a lack of understanding regarding the impact that innovation has on financial performance. This issue is caused by a lack of knowledge regarding the factors that drive innovation, as well as the fact that the impact of innovation on bank performance has not been confirmed. Kenyan commercial banks have made significant investments in the implementation of new technology inside their institutions as well as in the training of their employees to enable them to operate the new systems that have been installed within the banks. PESALINK is a new product that was spearheaded by the Kenya Bankers Association that enables bank clients to shift funds from one bank to another via mobile phones, the internet, automated teller machines, bank agents, and branches (CBK, 2016). Towards the end of 2016, fifteen banks submitted applications to implement PESALINK so that it may be introduced.

In Kisii County, Commercial banks have continued to give their approval to new banking innovation products for the financial services industry, which has been influenced by the ever-changing needs of consumers, the development of novel financial products, the improvement of technology, and the utilization of different delivery channels. Through the introduction of new products, the expansion of existing ones, and the addition of new distribution channels, banks are able to continue to be competitive in the unique scenarios and are able to endure with the environment. According to reports from CBK (2016), the number of automated teller machines increased from 617 in 2006 to 2656 in 2016. However, there was a decline of 62, or 4%, in the number of ATMs in 2016 compared to the number of ATMs in 2015, which was 2718. From 2,301 in December 2022 to 2,282 in December 2023, the number of automated teller machines (ATMs) had a further reduction of 19 (0.83%), as stated in the report by CBK (2023). In the banking business, the adoption of agency, mobile, and digital banking has been the primary driver of the reduction in the number of automated teller machines (ATMs) that banks have installed.

In addition, commercial banks in Kisii County are included among the financial institutions that make use of technological advancements in the financial sector to improve commercial products, services, and operations. This provides valuable insights for the study that is now being conducted. The

proliferation of digital banking, for instance, has had a significant impact on the Kenyan financial sector (Esokomi and Otuya, 2020). Digital banking largely involves the utilization of agencies located in remote and inaccessible places in order to carry out banking activities such as cash transfers, deposits, withdrawals, and access to bank statements. According to Njagi (2017), commercial banks' use of mobile banking resulted in an increase in the number and volume of loans. In his study on the impact of internet banking on the financial performance of commercial banks in Kenya, Kiragu (2017) discovered that there is a positive correlation between increased commercial bank performance and the adoption of internet banking as a result of technical advancements in the financial service industry. As a result of the fact that new technological advancements in the financial sector manifest themselves every other time, commercial banks are required to be early adopters in order to preserve their competitive advantage. Increases in the use of Digital banking applications that are based on Application Programming Interface (API) have revolutionized banking in the sense that users do not need to visit banking halls in order to conduct transactions. The current study therefore sought to investigate effect of Digital banking on financial performance of commercial Banks in Kisii County.

Study objective

To assess the influence of digital banking on financial performance of commercial banks in Kisii County.

Hypothesis

H_{01}: Digital banking has no significant influence on financial performance of commercial banks in Kisii County.

LITERATURE REVIEW

Theoretical Literature Review;

Schumpeter Theory of Innovation

According to Yu Sheng and Ibrahim (2020), in contemporary competitive markets, innovation is a critical determinant of a company's long-term sustainability. This study examined the impact of a bank's readiness to embrace new technology on its success in Ghana. The research participants comprised 450 individuals from the Kumasi metropolitan area in Ghana, who were either employed by or patronized a bank. A multitude of investments would be undertaken by investor groups enticed by the potential for substantial returns, hence diminishing the innovation's profit margin. However, just as the economy appeared to attain equilibrium, a surge of fresh discoveries emerged, initiating the subsequent phase of economic activity. He elucidated the distinction between invention/discovery and innovation/commercialization/entrepreneurship, underscoring the significance of entrepreneurship and the search of chances that would catalyze actions to enhance income generation.

The institutional paradigm of innovation in the nineteenth century, characterized by individual inventors supplying findings to commercial ventures as potential inputs, emphasized the distinction between invention and innovation. Furthermore, the author considered innovations as disruptive creative forces that are necessary to the evolution of a capitalist economy. Throughout his life, Schumpeter's beliefs evolved to the extent that some scholars distinguish between his early and later perspectives, the former highlighting the significance of audacious individuals willing to embrace risks for the purpose of innovation.

Financial innovation refers to the development and adoption of new financial instruments, technologies, institutions, or markets within the financial industry. To achieve this, one must adopt unconventional approaches to resolving financial challenges and implement innovative financial instruments and methodologies. Many assert that innovation is essential for economic advancement at both the national and industrial levels. The capacity for innovation within a firm is considered a strategic asset and is crucial for sustaining a competitive advantage. Due to resource

restrictions, innovation is regarded as a potent instrument for enhancing a company's productivity.

Financial institutions are compelled to reinvent their operations to secure a sustainable competitive advantage and enhance their financial performance in light of globalization and increasing market competition. In the financial sector, competition is focused not solely on. The emergence of new market participants is attributable to the spread of innovative financial products, stemming from the sector's receptiveness to novel ideas and practices. The expansion of the financial industry has led to an increase in both the number of financial institutions and the complexity of the sector due to the introduction of innovative payment technologies and alternative asset storage methods. Financial innovations, including automated teller machines and debit cards introduced in the late 1990s, electronic money launched in early 2007, value capping implemented in 2009, the agent banking model established in mid-2010, the Cheque Truncation System (CTS) introduced in 2012, and T+1 cheque clearing introduced in 2016, have significantly propelled the rapid expansion of the banking industry in recent years. Alongside RTGS, EFT, ACH, MICR, retail banking, complimentary advisory services, execution of customers' standing instructions, utility bill payments, fund transfers, internet banking, telephone banking, mobile banking, insurance product sales, issuance of complimentary cheque books, travelers' cheques, and numerous additional value-added services, these represent further innovations in banking and the financial sector. This theory is significant for this study due to its insights into the motivations behind innovation and its potential impact on facilitating necessary changes within a business setting. This theory formed the basis of understanding the influence of digital banking on financial performance of commercial banks.

Transaction Cost Innovation Theory

Hicks and Niehans (1983) introduced the Transaction Cost Theory to elucidate the expenses linked to emerging technology. Transaction costs are intended to be minimized when a financial institution engages in financial reengineering or creates new products and services. This results from technology's ability to reduce service acquisition time, streamline processes, and enhance user accessibility. On the supply side, reduced operating expenses and increased revenues motivate financial institutions to implement incremental enhancements to their products and services. Hicks and Niehans (1983) assert that financial institutions should seek and implement new innovations to capitalize on the advantages they offer.

Within the context of the study, Kenyan commercial banks have embraced innovations and products from the information and technology sector, rendering the Transactional Cost Theory of Innovation relevant. The adoption of these items and their adaption to the financial industry have enabled banks to expand their client base, reduce operational costs, and provide additional products and services. Thus, this theory can be used to explain the influence of open banking on commercial banks' financial performance.

Circumvention Innovation Theory

Kane (1981) is predominantly recognized as the principal proponent of the notion that most governmental regulations and restrictions can be interpreted as a sort of hidden taxation that diminishes business profitability. One perspective posits (Karani & Nasieku, 2015) that the ongoing market innovation and regulatory innovation enforced by financial institutions constitutes a conflict between free economic forces and the political forces embodied by the state.

Portfolio management by financial institutions and the introduction of new products to the market are strategies implemented to avert profit decrease and mitigate the impact of government regulation. Consequently, financial institutions, according to Kane (1981), develop and launch new products in the market to generate profit and circumvent governmental regulations. New rules are implemented to enhance the enforcement of existing restrictions, in opposition to Kane's notion,

which is predominantly driven by a pursuit of profitability. However, in a free market, financial innovations frequently thrive.

Karani and Nasieku's (2015) study examine the influence of financial innovation on financial intermediaries in Kenya, utilizing this concept. Cherotich (2013) employs it to elucidate the relationship between financial innovations and performance. Financial reengineering generally involves the implementation of new technology, such as electronic funds transmission, aimed at enhancing an organization's profitability. This study will form the basis for understanding the influence of artificial intelligence on financial performance of commercial banks.

Theory of Reasoned Action

In the latter half of the 1970s, Martin Fishbein and Icek Ajzen were the original proponents of this concept. Hagger (2019) asserts that it is one of the most effective strategies for understanding and predicting intentional behavior. It specifically concentrates on individuals' perceptions of the future execution of a particular behavior. This model posits that any human action can be anticipated and elucidated by considering three fundamental cognitive factors: attitudes, denoting an individual's degree of favorability or unfavourability towards a behavior; social norms, indicating the impact of others; and intentions, representing the individual's decision to engage in or abstain from an action.

This human action should be defined as methodical, rational, and voluntary, according to the study. The perceptions individuals hold about the impact of robotic process automation (RPA) on their daily tasks are crucial in determining the extent of its implementation, given that RPA is a nascent technology requiring collaboration between human workers and software robots. Some employees may perceive that software robots are usurping their roles, leading to potential resistance to technological innovation. Trafimow (2019) indicates that critiques of the theory have a definitional perspective about the precise meaning of attitude.

Conceptual Framework

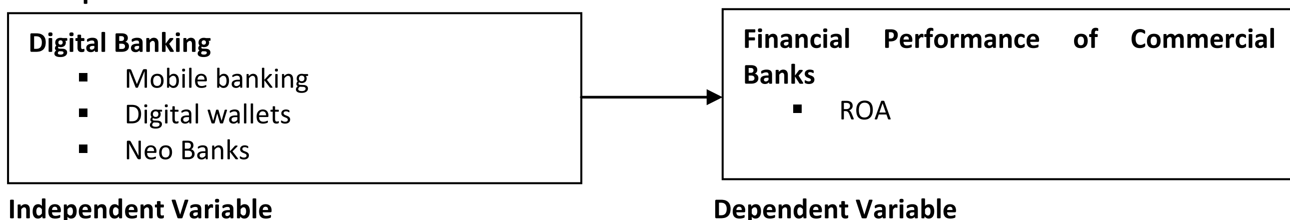

Figure 1: Conceptual Framework

METHODOLOGY

Research Design: Research design is viewed as the logical progression of how a study was carried out (Nachmias & Nachmias, 2004). The descriptive correlational research design is appropriate for studies that seek to establish a causal relationship between independent and dependent variables. It was utilized to evaluate the relationship between technological innovations and financial performance of commercial Banks in Kisii County.

Target Population: A study's target population is derived from the integration of all elements under consideration (Kothari & Garg, 2014). The study targeted twenty-two (22) commercial banks which operates within Kisii County. The unit of analysis was 22 commercial banks and unit of observation was operation managers.

Sample and Sampling Technique: Sampling is a comprehensive approach for selecting a representative group from a target population. Furthermore, it emphasizes the method that the researcher used in selecting the elements that was included in a study, which should be reliable and acceptable (Kothari, 2004). The study involved all

the 22Commercial Banks operating in Kisii County. A census analysis is viable when the research population is small and the components are fairly varied from one another (Cooper & Schindler, 2006).

Research Instrument: Data collection is simply the systematic gathering of relevant information to the sub-problems of a research area through the use of defined measures such as interviews, participant observations, focus group discussions, case histories, and narratives. Burns and Grove (2010). CBK's annual banking report was the primary source document for secondary data. Data collection to be used, was consistent with previous studies such as Githira and Nasieku (2015), Ndili and Muturi (2015), and Tarus and Omandi (2013), which used a similar approach to consolidate secondary data for their analysis.

Pilot Test: Data was collected from the secondary sources using document analysis method which was tested for stability. This was done by use of 9% of the sample size which was20 observations from two commercial banks that was randomly selected. This is in line with Creswell (2013) who suggests that a pilot study in academic research can be done with between 10% and 20% of the sample size. Mugenda (2011) asserted that, the accuracy of data to be collected largely depended on the data collection instruments in terms of stability. Data Analysis: The collected data was thoroughly examined and checked for errors and tabulated accordingly. The study used descriptive statistics to analyse the data to establish patterns, trends and relationships. Data was presented in frequency tables. The effect of Digital Banking and Financial Performance. The applicable regression model is shown below:

$y = \alpha + \beta_1 X_1 + \varepsilon$

Where;

Y= Financial Performance

α =constant

β_1 = parameter estimate

X_1 = Digital Banking

ε is the error of prediction.

FINDINGS AND DISCUSSION

Response Rate

The study involved all the 22Commercial Banks operating in Kisii County. A census analysis is viable when the research population is small and the components are fairly varied from one another (Cooper & Schindler, 2006).

Descriptive Statistics on Digital Banking

Digital Banking was estimated using alternative ratios. The ratios examined technological innovation. Summary of findings are in Table 1.

Table 1: Descriptive Statistics on Digital Banking

Mean	0.69
Std. Deviation	0.50
Minimum	0.08
Maximum	0.92
Skewness	1.91
Kurtosis	4.68

From Table 1 the average of Digital Banking was 0.69, with a minimum of 0.08 and maximum of 0.92. Since the ratio is positive it indicates listed banks have positive innovation.

Inferential statistics

Correlation Analysis

The correlation analysis presented in Table 2 focuses on the relationship between financial performance and Digital Banking

Table 2: Correlation Analysis

		Risk Assessment Practices	Project Performance
Risk Assessment Practices	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	105	
Project Performance	Pearson Correlation	.723**	1
	Sig. (2-tailed)	.000	
	N	105	105

Findings showed that there is a strong positive correlation between financial performance and Digital Banking, with a Pearson correlation coefficient of 0.723 ($p < 0.01$). This suggests that higher levels of Digital Banking are associated with improved performance, indicating that effective support and guidance can significantly enhance financial performance.

Analysis of linear regression;

Linear influence of Digital Banking on financial performance

This tested the direct influence Risk Assessment on performance. The results are shown in table 3. Regression analysis was used to determine the relationship between the independent or predictor variables and a dependent variable.

Table 3: Direct influence of Digital Banking on financial Performance

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.79	0.6241	0.6134	0.0041

Regression model summary in Table 3 had an Adjusted R-square of 0.6134 that indicates that 61.34 percent of changes in financial performance of commercial banks are explained by digital banking, while extraneous factors accounted for 38.66 percent.

$y = 2.516 + \mathbf{0.458X_2}$

Where;

y = Performance

X_2 = Digital Banking

CONCLUSIONS AND RECOMMENDATIONS

The objective sought to assess the influence of digital banking on financial performance of commercial banks in Kisii County. There was a positive and significant relationship of digital banking and performance of commercial banks.

The hypothesis sought to determine as to whether digital banking has no significant influence on financial performance of commercial banks in Kisii County. Therefore, the researcher rejects the null hypothesis that digital banking has no significant effect on performance of commercial banks in Kisii County. The study therefore concludes that digital banking has significant effect on performance of commercial banks in Kisii County.

The study established that digital banking as an innovation in banking, positively influenced the financial performance of commercial banks during a five-year period. The study recommends that the management of commercial banks in Kenya should work together with providers of digital services in order to cultivate synergy in the process of expanding and accelerating the adoption of digital banking, which will ultimately lead to improved financial performance.

Areas for further studies

Similar study can be done on other projects using similar variables, though using different methods.

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