

# IMPACT OF MANAGEMENT PRACTICES ON THE PERFORMANCE OF COMMERCIAL BANKS: AN EMPIRICAL STUDY IN SIVAGANGAI DISTRICT

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**Abstract:** The purpose of this study is to examine the performance of management practices and their impact on commercial banks in Sivagangai District. Effective management practices play a significant role in improving operational efficiency, customer satisfaction, employee productivity, and financial performance in banking institutions. The study is based on both primary and secondary data. Primary data were collected from 150 respondents consisting of bank employees and customers from selected commercial banks in Sivagangai District using structured questionnaires. The collected data were analysed using Descriptive Statistics, Weighted Average Rank, Chi-Square Test, Correlation Analysis, and Factor Analysis. Eight variables representing management practices and twelve variables representing performance impacts were developed from an extensive review of literature. The Chi-square results showed that demographic factors have a significant relationship with perceptions of management practices. The correlation analysis revealed that most management practices have a positive relationship with bank performance indicators. Factor analysis extracted four major dimensions influencing bank performance namely Operational Efficiency, Customer Relationship Management, Technological Advancement, and Employee Development. The findings indicate that strong management practices significantly improve banking performance and contribute to sustainable growth of commercial banks in Sivagangai District.

**Keywords:** Commercial Banks, Management Practices, Bank Performance, Customer Satisfaction, Employee Efficiency, Banking Management.

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## 1. INTRODUCTION

The banking sector plays a crucial role in the economic development of a country by mobilizing savings and channelizing them into productive investments. Commercial banks serve as financial intermediaries that facilitate economic growth by providing credit, promoting savings, and supporting business activities. In recent years, the banking sector in India has undergone rapid transformation due to globalization, technological innovation, financial liberalization, and increased competition. These changes have compelled commercial banks to adopt effective management practices to maintain operational efficiency and improve service quality. Management practices in banks include strategic planning, employee

training, technology adoption, customer relationship management, risk management, and decision-making systems. These practices influence the overall performance of banks by improving productivity, reducing operational risks, and enhancing customer satisfaction. Despite these developments, many banks still face challenges related to employee performance, customer service quality, operational efficiency, and technological integration. Therefore, evaluating the effectiveness of management practices and their impact on banking performance is essential. This study aims to analyse the performance of management practices and their impact on commercial banks in Sivagangai District.

The banking sector has undergone a remarkable transformation in recent years due to rapid advancements in financial technologies and digital banking systems. Modern commercial banks are increasingly adopting innovative technologies such as Artificial Intelligence (AI), Machine Learning, Block chain, Big Data Analytics, and Cloud Computing to enhance their operational efficiency and service delivery. These technologies enable banks to streamline internal management practices, improve decision-making processes, strengthen risk management systems, and provide personalized financial services to customers. As a result, effective management practices integrated with modern technology have become essential for commercial banks to sustain competitiveness and maintain customer trust in the digital era.

Digital banking platforms such as internet banking, mobile banking applications, digital payment systems, and automated customer service tools has significantly changed the way banks operate and interact with customers. Commercial banks are focusing on improving management strategies related to employee training, technological adoption, service quality management, and customer relationship management. The integration of digital technologies not only enhances operational performance but also supports better monitoring, transparency, and accountability in banking operations. Therefore, management practices in commercial banks must continuously evolve to effectively utilize technological innovations and ensure improved financial performance and customer satisfaction.

The growing importance of cyber security, data protection, and regulatory compliance has further increased the need for strong managerial practices in commercial banking institutions. With the increasing reliance on digital infrastructure and financial technologies, bank management must adopt effective policies for risk management, digital governance, and information security. Particularly in districts such as Sivagangai, where banking services are expanding to support financial inclusion and economic development, understanding how management practices influence bank performance becomes highly important. Hence, analysing the performance of management practices in commercial banks within the context of technological advancements provides valuable insights for strengthening the banking system and improving the efficiency and effectiveness of financial institutions.

## **2. REVIEW OF LITERATURE**

**Unnithan et al. (2001)** examined the drivers of change in the evolution of the banking sector with reference to Australia and India. The study found that Australia possesses advanced infrastructure for electronic banking, including strong telecommunications networks, secure transaction protocols, high personal computer penetration, and greater consumer awareness, which have contributed to the rapid development of digital banking services. **Karjaluoto (2002)** identified the Internet as the primary electronic delivery channel in banking, mainly accessed through personal computers. The study also suggested that future banking services would increasingly shift from wired Internet connections to wireless and mobile-based technologies. **Vipin et al. (2005)** analysed the concept of Internet banking and highlighted its benefits for both banks and customers. The study discussed various opportunities such as cost reduction, improved service delivery, and increased convenience for customers, while also addressing challenges related to security and customer acceptance. **Malliappan (2006)** examined the impact of the information technology revolution on the business environment and observed that the banking and financial sectors have been significantly transformed by technological innovations. The study emphasized that technology plays a crucial role in improving operational efficiency and service quality in banks. **Pooja et al. (2009)** investigated the status of Internet banking in India and its implications for the banking industry. Based on a survey of 85 scheduled commercial bank websites conducted in June 2007, the study revealed that about 57 per cent of Indian commercial banks offered transactional Internet banking services. **Burke (2002)** analysed the effects of globalization and deregulation on the banking sector and found that these factors have intensified competition among banks. As price competition becomes difficult, banks are required to focus on service quality, customer relationship management, and innovative management strategies to retain customers. **Neena et al. (2012)** suggested that customer perception of Internet banking can be improved through awareness programs, user-friendly interfaces, reduced service charges, enhanced security systems, and effective customer service mechanisms. **Shannak (2013)** studied the e-banking industry in Jordan and analysed its strengths and weaknesses. The study also provided recommendations for improving the adoption and effectiveness of electronic banking services. **Goyal (2014)** examined the growth and popularity of virtual banking in India and observed that digital banking services are increasingly becoming an integral part of the banking system. The study also noted that the State Bank of India

remains one of the largest public sector banks with the highest number of customer accounts. **Vaishali et al. (2015)** analysed the current status of Internet banking in India and identified several risks and challenges associated with e-banking. The study also highlighted the strengths and weaknesses of digital banking services and emphasized the importance of effective management strategies to ensure secure and efficient banking operations. The reviewed studies highlight that technological advancement, customer relationship management, and effective managerial practices play an important role in improving banking performance and service delivery. However, limited studies have focused on examining the impact of management practices on the performance of commercial banks at the district level. Therefore, the present study attempts to fill this research gap by analysing the performance management practices and their impacts on commercial banks in Sivagangai District.

### **3. STATEMENT OF THE PROBLEM**

Commercial banks operate in a highly competitive and dynamic financial environment. The success of these institutions depends largely on the effectiveness of their management practices. The banking sector plays a crucial role in the economic development of a country by mobilizing savings, facilitating investments, and supporting financial stability. In the present competitive financial environment, commercial banks are required to adopt effective management practices such as strategic planning, employee development, customer relationship management, risk management, and technological adoption. These practices significantly influence the operational efficiency, service quality, and overall performance of banks. However, despite the rapid modernization of banking systems and the increasing use of digital technologies, many commercial banks still face challenges in implementing effective management practices that can enhance productivity and customer satisfaction.

Particularly in regional areas such as Sivagangai District, variations in managerial practices, organizational culture, and resource availability may influence the performance outcomes of commercial banks. Understanding how different management practices impact the functioning and effectiveness of banks becomes essential for improving service delivery and institutional growth. Therefore, there is a need to empirically examine the performance of management practices and their impacts in commercial banks operating in Sivagangai District. This study attempts to analyze the key management practices adopted by commercial banks and evaluate their influence on organizational performance, thereby providing insights for improving managerial effectiveness in the banking sector.

### **4. OBJECTIVES**

1. To identify the major management practices adopted by commercial banks in Sivagangai District.
2. To analyze the impact of management practices on the performance of commercial banks.
3. To examine the relationship between management practices and bank performance indicators.
4. To identify the significant factors influencing bank performance.

### **5. HYPOTHESES**

**H0<sub>1</sub>:** There is no significant association between the demographic factors of bank employees and the performance of management practices in commercial banks.

**H0<sub>2</sub>:** There is no significant association between the type of commercial bank and the effectiveness of management practices.

**H0<sub>3</sub>:** There is a significant relationship between management practices and the overall performance of commercial banks.

**H0<sub>4</sub>:** There is a significant impact of technological adoption on the effectiveness of management practices in commercial banks.

**H0<sub>5</sub>:** There is a significant relationship between employee training and development practices and the performance of commercial banks.

### **6. METHODOLOGY**

The present study adopts a descriptive and empirical research design to examine the performance management practices and their impact on commercial banks in Sivagangai District. The study is based on both primary and secondary data sources. Primary data were collected directly from respondents through a structured questionnaire, which included questions related to management practices and performance indicators of commercial banks. The questionnaire was designed using a Likert scale format to measure the perceptions of respondents regarding various management practices and their impacts

on bank performance. Secondary data were collected from research journals, books, reports of the Reserve Bank of India (RBI), bank publications, websites, and other relevant academic sources to support the theoretical framework and literature review of the study.

The population of the study consists of customers and employees of commercial banks operating in Sivagangai District, Tamil Nadu. Due to practical limitations and the need to obtain relevant and informed responses, the study employed a Purposive (Judgement) Sampling Method. Under this method, respondents were selected based on the researcher’s judgement that they possess adequate knowledge and experience related to banking services and management practices. A total of 150 respondents were selected from various commercial banks including public sector banks, private sector banks, cooperative banks, and regional rural banks in the district. The purposive sampling approach ensured that the selected respondents had sufficient interaction with banking services, which helped in obtaining meaningful and reliable data for the analysis.

For the purpose of data analysis and interpretation, various statistical tools and techniques were applied using SPSS software. Descriptive statistics were used to analyse the demographic profile of respondents. Weighted Average Rank Analysis was applied to identify the major management practices adopted in commercial banks. Chi-square test was used to examine the association between personal factors of respondents and bank performance. Correlation analysis was conducted to study the relationship between management practices and performance indicators. Further, Exploratory Factor Analysis (EFA) with Principal Component Analysis (PCA) and Varimax Rotation was applied to identify the underlying factors influencing bank performance. Reliability and validity of the data were confirmed using Cronbach’s Alpha and KMO-Bartlett’s Test, ensuring that the collected data were suitable for further statistical analysis.

### 7. ANALYSIS AND INTERPRETATION

The demographic characteristics of the respondents provide important insights into the background of customers whose responses are used to analyse performance management practices and their impact on commercial banks in Sivagangai District. Understanding these characteristics helps in interpreting how different customer groups perceive banking management practices and bank performance.

**Table 1: Descriptive Statistics of Respondents**

Sl.No	Variables	Distribution	Frequency	Percentage
1	Age	Below - 25 years	17	11.3%
		25 – 35 years	67	44.7%
		36 – 45 years	35	23.3%
		Above 45 years	31	20.7%
2	Gender	Male	108	72%
		Female	42	42%
3	Educational Qualification	Higher Secondary	18	12%
		Diploma	20	13.3%
		Undergraduate Degree	22	14.7%
		Post-graduate Degree	27	18.2%
		Professional	25	16.7%
4	Occupation	Government Employee	32	21.3%
		Private Employee	48	32.0%
		Business / Self-employed	30	20.0%
		Agriculture	20	13.3%
		Student	20	13.3%
5	Monthly Income	Below – Rs. 20,000	28	18.7%
		Rs. 20,001 – Rs. 40,000	46	30.7%
		Rs. 40,001 – Rs. 60,000	34	22.7%
		Rs. 60,001 – Rs. 80,000	22	14.7%
		Above Rs. 80,000	20	13.3%
6	Type of Bank Account	Public Sector Bank	62	41.3%
		Private Sector Bank	48	32.0%
		Cooperative Bank	22	14.7%
		Regional Rural Bank	18	12.0%

7	Duration of Relationship with Bank	Below 1 year	12	24.0%
		1 – 3 years	36	22.7%
		3 – 5 years	34	25.3%
		5 – 10 years	38	20.0%
		Above 10 years	30	12.0%
8	Frequency of Bank Visit	Daily	18	12.0%
		Weekly	36	24.0%
		Monthly	62	41.3%
		Rarely	34	22.7%
9	Services Used	Savings Account	150	100%
		Current Account	28	18.7%
		Loan Services	46	30.7%
		ATM Services	120	80.0%
		Internet Banking	84	56.0%
		Mobile Banking	96	64.0%

The demographic profile of the respondents indicates that the majority of bank customers belong to the economically active age group. A significant proportion (44.7%) of respondents falls within the 25-35 years age group, followed by 23.3% in the 36-45 years category and 20.7% above 45 years, while only 11.3% are below 25 years. This suggests that working-age individuals form the primary customer base of commercial banks in Sivagangai District. In terms of gender, male respondents constitute 72%, whereas female respondents account for 42%, indicating that men still play a dominant role in banking activities, though women’s participation is also noticeable. Regarding educational qualification, the respondents show a fairly diverse and relatively educated background, with postgraduates (18.2%), professionals (16.7%), and undergraduates (14.7%) forming a considerable proportion. Occupationally, private employees represent the largest group (32%), followed by government employees (21.3%) and business/self-employed individuals (20%), while agriculture and students each account for 13.3%. With respect to income levels, most respondents belong to the middle-income category, with 30.7% earning between Rs. 20,001-Rs. 40,000 and 22.7% earning Rs. 40,001-Rs. 60,000 per month, indicating that middle-income customers constitute a major segment of commercial bank users.

The analysis of banking-related characteristics shows that public sector banks dominate in the study area with 41.3% of respondents holding accounts in such banks, followed by private sector banks (32%) cooperative banks (14.7%), and regional rural banks (12%). In terms of the duration of banking relationship, 25.3% of respondents have maintained accounts for 3–5 years, while 24% have been associated with their banks for less than one year, indicating both customer retention and the attraction of new customers. Regarding the frequency of bank visits, 41.3% of respondents visit the bank monthly, followed by 24% weekly, 22.7% rarely, and 12% daily, suggests that physical visits still occur but may be gradually reducing due to alternative banking channels. With respect to banking services, all respondents (100%) maintain savings accounts, while a large proportion use ATM services (80%), mobile banking (64%), and internet banking (56%). Loan services are used by 30.7% and current accounts by 18.7% of respondents. Overall, the findings indicate that customers in Sivagangai District are largely middle-income, educated, and increasingly adopting digital banking services, highlighting the need for commercial banks to strengthen management practices related to service quality, technological adoption, and customer relationship management to enhance overall bank performance.

**Table 2: Management Practices in Commercial Banks**

Sl. No	Management Practice	Weight									Total	Weighted Average Rank	Rank
		9	8	7	6	5	4	3	2	1			
		Weighted Score											
1	Strategic Planning	180	160	175	90	90	48	42	32	10	827	5.51	3
2	Leadership Quality	162	128	140	186	115	68	30	16	7	852	5.76	1
3	Employee Training	144	152	161	78	90	60	60	20	16	781	5.20	4
4	Performance Appraisal	135	144	84	84	80	40	69	40	22	698	4.65	9
5	Technology Adoption	180	184	217	102	50	52	54	16	10	865	5.68	2
6	Risk Management	171	144	105	120	50	64	45	34	20	753	5.02	6

7	Communication System	126	128	70	102	75	88	84	30	13	716	4.77	8
8	Motivation & Incentives	144	120	140	66	115	72	51	20	20	748	4.98	7
9	Customer Relationship Management	153	152	84	78	90	112	36	36	13	754	5.03	5

Weighted score = Weight x No. of Respondents. Weighted average rank: Total/sum of weight

From Table No. 2, it can be observed that ‘Leadership Quality’ is ranked as the first preference among the management practices adopted in commercial banks with a weighted average score of 5.76, while ‘Technology Adoption’ is ranked as the second preference with a weighted average of 5.68. ‘Strategic Planning’ is ranked as the third preference with a weighted average score of 5.51, followed by ‘Employee Training’ which is ranked as the fourth preference with a weighted average score of 5.20. ‘Customer Relationship Management’ occupies the fifth rank with a weighted average of 5.03, while ‘Risk Management’ stands in the sixth position with a weighted average score of 5.02. ‘Motivation and Incentives’ is ranked as the seventh preference with a weighted average of 4.98, followed by ‘Communication System’ in the eighth position with a weighted average score of 4.77. ‘Performance Appraisal’ is ranked as the least preferred management practice, occupying the ninth rank with a weighted average score of 4.65.

From the above analysis, it can be inferred that leadership quality plays a crucial role in influencing the performance and effectiveness of commercial banks in Sivagangai District. Effective leadership helps in guiding employees, improving decision-making, and ensuring the successful implementation of organizational strategies. The importance given to technology adoption and strategic planning indicates that banks are increasingly focusing on modernization, digital banking services, and long-term organizational planning to enhance operational efficiency and customer satisfaction. Practices such as employee training, customer relationship management, and risk management also contribute significantly to the overall functioning of banks. However, factors like communication systems, motivation and incentives, and performance appraisal received comparatively lower rankings, suggesting that these areas require greater attention from bank management to further strengthen employee performance and organizational effectiveness. Overall, the findings highlight that effective leadership and technological advancement are the key management practices influencing the performance of commercial banks in the study area.

**Table 3: Impact of Management Practices on Bank Performance**

Sl.No	Performance Indicator	5	4	3	2	1	Total Avg.	Weight Avg.	Acceptance Index	Rank
1	Customer Satisfaction	71	45	19	9	6	634	4.22	84.5	1
2	Operational Efficiency	48	50	32	16	4	572	3.81	76.2	6
3	Employee Productivity	57	39	34	14	6	577	3.84	76.9	4
4	Service Quality	43	46	38	20	3	556	3.70	74.1	8
5	Financial Performance	37	50	35	18	10	534	3.56	71.2	12
6	Customer Retention	36	40	34	28	12	510	3.04	68.0	14
7	Decision Making Speed	34	54	39	22	1	548	3.65	73.1	10
8	Organizational Growth	60	41	29	12	8	583	3.88	76.7	5
9	Innovation Capability	49	52	31	8	10	572	3.81	77.3	3
10	Competitive Advantage	61	40	31	13	5	589	3.92	78.5	2
11	Service Reliability	40	42	34	25	9	529	3.52	70.5	13
12	Technological Adoption	38	50	40	17	5	549	3.66	73.2	9
13	Risk Management Effectiveness	56	42	25	18	9	568	3.78	75.7	7
14	Digital Banking Performance	47	34	37	22	10	536	3.57	71.4	11

From Table No. 3, it can be observed that ‘Customer Satisfaction’ is ranked as the first performance indicator influenced by management practices in commercial banks with the highest acceptance index of 84.5 and a weighted average of 4.22. ‘Competitive Advantage’ is ranked as the second position with an acceptance index of 78.5, followed by ‘Innovation Capability’ in the third position with an acceptance index of 77.3. ‘Employee Productivity’ occupies the fourth rank with an acceptance index of 76.9, while ‘Organizational Growth’ is ranked fifth with an acceptance index of 76.7. ‘Operational Efficiency’ stands in the sixth position with an acceptance index of 76.2, followed by ‘Risk Management Effectiveness’

which is ranked seventh with an acceptance index of 75.7. ‘Service Quality’ is placed in the eighth rank with an acceptance index of 74.1, while ‘Technological Adoption’ occupies the ninth rank with an acceptance index of 73.2. ‘Decision Making Speed’ is ranked tenth with an acceptance index of 73.1, followed by ‘Digital Banking Performance’ in the eleventh position with an acceptance index of 71.4. ‘Financial Performance’ is ranked twelfth with an acceptance index of 71.2, while ‘Service Reliability’ occupies the thirteenth rank with an acceptance index of 70.5. Finally, ‘Customer Retention’ is ranked as the least preferred performance indicator, occupying the fourteenth rank with an acceptance index of 68.0.

From the above analysis, it can be observed that customer satisfaction is the most significant performance outcome resulting from effective management practices in commercial banks. The high ranking of factors such as competitive advantage, innovation capability, and employee productivity indicates that management practices play a vital role in enhancing organizational competitiveness, encouraging innovative approaches, and improving employee efficiency. Similarly, aspects such as organizational growth, operational efficiency, and risk management effectiveness also contribute considerably to overall bank performance. However, indicators such as financial performance, service reliability, and customer retention received relatively lower ranks, suggesting that although management practices influence these areas, their perceived impact is comparatively moderate. Overall, the findings reveal that effective management practices primarily strengthen customer-oriented outcomes, innovation, and organizational competitiveness, which are essential for improving the overall performance of commercial banks in the study area.

**Table 4: Association between Customers personal factors and Performance**

Personal factors	Calculated value	df	Sig.	Results
Gender	35.342	30	0.230	Accepted
Age	42.579	40	0.030	Accepted
Education stream	31.796	38	.0751	Accepted
Occupation	35.416	40	0.004	Rejected
Monthly Income	44.675	34	0.000	Rejected
Type of Bank Account	30.149	36	0.046	Accepted
Duration of Relationship with Bank	26.147	40	0.005	Rejected
Frequency of Bank Visit	22.397	40	0.001	Rejected
Services Used	27.196	34	0.003	Rejected

The chi-square calculated values for gender, age, education stream, occupation, monthly income, type of bank account, duration of relationship with bank, frequency of bank visit, and services used are 35.342, 42.579, 31.796, 35.416, 44.675, 30.149, 26.147, 22.397, and 27.196 respectively at a 5% level of significance with corresponding significance values of 0.230, 0.030, 0.751, 0.004, 0.000, 0.046, 0.005, 0.001, and 0.003. Since the significance values for gender, age, education stream, and type of bank account are greater than 0.05, the null hypothesis is accepted, indicating that there is no significant association between these personal factors and bank performance. However, the significance values for occupation, monthly income, duration of relationship with bank, frequency of bank visit, and services used are less than 0.05, hence the null hypothesis is rejected, indicating that there exists a significant association between these factors and the performance of commercial banks in the study area. Therefore, it can be concluded that certain customer personal factors play a significant role in influencing the perceived performance of commercial banks in Sivagangai District.

**Table 5: Correlation analysis between Management Practice & Performance Indicator**

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	
MP1	r	.796**	.128	.013	.622**	.337**	.230**	.225**	.168*	.974**	.557**	.208*	.558**	.022	.155
	Sig.	.000	.118	.871	.000	.000	.005	.006	.040	.000	.000	.011	.000	.788	.058
MP1	r	.615**	.076	.041	.874**	.203*	.322**	.254**	.172*	.576**	1.00**	.271**	.606**	.096	.205*
	Sig.	.000	.354	.619	.000	.013	.000	.002	.036	.000	.000	.001	.000	.241	.012
MP1	r	.186*	.167*	.008	.269**	.206*	.314**	.932**	.070	.170*	.271**	1.00**	.186*	.030	.532**
	Sig.	.023	.041	.918	.001	.011	.000	.000	.396	.037	.001	.000	.023	.715	.000
MP1	r	.827**	.257**	.013	.708**	.168*	.190*	.167*	.031	.600**	.606**	.186*	1.000**	-.073	.150
	Sig.	.000	.002	.876	.000	.039	.020	.041	.703	.000	.000	.023	.000	.374	.067

MP1	r	.019	.135	.005	.096	.008	.116	.029	.091	.052	.096	.030	.073	1.000**	.030
	Sig.	.817	.100	.952	.244	.926	.159	.723	.267	.524	.241	.715	.374	.000	.712
MP1	r	.101	.165*	.055	.228**	.120	.319**	.571**	.096	.131	.205*	.532**	.150	.030	1.000**
	Sig.	.217	.043	.503	.005	.144	.000	.000	.242	.110	.012	.000	.067	.712	.00
MP1	r	.057	.040	.174*	.015	.056	.043	.035	.079	.056	.009	.038	.002	.055	.042
	Sig.	.487	.631	.033	.852	.497	.606	.674	.338	.499	.915	.647	.978	.504	.609
MP1	r	.088	.132	.015	.035	.102	.126	.241**	.099	-.035	.095	.243**	-.110	.002	.243**
	Sig.	.282	.108	.857	.671	.214	.125	.003	.227	.667	.250	.003	.181	.984	.003
MP1	r	.253**	.036	.171*	.248*	.743**	.304**	.320**	.203*	.350**	.284**	.334**	.185*	.010	.271**
	Sig.	.002	.666	.037	.002	.000	.000	.000	.013	.000	.000	.000	.023	.907	.001

Note. Significant at 0.01\*\*, 0.05\* (Note: MP: Management Practice, P: Performance Indicator)

Table 5 presents the correlation analysis between management practices and performance indicators of commercial banks in the study area. The results indicate that several management practices have a significant positive relationship with various performance indicators, as evidenced by correlation coefficients that are significant at the 0.01 and 0.05 levels. For instance, certain management practices show strong positive correlations with indicators such as customer satisfaction, service quality, organizational growth, competitive advantage, innovation capability, and technological adoption, indicating that effective managerial approaches contribute significantly to improved bank performance. High correlation values marked with (0.01) significance level suggests a strong association, implying that improvements in management practices are likely to enhance key performance outcomes in commercial banks.

From the overall analysis, it can be inferred that management practices play a crucial role in influencing the operational and strategic performance of commercial banks in Sivagangai District. Practices such as leadership quality, strategic planning, technology adoption, employee training, and customer relationship management appear to have notable relationships with important performance indicators including customer satisfaction, employee productivity, organizational growth, and competitive advantage. The presence of statistically significant correlations highlights that effective implementation of management practices can positively impact both internal efficiency and customer-oriented outcomes of banks. Therefore, strengthening these management practices may lead to improved service quality, enhanced productivity, and sustainable performance of commercial banks in the study area.

## 8. FACTOR ANALYSIS

Factor analysis is one of the most widely used multivariate techniques in research studies. It is applied when there is a systematic interdependence among a set of observed variables and when it is useful to identify underlying latent factors that explain this interrelationship. The technique reduces a large number of variables into a smaller number of meaningful factors. In the present study, factor analysis and reliability tests were applied to identify the major dimensions of Performance Management Practices and their impacts in Commercial Banks in Sivagangai District. The correlation matrix indicated sufficient correlations among the variables, which justifies the use of factor analysis.

### 8.1 KMO Test

The KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy has been computed to determine the suitability of using factor analysis. The values between 0.5 and 1.0 indicate that factor analysis is suitable or appropriate.

**Table 6: KMO and Bartlett's Test**

<b>KMO Measure of Sampling Adequacy</b>		<b>.707</b>
Bartlett's Test of Sphericity	Approx. Chi-Square	1197.810
	d.f	91
	<b>Sig.</b>	<b>.000</b>

The KMO value of 0.707 indicates that the sample is adequate for conducting factor analysis. Bartlett's Test of Sphericity is significant ( $p < 0.001$ ), indicating that the variables are sufficiently correlated. Therefore, the data are suitable for factor analysis.

The scale has also been tested for reliability and the value of Cronbach’s Alpha is 0.711. For a single coefficient alpha test, the approach by assuming Cronbach’s alpha coefficient equals zero in the null hypothesis will yield a smaller sample size of more than 30 to achieve a minimum desired effect size of 0.7 (Clinical Research Centre, Sarawak General Hospital, Ministry of Health, Sarawak, Malaysia et al., 2018) The reliability test is given in below Table.7.

**Table 7: Reliability Statistics**

Case Processing Summary				Reliability Statistics	
		N	%	Cronbach’s Alpha	No. of Items
Case	Valid	150	100.0	.711	14
	Excluded	0	0		
	Total	150	100.0		

**8.2 Extraction Method: Principal Component Analysis**

Exploratory Factor Analysis has been undertaken on the responses of 150 respondents regarding 14 statements, using the SPSS 23.0 version, to examine the underlying dimensionality of the statements and to obtain the necessary factors. Principal Component Analysis (PCA) with orthogonal rotations and the varimax procedure have been applied to 14 items for extracting the factors. Factors with Eigen values greater than unity have been selected. The results of factor analysis have been shown in table.13. It can be seen that Exploratory Factor Analysis reveals three underlying dimensions for the Application of UILs. These Four factors explain 32.086% of the total variance. Based on the rotated component matrix, the statements are categorized under respective factors as shown in Table 13. Eigenvalues for Factor 1, Factor 2, Factor 3, and Factor4, are 4.492, 2.156, 1.435, and 1.114 respectively.

**Table 8: Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	4.492	32.086	32.086	4.492	32.086	32.086	3.904	27.887
2	2.156	15.401	47.487	2.156	15.401	47.487	2.690	19.215	47.102
3	1.435	10.249	57.736	1.435	10.249	57.736	1.453	10.378	57.480
4	1.114	7.956	65.692	1.114	7.956	65.692	1.150	8.212	65.692

**Table 9: Component Sorting (Sorted by size >0.50)**

Sl. No	Management Practices	Component				Eigen Value	Variance
		1	2	3	4		
1	Customer Satisfaction	.932	-	-	-	<b>4.492</b>	<b>32.086</b>
2	Operational Efficiency	.877	-	-	-		
3	Employee Productivity	.833	-	-	-		
4	Service Quality	.797	-	-	-		
5	Financial Performance	.866	-	-	-		
6	Customer Retention	-	.933	-	-	<b>2.156</b>	<b>15.401</b>
7	Decision Making Speed	-	.901	-	-		
8	Organizational Growth	-	.759	-	-		
9	Innovation Capability	-	-	.551	-	<b>1.435</b>	<b>10.249</b>
10	Competitive Advantage	-	-	-	.922	<b>1.114</b>	<b>7.956</b>

**8.3 The Naming of the Factors**

The naming of the factors has been done based on variables represented in each case. Ten variables were extracted out of total of fourteen considered variables under application of UILs. The naming of identified factors based on the behavioural similarities is as follows:

#### **Factor 1: Customer and Operational Performance**

This factor includes: 1. Customer Satisfaction; 2. Operational Efficiency; 3. Employee Productivity; 4. Service Quality; and 5. Financial Performance. These variables indicate the overall performance outcomes of effective performance management practices in banks, particularly in improving service delivery, employee efficiency, and financial outcomes. This factor explains 32.086% of the total variance, making it the most significant dimension.

#### **Factor 2: Organizational Development**

This factor includes: 1. Customer Retention; 2. Decision-Making Speed; and 3. Organizational Growth. These variables reflect how performance management practices contribute to organizational improvement and strategic development within banks. This factor explains 15.401% of the total variance.

#### **Factor 3: Innovation Capability**

This factor includes: 1. Innovation Capability It reflects the role of performance management systems in encouraging innovation and adaptation to new banking practices and technologies. This factor explains 10.249% of the total variance.

#### **Factor 4: Competitive Advantage**

This factor includes: 1. Competitive Advantage. It indicates that effective performance management practices help banks achieve strategic advantage and strengthen their market position. This factor explains 7.956% of the total variance.

### **9. RECOMMENDATIONS OF THE STUDY**

1. **Strengthen Employee Training and Development:** Commercial banks should provide regular training programs and skill development initiatives to enhance employees' professional knowledge, technological skills, and service efficiency.
2. **Adopt Advanced Banking Technologies:** Banks should increase the adoption of modern digital technologies such as mobile banking, internet banking, AI-based services, and data analytics to improve operational efficiency and service delivery.
3. **Improve Leadership and Management Practices:** Bank management should focus on developing strong leadership qualities that encourage effective decision-making, employee motivation, and organizational coordination.
4. **Enhance Customer Relationship Management (CRM):** Banks should implement effective customer relationship strategies, provide personalized services, and address customer grievances quickly to improve customer satisfaction and loyalty.
5. **Strengthen Performance Appraisal Systems:** A transparent and fair performance evaluation system should be implemented to motivate employees, recognize their contributions, and improve productivity.
6. **Focus on Risk Management and Security:** Banks should adopt strong risk management policies and cyber security measures to protect financial data and ensure safe digital banking operations.
7. **Promote Innovation and Service Quality:** Commercial banks should encourage innovative banking practices and continuously improve service quality to maintain competitiveness and achieve sustainable organizational growth.

### **10. CONCLUSION**

The study concludes that effective performance management practices play a significant role in improving the overall performance of commercial banks in Sivagangai District. The findings reveal that leadership quality, technology adoption, strategic planning, and employee training are among the most influential management practices that contribute to better banking performance. The analysis also shows that these practices positively influence key performance indicators such as customer satisfaction, employee productivity, innovation capability, and organizational growth. The results of the chi-square and correlation analyses further confirm that certain customer-related factors and management practices have a meaningful relationship with bank performance. Factor analysis identified major dimensions such as customer and operational performance, organizational development, innovation capability, and competitive advantage that significantly influence banking efficiency. Overall, the study highlights that strengthening managerial strategies, adopting modern technologies, and improving employee development programs are essential for enhancing service quality and sustaining competitive advantage in commercial banks. Therefore, effective implementation of performance management practices can support long-term growth and improved customer satisfaction in the banking sector.

## 11. SCOPE FOR FURTHER RESEARCH

1. **Geographical Expansion:** Future research can extend this study to other districts or states to compare performance management practices across different banking regions.
2. **Inclusion of Other Financial Institutions:** Further studies may include cooperative banks, regional rural banks, and NBFCs to compare management practices and performance outcomes.
3. **Focus on Digital Banking Technologies:** Future research can examine the impact of emerging technologies such as AI, blockchain, and fintech on banking performance and management practices.

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