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THE OUTSOURCING DECISIONS AND THEIR INFLUENCE ON BANK PERFORMANCE: AN EMPIRICAL STUDY

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ABSTRACT

Present research is an attempt to identify the impact of outsourcing factors and outsourcing benefits on the performance of public sector banks and private sector banks in India. The responses collected from 200 bank employees in the National capital region of India, were analyzed through structural equation modeling. The major factors motivating the outsourcing decisions are strategic competitive advantages, Better use of resources, Better customer service, capitalization of technological advancements, and cost-effectiveness. Outsourcing has provided reputational benefits, competitive benefits, profitability benefits, and other benefits to the banks. The findings of the paper were that the factors motivating the banks to outsource have a significant impact on banks' performance. The factors motivating outsourcing also have significant relation with the benefits of outsourcing. The benefits also impact the performance of banks in the public and private sectors in India. Outsourcing has improved the bank's performance in form of improved employee productivity, improved customer service, an increase in customers, increased revenues, and improved brand image.

KEYWORDS

outsourcing, performance of banks.

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1. INTRODUCTION

Banks are a very important source of finance and capital formation. The international banks are increasing their profitability and efficiency by outsourcing some of their processes to third parties called service providers. The present study is an attempt to analyze the impact on performance on public sector banks and private sector banks after outsourcing their activities from their employee perspective.

RBI, the central bank of India, has issued guidelines in the form of outsourcing policies to these banks. An attempt has been made to understand the changes that occurred in their financial and operational performance after implementing the outsourcing guidelines. New private banks have grasped outsourcing habits very easily but, the public sector banks have adopted these practices only due to increased pressures of competition, technological advancements, and pressures of maintaining the market share. On the one hand, private banks have started outsourcing even financial and marketing services; on the other hand, public sector banks are outsourcing only less relevant non-core activities. There is a significant difference between the opinions of employees of the two types of commercial banks. This creates a research problem to be diagnosed. Whether outsourcing has an impact on the performance of public sector banks and the private sector banks in India. The growing competition in the banking sector has forced banks to outsource some of their activities to maintain their competitive edge.

2. LITERATURE REVIEW***Theoretical background***

Technology Acceptance Model (TAM) was the most commonly accepted model (Davis et.al. 1989). The TOE framework proposed by Tornatzky and Fleischer (1990), included three features having influence on adoption of innovation- technology, organization, and environment (TOE). Diffusion of Innovation (DOI) was another prominent adoption model in which proposed five attributes viz. relative advantage, compatibility, complexity, observability, trialability, that describes the acceptance of innovation in an organization. (Rogers, 2003). Transaction Cost Economics (TCE) was one of the most commonly used theoretical frameworks in the research area of Information technology outsourcing (Liu, et.al. 2013); (Schermann, et.al. 2014). Many studies found Resource-Based View (RBV) and Resource dependence theory (RDT) for analyzing the effect of both firms- and process-level factors like internal capabilities and strategic significance of the process on outsourcing decision. (Gerbl, et.al. 2014) (Mann, et.al. 2015). The present study used resource-based view and transaction cost economics (TCE) as the base for taking foundation of outsourcing in banks.

2.1 IT/IS and BPO Outsourcing

In terms of ITO, the decision to outsource was influenced and initiated by imitating the competitive firms, various organizations just outsourced their IT/IS as an imitation of their competitor firms. (Yang et al., 2007). There was some typical kind of outsourcing like IT outsourcing (ITO), involved giving responsibility to a third-party service provider for managing specific applications for banks in India. The most common functions which were to be outsourced were network administration, Server management, availing isolated cloud centers, providing infrastructure solutions and software development, and ITO (Schermann, et. al. 2014); (Gorla and Somers, 2014).

Outsourcing of business processes (BPO) is also one of the prevailing forms of outsourcing. This was a strategic methodology to give a rest to inefficient internal operation functioning and instead of handing over entire business activities like digitizing, accounting, finance, recruitment, or customer service to a third party to manage; (Zhang, et.al. 2018).

3. RESEARCH DESIGN

3.1 Research Objectives and hypothesis

The main objective of the study is "To find the impact of outsourcing activities on bank performance in selected areas like Increase in Revenue, customer satisfaction, employee productivity, and quality of services" from the employee perspective.

The following hypotheses are developed and tested for the present study to justify the objective with the help of available data:

Hypotheses 1: The motivating factors for the outsourcing activities are significantly related to the perceived benefits of the outsourcing activities.

Hypotheses 2: The motivating factors for outsourcing activities significantly improves bank performance.

Hypotheses 3: The perceived benefits of outsourcing activities significantly improve bank performance.

3.2 Data collection

The survey method was used for collecting the primary data using a structured questionnaire as the data collection tool. Indian Public and private sector banks were selected as target population. The Geographical area of study selected was the National capital region of India. The sample banks were selected based on their market capitalization and a huge number of branches in the National Capital Region of India. The sample included the senior managers, deputy managers, branch managers, Junior managers, and experienced clerical staff working at branches of the sample banks located in NCR, India. The sample was taken from Punjab National Bank, State Bank of India, Bank of Baroda, HDFC Bank, IICI Bank, and Axis bank respectively as three public sector banks and three private sector banks. The respondents were asked which activities their bank is outsourcing and for how long they have been outsourced by the bank, the factors which motivates their banks to outsource the activities, the benefits received by their bank, and the changes in performance experienced by their banks in performance. The responses of the bank employees are collected against these statements on the five-point rating scale to identify the latent factors indicating the impact of outsourcing on the performance of the banks.

Sampling design

The sampling frame includes the list of the branches available from the website of the sample banks. The *snowball sampling method* was used for collecting the data. The data was collected from the questionnaire developed for the purpose. The 400 questionnaires were floated out of which 234 responses were received. After eliminating the incompletely filled questionnaire the 200 completely filled questionnaires were included for analysis.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Bank performance due to outsourcing activities: EFA results

Commercial banks of India are found to have outsourcing different activities to different external firms due to different reasons and banks have experienced changes in performance. The 20 statements indicating the various dimensions of the performance of a bank after outsourcing are included in the questionnaire. The EFA method examines the correlation between the statements and clubs the highly correlated statements. The sample size adequacy is examined with the help of the KMO test and the correlation among the different included statements is examined with the help of the Bartlett test of sphericity. The results of the KMO and Bartlett test are shown in table 1:

TABLE 1: KAISER-MEYER-OLKIN TEST AND BARTLETT'S TEST OF SPHERICITY

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.909
Bartlett's Test of Sphericity	Approx. Chi-Square	2139.110
	Df	190
	Sig.	.000

Source: Primary data collected

Table 1 reported that the KMO statistics are 0.909 which is greater than the required value of 0.6. Thus, the sample size is adequate to apply the factor analysis. Bartlett's test of sphericity examines the correlation matrix between the statements. The table reported that the Chi-square statistics estimated for Bartlett's test are found to be 2139.11 with the probability value of 0.000. Thus, the results supported the presence of a significant correlation matrix which is required for factor analysis. Factors can be extracted from the significantly correlated statements. Here, the factor analysis aimed to identify the impact of outsourcing the different activities on the performance of banks from the included statements. Table 2 reported that the extracted commonalities of all the statements are greater than 0.5 indicating that at least 50% of the variance of the selected statements can be explained with the help of the extracted factors. The principal component analysis (PCA) method is used for factor analysis. Only the factors having an eigen value of more than one is selected for further analysis. Further, the orthogonal rotation "Varimax" is applied in PLA analysis which provides independent factors. The results of the rotated component matrix are shown in table 2:

TABLE 2: ROTATED COMPONENT MATRIX

Statements included in factor analysis	Factor Loadings	Extracted Commuality	Factor name	Eigen Value (Variance explained)	Cumulative variance explained
Customers are satisfied with customer service.	.747	0.669	Customer Service	3.510 (17.551%)	17.551%
Service provider updates its technology regularly to improve the capability to provide service to customers in a more efficient manner	.732	0.659			
Customer's complaints and feedback are used to improve the products	.727	0.611			
Feedback is considered to improve the bank's service standard	.722	0.581			
Delivering services quickly at all times	.676	0.572			
The service provided by the service provider are efficient and up to the quality mark	.575	0.620	Brand Image	3.095 (15.475 %)	33.027%
By outsourcing the bank can concentrate better on putting its strategies into action	.844	0.651			
Outsourcing helps your respective bank to gain a competitive edge in the market to which the customer can rely on	.786	0.657			
Outsourcing has improved the productivity of in-house employees	.768	0.621	Increase in Revenue	2.603 (13.014%)	46.040%
Outsourcing allows the bank to enhance the individual capabilities that distinguish it from its competitors	.742	0.625			
Better marketing of bank products	.758	0.634			
Improvement in customer service quality	.747	0.516			
Better utilization of new technology	.734	0.773	Increase in Customers	2.423 (12.117%)	58.157%
Easier introduction of new products	.636	0.778			
Customer-friendly loan procedures	.780	0.736			
outsourcing partner take over and continue work even after your employees go home (i.e., 24 x 7)	.778	0.717	Employee Productivity	2.249 (11.245%)	69.40%
Low cost per transaction	.775	0.655			
Better Access to specialized vendors	.811	0.651			
Effective recycling of funds	.757	0.575			
Now Focus is more on the core activities	.744	0.580			

Source: Primary data collected

Table 2 reported that 20 statements included in factor analysis can be explained with the help of 5 factors explaining the 69.40% of the variance of the included statements.

4.2 Dimensions of bank performance as a result of the outsourcing decision of banks

The EFA provides the five factors which are examined carefully and are named as

Factor 1: Customer Service

Customer services represent the different level of services banks provides to its customers for providing them satisfaction and making them loyal. The outsourcing of the selected activities allows the banks to give improved customer services to their customers as compared to their competitor banks and generates value for its shareholders. 'Banks uses the customer feedbacks to improve the customer service standard, and 'Customers' complaints and feedback are used by bank to improve the products. By outsourcing e-banking, internet banking functions banks are ready to serve quickly at all times with the help of service providers. A better understanding of customer needs and demands, serving them quickly, increased customer loyalty are examples of customer services (Alsamydai et.al) (2012).

Factor 2: Brand Image

The brand image of banks enhances as a result of the outsourcing activities. Bank outsourcing of the HR activities results in ultimate responsiveness of the employees for their bank, as they feel their process can be outsourced and the bank may not need their services in future, this brings a feeling of insecurity in them as they have a fear of losing their job so they work with more responsiveness and always try to make themselves a better employee then the employees of the outsourcing service provider (Lacity and Willcocks 2014).

Factor 3: Increase in revenue

The third factor represents the level of revenue banks has improved after outsourcing. The outsourcing of the selected activities allowed the banks to have improved revenues, in terms of increased profits and cost cuttings (Kivijärvi, & Toikkanen, 2015). Though there is no standard direct approach was identified in the review of available literature with which we can measure the direct quantitative effect of outsourcing benefits on profits (Juma'h, & Wood, 2000) Though the qualitative impact of outsourcing on revenues and costs has been identified by many authors.

Factor 4: Increase in customers

This represents that the number of customers in banks has improved after outsourcing. A bank that possesses better customer services has an edge over its competitors due to superiority of such services which ultimately results in increased customers. A successful outsourcing agreement has fruitful results, which helps in the growth of the bank and the service provider both.

Factor 5: Employee productivity

Outsourcing has brought a huge difference and innovations in the area of human resource management. Various organisations having expertise in HR functions has grown over the time, which provides full HR service or some specialized job or activity on cheaper and reasonable rate. (Handley and Benton 2009).

4.3 Reliability and validity analysis

The performance of selected banks is measured with the help of 5 dimensions extracted from the factor analysis. The internal consistency reliability of these 5 factors is examined with the help of Cronbach alpha. The construct validity is examined with the help of construct loading, composite reliability, average variance extracted. The results of reliability analysis are reported in Table 3.

TABLE 3: RELIABILITY AND VALIDITY ANALYSIS

Dimensions of Bank Performance	Item Code	Construct loadings	Composite Reliability	Average Variance Extracted	Cronbach Alpha
Brand Image	BI1	0.850	0.895	0.682	0.896
	BI2	0.813			
	BI3	0.883			
	BI4	0.752			
Customer service	CS1	0.679	0.866	0.523	0.868
	CS2	0.604			
	CS3	0.692			
	CS4	0.902			
	CS5	0.708			
	CS6	0.721			
Employee productivity	EP1	0.798	0.811	0.589	0.810
	EP2	0.781			
	EP3	0.722			
Increase in customers	IC1	0.803	0.837	0.632	0.837
	IC2	0.838			
	IC3	0.740			
Increase in Revenue	IIR1	0.741	0.800	0.502	0.800
	IIR2	0.632			
	IIR3	0.776			
	IIR4	0.675			

Source: Primary data collected

Table 3 reported that the estimated value of Cronbach alpha is found greater than the required minimum value of 0.7 thus indicating that internal reliability consistency of the factors representing the improvement in the performance as a result of outsourcing activities is ensured. The construct validity of factors is measured with the help of confirmatory factor analysis (CFA) (Hurmelinna and Olander,2014). For CFA, the measurement model is developed. The construct validity comprises of convergent as well as discriminant validity. The convergent validity is measured with the help of construct loadings, composite reliability, and average variance extracted. For convergent validity, the construct loadings of the different statements of each factor are expected to be greater than 0.7. Composite reliability of each factor is expected to be greater than 0.7 (Nunnally, 1978) and AVE (average variance extracted) of each construct should be more than 0.5 (Fornell and Larcker, 1981). The discriminant validity of all the factors is examined with the help of the Fornell-Larcker criterion, where the square root of AVE is compared with its correlation with the remaining factors. Table 3 reported that the composite reliability and AVE of all the five factors, which is found more than the required values. Thus, the convergent validity of the measurement scale is concluded. The discriminant validity is reported in table 4.

TABLE 4: DISCRIMINANT VALIDITY

	Brand Image	Customer Service	Employee Productivity	Increase in customers	Increase in revenue
Brand Image	0.826				
Customer Service	0.654	0.723			
Employee Productivity	0.553	0.597	0.767		
Increase in customers	0.650	0.672	0.667	0.795	
Increase in revenue	0.608	0.623	0.641	0.548	0.708

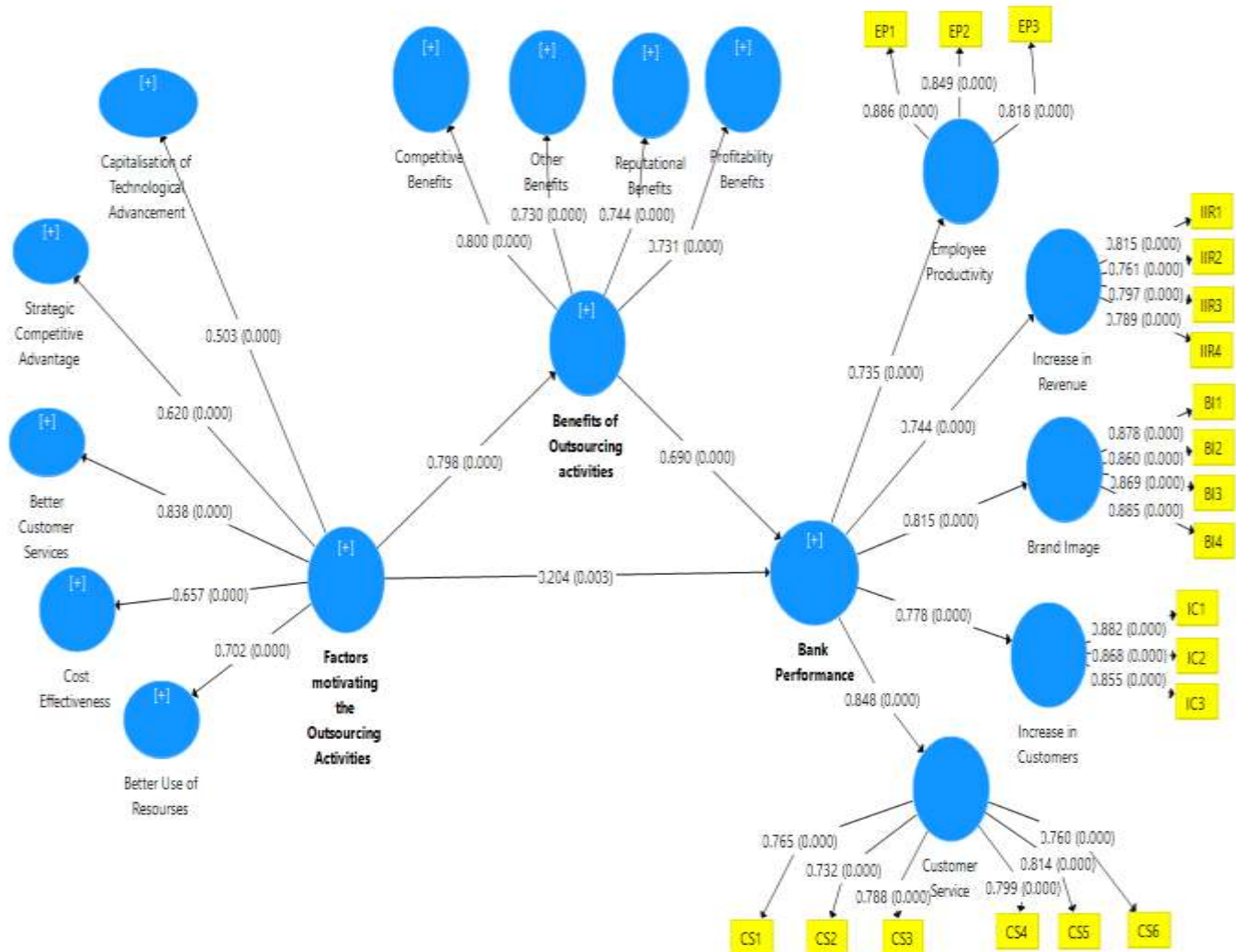
Source: Primary data collected

Table 4 reported that the square root of the AVE of each factor representing the bank performance as a result of outsourcing activities is greater than the correlation of the factor with remaining factors.

4.4 Relationship between the factors motivating the adoption of outsourcing activities, the perceived benefits of outsourcing activities, and their impact on bank performance

The structural equation model was developed and analyzed with the help of the PLS-SEM approach using Smart – PLS 3.0 software which was created by Ringle, Wende, and Will (2005). In the structural model, the bank performance is assumed to be an endogenous construct, the benefits of outsourcing activities are assumed to be a mediation construct and the factors motivating the outsourcing activities are assumed to be exogenous construct. In the structural model, all three constructs are second-order constructs and measured with the help of different sets of first-order reflective constructs.

FIGURE 1: THE STRUCTURAL MODEL



Source: Analysis done on smart PLS 3.0 based on primary data

TABLE 5: THE RELATIONSHIP BETWEEN THE FACTORS MOTIVATING THE ADOPTION OF OUTSOURCING ACTIVITIES, THE PERCEIVED BENEFITS OF OUTSOURCING ACTIVITIES, AND THEIR IMPACT ON BANK PERFORMANCE

Endogenous construct	Exogeneous construct	Path coefficient	Standard error	T statistics	Conclusion
Brand Image	Bank performance	0.815	0.028	29.306**	Supported
Customer service	Bank Performance	0.848	0.028	29.787**	Supported
Employee productivity	Bank Performance	0.735	0.042	17.660**	Supported
Increase in customers	Bank Performance	0.778	0.033	23.320**	Supported
Increase in Revenue	Bank Performance	0.744	0.042	17.884**	Supported
Bank Performance	Benefits of outsourcing activities	0.690	0.063	10.888**	Supported
Competitive benefits	Benefits of outsourcing activities	0.800	0.040	19.844**	Supported
Other benefits	Benefits of outsourcing activities	0.730	0.043	16.902**	Supported
Profitability benefits	Benefits of outsourcing activities	0.731	0.044	16.719**	Supported
Reputational benefits	Benefits of outsourcing activities	0.744	0.046	16.027**	Supported
Bank performance	Factors motivating the outsourcing activities	0.204	0.068	3.024**	Supported
Benefits of outsourcing	Factors motivating the outsourcing activities	0.798	0.022	35.491**	Supported
Better customer service	Factors motivating the outsourcing activities	0.838	0.021	40.476**	Supported
Better use of resources	Factors motivating the outsourcing activities	0.702	0.040	17.657**	Supported
The capitalization of technological advancements	Factors motivating the outsourcing activities	0.503	0.074	6.838**	Supported
Cost-effectiveness	Factors motivating the outsourcing activities	0.657	0.052	12.728**	Supported
Strategic competitive advantage	Factors motivating the outsourcing activities	0.620	0.057	10.919**	Supported

** Significant at 5 % level

The table supported the relationship between the factors motivating the adoption of outsourcing activities, the perceived benefits of outsourcing activities, and their impact on bank performance.

5. DISCUSSION AND CONCLUSION

This study supported the relationship between factors affecting outsourcing decisions and their impact on the performance of the banks. Besides, the mediation effects of employees' perceived benefits of outsourcing and performance of banks were investigated. This study contributes to the literature in several ways. First, the results revealed that the employees perceived benefits of outsourcing positively influence the performance of the banks. (Elhoushy, et.al. 2019; Gewald and Dibbern 2009; Jain and Natarajan 2011). Furthermore, this result supported the significant influence of the motivating factors on the performance of banks. This positive relationship can be attributed to the changes in performance obtained from outsourcing selected activities to an external service provider. (Alsamyda, et.al. 2012; Aggarwal, et.al. 2016; Assaf, et.al. 2011; Gulla and Gupta 2012; Jain and Natarajan 2011). Secondly, the findings supported the leaning to use outsourcing in the future, where the performance changes in performance will be higher than the present level. This is consistent with the previous studies that revealed employees' positive perspective towards outsourcing and the tendency to outsource more than at present. (Lacity and Willcocks (2014; Brender and Markov 2013)). The study found that the benefits of outsourcing are mediating the relationship between the factors affecting outsourcing and bank performance. Although the theoretical foundations assume outsourcing as a strategic decision, which is to be evaluated in terms of core and non-core function of the banks. This study suggests that factors and benefits have a significant impact on the performance of the banks as a result of outsourcing policies of a bank.

Commercial banks in India are outsourcing different activities to external firms. This outsourcing helps in improving bank performance. The performance of banks as a result of outsourcing activities can be expressed with the help of five factors namely "Improved customer service", "Brand Image", "Increase in Revenue", "Increase in Customers" and "Employee Productivity". A better understanding of customer needs and demands, serving them quickly, increased customer loyalty are examples of customer services (Alsamyda et.al (2012). Uniqueness in customer services helps banks to have satisfied and loyal customers as a result of better-quality services, greater efficiency, more innovation, and higher customer responsiveness (Kumar and Prakash, 2019). The revenues of the banks have seen improvement after outsourcing in terms of increased profits and cost cuttings (Kivijärvi and Toikkanen, 2015). The banks' employee's perspective about the benefit of outsourcing activities found competitive benefits, reputational benefits, profitability benefits, and other benefits. The perceived benefits of the outsourcing activities are playing a significant mediating role in explaining the bank performance due to the adoption of outsourcing activities of the banking sector concerning bank employees.

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IMPACT OF THE COVID-19 ON THE PERFORMANCE OF THE SBI: A STUDY

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ABSTRACT

The outbreak of the Covid-19 pandemic is the most serious challenge for the world as well as Indian economy. Both the manufacturing and services industries have been worsely affected by the heat of the virus. The banking sector, which is one of the most vital players for economic growth, has been bitten defectively by the spread of the Covid-19 virus. It keeps the national financial system moving upward by offering finance to the business and individual to expand or invest. The lending and business investment are vital for the growth of the nation's economy. So right now, the stability of the banking sector is a very crucial matter. In the present study has attempted to evaluate the impact of Covid-19 pandemic on the performance of the State bank of India (SBI). Variables like net profits, basic EPS, net NPA, ROA has been used to analyze the performance of the SBI with the help of paired sample t-test and one sample t-test. The results show that there is no such impact of Covid-19 outbreak in the performance of the SBI.

KEYWORDS

Indian economy, Covid-19, banking sector, performance and economic growth.

JEL CODES

Q54, G29.

INTRODUCTION

The outbreak of Covid-19 virus has hit the global economy very badly. It has created a worldwide socio-economic crisis that forced the world economy to fall into a great depression. The Indian economy is not away from this amid. There is also a downturn in our national economic growth by this unprecedent pandemic across the world. The banking sector is one of the most significant players of the economic growth of the nation. It keeps the national financial system moving upward by offering finance to the business and individual to expand or invest. The lending and business investment are vital for the growth of the nation's economy. So right now, the stability of the banking sector is a very crucial matter. The Indian banking sector has also been bitten defectively by the spread of the Covid-19 virus. The Government of India and the Reserve bank of India both have taken different kinds of initiatives to prevent and protect the economic meltdown and to minimize the negative impact of the pandemic on the economy. As the Covid-19 pandemic is not over, the banking sector is still facing various difficulties in their regular activities. The experts say that the banking sector will take a longer time to recover from the devastating pandemic situation. In the present study has attempted to evaluate the impact of Covid-19 pandemic on the performance of the State bank of India (SBI).

LITERATURE REVIEW

Several studies have been conducted by many academicians and researchers on the impact of Covid-19 pandemic on the Indian banking sector. Some of them are highlighted below.

Thakor (2020) found that the banks remained risk averse and mainlining a consensus among industry leaders in consumer oriented sectors that are operating with 70% capacity presently. The health of the banking sector depends on the recovery of the economy depending on the fiscal stimulus package of the government. Poddar and Yadav (2020) said that the situation of Covid-19 is the aggravating the financial health of the nation even worse. They found that there is a significant relation between the happening of Covid-19 and fall of Indian economy. They suggested that the government is needed to give priority to the economic measures to boost up the economy.

Perwej (2020) aimed to demonstrate a close look to about the impact of Covid-19 pandemic on the Indian banking system and briefly discussing Indian banks ready to assimilate Covid—19 as well as influence of Covid on the financial services sector. He suggested that the banks must continue to leverage the technology and build a flexible in their infrastructure to navigate the current challenges of a pandemic from the banking sector.

Lelissa (2020) tried to explore the impact of the Covid pandemic on the core business of the private banking system and its implication from the balance sheet and profit & loss perspectives. She found that there is an immediate requirement of liquidity to private banks. She also found that a comprehensive reform and financial sector restructuring program should be made to accommodate the changes and accelerate the recovery process.

Kumar and Kumar (2021) over viewed the impact of Covid-19 pandemic on the Indian economy and Indian banking sector specially the challenges. They analyzed the various policy measures taken by the Reserve Bank of India and the Government of India data both at central and state level to prevent and recover the current economic meltdown of India. They suggested a strong and resilient leadership in the Indian economy to protect it from long term damage from the current pandemic situation.

RESEARCH GAP

From the above literature review, it appears that various attempts have been made by many academicians and researchers to evaluate the impact of Covid-19 pandemic on the Indian banking sector and the Indian economy. But no such work has been done to analyze the impact of Covid-19 on the performance of the State Bank of India. So, the present study has tried to explore this untouched area.

OBJECTIVE OF THE STUDY

The objective of the study is to analyze the impact of Covid-19 on the performance of the SBI

METHODOLOGY

The study is analytical in nature. It is purely based the secondary data. The data have been collected from various related research articles, publications, quarterly reports of SBI (money control) and web-based resources. The study period covers eight quarters, starting from 31.06.2019 to 31.03.2021 which includes two financial years (2019-20 to 2020-21). The present study has considered four variables like Net profits, Basic EPS, Net NPA and Return on Assets (ROA) to measure and analyze the performance of SBI over the study period. The statistical tools like paired sample t-test and one sample t-test have been applied in the study to analyze the data to get the results for drawing a logical conclusion. The secondary data have been processed with the help of SPSS.

Hypothesis:

Following eight sets of hypotheses have been formulated to achieve the research objective of the study.

1. H₀: There is no significant difference in the net profits of SBI before and during Covid-19.
2. H₀: There is no significant difference in the basic EPS of SBI before and during Covid-19.
3. H₀: There is no significant difference in the net NPAnet profits of SBI before and during Covid-19.
4. H₀: There is no significant difference in the ROA of SBI before and during Covid-19.
5. H₀: There is no significant increase in the net profits of SBI.
6. H₀: There is no significant increase in the basic EPS of SBI.
7. H₀: There is no significant decrease in the net NPA of SBI.
8. H₀: There is no significant increase in the ROA of SBI.

ANALYSIS AND RESULTS

1. Framework of Data for Analysis

TABLE 1: SBI QUARTERLY REPORT (Rs. in Cr.)

Quarters	Net Profits	Basic EPS	Net NPA	ROA(%)
31.03.2021	6450.75	7.23	36809.72	0.58
31.12.2020	5196.22	5.82	29031.72	0.49
30.09.2020	4574.16	5.13	36450.69	0.44
31.06.2020	4189.34	4.69	42703.63	0.42
31.03.2020	3580.81	4.01	51871.3	0.37
31.12.2019	5583.36	6.26	58248.61	0.60
30.09.2019	3011.73	3.37	59939.22	0.33
31.06.2019	2312.2	2.59	65623.86	0.25

(Source: www.moneycontrol.com)

Observation: The above table- 1 shows the data for the last eight quarters of selected four variables for the measurement of the performance of the SBI. In three variables, namely net profits, basic EPS and ROA have an increasing trend over the quarters (2019-20 to 2020-21) whereas net NPA has a declining trend in the same time.

2. Testing of Hypothesis

A. Paired Sample t-Test: This statistical test has been used in the study to compare the mean of observations of the same sample in two different times.

Hypothesis Testing-1

H₀: There is no significant difference in the net profits of SBI before and during Covid-19

H₁: There is a significant difference in the net profits of SBI before and during Covid-19

TABLE 2: PAIRED SAMPLES TEST

Pair	Net Profits Before - Net Profits during Covid-19	Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
1		1480.59250	1364.14301	682.07151	-690.06344	3651.24844	2.171	3	.118

(Source: Compiled by the researcher)

Interpretation: The above table- 2 has revealed that the calculated p value is 0.118 which is greater than 0.05 at the 5% level of significance. So, the null hypothesis is accepted and alternative hypothesis is rejected. Therefore, it can be concluded that there is no significant difference in the net profits of SBI before and during Covid-19 period.

Hypothesis Testing-2

H₀: There is no significant difference in the basic EPS of SBI before and during Covid-19

H₁: There is a significant difference in the basic EPS of SBI before and during Covid-19

TABLE 3: PAIRED SAMPLES TEST

Pair	Basic EPS Before - Basic EPS during Covid-19	Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
1		1.66000	1.53267	0.76633	-0.77881	4.09881	2.166	3	.119

(Source: Compiled by the researcher)

Interpretation: The above table- 3 has shown that the calculated p value is 0.119 which is greater than 0.05 at the 5% level of significance. So, the null hypothesis is accepted and alternative hypothesis is rejected. Therefore, it can be concluded that there is no significant difference in the basic EPS of SBI before and during Covid-19 period.

Hypothesis Testing-3

H₀: There is no significant difference in the net NPAnet profits of SBI before and during Covid-19

H₁: There is a significant difference in the net NPAnet profits of SBI before and during Covid-19

TABLE 4: PAIRED SAMPLES TEST

Pair	Net NPA Before - Net NPA during Covid-19	Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
1		-22671.80750	5816.13895	2908.06948	-31926.58246	-13417.03254	-7.796	3	.004

(Source: Compiled by the researcher)

Interpretation: It is seen from the above table- 4 that the calculated p value is 0.004 which is less than 0.05 at the 5% level of significance. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant difference in the net NPA of SBI before and during Covid-19 period.

Hypothesis Testing-4

H₀: There is no significant difference in the ROA of SBI before and during Covid-19

H₁: There is a significant difference in the ROA of SBI before and during Covid-19

TABLE 5: PAIRED SAMPLES TEST

Pair	ROA Before - ROA during Covid-19	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
1		0.09500	0.14271	0.07136	-0.13209	0.32209	1.331	3	.275

(Source: Compiled by the researcher)

Interpretation: The above table- 5 has shown that the calculated p value is 0.275 which is greater than 0.05 at the 5% level of significance. So, the null hypothesis is accepted and alternative hypothesis is rejected. Therefore, it can be concluded that there is no significant difference in the return on assets (ROA) of SBI before and during Covid-19 period.

B. **One Sample t-Test:** This statistical test has been used in the study to examine whether the mean of observations of the sample is significantly different from a known or specific value.

Hypothesis Testing-5

H₀: There is no significant increase in the net profits of SBI

H₁: There is a significant increase in the net profits of SBI

TABLE 6: ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Net Profits	8.965	7	.000	4362.32125	3211.6580	5512.9845

(Source: Compiled by the researcher)

Interpretation: The above table- 6 has shown that the calculated p value is 0.000 which is less than 0.05 at the 5% level of significance. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant increase in the net profits of the SBI during the study period.

Hypothesis Testing-6

H₀: There is no significant increase in the basic EPS of SBI

H₁: There is a significant increase in the basic EPS of SBI

TABLE 7: ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Basic EPS	8.953	7	.000	4.88750	3.5966	6.1784

(Source: Compiled by the researcher)

Interpretation: The above table 7 has revealed that the calculated p value is 0.000 which is less than 0.05 at the 5% level of significance. So, the null hypothesis is rejected & the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant increase in the basic EPS of SBI during the study period.

Hypothesis Testing-7

H₀: There is no significant decrease in the net NPA of SBI

H₁: There is a significant decrease in the net NPA of SBI

TABLE 8: ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Net NPA	10.202	7	.000	47584.84375	36555.8674	58613.8201

(Source: Compiled by the researcher)

Interpretation: The above table- 8 has revealed that the calculated p value is 0.000 which is less than 0.05 at the 5% level of significance. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant decrease in the net NPA of the SBI during the study period.

Hypothesis Testing-8:

H₀: There is no significant increase in the ROA of SBI

H₁: There is a significant increase in the ROA of SBI

TABLE 9: ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ROA	10.243	7	.000	.43500	.3346	.5354

(Source: Compiled by the researcher)

Interpretation: The above table- 9 has revealed that the calculated p value is 0.000 which is less than 0.05 at the 5% level of significance. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant increase in the return on asset (ROA) of the SBI during the study period.

FINDINGS FROM THE HYPOTHESIS

1. There is no significant difference in the net profits of SBI before and during Covid-19 period.
2. There is no significant difference in the basic EPS of SBI before and during Covid-19 period.
3. There is a significant difference in the net NPA of SBI before and during Covid-19 period.
4. There is no significant difference in the return on assets (ROA) of SBI before and during Covid-19 period.
5. There is a significant increase in the net profits of the SBI during the study period.
6. There is a significant increase in the basic EPS of the SBI during the study period.
7. There is a significant decrease in the net NPA of the SBI during the study period.
8. There is a significant increase in the return on asset (ROA) of the SBI during the study period.

CONCLUSION

From the overall above analysis, it can be concluded that the Covid-19 pandemic has no such negative effect on the performance of the SBI. Rather, there is an upward trend in the net profits, basic EPS, return on assets and a downward trend in net NPA of the SBI during the last eight quarters of the study period. So, it is a clear evidence that the SBI has been tackling its banking business in the most efficient and effective manner possible in this pandemic situation. It has efficiently managed its NPA and profitability, performance during this pandemic economic downturn across the nation and the world as a whole. But, the Covid pandemic has negatively affected the Indian economy and the Indian banking sector as a whole. As the pandemic is not over, the government and the RBI have to look forward and take some more initiatives in the future to pull out the nation's economy from the unprecedented downturn.

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SCOPE FOR THE BIKE TAXI SERVICES IN COIMBATORE CITY: A FEASIBILITY STUDY

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ABSTRACT

Offering bike taxi services to the commuters with basic goals of overcoming traffic congestion issues, being effective and affordable is the trend today. Online service taxi cabs hiring system have removed the barriers of several consumers for their transport expectations giving more opportunity to the public to obtain the facilities and a phenomenal growth in this segment i.e., domestic cabs service segment. This research work is an attempt to assess the feasibility for the promotion of bike taxi service in the tier II, recently announced smart city Coimbatore. Needed data were collected from a sample group of 125 volunteer respondents, who belong to different segment in a society i.e., college students, private sector employees, business class persons and professionals. A self-administered ethnographic survey was conducted by the author in Coimbatore city. The study provides an outlook that there is a more feasibility for the growth, promotion and sustainability of bike services in the large and small cities across the nation. Potential bike taxi riders have said that they prefer these services as it is cost and time wise economic (68 per cent), very convenient for them during peak hours (64.75 per cent), easy to access to congested lanes (61.25 per cent) and support they overcoming parking issues in busy areas (57.75 per cent). At the same time 77.67 per cent of the sample subjects have registered that these services are reliable in nature.

KEYWORDS

potential customers, bike taxi, feasibility, conveyances service.

JEL CODES

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INTRODUCTION

For centuries people have been travelling from one place to another and they return back to their home town /city after a specific time period. Traveller used number of means to travel from one place to another. With the invention of rolling wheel, the traveller has become daily commuters, who passes certain distance every day with modern mode of transportation. Commuters either use own their private vehicles or hire a public transportation like cycle, bike, car, bus, tram or a train, boats or small ships. Self-consciousness towards environment pollutions issues, being a process of cost-cutting and also rise in traffic conjunction have influenced daily traveller to think of other alternative means of transportation like usage of hire car i.e., taxi services.

With the identification and development of prominent cities in the country recognised as "Smart cities" have provided wider scope for the growth of public transportation services hired by individuals as per their convenience of travel either by individual, two, four people or in group. On the other side, technology advance has supported these service providers in enhancing or offering quality, timely and most economic services. Carrying the discussion further, it can be rightly said that the online service taxi cabs hiring system have removed the barriers of several consumers for their transport expectations giving more opportunity to the public to obtain the facilities and a phenomenal growth in this segment i.e., domestic cabs service segment. Following the track of call taxis, private box services are offered to single commuters across a state i.e., specific geographical area.

FEASIBILITIES FOR THE GROWTH OF BIKE TAXI SERVICES IN INDIA

The Economic Times has published the Ola Mobility Institute Report (2020) stating the opportunities available for the bike taxi service across India. It has been reported in the News daily that this service sector has the opportunity of earning Rs.5 billion per annum and can also employ 2 million youths. Bike taxi services are more preferred during peak hours of day morning 8 am to 12 Noon and in the evening 4 pm to 8pm. As per the opinion of Gupta (2019) so far rental car services are available in almost all major and small cities in India, bike services as at present available in major cities in Karnataka and Maharashtra. Uber and Ola, two major service providers are currently operating bike services in 52 cities across India and they expect to reach 200 by the end of the year 2020, rolling 1,50,000 passenger trip per day. As per Shah (2021) report in the Financial Express, outbreak of Pandemic has provided wider opportunity for the flourishing bike taxi services in the country. The report has stated that adoption of bike taxi services has rose in tier I and II cities.

AIM OF THE STUDY

Innovation and rapid adoption to the changing customers need are two golden keys that support in the prosperous of any business. Offering bike taxi services to the commuters with basic goals of overcoming traffic congestion issues, being effective and affordable is the trend today. Rapido has pioneered in over bike taxi services fulfilling above mentioned goal. At present Indian bike taxi market is valued at US \$ 150 million and every month 20 per cent growth is predicted in this segment. Business model of bike taxi service is very unique in India, where a bike ride could be offered at a cost of Rs.60-Rs.70, compared to costly Rs.200 call taxi ride. Success of this innovative service is purely depending on the nature of support extended by the potential bike riding customers. This study is an attempt to assess the feasibility for the promotion of bike taxi service in the tier II, recently announced smart city Coimbatore.

HYPOTHESIS

H_0 : There exists no close association between mode of transportation customers feel comfortable during peak hours and most influence the customers in selection of bike taxi service.

METHODOLOGY

Daily travelers' preferences for bike taxi, nature of factors they consider while selecting a specific bike taxi services and their expectation among potential users were assessed in this study. Needed data were collected from a sample group of 125 volunteer respondents, who belong to different segment in a society i.e., college students, private sector employees, business class persons and professionals. A self-administered ethnographic survey was conducted by the author in Coimbatore city.

RESULTS AND DISCUSSIONS OF THE ARTICLE

As stated above in the discussion that bike taxi services are highly preferred by the daily commuters for it convenient i.e., hassle free transportation available at their door step. Assessment of demographic profile of the potential supporters of bike taxi service give an overall understanding on nature of bike taxi service is expected by a specific demographic segment of population in a city. Among 125 respondents surveyed, 58.40 per cent of bike taxi users were male and 41.60 per cent of sample subjects were female. Nearly 60.80 per cent of samples bike taxi users were in the age group of 20-30 years and 21.60 per cent of the bike taxi

service supporter are employed in an organisation. It was inferred that 82.40 per cent of the sample subjects are single and 65.50 per cent of the bike taxi patron-ages are graduates. Monthly income of 45.60 per cent of the samples ranged between Rs.20000-Rs.40000 and 51.20 per cent of the sample subjects live in urban regions of the city.

TABLE 1: CUSTOMERS AWARENESS TOWARDS THE APP BASED BIKE TAXI SERVICE AVAILABLE IN THE CITY

Sl. No	Opinion	No. of Respondents	Percentage
1.	Aware	68	54.40
2.	Not Aware	57	45.60
	Total	125	100

Source: Primary Data

Data assessment table revealed that 54.40 per cent of the bike taxi users are aware of app-based bike taxi services recently introduced in the city. And 45.60 per cent of the respondents are not aware of app-based bike taxi services.

TABLE 2: SOURCES OF KNOWLEDGE GATHERED ON APP BASED BIKE TAXI SERVICE

Sl. No	Sources	No. of Respondents	Percentage
1.	Media Advertisement	39	31.20
2.	Friends	70	56.00
3.	Relatives	11	8.80
4.	Hoardings	5	4.00
	Total	125	100

Source: Primary Data

Sample subjects had gathered information on specific app-based bike taxi services from various sources i.e., through their friends (56 per cent), through media advertisement (31.20 per cent), relatives' references (8.80 per cent) and through hoardings display in outdoor (4 per cent).

TABLE 3: POTENTIAL REASONS STATED BY THE TRAVELLERS FOR CHOOSING BIKE TAXI SERVICE

Sl. No	Purpose of Travel	No. of Respondents	Percentage
1.	Personal Work	50	40.00
2.	Official	25	20.00
3.	Emergency	17	13.60
4.	Unavailability	33	26.40
	Total	125	100

Source: Primary Data

Nearly 40 per cent of the sample potential bike taxi rider have said that they would travel in bike taxi without any compulsion i.e., on their personal decision for personal work accomplishment. Followed by, 26.40 per cent of the sample respondents said that they will travel at unavoidable situations, 20 per cent of the rental bike taxi users would select app-based bike taxi services for official purposes and 13.60 per cent of the sample subjects have opined that they would pick app-based bike taxi services at the time of emergency.

TABLE 4: PRIMARY REASONS STATED BY THE POTENTIAL CUSTOMERS FOR PREFERRING BIKE TAXI SERVICES

Sl. No	Variables	Sum	Mean	Rank
1.	Not access to Personal Vehicle	517	4.14	6
2.	Poor and Improper Local Transportation Facilities	462	3.70	7
3.	Personal Health Reasons	459	3.67	8
4.	Difficulties of Driving in Heavy Traffic	543	4.34	5
5.	Easy to Access to Congested Lanes	613	4.90	3
6.	Economic and Time Saving	680	5.44	1
7.	Very Convenient	648	5.18	2
8.	Overcome Parking Issues in Busy Areas	578	4.62	4

Source: Primary Data

Out of 125 samples surveyed, nearly 68 to 57.75 per cent of the potential biker taxi rider have said that they prefer these services as it is cost and time wise economic (68 per cent), very convenient for them during peak hours (64.75 per cent), easy to access to congested lanes (61.25 per cent) and support they overcoming parking issues in busy areas (57.75 per cent). A group of sample subjects have listed their reasons for choosing app-based bike taxi services to overcome the difficulties of driving in heavy traffic (54.25 per cent), in-access of personal vehicle (51.75 per cent), poor and improper local transportation facilities (46.25 per cent) and personal health reasons (45.88 per cent). The above-mentioned variables are ranked in the first to eighth places with the mean score computation of 5.44-3.67.

TABLE 5: CUSTOMERS OPINION ON THE FEATURES BIKE TAXI

Variables	Sum	Mean	Rank
Service Uniqueness (Very Innovative Concept)	259	2.07	7
Convenience of Travel	265	2.12	5
Safety & Comfort Features	268	2.14	4
Speed of Reach in Heavy Traffic	259	2.07	7
Economic Price	273	2.18	2
No Stress of Driving	263	2.10	6
Easy Payment Options	273	2.18	2
Service Reliability	291	2.33	1
Others	218	1.74	9

Source: Primary Data

Data analysis table inferred that 77.67 per cent of the sample subjects are highly attracted towards the service reliability features provided by the bike taxi services and 72.67 per cent of the bike taxi users prefer to online cab facilities for easy payment options and economic pricing values. Similarly, 71.33 per cent of the customers are fascinated towards the safety and comfort features of bike taxi services and 70.67 per cent of the samples are impressed towards the convenience for travel. Followed by, 70per cent of the bike taxi users feel that they had no stress for driving and 69 per cent of the sample populations are attracted towards the speed of reach in heavy traffic especially during peak hours and its service uniqueness as it considered an innovative concept. Moreover, 58 per cent of the bike taxi users are fascinated with the other features offered by the bike taxi services such as: its available on demand, solve the last mile connectivity problem etc., The above variables are rated in the first to ninth places with the average score range of 2.33-1.74.

Multiple regression analysis was performed to measure the association between mode of transportation customers feel comfortable during peak hours and the feature that most influence the customers in selection of bike taxi service.

H₀: There exists no close association between mode of transportation customers feel comfortable during peak hours and most influence the customers in selection of bike taxi service.

Feature that most influence the customers in selection of bike taxi service $(Y_1) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + e$

Where, Y= Feature that most influence the customers in selection of bike taxi service, β_0 = Intercept, β_1 - β_{18} = Slopes (estimates of coefficients), X_1 = Service Uniqueness (Very Innovative Concept), X_2 = Convenience of Travel, X_3 = Safety & Comfort Features, X_4 = Speed of Reach in Heavy Traffic, X_5 = Economic Price, X_6 = No Stress of Driving, X_7 = Easy Payment Options, X_8 = Service Reliability, X_9 = Others and e = Random error, which the author assumed as NID for this research.

**TABLE 6: RESULT OF MULTIPLE REGRESSION ANALYSIS
MODE OF TRANSPORTATION CUSTOMERS FEEL COMFORTABLE DURING PEAK HOURS AND MOST INFLUENCING FEATURES OF BIKE TAXI**

R Value	R ² Value	Adjusted R ²	F Value	Sig
.304	.093	.022	1.304	.243

Level of Significance: 5 per cent

$Y = 1.224 + .023X_1 + .036X_2 - .117X_3 + .074X_4 + .079X_5 - .010X_6 - .048X_7 - .006X_8 - .033X_9$

From the above presented multi-level test, it has been observed that F ratio (1.304) is statistically insignificant at 5 per cent level. Similarly, the computed regression value establishes mark 30.40 per cent relationship between the variables tested and the coefficient of correlation (R) value is found to be .304, it does not establish good relationship between variables tested. Hence the hypothesis framed stands rejected and it determined that there exists close association between mode of transportation customers feel comfortable during peak hours and most influence the customers in selection of bike taxi service. Correlation and regression value of individual variables are presented in the below mentioned table.

**TABLE 7: SUMMARY OF MULTIPLE REGRESSIONS ANALYSIS
MODE OF TRANSPORTATION CUSTOMERS FEEL COMFORTABLE DURING PEAK HOURS AND MOST INFLUENCING FEATURES OF BIKE TAXI**

Variables	Unstandardized Coefficients		Standardized Coefficients	t value	Sig	Collinearity Statistics	
	β	Std. Error	Beta			Tolerance	VIF
Constants	1.224	.342	-	3.574	.001	-	-
Service Uniqueness (Very Innovative Concept)	.023	.050	.043	.463	.644	.911	1.097
Convenience of Travel	.036	.056	.064	0.646	.519	.794	1.260
Safety & Comfort Features	-.117	.053	-.212	-2.201	.030	.853	1.173
Speed of Reach in Heavy Traffic	.074	.050	.139	1.480	.142	.897	1.115
Economic Price	.079	.053	.144	1.497	.137	.850	1.177
No Stress of Driving	-.010	.051	-.019	-0.194	.846	.865	1.155
Easy Payment Options	-.048	.055	-.083	-0.870	.386	.874	1.144
Service Reliability	-.006	.057	-.010	-0.102	.019	.768	1.302
Others	-.033	.048	-.068	-0.685	.495	.797	1.255

Level of Significance: 5 per cent

Out of nine parameters statements considered only two variables were statistically insignificant. The standardized co-efficient beta column reveals that feature that most attracted by customers in bike taxi have met beta standard co-efficient 1.224 which is statistically significant at 0.001. The computed Tolerance values and VIF (Variance Inflated Factor) fall within the set marks i.e., Tolerance values were above .500 and VIF were with five per cent of Tolerance value.

Predicted Value of

Feature that most influence the customers in selection of bike taxi service = 1.224 (Constant)

±.117 (Safety & Comfort Features)

±.006 (Service Reliability)

Multiple Regression Analysis indicated out of nine variables tested only two variables: safety & comfort features and service reliability were found to be statistically significant.

FINDINGS AND CONCLUSION

Article has conveyed that out of 125 samples surveyed only 54.40 per cent of the bike taxi users are aware of app based bike taxi services recently introduced in the city. Friends and media are found to be major influencing forces that have motivated the samples to use this unique service. Nearly 40 per cent of the sample potential bike taxi rider have said that they would travel in bike taxi on their personal decision for personal work accomplishment. Potential biker taxi rider have said that they prefer these services as it is cost and time wise economic (68 per cent), very convenient for them during peak hours (64.75 per cent), easy to access to congested lanes (61.25 per cent) and support they overcoming parking issues in busy areas (57.75 per cent). At the same time 77.67 per cent of the sample subjects have registered that these services are reliable in nature. The article also claim that there exists close association between mode of transportation customers feel comfortable during peak hours and most influence the customers in selection of bike taxi service. As a summary note author have suggested the bike service providers (Ola, Uber or Rapido) to create more awareness on these innovative services, promote their service by highlighting its feature benefits, safe and convenience features. The study provides an outlook that there is a more feasibility for the growth, promotion and sustainability of bike services in the large and small cities across the nation.

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