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FROM THE DESK OF EDITOR –

On behalf of the Departmental journal BANIJYA – Department of Commerce, Assam University, Silchar, and its editorial team, I would like to wish all authors, reviewers and all the stakeholders a healthy and blissful year 2022 ahead. I can assure all the stakeholders that our consistent efforts will be envisioned toward raising the prominence, impact, citations and the inclusive quality of the journal BANIJYA, 15th issue, volume 1. The Editorial team looks onward to cumulative the reputation of our publication.

This issue is intended and will stand to the expectations of academicians, practitioners and scholars of the greater field business studies. Mainly, the issue of journal consists of current and empirical issues, viz., accounting variables and stock price, impact of dividend policies on stock prices, impact of agriculture on rural development, awareness and satisfaction of investors on life insurance policies, financing of individual health care and perceived service quality of airlines, NPA and its implications in profitability.

My sincerest gratitude goes to Prof. Rajive Mohan Pant, Hon'ble Vice-Chancellor, Assam University, Silchar, for his constant encouragement. I thank my managing editor Dr. Kingshuk Adhikari, my youngest colleague Dr. Pranesh Debnath and the entire editorial board and reviewers for all their sincere work. My heartiest acknowledgment goes to all the members of the Editorial Board of the journal. Together we would work towards making the journal a truly influential publication. Comments and suggestions are all the time welcome.

Last but not the least, I honestly convey my thanks to Mr. Punyapriya Choudhury of Silchar Sungraphics (Printer) for his co-operation during the publication task of the journal.

Best wishes,

Silchar, 19th May, 2022

Prof. Parag Shil
Chief Editor
BANIJYA

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Linkage between Accounting Variables and Stock Price: Evidence from BSE Listed Manufacturing Firms

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Abstract

The present study focuses on investigating the linkage between the accounting variables and the stock price in Indian manufacturing firms. Accounting data's value relevance and impact on stock market prices are substantial concerns as investors tries to take their decisions on the basis of the financial information provided by the companies. Accounting data can provide an idea about the financial strength of a company and thus can affect the market price of the share. Thus, the present considers Earnings Per Share, Book Value Per Share, Dividend Per Share, Debt-Equity Ratio as the accounting variables and tries to find its relation with the market price of the share of the manufacturing firms listed in the BSE index for a period of five years from 2015 to 2019. By using Panel data regression, the study finds that EPS, BVPS, and DPS positively impact the Stock price of manufacturing firms listed in India, while the D/E ratio negatively impacts the stock price. The study's findings will help investors make decisions and assess the financial health of the manufacturing firms listed in India, considering different accounting variables before investing.

***Keywords**: Stock Price, Accounting Variables, Value Relevance, Manufacturing Industry, Earnings Per Share*

Introduction

The basic notion investors have about the security market is the risk and reward associated with the market (Yu et al., 2014). To overcome the risk and the reward from the investment, the investors typically engage in diverse technical and fundamental pre-investment analyses (Nti et al., 2020). The challenge lies in predicting stock prices as they follow a random walk pattern (Fama, 1965). Nevertheless, investors actively strive to mitigate associated risks and pinpoint potential positive returns by scrutinizing the various factors influencing stock prices and returns. Literature has evidence of numerous theories asserting a wide range of factors including political, financial, and economic which impact stock prices (Langevoort, 1992).

Accounting information is considered reliable for investors until it is beneficial for decision-making without any losses (Adhikara et al., 2017). The quality of information assists investors in making informed decisions that have a significant impact. In well-functioning stock markets, the market values of stocks are influenced by the quality of accounting information (Healy & Palepu, 2001). Prior literature indicates that the true measure of an entity's value is "shareholder wealth maximization" (Jensen, 2009). Consequently, investors assess their wealth based on the market value of the common stock they own. Hence, the accounting concept of value relevance seeks to establish a linkage between accounting data and the market value of common shares.

The concept of value relevance encompasses the theory that elucidates the relationship between accounting data and share prices. Value relevance, as described by Francis and Schipper (1999), refers to the potential of financial statement information to impact stock prices, highlighting the practicality of accounting information. Studies on value relevance, as outlined by Bowerman and Sharma (2016), examine the relationship between stock prices and accounting information. According to Osundina et al. (2016), Beisland (2009), and Barth et al. (1998), accounting data is deemed valuable when it is both reliable and pertinent. Relevance, in this context, implies that the information can influence investor decisions. Moreover, it is considered value-significant if it explains variations in stock prices.

A wide range of financial parameters such as return on equity, net income, book value per share, earnings per share, size of the firm, net profit margin, and D/E ratios impacts the stock price (Jermsittiparsert et al., 2019; Banerjee, 2019; Penman, 1996). Hence, an investor should thoroughly assess the factors before any investment.
Indian economy consists of a wide range of sectors and companies that contribute to the country's GDP. Manufacturing firms are one of the growing sectors and play a crucial role in the Indian economy that holds significant importance and wields substantial influence on the stock market (Gurloveleen & Bhatia, 2015). It significantly contributes to India's GDP, generates diverse employment opportunities, and enhances foreign exchange reserves through increased export earnings (Mehta & Rajan, 2017; Dunne et al., 1989). Moreover, manufacturing sector growth drives infrastructure development and spurs the growth of ancillary industries. Positioned at the forefront of innovation and technology adoption, manufacturing firms contribute to India's competitiveness. The stock market performance of manufacturing firms is closely monitored by investors and analysts, it can be affected by various factors such as production efficiency, market demand, and government policies. Given the promising future of the manufacturing sector in the Indian economy, it is essential to scrutinize the information and accounting variables influencing the stock prices of these firms. In this context, the current study specifically concentrates on examining the impact of accounting variables on the stock prices of manufacturing firms listed on the BSE.

Review of Literature

Literature has evidence that accounting variables are crucial elements in determining the market price of stocks. A study conducted by El Wassal (2013) identified and comprehend the factors influencing stock prices in financial markets and mentioned that supply factors and demand factors are the building blocks of the stock market. There are various studies which are centred on accounting variables that are deemed as essential indicators of a firms financial health and performance including but not limited to EPS (Sari, 2021), Dividend pay-out ratio (Rahmadi, 2020), Price-earnings ratio (Ou & Penman, 1989), net profit margin (Mahdi & Khaddafi, 2020), return on equity (Kamar, 2017), book value per share (Hanifah, 2019), and dividend per share (Arsal, 2021).

Studies have shown positive and negative findings with different variables. Variables such as earnings per share (Sari, 2021), price-earnings ratio (Sari, 2021), book value per share (Bustani et al., 2021), dividend per share (Masum, 2014), return on assets (Saputra, 2022), and profitability (Murniati, 2016) shows a positive association with stock prices. The positive association indicates the financial strength of the firms which ultimately increases the demand for the stock. On the contrary, studies have also depicted negative impacts on stock prices with accounting variables such as net profit margin (Pulungan & Insan, 2020) and return on equity (Mogonta & Pandowo, 2016). Adverse impact on these variables tends to decrease the stock price, as investors may interpret such decline as an indicative of reduced prospects for the company and a high level of risk. The negative impact also signifies firms' operational inefficiencies or financial challenges, thereby decreasing the stock prices.

Dividend policy is another area of interest in stock price determinants. Studies show that a higher dividend payout ratio represented by the proportion of earnings distributed as dividends, is associated with higher stock prices (Bustani *et al.*, 2021). This is because dividends are often considered a sign of financial stability and profitability (Myers & Bacon, 2004). However, it's essential to note that not all companies with high dividend pay-out ratios experience an automatic increase in stock prices, as various other factors, both internal and external, can impact stock performance.

Furthermore, multiple studies have demonstrated the value relevance of accounting information, particularly metrics like earnings per share and book value of equity (Dunham & Grandstaff, 2022). Investors often rely on these financial indicators to assess a company's value and prospects, thereby exerting significant influence on the stock market value. Previous studies have not only shed light on the importance of various accounting variables but have also expanded their scope to examine sector-specific factors, geographic variations, and methodological improvements.

Numerous studies have been undertaken in industrialized nations to examine the influence of accounting variables on stock market prices. However, there exists a notable dearth of research on this subject within the context of India. Emerging markets, distinguished by poor market efficiency, the prevalence of uninformed investors, and low levels of liquidity, present unique characteristics in contrast to mature markets. In consideration of these factors, it becomes imperative to explore the value relevance of accounting information specifically within developing markets such as India.

Literature has shown diverse findings conducted considering different markets and timeframes; most of which have focused only on limited samples and variables. The study fills the gap by considering a sample from the Indian market proxy multiple variables. The primary contribution of this paper lies in its demonstration of the pivotal role played by accounting data for investors in burgeoning markets. Beyond expanding the current body of literature, the study's findings serve to guide investors in leveraging accounting information for optimal investment decision-making. The current investigation represents a significant advancement above previous global investigation. First, a sizable population sample is used for research reasons. Second, compared to previous studies, it looks at a greater number of variables. Thirdly, it takes a five-year inquiry period that is relatively long.

Research Methodology

Sample

The study selects top manufacturing firms listed in the BSE index for a period of five years i.e., from 2015 to 2019. A total of 92 manufacturing firms are listed in the BSE index, out of which only 40 firms are considered for the study. The remaining 52 firms are excluded from the study due to the unavailability of data for the five years period considered in the study. The study relies on a secondary source for data collection. All the study variables are collected from the BSE and Money control websites.

Study Variables

Table 1: Operational Definition of the Variables

Types	Variables	Proxy Used	Symbol
Dependent Variables	Stock Price	Market Price	MPS
Independent Variables	Earnings Per Share	$\frac{\text{Total Earnings Available for Equity Shareholders}}{\text{No. Of Equity Share}}$	EPS
	Book Value Per Share	$\frac{\text{Shareholders' Fund} - \text{Preferred Stock}}{\text{No. Of Equity Shares of the company}}$	BVPS
	Dividend Per Share	$\frac{\text{Total dividends paid out in a year}}{\text{No. Of Equity Shares of the company}}$	DPS
	Debt-Equity Ratio	$\frac{\text{Total Debt}}{\text{Shareholders' Equity}}$	D/E Ratio

Source: Author's Compilation

Study Model

$$MPS_{it} = \beta0 + \beta1\ (EPS)_{it} + \beta2\ (BVPS)_{it} + \beta3\ (DPS)_{it} + \beta4\ (D/E\ Ratio)_{it} + \varepsilon_{it} \ldots\ldots(i)$$

Where MPS_{it} is the market price of the share of ith company at time t, β0 is the constant, β1 to β4 are the coefficients of the independent variables, EPS_{it} is the earning per share of company i at time t, $BVPS_{it}$ is the book value per share of i company at time t, DPS_{it} is the dividend per share of i company at time t, D/E $Ratio_{it}$ is the debt-equity ratio of i company at time t and ε_{it} is the error term.

In the preliminary stage, Descriptive statistics and correlation coefficients for each variable are calculated. Next, the fixed effect and random effect tests are calculated and in the final stage, the Hausman test is calculated to ascertain the suitability between the fixed effect model (FEM) and the random effect model (REM).

The Random Effects Model is the null hypothesis in this test, and the Fixed Effects model is the alternative hypothesis. Hence, we can rule out the null hypothesis if the p-value is less than 0.05.

Results and Discussion

Table 2: Descriptive statistics

	MPS	BVPS	EPS	DPS
Mean	454.8943	126.3872	12.71072	3.766217
Std. Dev.	1944.855	249.6904	45.65003	18.77582
Skewness	9.675422	8.166898	5.399821	14.26992
Kurtosis	105.7170	90.27244	57.08877	242.8875
Jarque-Bera	209400.5	151096.0	58309.35	1118576.
Probability	0.000000	0.000000	0.000000	0.000000

Source: Author's Own Calculation

Table 2 shows the descriptive statistics of all the variables. The mean values of MPS, BVPS, EPS, and DPS are 454.8943, 126.3872, 12.7107, and 3.7662 respectively. MPS has the highest average (454.8943) and standard deviation (1944.855) value and DPS has the lowest average (3.766217) and standard deviation (18.77582) value among the variables. The average and standard deviation shows that MPS is the variable that highly varies among the variables and DPS is the most fluctuating variable among the accounting metrics.

The leptokurtic distribution of the variables is indicated by the kurtosis value, and the positive skewness of all the variables is determined by the skewness result. In the end, the Jarque-Bera statistics verify that none of the variables have a normal distribution at the 5% level.

Table 3: Correlation Analysis

	MPS	BVPS	EPS	DPS	D/E RATIO
MPS	1.000000 -----				
BVPS	0.369684 0.0000	1.000000 -----			
EPS	0.714273 0.0000	0.718930 0.0000	1.000000 -----		
DPS	0.899384 0.0000	0.310354 0.0000	0.631001 0.0000	1.000000 -----	
D/E RATIO	-0.035515 0.4473	-0.020183 0.6659	-0.032697 0.4842	-0.032446 0.4876	1.000000 -----

Source: Author's Own Calculation

Table 3 shows the correlation analysis. The correlation analysis shows that a high and positive link between the market price of each equity share and EPS, BVPS, and DPS exists. It also shows that the independent variables have strong inter-correlations with one another. To overcome the problem of multi-collinearity (high correlation) issue, panel regression is incorporated instead of Pooled OLS regression.

Table 4: Hausman Test

Test Summary	Chi-Sq.Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	570.106799	4	0.0000

Source: Author's Own Calculation

Table 4 shows the results of the Hausman test which shows that the fixed effect model is appropriate to investigate the association between stock prices and accounting data of particular manufacturing firms of the BSE. The chi-square test statistic is statistically significant.

Table 5: Panel data regression analysis

	FE Model				RE Model				
Variables	Coeff.	Std. Error	t-statistic	p-value	Variables	Coeff.	Std. Error	t-statistic	p-value
C	186.14	26.29	7.08	0.0000	C	133.05	37.94	3.506	0.0005
BVPS	0.486	0.18	2.58	0.0102	BVPS	-0.297	0.14	-1.984	0.0477
EPS	5.717	1.00	5.66	0.0000	EPS	11.82	0.87	13.49	0.0000
DPS	36.28	1.76	20.59	0.0000	DPS	56.35	1.54	36.51	0.0000
D/E RATIO	-2.847	10.12	-0.281	0.7786	D/E RATIO	-4.45	9.26	-0.480	0.6308

R^2 =0.968482, Adj.R^2 =0.960257, F-statistic =117.7378 (0.000), Durbin-Watson Statistic= 2.334448

Source: Author's Own Calculation

Table 5 reports the results for both REM and FEM. At 5 percent, the coefficient of EPS is positive and statistically significant. The positive significant coefficient indicates that changes in EPS have influences on the stock price movement. Conversely, investors do not rely heavily on the D_E ratio when choosing manufacturing company stocks as it has a negative coefficient and is negligible at 5 percent. BVPS and DPS have statistically significant positive coefficients at 5 percent which is in line with the theory.

A sensible investor views an undervalued share as valuable and considers investing in an exaggerated stock. The positive coefficient of BVPS aligns with the theory that believes that rising firm BVPS is correlated with rising share prices. The positive coefficient of DPS shows the beneficial impact of dividend payments on the stock price of manufacturing companies listed on the BSE. The three independent accounting variables collectively explain approximately 96 percent of the variations in the market price of equity shares, as evidenced by the regression's output R2 of 0.9684 and adjusted R2 of 0.9602.

Conclusion

Assisting accounting information users, particularly stock investors, in gauging a company's value stands as a key objective in financial reporting. Value relevance studies assess the extent to which this goal is achieved. The current study uses panel data regression analysis to examine the association between an accounting variable and the stock price of manufacturing firms listed in BSE for five years i.e., from 2015 to 2019. The results from the regression analysis using panel data indicate a significant and positive impact of accounting variables on stock prices. The study's findings indicate that EPS significantly influences the market price of the stocks of manufacturing businesses listed on the BSE, as compared to the developed and developing markets. Furthermore, both DPS and BVPS exhibit a considerable positive influence on share prices, suggesting that an increase in these elements correlates with a rise in stock prices. On the other hand, the D/E Ratio shows a negligible and unfavourable effect on share prices. Inconsistencies in the findings of value relevance studies across different markets may be attributed to variations in accounting standards, market dynamics, research methodologies, study durations, and the selection of enterprises in the sample.

The findings of the study cannot be generalized because of its limitations. The empirical findings of the study are restricted to only the manufacturing firms listed in BSE for five years only i.e., from 2015 to 2019. The accounting variables considered for the study are also limited to only EPS, BVPS, DPS, and D/E ratios. Studies in future can extent the findings by incorporating the different methodologies and parameters. Prior studies have relied on quantitative data to examine the usefulness and relevance of accounting information across various nations and industries, future studies can use qualitative data to assess the factors influencing the stock values. Future studies can also incorporate the linkage of value relevance considering Ohlson's (1995) and Easton and Harris's (1991) theories. Furthermore, researchers can also study the impact of corporate announcements on stock prices. The findings of the study contribute to the existing literature on the influence of accounting variables on stock prices.

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Appendix

List of Firms

Sl No.	Name	Sl No.	Name	Sl No.	Name
1	Valson Ind	14	Garden Silk	27	Rupa and Comp
2	Indo Count	15	Kkalpana Ind	28	Bharat Forge
3	Empire Ind	16	RDB Rasayans	29	Alicon Castallo
4	Hind Tin Works	17	Vardhman Poly	30	Himatsingka Seide
5	Surat Textile	18	Alok Ind	31	Saint Gobain
6	Forbes Gokak	19	Centum Electron	32	Welspun India
7	Mafatlal Ind	20	Yash Pakka Ltd	33	JCT
8	Jain Irrigation	21	Faze Three Exp	34	Filatex India
9	Ester Ind	22	Bilcare	35	Tamil Newsprint
10	Ginni Filaments	23	Garware Technic	36	NR Agarwal
11	Magnum Ventures	24	Nitin Spinners	37	West Coast Pap
12	Sumeet Ind	25	Garware Poly	38	VIP Ind
13	Super Spinning	26	Duro Pack	39	Malu Paper
				40	Raymond

Dividend Policy and Its Impact on Stock Prices: An Empirical Study on Selected Indian Steel Companies

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Abstract

Dividend decision is a very decisive judgment for any firm as it will impacted on several factors like stock prices, future development, debt repayments etc. in this particular paper it has been tested whether EPS and DPS has any significant effect on MPS or not. For that fifteen companies are chosen on the basis of market capitalization basis and there after correlation and regression analysis has been done to see the effect of EPS and DPS on MPS. Finally after all analysis it was found that ther was a positive correlation between EPS and DPS with MPS but not significantly and on the other side by regression analysis it was fond that approximately twenty two percent variations in MPS explained by EPS and DPS and rest due to residual term.

Keywords: *Dividend, Earnings per Share, Dividend per Share, Market price per share.*

Background and History of Dividend

Dividend policy has been among the very significant topics in the financial management since the coming existence of corporation from business. Corporate dividends concept developed at least to the early sixteenth century in Holland and Great Britain when the captain of sailing ships started selling financial claims or product to financiers, which entitled them to share the profits if any, of the voyages. At the end of each peregrination the profits and capital were distributed among the investors. By the end of sixteenth century these financial activities started to be traded on open market in Amsterdam and gradually replaced by shares of ownership. In that time many investors would buy shares from more than one captain to diversify their portfolio and distribute the risk of investment. The ownership structure of shipping firms gradually evolved into joint stock of company business. As a result these companies began trading as going concern entities and distributed only the profits rather than entire capital. The firms as a going concern initiated to decide portion of income as dividends among the shareholders or investors. Gradually the firms began to restrict the payments of dividends from profits for further development and expansion purpose. In additions to the importance placed by investors on dividend consistency. Another issue of modern corporate dividend that dividend come to be seen as an important form of knowledge regarding firms financial performance. In short investors are often faced with inaccurate fact about the performance of a firm and to measure the actual financial position and future views of management, dividend policy is one of the measures.

To summaries, development of dividend payments is linked up with corporate form itself. Corporate mangers are trying to maintain balanced dividend payments to share holders believing that dividend reduction might have unfavorable reaction on share price and therefore used dividends as device to signal information to the market. The next section considers these developments from both theoretical and an empirical point of view.

Birds in a Hand Theory

Birds in a hand worth two in the bush- means keep old one what is in your hand which is better to get something new for taking more risk. In other words investors prefer to take less risk and demand for dividends as early as possible as opposed to a larger share on capital gain. This theory of demanding for near term dividends was first proposed by Krishnan as the bird in the hand theory. According to Gordon, uncertainty increases with passing time and this is also applicable for dividends. Therefore as uncertainty level go up with distant dividends, the risk to get a certain return as a heavier dividends gets diminished. Therefore the risk averse investor prefer to have dividends in the near future compare to get more appreciation in stock price in the market in distant future. According to Gordon, the distant dividends are generally not preferred by the risk averse investors. This theory says investor prefer stock dividends to potential capital gains due to the uncertainty of capital gains. The theory was developed as a counter point to the MM-theory of irrelevance of dividends which means that investors don't care where there returns come from. The Birds in a Hand theory argument of dividends mean that the near future dividends are worth more than a distant future dividend by market appreciation by equal amount.

On the other side birds in a hand theory - that complies regarding dividend payout policy does impact the share price and investors behavior. The theory reasons that a low dividend payout increases cost of capital of firm. This is because investors expects that more retained earnings lead to higher growth and higher dividend in the future and a higher dividend payout boosted the share price. The theory is based on the old saying "a bird in a hand is worth two in the bush".

Here bird in hand – dividend pay out

Two in the bush – expectations of increases market price of share may or may not happen – capital gains.

History and development of Indian steel industry:

Iron and steel industry is considered as the backbone of an emerging economy. One of the measures of development is counted by the per capita consumption of steel. India is always ahead of time in production and innovation of steel. History says in Delhi in 300AD, an Iron pillar of nearly 20 ft high and 6 tons weight was made by welding together dices of forged iron which is remarkably free from corrosion. It is mysterious like pyramid of Egypt.

The first modern steel industry was established in 1874 in Kulty by Bengal Iron Works which later on stands as Indian Iron and Steel Company. The large scale steel production started when Tata Steel Plant was established in 1907 in Jamshedpur. In 1918 IISCO was set up and in 1973 SAIL is created as a holding company to oversee the public sector steel production.

From 1 MT steel capacity in 1947, today India is 4^{th} largest crude steel production and world's largest production of sponge iron. A sustainable growth of steel industry contributes positively to an economy exclusively. Source: *Government of India, Ministry of Steel, National Steel Policy.*

Though the growth in the steel sector is encouraging but govt. has taken steps to make it more sustainable. The engineering sector has de-licensed and 100% FDI is allowed in the sector. Large infrastructure project in PPP (public private partnership) mode has been framed. Meanwhile ,the National Steel Policy of 2005 has been replaced by 2012 the growth rate of market value of steel production 17.7% (Source*:www.jpcindiansteel.nic.i)*

Review of Literature

Frankfurter and Wood (2002), examined the various dividend policy theories with empirical tests and they found that managers are reluctant to reduce dividend payments even in periods of financial crisis also. Shareholders expect and deserve increase in dividend payments and they prefer for dividend despite the tax liability. Al-Malkawi, Rafferty, Pillai (2010), reviewed the various dividend policy theories with empirical data and they found that dividend policy has been bound up with the development and history of corporation itself. Although various studies have examined various issues of dividend policies, they have produced mixed and inconclusive results. Alli, Kasim. L, Qayyum Khan and Gabriel (1993) examined the determinants of corporate dividend policy by using two step procedures that involves factor analysis and multiple regression and they found residual theory of dividend and the role of dividends in mitigating agency problems. They also found for the role of managerial consideration in affecting the firms payout policy. Bodla and Rani investigate the determinants of dividend policy with respect to mining sector unit in India by two statistical applications. First by Factor Analysis on the data to extract prominent factors from various variables and finally multiple Regression Analysis is conducted. They found various prominent factors like firm size, profitability, pecking order hypothesis, ownership structure, liquidity ratio, leverage etc. and by regression analysis on the above factors resulted firm size, pecking order hypothesis and dividend signalling to be determinants of the dividend policy of mining industry. Bhatia (2020) investigates dividend decision of Indian companies and he found various useful insights of dividend policy. Firstly profitability has a positive and significant effect on dividend policy. Secondly the history of dividend policy also a vital effect on dividend policy and finally investment opportunity is also positively related to the dividend policy. Taushev (2016) examined the theoretical models of dividend policy and found that dividend policy of public companies influences the decision of shareholders. The conclusion from the discussed theories is that there is no final solution to the "dividend puzzle" neither in theory nor in practice. Yilmaz and Gulay (2006) found in their study that market prices of shares start to rise a few days before cash dividend payment and on the ex-dividend day the share price will fall more than the actual dividend received and which leads to increase the trading volumes to gather the opportunities around ex-dividend day. Alam and Hossain (2012) investigates the effect of dividend policy on UK based companies listed in London stock Exchange and found that as per dividend irrelevance theory dividend policy has no influence on the value of the firm for the reason home made dividend, on the other side according to dividend relevance theory value of the firm influenced by dividend policy because of certainty, clientele effect, information context, liquidity, leverage, profitability and market capitalization influence the dividend rate negatively while growth affect positively in case of Bangladeshi firms. According to Baker, Farrelly and Edelman (1985), shareholders are highly concerned about the regularity and continuity of dividend. Share value is associated by dividend policy and the concerned persons are generally aware of signalling and clientele effects of dividend policy.

Objectives of the Study

1) To check and verify whether earnings per share will affect the market price per share of selected Indian steel companies.

2) To check and verify whether dividend per share will affect the share price of selected Indian steel companies.

Hypothesis of the Study

Earnings per Share and Dividend per Share will influence the Market Price per Share.

Methodology

The study is descriptive in nature will be done on secondary data from the annual reports of the companies and money control website as required. Fifteen Indian steel companies have been chosen on the basis of market capitalization for analysis. Two major variables are identified namely earnings per share (EPS) and dividend per share (DPS) for analysis of share price. Firstly correlations of the variables are calculated from micro soft excel. There after regression is done from panel data to analyze the impact of EPS and DPS on market price per share (MPS) of the steel industry. Appropriate accounting and statistical tools are used to analyze the data collected for research and draw the inferences accordingly.

Variables

1) Earnings per share (EPS) are calculated as a earnings available to equity share holders divided by the number of equity shares. The resulting number serves as an indicator of a company's profitability. The higher a company's EPS the more profitability it is considered. EPS is most valuable when compared against competitor metrics, companies of the same industry, or across a period of time.

EPS= Earnings Available to Equity Shareholders / Total number of Equity Shares

A reason for its being selected that eps is reflected as assign of determining ability of the firms to earn profit. In the light of GAAP publicly owned companies are to show earnings per share next to the income line in their respective p/l a/c. it has its own distinct position in financial ratios.

2) Dividend per Share (DPS) calculates the portion of company's earnings that is paid out to shareholders. It indicates how profitable a company is over a fiscal period and it can tell investors about the past financial health and current financial stability.

DPS = total dividend pays out over twelve months period / Number of Equity Shares

It is an important financial ratio in understanding the financial health and long term growth prospects of a company, growing dividend payment by a company can be signal of growth, stability and sustainability. At the same time declining DPS may be due to reinvestments in a firm operation or debt reduction, but may also indicate poor earnings and be a red flag for financial hardship.

3) Market Price per Share (MPS) it is calculated by considering the market value of a company divided by the total number of equity shares. A market price per share of a company is the amount of money investors are willing to pay for each share.

In this study the stock market price has been used as a dependent variable. Stock market price can be calculated through the process of considering closing market prices of shares at the last trading day of the financial year.

Results and Analysis

The correlation coefficient between EPS and MPS is 0.368964 which signifies that EPS is positively associated with MPS.

On the other side correlation coefficient between DPS and MPS is 0.113551 which implies that there is a positive correlation.

Results of Regression Analysis

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	153.0134	26.1610	5.84889	1.34E-07	100.8622	205.164	100.862	205.164
X Variable 1	2.935112	0.66876	4.38885	3.83E-05	1.601955	4.26827	1.60195	4.26827
X Variable 2	-13.7597	4.89679	-2.8099	0.00637	-23.5213	-3.9981	-23.521	-3.9981
Multiple R= 0.470685, R Square =0.221544, Adjusted R Square =0.19992, Standard Error =191.1944, Observations =75, F Value =10.24539								

Multiple R denotes the correlation coefficient between the three variables namely EPS, DPS, MPS. The value of R=0.470685 shows positive correlation between MPS with EPS and DPS. R^2 has a value 0.221544. R^2 is called the coefficient of determination. This closer the value of R^2 to one greater is the veracity of the model. In our case R^2=0.221544. The interpretation is 22.15% of the variations in the MPS is explained by EPS and DPS only and about 77.85% is explained by the error or residual term. So the model fitted is fairly accurate. If we look the calculated F value it is 10.24539 and is greater than the critical F (3.1239) value which implies to reject null hypothesis. At the same time significance F value (P value) is given to be 0.000121. It is less than the level of significance 0.05. Reject null hypothesis. The conclusion is that MPS is linearly related to EPS and DPS. Coefficient- Y intercept is 153.4647 and slope of the variables EPS and DPS are 2.94 and -13.88. It implies that there is a downward negative relation with DPS and MPS. On the other side there is a positive relation of MPS with EPS. P value- if the P value is lower than 0.05 means no effect of independent variables on dependent variables. Of our calculation EPS has more than 0.05 which means EPS has an effect on MPS and on the other side DPS P value is less than 0.05, which signifies that DPS has no effect on MPS. The correlation coefficient is 0.368964 which signifies that EPS is positively associated with MPS but not strongly associated with MPS and the value is less than 0.5. On the other side the correlation coefficient is 0.113551 which implies that there is a merely positive correlation but not strongly associated with DPS and MPS.

Summary

The central intention of this study is to observe the association linking dividend policy and stock prices. Research question of the study are whether dividend policy has an impact on stock prices or not? The objectives of the study are to study the relationship of the dividend policy with the share prices and accept or reject the academic explanation of the practice of paying dividend. Though simple regression analysis is used and at the same time correlation of the variables also done to get the concrete results from the analysis. Result shows that there is a positive correlation between earnings per share and dividend per share with market price per share but not strongly significant. On the other side from regression analysis shows that less near about twenty two percent changes of mps due earnings per share and dividend per share and 78% for residual term.

Conclusions

The study is conducted to know the impact of dividend policy on stock price. Results of the correlation show that among the given variables earnings per share and dividend per share are positively correlated but not strongly positive with market price per share. On the basis of regression analysis R^2 results shows that 22.28% of changes in market price per share due to earnings per share and dividend per share and balance 77.72% is explained by error or residual term. Hence from the above analysis we can conclude that (on the basis of last five years data) earnings per share and dividend per share of Indian steel companies has not significant impact on market price per share, at the same time finally we conclude that dividend declaration out of earnings has not a strong parameter for change in market price per share. So birds in hand theory developed by Gordon and Linter's has not applied on Indian steel companies stock prices.

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Role of Agriculture in Rural Development in Northeast India: Prospects and Challenges

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Abstract

The Northeastern region comprises of eight states and is strategically important as it shares international boundary with other eastern countries. Rooted in diversity, the region is blessed with untapped natural resources, hills, wetlands, flora and fauna, rich indigenous knowledge and techniques, diverse farming practices that are unique in nature. Agriculture remains a major occupation of the people in the region with over 70% of the population is dependent on it for livelihood (NITI Aayog, 2021). The practice of sustainable indigenous farming practices is dormant in this part of the country where the farmers use age-old techniques of cultivation, irrigation that are scientific in nature. The impact of green revolution, modernisation of agriculture has escaped the northeast region to a larger extent making the agricultural practices ecologically safe and sustainable. Despite the fact that the region is abundant with natural resources, sustainable farming the region is lagging behind on several fronts. To meet the challenges faced by the farmers and making the region self-sufficient, the government is taking active interventions through various innovative schemes and policies that helps the farmers in developing. With the increased attention towards organic farming, climate-resilient agricultural practices that are already practiced in these states the government is striving to unleash the huge potentialities existing in the northeastern region and establish international market linkages. The paper is a humble attempt to understand the present agricultural scenario in the Northeastern states and the challenges faced. Further, the study aims to understand the prospects of agricultural growth and rural development in the Northeastern states. Secondary source of data was employed for the study. Data are collected from government websites, government reports, various international, national and regional research articles.

Keywords: *Agriculture Scenario, Northeast India, Indigenous Knowledge, Market Linkages*

Introduction

The Northeastern region comprises of eight states of Arunachal Pradesh, Assam, Manipur, Mizoram, Nagaland, Sikkim, Tripura. The region is strategically important as it shares international boundary with other eastern countries. The region is most culturally and ethnically diverse in terms traditions, numerous tribes, food habits, agricultural practices, languages and so on. Rooted in diversity, the region is blessed with untapped natural resources, hills, wetlands, flora and fauna, rich indigenous knowledge and techniques, diverse farming practices that are unique in nature. With the immense potential and untapped resources, the region is developing into an economic hub that can be a good opportunity for the rural development and working population in this part.

Agriculture remains a major occupation of the people in the region with over 70% of the population is dependent on it for livelihood (NITI Aayog, 2021). Along with agriculture, fisheries and horticulture are other contributors to the region's Gross Domestic Product in the country. The practice of sustainable indigenous farming practices is dormant in this part of the country where the farmers use age-old techniques of cultivation, irrigation that are scientific in nature. The impact of green revolution, modernisation of agriculture has escaped the northeast region to a larger extent making the agricultural practices ecologically safe and sustainable. This provides an opportunity to the farmers in the region to build an agricultural ecosystem, embracing the rich indigenous techniques, make use of locally available resources, empowering the local community for an economically viable agricultural practices in the region. Combining the traditional knowledge with modern knowledge can provide a scope not only for economic and rural development but also for environmental sustainability.

Despite of the abundant availability of natural resources, sustainable farming in the region is lagging behind on several fronts. Several factors are interlinked from political insurgency to topographical conditions that act as a stumbling block in the progress and development of these states. The region produces only 1.5% of country's food grain production and imports food grains for its domestic consumption (Deka, 2020). To meet the challenges faced by the farmers and making the region self-sufficient, the government is taking active interventions through various innovative schemes and policies that helps the farmers in developing. With the increased attention towards organic farming, climate-resilient agricultural practices that are already practiced in these states the government is striving to tap the huge potentialities existing in the northeastern region and establish international market linkages. Therefore, growth in agricultural sector is crucial for the overall development of the economy and has positive implication in poverty reduction. As a vast majority of the population is dependent on this sector as primary source of income therefore this sector is a major source of food security for the vulnerable section.

Objectives

The objectives of the present study are-

- To understand the present agricultural scenario in the Northeastern states and the challenges faced.
- To study the prospects of agricultural growth and rural development in the Northeastern states.

Research Methodology

Secondary source of data was employed for the study. Data are collected from government websites, government reports, various international, national and regional research articles.

Agricultural Scenario in Northeast India

The Northeastern states are largely agrarian in nature. The soil condition and the hilly terrain gave rise to two types of dominant agricultural practices namely Settled Cultivation and Slash and Burn locally called as *Jhum* cultivation in the region. The *Jhum* cultivation is practiced mainly in the states of Arunachal Pradesh, Nagaland, Meghalaya and Mizoram (NITI Aayog, 2021). Settled cultivation is mainly practiced in the alluvial soil in the plains of Assam i.e., Brahmaputra and Barak valley, some plains in Tripura, central Imphal valley of Manipur (Seitinthang, 2014). In terms of net sown area, Assam with 34.1% has the highest net grown area followed by Tripura 23.5% while Arunachal Pradesh with 2.1% is the lowest (Deka, 2020). Further in terms of cropping intensity, the overall percentage by the Northeast region is 135 and among that Tripura has the highest share with 185% followed by Manipur at 145% (Deka, 2020).

The main crops that are cultivated in the region are cereals, pulses and oilseeds with rice dominating the crop cultivation. In terms of rice production, Assam comes under the top 10 states in India. Through rice is a dominant crop cultivated by the farmers in these states still the production of rice is below the national average. It is mainly because of varied ecological conditions that are predominant in this part of the country. Despite that, there are numerous indigenous varieties of rice crops that are cultivated in *Jhum* fields as well as in plains that are majorly consumed by the people. Various other delicacies are prepared from rice that are popular among the tribal and non-tribal population in the region. Age old techniques are used by the farmers in these states for the cultivation, storing of seeds of different varieties of rice for cultivation in coming seasons. The practices are versatile in nature as it varies from one state to another and within the state from one tribal group to another. Varieties such as sticky rice, black rice, red rice, ahu rice, *bao* rice etc. are cultivated in different states using traditional techniques in the northeastern states. The prevalence of this practice deduces the fact that seems to be rooted in their traditional and culture understanding that reflects their food sovereignty over their cultivation and land.

Table 1: Top 10 Rice Production States of India

Area - Million Hectares
Production - Million Tonnes
Yield - Kg./Hectare

State	2020-21#					2019-20					Area
	Area	% to All-India	Production	% to All-India	Yield	Area	% to All-India	Production	% to All-India	Yield	Under Irrigation (%) 2018-19*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
West Bengal	5.58	12.38	16.65	13.62	2984	5.49	12.58	15.88	13.36	2892	51.08
Uttar Pradesh	5.68	12.60	15.66	12.81	2759	5.74	13.14	15.52	13.05	2705	86.3
Punjab	2.79	6.19	12.18	9.96	4366	2.92	6.69	11.78	9.91	4034	99.7
Odisha	4.03	8.95	8.77	7.17	2173	3.94	9.03	8.36	7.03	2122	31.5
Andhra Pradesh	2.32	5.16	7.89	6.45	3395	2.30	5.27	8.66	7.28	3765	96.9
Telangana	2.31	5.14	7.70	6.30	3327	2.01	4.61	7.43	6.25	3694	99.3
Tamil Nadu	2.04	4.52	7.28	5.96	3574	1.91	4.37	7.17	6.03	3760	93.2
Chattisgarh	3.79	8.41	7.16	5.86	1889	3.67	8.40	6.77	5.70	1848	37.0
Bihar	3.02	6.71	6.88	5.63	2276	2.89	6.61	6.30	5.30	2182	72.1
Assam	2.36	5.24	5.26	4.30	2224	2.29	5.25	4.98	4.19	2176	15.9
Others	11.13	24.70	26.84	21.95	2411	10.51	24.08	26.02	21.89	2475	
All India	**45.07**	100.00	**122.27**	100.00	2713	**43.66**	100.00	**118.87**	100.00	2722	**62.7**

Source: Directorate of Economics & Statistics, DA&FW
Note: States have been arranged in descending order of percentage share of production during 2020-21.
Fourth Advance Estimates.
*-Provisional

Source: Agricultural Statistics at a Glance (Government of India, 2021)

The above table represents the top 10 rice production states in India. Though Assam is at the bottom in terms of percentage share but it can be seen that there has been growth in production from 2019-20 to 2020-21.

Apart from rice cultivation, the cultivation of cash crops such as arena nuts, rubber, ginger, turmeric, tea, palm oil, cardamon is also in practice. Tripura is in the forefront of natural rubber cultivation in the region and the second largest producer in the country after Kerala (Government of Tripura, 2023). Apart from rubber cultivation, bamboo and bamboo handicrafts are considered to be the best in the country. Out of 130 bamboo species available in the country, 21 species are found in Tripura (Government of Tripura, 2023). Further reference can be made to Meghalaya where the Lakadong variety of turmeric that contains 6.0-7.5 of curcumin which is the chief constituent of turmeric is grown in the Jaintia hills of Meghalaya (Devi, 2020). Tea is one of the most important plantations that is practiced in the region dates back to 1833 bringing a good revenue in the region. In comparison to other cash crops, tea cultivation is done in large scale on commercial basis. Assam alone contributes to almost half of the total domestic production in tea cultivation (Global South, ActionAid, Solidarity for Sustainable North East, 2019). The cultivation of Palm oil in the region made a new entrance in comparison to rubber, tea plantation. Reference can be made to Mizoram where the cultivation has been done in Public Private Partnership (PPP) model. Recently, the cabinet also approved the National Mission on Edible Oils- Oil Palm (NMEO-OP) and provided a funding of Rs. 5850 crores covering 3.38 lakh hectare in NER and Andaman & Nicobar Island (Ministry of Development of North Eastern Region, 2021-22).

The agro-climatic condition and the soil condition gave rise to another practice of cultivation that is Horticulture. The horticulture cultivation is practiced in all the northeastern states but the quantities vary. Different varieties of temperate and tropical horticultural crops are produced in the region that are loaded with nutrition. With the extension of the market linkages, the horticultural sector of the region is getting a boost in recent years and a slow shift towards horticultural cultivation supporting a large number of farmers.

Table 2: Fruits & Spices cultivated in N.E. India

States	Fruits	Spices
Arunachal Pradesh	Apple, Banana, Guava, Kiwi, Orange, Pear, Pineapple, Walnut	Ginger, Large Cardamom
Assam	Banana, Guava, Jack fruit, Lemon, Litchi, Mandarin Orange, Mango, Papaya, Pineapple, Sapota	Black cumin, Black pepper, Chillies, Coriander, Cumin, Fennel, Fenugreek, Garlic, Ginger, Mint, Onion, Turmeric
Manipur	Banana, Lemon, Orange, Passion fruit, Peach, Pear, Pineapple, Plum	Chillies, Garlic, Ginger, Hatkora, Onion, Turmeric
Meghalaya	Banana, Guava, Lemon, Mandarin Orange, Pear, Pineapple, Plum	Bay leaf, Black pepper, Chillies, Ginger, Turmeric
Mizoram	Banana, Hatkora, Orange, Papaya, Passion fruit, Pineapple	Chillies, Ginger, Turmeric
Nagaland	Banana, Guava, Jack fruit, Lemon, Litchi, Mandarin Orange, Mango, Papaya, Pineapple, Plum, Pomegranate	Black pepper, Cardamom, Chillies, Garlic, Ginger, Turmeric
Sikkim	Banana, Kiwi, Mandarin Orange, Papaya, Passion fruit, Pear	Cherry pepper, Ginger, Large cardamom, Turmeric
Tripura	Banana, Ber, Guava, Jack fruit, Lemon, Litchi, Mango, Musambi, Orange, Papaya, Pineapple, Sapota	Black Pepper, Betel vine, Chillies, Ginger, Onion

Source: Growth Trend and Potential of Horticulture in Northeast India (Das Gupta, 2022)

The above table shows the varieties of fruits and spices that are cultivated in the northeastern region. The states have recorded an increase in their annual growth from 3404.4 in 2009-10 to 4722.31 in 2018-2019 (Das Gupta, 2022).

Prospects and Upscaling of Agriculture in the Region

The northeast region is a vast untapped market for economic growth. The government as well as the international bodies are putting much emphasis on rapid development of the region. Initiatives are been taken to promote niche products from these states for export to other states and countries. Being strategically located, the northeastern states are the gateway to South-East Asia and ASEAN countries. The presence of such lucrative market in the neighbour can be a game-changer for the northeastern countries if proper strategies and market linkages are established.

The development of the northeastern region got a major boost up with the adoption of ‘Look East Policy’ in 1990s. The identification of the region as a zone for trade expansion with the neighbouring countries and growth and economic development of India and Southeast Asian countries helped in development of the region on several fronts. The policy was changed from ‘Look East Policy’ to ‘Act East Policy’ in 2014 under the new ministry and is a continuation of the previous policy. Roads and connectivity infrastructure plays a crucial role in the development of trade and economic transformations that remain an important agenda of the Act East Policy. The connection of ASEAN countries with the Northeastern region has got some cultural and traditional history, commonness that is shared across the borders (Barua, 2020). There has been increased attention towards the Northeastern region in the Act East Policy through commerce, connectivity, cultural sharing, infrastructure development. The total earmarked funds for Northeast region have been increased by 110% from Rs 36,108 crore in 2014-15 to Rs 76,040 crore in 2022-23 for the overall development (Ministry of Home Affairs, 2022). Agriculture remaining a dormant part of the economy of the region can harness a good economic growth with the help of the policy. The region produces good quality fruits and is an exporter of fruits within the country and outside such as banana, kiwis, queen pineapples, jackfruits, lemon and others that can be capitalised and accentuated for export purpose. Recently, PM Modi talked about 8 pillars of development for the northeastern region and among that natural farming is one parameter for development. The already existing practice of sustainable farming in the region can be a great opportunity for the region to enhance their productivity and export it. Connectivity through rail, road, airways, digital connectivity is already underway that can further help the farmers in the region to exporting their products.

Sustainable Development Goals (SDGs) and agricultural practices are also closely interlinked as improvement and sustainable development of agriculture is linked with the achieving of other goals. Goal 1 (No Poverty), Goal 2 (Zero Hunger), Good Health and well-being (Goal 3), Gender Equality (Goal 5), Climate Change (Goal 13), Life on Land (Goal 16) are some of the SDGs that are specially linked with agricultural development. Agricultural development can help the poor vulnerable section by lifting them out of poverty and ensuring food security, livelihood opportunities and income. Accessibility to nutritious food is critical to fight against malnutrition, hunger, Maternal mortality and infant mortality rate and achieving the set targets in SDGs. To achieving this, one of the ways is to enhance organic and local farming, diversified farming, reviving traditional food practices that are in consonance with the local environment and loaded with health benefits and further limiting the use of chemical fertilisers. Along with this, sustainable farming practices are also helpful in limiting greenhouse gas emissions as the affect of climate change has a profound impact on agricultural practices. Therefore, sustainable farming practices and promotion of agrobiodiversity are not only beneficial to the farmers but also to restoring the ecosystem.

The Government is also taking innovative steps to help the farmers in the Northeast region to establish value chain and market linkages for their agro products. Some of the schemes are-

- Recently the Krishi UDAN 2.0 initiative was launched by the government (PIB Delhi, 2021). The scheme aimed to facilitate and incentive the agricultural produce by air transportation. The scheme will be implemented in 53 airports across the country and special focus on Northeast and tribal region. In the first phase of the initiative, 7 locations from northeast are selected. Apart from this, another 7 focus routes and products will be exported to rest to India and international market. Among the 7 focus routes, organic products from Sikkim to be marketed to all over India, Mandarin and Oranges from Dibrugarh to be exported to Delhi and Dubai, Pulses, fruits and vegetables from Guwahati to Hong Kong.
- PM DevINE (Prime Minister's Development Initiative for North-East) is a 100% central funding scheme that will create infrastructure, support industries, livelihood creation for youth and women and social development projects (PIB, Delhi, 2023). Promoting Scientific Organic Agriculture in North East Indian is an initiative under the scheme.
- National Mission for Sustainable Agriculture: It focusses on enhancing agriculture that is mostly rainfed, integrated farming, soil health management etc. It caters to the key themes namely efficient water use, livelihood diversification, nutrient management through sustainable technologies, conservation of natural resources and so on. Under this scheme some other sub themes are developed (Deka, 2020)-
    - Rainfed Area Development
    - Soil Health Management
    - National Rainfed Area Authority
    - Mission Organic Value Chain Development in North Eastern Region
    - Paramparagat Krishi Vikas Yojana

SWOT Analysis can be done to understand the potentialities and prospects of agricultural upscaling in rural development in the region.

Strength

The favourable climatic environment provides opportunities to the farmers to cultivate various kinds of crops such as millets, paddy, cash crops, *Rabi* and *Kharif* vegetables, varieties of chillis, fruits. As the region is blessed with heavy rainfall, the agricultural practices are mostly rainfed. Various indigenous techniques such as Bamboo Drip Irrigation, Bench Terrace Irrigation and so on are used by the farmers in the region since a long time. Therefore, these techniques intermixed with modern rainwater harvesting techniques can be introduced with the participation of the farmer that can increase crop yields and agricultural productivity. Farming practices used by farmers in the region such as *Zabo* system in Nagaland, Contour Trench farming in Mizoram, Rice-Fish system of cultivation of *Apatani* tribe of Arunachal Pradesh, *Bari* (backyard farming) in Assam etc. are some practices that are sustainable in nature and utilise the local resources. Thus, these techniques of farming that are location specific are unique in nature that can be promoted by the government to optimise production without adversely affecting the nature. Apart from these, the region is blessed with perennial rivers, streams, *Beels* that provides varieties of local fishes. There are more than 3000 varieties of fishes in the region and Assam in 2019 produced 3,27,000 metric tonnes of fishes (Global South, ActionAid, Solidarity for Sustainable North East, 2019). Fishes are widely consumed globally and with such production this can be a good opportunity for the region to meet the demand and supply. Along with this, the consumption of dry fish is widely popular within the region and also outside. Proper mechanisation of drying, storing, packeting can establish a good market value. Further, as horticulture plays a crucial role in the economic growth of northeastern region therefore investing and venturing in this field is a good prospect for rural development. Hi-tech horticulture such as climate resilient production technology, conserving existing germplasm, using the underutilised plant, development of value chain to deal with post-harvest loss are some of techniques that are applied under it (Deka, 2020). Horticulture based farming system is a viable option for farmers cultivating in *Jhum* fields.

Linking modern knowledge with the indigenous farming practices and techniques used by the farmers in the region can augment the expansion of the market. Increased attention is given to natural farming and chemical free farming in the Budget 2023 where the government established National Mission on Natural Farming for promotion on a larger scale (Ministry of Agriculture and Farmers Welfare, 2023). The concept of natural farming and organic farming is already practiced by the farmers in the northeastern region. Further, setting of industries for these allied products such as processing centres, preservation industries etc. can increase employment as well as value addition of the products. Therefore, with the help of proper technology, marketing the production can be increased helping the small landholding farmers in development.

Weakness

Despite such advantages, the farmers in the northeastern states face innumerable challenges. As the farming practices are mostly rainfed therefore excessive dependency on the natural resources stands as a problem. Further the hilly terrain where the *Jhum* cultivations are done, using of machineries are not possible. Thus, the entire process spanning from clearing of land to harvesting of the products are done manually that is time consuming and labour intensive in nature. Additionally, small landholdings, unorganised markets for selling products, unavailability of cold storages are other challenges faced by the farmers in the region. These limitations impede production efficiency ultimately incurring financial loss to the farmers. Thus, as the geographical topography in this part of the country is different from the rest of India, therefore context specific technologies for *Jhum* fields, storage facilities can be adopted by the government depending on the location. Thus, the government along with the NGOs must identify these challenges and implement proper mechanism to deal with it.

Opportunity

Close proximity with international borders is a great opportunity for the farmers in the region to offer markets for local organic products that can generate foreign revenue. The Northeast region has seen a significant rise in the export of agricultural products from USD 2.5 million in 2016-17 to USD 17.2 million in 2021-22 (Goswami, 2022). The NER is the gateway of Southeast Asian countries and shares international boundaries with five countries that makes the region conducive for international trade. The major destination of export of the products are Bangladesh, Bhutan, Middle East, Europe and the UK (Goswami, 2022).

North Eastern Regional Agricultural Marketing Corporation (NERAMAC) Limited is providing helping hand to the farmers in the region in marketing their finished products. The farmers can sell their products to NERAMAC where they are provided the MSP and establish a supply chain that helps them in getting good price. Further, NERAMAC helped the farmers in 15 GI registration of their agro-horti products (Ministry of Development of North Eastern Region, 2021-22). The GI tag helps in increasing the demand of the products and promote export helping in development of marginal farmers associated with it. Products such as king chillies or indigenous *Naga Jolokias*, assam lemon (*Kaji nemu),* Joha rice, Black rice, Jackfruit, bananas, queen pineapple, kiwi wine are gaining popularity and the exports of these products has significantly increased. Therefore, wholesome efforts should be made for larger production of these agro-horti products maintaining and complying with the international standards and market.

Threat

The location of the northeast region is a boon as well as bane for the entire region. In absence of proper mechanism of the agro-horti products, the neighbouring countries like Bangladesh which is a rapidly developing country can strategically use this opportunity to import fruits, vegetables etc on a cheaper rate and further make value addition by processing it on large scale making a profitable business for their own. Therefore, to meet this threat situation, it is necessary to increase production, establish proper market chains that can be used for early entry in the exporting industry and international linkages.

Apart from these, establishing post-harvest supply chains of highly perishable agro-horti through fruit processing like jams, pickles, jellies, processing of spices such as turmeric, ginger into dry powder, natural dyes etc., proper workshops and distribution of machineries to use the learned techniques in ground level, proper road connectivity, formation of FPOs and registering the farmers under that, formation of marketing cooperatives at the community level, etc. are extremely important to meet the demand and development of the region and also fulfilling the goal of ‘Atmanirbhar Bharat’.

Conclusion

The promotion and expansion of agriculture is important for the development of the entire northeastern region. Strategies such as Promotion of home gardens from the government to increase household food security and nutritional intake among the women, Terrace cropping, SALT (Sloping Agricultural Land Technology), organised market, engaging rural youth and women in mass level at decision making, value addition of finished products, capacity building trainings, research, blending of traditional and modern technology and so on can be helpful in generating income and employment, poverty reduction, rural development. Along with this, embracing agroecological approaches, supporting local food systems and small-scale farmers will be beneficial in achieving the targets set in SDGs and fostering sustainable agricultural practices and rural development. Recognising the interconnections between the traditional farming practices and addressing the complex challenges of food security, food sovereignty, poverty, social inequities can be a way forward to a sustainable and resilient future. Thus, the strategic location of the region can be utilised to develop an economic corridor between the South-East Asian countries that would bring boost and development to the country’s economy and farmers’ development as well in the region.

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Awareness and Satisfaction of Investors over Life Insurance Policies of LICI Limited: A Study among the Teachers of Assam University, Silchar

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Abstract

The uncertainty of human life is its most significant feature. Human life and property are inexorably exposed to various types and degrees of dangers and uncertainties. Humans use insurance coverage offered by insurance firms, which operate as trustees over the money received from premiums and offer assurance where uncertainty once reigned, to safeguard themselves and their property from ultimate devastation. This study sheds light on the awareness and satisfaction of investors on life insurance policies offered by LICI Limited. For this study, the five-point Liker scale, weighted average score and the Chi square test were used. The data for the study are primary. The primary goal of this study is to shed insight on the level of awareness and satisfaction level of life insurance policyholders of LICI Limited. It is pellucid from the study that LICI Limited is the most popular insurance company. The investors are aware of the commonly known policies like money back policy, term insurance policy, and joint life insurance policy. Further the investors are satisfied with the selected factors considered for the study.

Keywords: *insurance, LIC policies, investors, awareness, satisfaction*

Introduction

It is very commonly heard in people’s mouths that "we don’t even have the certainty of living alive up to the next minute of our lives”, and that's where life insurance takes part in mitigating such uncertainties by providing alternative solutions for those unforeseeable factors that affect a human life. Human life can’t be valued in terms of money; life insurance is a compensatory measure that supports one against contingencies like death (accidental or natural), accidental causes that make someone partially or permanently disabled, or the loss of a source of income.

Life insurance is a monetary instrument or an agreement between the insurer and the insured, where the insurer agrees to indemnify the insured a sum of money or any other benefit in the event of uncertainty and risk of life mentioned in the policy in due consideration with the terms and conditions of the policy. A life insurance policy acts as a financial cushion at a time of financial crunch for the insured him or her and even for their dependents. To be very conceptual a life insurance is made for oneself for facing any eventuality that leads to risk of life in the future. The contract includes details about the premium to be paid and at what interval, it also outlines the situation or conditions in occurrence of which the insured or the dependent (beneficiary) will be paid with the sum assured.

The life insurance sector has become more prominent and an important part of one’s life. Its popularity is growing day by day, mostly in developing nations. The fastest-developing nation in the world is India, and the most popular insurance company in India is Life Insurance Corporation of India Limited, a statutory corporation and a public limited company. It has the largest market share in the life insurance sector and can also be seen as a monopoly in this business, though the number of insurer companies is increasing day by day and is still insignificant in creating competition.

As per the government rule, 75% of the gathered premiums are invested in Central and State Government Securities, as per the LIC rules. The main motive for establishing LIC was to promote savings, secure people's surplus income, and most importantly, safeguard against uncertainty and risk in life. The mission statement of LIC states, "Ensure and enhance the quality of life of people through financial security by providing products and services of aspired attributes with competitive returns and by rendering resources for economic development." It enumerates that its main purpose of establishment is to uplift the quality of people's lives by providing financial security through its products (policies) as a return on the premium paid on subscription of the policy, which also further contributes to the economic development of the nation. As per the popularity of LIC it can be understood that the feasibility in getting a LIC policy is very high.

There are around ten types of LIC policies with different plans, which give LIC the competitive advantage of providing more customized plans as per the customer's or investor's needs. Thus it’s necessary to have the knowledge about the policies and get insured that will yield the best benefit. So this study plays significant role in letting us to understand the awareness and satisfaction level of investors with the policies of LICI Limited. Percentage analysis, chi-square test and weighted average score were deployed as statistical tool.

Research Problem

Though Life Insurance Corporation of India Limited is the company with the largest market share in the life insurance sector, as people have faith in public companies and believe that their money deposited is secured. Further, LIC also enjoys a monopoly since it was established when there were no players in this sector. As there were no other insurance company, since its beginning the investors had only LICI Limited as an insurance company and it became as a tradition for investing in the policies of LICI Limited. So it is very important to explore the awareness of the investors about the factors of policies offered by LIC and understand the satisfaction yield from the policy of the Life Insurance Corporation of India Limited.

Objective of the Study

- To study the awareness of investors over life insurance policies of LICI Limited.
- To understand the level of satisfaction of investors over life insurance policies of LICI Limited.

Significance of the Study

The life insurance industry is one of the fastest-growing industries in India, and its growth got fueled after the Life Insurance Corporation of India Limited came into existence and became the most popular life insurance company in the market. Thus, it is deemed that the investors may be fully aware of and satisfied with the LIC policies. This study becomes significant as it aims to remove the word 'deemed' in context of the understandability of the level of awareness and satisfaction from the LIC policies of investor and provide us with the reliable level of awareness and satisfaction of investors in Life Insurance Corporation of India Limited.

Review of Literature

Balani (2022) emphasized the importance of understanding the awareness level regarding life insurance policies and the attributes that influence the decision to buy an insurance policy. The study is based on sampling and judgmental sampling, and chi-square was deployed for analyzing the data. The maximum number of respondents was from the age group 21–30, and most of them opted for long term investment. It is concluded that the insurance industry must focus on product innovation, appropriate pricing, and the speedy settlement of claims based on the emerging and evolution of insurance industry. Peter and Sachdev (2019) studied about how buying behavior of customer is influenced by the factors like perception. In this study they tried to find out whether there is a relationship between determinants of buying behavior with demographic variables. Statistical tools like correlation, hypothesis, regression techniques were used through IBM SPSS software. It is concluded that psychographic factor like perception is a key factor that influences a buyer's purchase decision in life insurance. Dhanlakshmi (2018) conducted a study to understand the level of awareness of the policyholder in LIC and indentify the policy that is widely preferred. The data were collected from school teachers and statistical tools like percentage analysis and average mean scouring analysis are used for data analysis. The study concluded that the school teachers preferred LIC policies for tax relief, saving and investment and family safety. Parveen (2017) studied the customer awareness, identified the preference of customer towards LIC policies and examined the level of satisfaction of customers of LIC. The researcher also focused on studying the various factors of LIC which influence a customer to choose LIC policies. The data were derived through questionnaire, both primary and secondary form of data was collected. The study is limited to Villupuram city. The data were analyzed by using statistical tool like percentage analysis, weighted average method and chi-square. The study revealed that LIC must give priority in advertisement for increase in awareness of its product and further additional monetary benefit must be providing to the agents and financial officers. Moreover claim settlement process must be fasten and made easier. Yadav and Tiwari (2012) have studied to understand the factors that influence an investor's investment decision. They conducted stratified and purposive sampling to collect data and analytical techniques such as chi square, correlation, weighted average, and hypothesis. The researchers used the techniques mentioned to find out the factors influencing the decision to choose life insurance. They have also given importance to finding out demographic factors and investor preferences in choosing a fruitful life insurance policy. And have found out that choosing a life insurance policy is influenced by age, sex, gender, and income. Most have chosen LIC because of safety, and others have opted for private players in order to earn a higher return. Siddiqui and Garg (2010) have investigated the importance of the service quality of life insurance and how it's being delivered to the customers. The researchers deployed a descriptive research framing questionnaire and also conducted a pilot survey. The researchers found that service quality is the basis for customer satisfaction and loyalty. The service quality measurement depends on six dimensions: personalized financial planning, assurance, competence, tangibles and technology, and corporate image, as per the researcher, and they have also outlined the gap in service quality in life insurance due to increasing competition in the market

Research Gap

Several studies have been conducted on life insurance, it was seen that the Life Insurance Corporation of India Limited is the most popular, largest and holds majority market share. But only a few studies were conducted on Life Insurance Corporation of India Limited though it has a great influence in insurance industry. Also from review of other studies it was found that awareness of policies among investors were not given much importance rather service quality was mostly focused for understanding satisfaction and awareness of investors. Further, the educational qualification of sample respondent from which the data were collected in previous studies is unknown, thus here in this study the awareness and satisfaction of investors with regard to policies of Life Insurance Corporation of India Limited is mainly focused and the data are collected from highly educated investors, so the data are highly reliable and assumes that their awareness is not influenced by any other people (agents) as they can decide upon what is true.

Limitations and Future Scope of the Study

This study is not free from limitations. These are given below:

- The data were collected purposively and thus it reveals the level of awareness and level of satisfaction of studied samples.
- The study only reflects the awareness and satisfaction level on policies on selected parameters thus further studies can be done including the remaining other factor.
- The data was collected from the population of teaching employees of Assam University, a small part of the consumer base; therefore the findings of the study are limited. To generalize the results of this study, it would be desirable to conduct further research with a variety of respondent groups.

Research Methodology

This study examines the level of awareness and level of satisfaction of investors on the policies offered by LICI Limited. It is a descriptive study. The study area included the teaching employee of Assam University, Silchar. There are total 341 teaching employee and so, as per Yamane formula the sample size at 0.10 margin of error is 77. The data were collected purposively from 77 respondents with a structured questionnaire which was provided to them in both offline and online form. Statistical tool like chi-square test, weighted average score and percentage analysis were deployed to derive the results for attaining the objectives

Research Hypothesis

H_0: there is no significant association between level of awareness and gender.

H_0: there is no significant association between level of awareness and income.

H_0: there is no significant association between level of awareness and age.

Analysis and Discussion of the Investors' Awareness over the Life Insurance Policies of LICI Limited

In order to understand the awareness level we collected the data from investors through liker scale. Percentage analysis was deployed to understand the maximum percentage of awareness and minimum percentage of awareness with regard to different policies. From this we will be able to derive the insurance policy on which the investors are mostly aware. Further the LICI Limited based on this study may formulate plan and policies to increase the awareness among investors on those policies which are having lower percentage of awareness.

Table 1: Response related to awareness level of investor about different type of policies.

Name of the policy	Level of Awareness				Total
	Fully Aware	Partial Aware	Just Aware	Not Aware	
Joint Life Policy	18 (23.38)	24 (31.17)	21 (27.27)	14 (18.18)	77 (100)
Money Back Policy	29 (37.66)	26 (33.77)	17 (22.08)	5 (6.49)	77 (100)
Children's Life Insurance Policy	20	21	26	10	77

	(25.97)	(27.27)	(33.77)	(12.99)	(100)
Endowment Life Insurance Policy	28 (36.36)	23 (29.87)	14 (18.18)	12 (15.58)	77 (100)
Group Insurance Policy	16 (20.78)	19 (24.68)	29 (37.66)	13 (16.88)	77 (100)
Pension Policy	19 (24.68)	30 (38.96)	20 (25.97)	8 (10.39)	77 (100)
Term Life Insurance Policy	26 (33.77)	25 (32.47)	18 (23.38)	8 (10.39)	77 (100)
Life Insurance Policy for Handicapped	12 (15.58)	17 (22.08)	21 (27.27)	27 (35.06)	77 (100)
Unit Linked Insurance Plan	12 (15.58)	26 (33.77)	22 (28.57)	17 (22.08)	77 (100)
Whole Life Insurance Policy	16 (20.78)	27 (35.06)	18 (23.38)	16 (20.78)	77 (100)

Source: Field Survey

Note: Figures in the parenthesis indicate percentage to the total

The above table helps us to interpret the data regarding the awareness of investors about various policies offered by LICI Limited. Let us understand what the analysis reveals about the awareness of investors

Referring to the table 1 we can understand that 31.17% of the respondents are partially aware of the Joint Life Policy where as 18.18% are not aware of the joint life policy. Further 27.27% are just aware and 23.38% are fully aware of the policy. In Money Back Policy 37.66% of the respondents are fully aware where as 6.49% are not aware of this policy. Further 33.77% are partially aware and 22.08% are just aware of the policy. Children Life Insurance Policy 33.77% of the respondents are just aware where as 12.99% are not aware of this policy. Further 22.27% are partially aware and 25.97% are fully aware of the policy. In Endowment Life Insurance Policy 36.36% of the respondents are fully aware where as 15.58% are not aware of this policy. Further 18.18% are just aware and 29.87% are partial aware of the policy. In the Group Insurance Policy 37.16% of the respondents are just aware where as 16.88% are not aware of this policy. Further 20.78% are fully aware and 24.68% are partial aware of the policy. In Pension Policy 38.96% of the respondents are partially aware where as 10.39% are not aware of this policy. Further 24.68% are fully aware and 25.97% are just aware of the policy. In the Term Life Insurance Policy 33.77% of the respondents are fully aware where as 10.39% are not aware of this policy. Further 23.38% are just aware and 32.47% are partial aware of the policy. In the Life Insurance Policy for Handicapped 15.58% of the respondents are fully aware where as 35.06% are not aware of this policy. Further 28.57% are just aware and 20.08% are partial aware of the policy. In Unit Linked Insurance Plan 33.77% of the respondents are partially aware where as 22.08% are not aware of this policy. Further 23.38% are just aware and 15.58% are fully aware of the policy. In the Whole Life Insurance Policy 35.06% of the respondents are partially where as 23.38% are just aware of this policy. Further fully aware and not aware percentage relevant to this policy is 20.06.

Among the scale fully aware, money back policy have highest awareness whereas Life Insurance Policy for Handicapped and Unit Linked Insurance Plan have least number of investors who are fully aware. In money back policy and unit linked policy highest number of investors are partially aware where as life insurance policy for handicapped has the least number of investors who are partially aware. Group insurance policy have highest number of investors who are just aware where as endowment policy has the least number of investors who are just aware. Lastly in the not aware scale the life insurance policy for handicapped have highest number of investors who are not aware of it on other hand money back policy have the least number of investors who are not aware of it.

Hypothesis Testing

It is very important to analyze if there is any association between of level of awareness and socioeconomic factors, as it has a role in framing polices and plans by insurer company like LICI Limited. Here we have used the Chi-Square test for deriving out if there is association of socioeconomic factors included in this study like age, gender and income with level of awareness over the selected parameters like benefits, surrender value, customer support and services, terms and condition, tax implication, corporate image of insurer, conversion option of their own policy they have invested. As the respondents are teaching faculty of university, they are highly educated and also have experience in the field of research thus they were asked to select the level of awareness as assumed by themselves considering the selected factors of the study.

The chi-square test was deployed to test the association of awareness level with gender, age and income at degree of freedom 3, 6 and 9 respectively. Further the significance level is 10% so the margin of error is 0.10.

Table: 2 Level of awareness as per gender of the respondents

Gender	Level of Awareness					χ^2	Table value
	Fully Aware	Partial Aware	Just Aware	Not Aware	Total		
Female	3	11	4	1	19	2.90	6.251
Male	18	24	15	1	58		
Total	**21**	**35**	**19**	**2**	**77**		

Source: Field Survey

Source : based on author's computation

We can see here the table 2, calculated value is lower than table value (2.90 < 6.251). Thus we failed to reject the null hypothesis. There is no association between level of awareness and gender. Gender and level of awareness are not dependent.

Table: 3 Level of awareness as per age of the respondents

Age	Level of Awareness					χ^2	Table value
	Fully Aware	Partial Aware	Just Aware	Not Aware	Total		
Above 45 year	8	5	0	15	28	8.23	10.645
35 year to 45 year	10	11	2	20	43		
Below 35 year	3	3	0	0	6		
Total	**21**	**19**	**2**	**35**	**77**		

Source: Field Survey

Source : based on author's computation

We can see here, the table value is greater than calculated value (**10.645>8.23**). Thus we failed to reject the null hypothesis. There is no association between level of awareness and age. Age and level of awareness are independent.

Table: 4 Level of awareness as per gross monthly income of the respondents.

Monthly Income (Gross)	Level of Awareness					χ^2	Table value
	Fully aware	Partial aware	Just aware	Not aware	Total		
Rs.2,00,000 and Above	10	18	12	0	40	12.81	14.684
Rs.1,50,001-2,00,000	4	6	1	1	12		
Rs.1,00,001-1,50,000	6	7	6	0	19		
Below Rs.1,00,000	1	4	0	1	6		
Total	**21**	**35**	**19**	**2**	**77**		

Source: field survey

Source : based on author's computation

We can see here calculated value is lower than table value (12.81<14.684). Thus we failed reject the null hypothesis. There is no association between level of awareness and income. Income and level of awareness are not interdependent.

Analysis of the Investors' Satisfaction over the Life Insurance Policies of LICI Limited.

A weighted average score is a mathematical calculation that gives different values for items varying levels of importance or influence when computing an average. Instead of treating all values equally, a weighted average assigns different "weights" to each value, indicating its relative significance in the overall average.

Investors' satisfaction has been analyzed and interpreted based on select factors in relation to the policies they have invested. The weighted average score (WAS) has been computed to understand the level of satisfaction. From the score we can understand the level of satisfaction. Further, the satisfaction on each factor under the study has been interpreted by using the following criteria:

Level of satisfaction	**Weighted average score**
Highly dissatisfied	Exactly 1
Dissatisfied	More than 1 but less than 3
Neutral	Exactly 3
Satisfied	More than 3 but less than 5
Highly satisfied	Exactly 5

Table: 5 : Response related to level of satisfaction of investors related to policies.

Sl. No.	Factors	HDS **(1)**	DS **(2)**	N **(3)**	S **(4)**	HS **(5)**	Total	WAS
1.	Sum assured of the policy	2	8	22	36	9	77	3.55
2.	Term of the policy	5	9	15	43	5	77	3.44
3.	Growth in policy return.	6	16	20	33	2	77	3.12
4.	Customization of the policy.	3	6	21	40	7	77	3.55
5.	Awareness and motivation given by the LIC agent.	6	11	22	32	6	77	3.27
6.	Terms and conditions of the policy.	2	8	21	38	8	77	3.55
7.	Transparency regarding documentation of the policy.	4	10	14	36	13	77	3.57
8	Promptness in issuing of policy.	1	6	16	40	14	77	3.78

Source: Field Survey

HDS=Highly Dissatisfied, DS=Dissatisfied, N=Neutral, S=Satisfied, HS=Highly Satisfied, WAS=Weighted Average Mean

Interpretation

From the above table we can understand that the investors are satisfied with the factors which are considered for the study as weighted average score of every factor are more than 3 but less than 5. Among all the factors, promptness in issuing policy yields the highest level of satisfaction followed by transparency regarding documentation of the policy, terms and conditions of the policy, customization of the policy, sum assured of the policy, term of the policy, awareness and motivation given by the LIC agent further investors are less satisfied with growth in policy return comparatively to other factors.

Findings of the Study

- The money-back insurance policy is the one of which the highest percentage of investors are fully aware. And investors are mostly not aware of the ULIP.

- Chi-square analyses reveal that the demographic factors like age, gender, income have no association with the awareness of insurance policies offered by LICI Limited. However the age and income are associated to level of awareness as per the study of Pradeepa and Ananth (2017)
- Among the factors selected for understanding the level of satisfaction, promptness in the issuing policy of LICI Limited yields the maximum satisfaction. However in other factors investors are also satisfied.
- From the mean of weighted average score we can understand that the investors are satisfied with the insurance policies of LICI Limited similar to the study of Qureshi and Bhat(2017)

Suggestions

- Awareness campaign can be undertaken by LICI Limited to increase the awareness level of investors among the policies with low awareness.
- The investors satisfaction about growth in return is least, thus LICI Limited must take initiative to yield high growth.

Conclusion

An effective defense against unforeseen future disasters is insurance. Before purchasing life insurance, people give careful consideration to the company's reputation. This is primarily because people anticipate safety and security for the money they invest, which is subsequently followed by the premium we pay to the insurance, bonuses and interest received from the business, services, etc. The insurance market in India is dominated by LIC. This study was conducted to examine and understand the level of awareness and satisfaction of investors on the policies offered by the LICI Limited among the teaching employees of Assam University. From the study it can be concluded that awareness level of investors are more in commonly known policies of LICI Limited. The demographic factors do not influence in the level of awareness. Further the study reveals that the investors are satisfied with their insurance policies in relation to the factors such as transparency regarding documentation of the policy, terms and conditions of the policy, customization of the policy, sum assured of the policy, term of the policy, awareness and motivation given by the LIC agent considered for the study.

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Financing of Individual Health Care in India: A Comparative Analysis of Selected Sources

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Abstract

In 2017, Indian households paid out of pocket for more than 62 percent of current health-care costs in India, compared to an 18 percent global average. Approximately 33 percent of current health-care spending are funded by the government in the same year. The government of India has implemented a number of initiatives to improve the country's public healthcare scenario. To change the landscape of healthcare financing in India, the government has launched various schemes like ESIS, RSBY, PMSBY, etc. The present study describes the possible sources of funding for healthcare expenditure in India, as well as attempts to analyse government spending on healthcare and the status of health insurance in India. It is found that out-of-pocket health spending accounts for the majority of health spending in India. Additionally, the study found that India's health insurance industry is underdeveloped in comparison to developed countries. The current study revealed that only around 32 percent of the Indian population is insured. It was also revealed that the government's contribution to India's healthcare system is insufficient. Spending on public healthcare by the government amounts to about 1.18 percent of GDP. The study offers a few suggestions for lowering out-of-pocket healthcare expenditure. Which could result in India's poverty problem being alleviated.

Keywords: *Healthcare Financing, Out-of-Pocket Expenditure, Health Insurance, Government funding.*

Introduction

It is necessary to have an improved health care system in a country because good health is necessary for empowerment. The healthcare system is made up of all the organizations, institutions, and resources that help people get better health. The Indian healthcare system is comprised of two sub-systems: public sector health care and private sector health care. Since independence, India's Ministry of Health has been in operation. The government of India gave emphasis on the upliftment of health care in different five-year plans. Post-independence, a number of schemes were launched by the government of India to improve the health status of the country. The Employees State Insurance Scheme was launched in 1952 and covers the medical services of employees and workers. CGHS, UHIS, RSBY, ABY, etc. were introduced from time to time by the government of India to cater to the needs of improving the health care status of the country. Despite all these investments made by the government in different schemes and projects, India still needs more of these investments in the health sector.

In India, private health care service providers dominate the health care market. Public support for health care is extremely low, accounting for less than 1 percent of total GDP. Most of the institutions providing health care services in India are owned and managed by the private sector. It is a known fact that private organisations are run with a profit motive. Thus, the patient will be charged a very high amount at private hospitals and nursing homes. In India, we have a smaller number of government hospitals. Non-government hospitals are catering to the needs of the patients in the country. Generally, a patient is always looking for a government hospital. When compared to non-government hospitals, these hospitals charge a very low fee to the patient. This is the reason that the public, who cannot bear the huge cost of healthcare, prefers to get treatment from government hospitals. Due to the lack of government hospitals in the country, a large number of patients have to visit non-government hospitals. To get cured of diseases in those non-government institutions, the patient has to pay a huge amount of money to such hospitals.

Private health services in India come at a high cost and can lead some households to spend a large share of their income (or savings). People with low incomes are frequently forced to sell their assets or take out loans to cover healthcare expenses. There is a significant probability that this could be pushing them into poverty, and poor households deeper into poverty than they were already in. Households may find themselves caught in an ill-health-poverty trap.

Due to less public funding for health care in India, private health care service providers play a major role in the Indian health care market. Private hospitals make up 50 percent or may be more than that of the country's healthcare infrastructure. However, this does not mean that the government is not working for the improvement of the health sector in India. Various recent plans in India, such as Ayushman Bharat and the National Health Mission, have shown some success. These programmes assist the poor in lessening the burden of healthcare costs and treatment.

The aim and objective of any healthcare system is to provide quality, equitable, and affordable healthcare services to the people. In developing countries like India, out-of-pocket healthcare payments are the major component of healthcare expenditure. Higher-income households can handle large unexpected healthcare payments. However, many lower-income households are dragged into poverty. Normal measures of poverty are not adjusted for healthcare costs, resulting in a misinterpretation of trends in poverty.

Review of Literature

Ravi S. (2017) investigated the necessity for health care financial reforms. The most recent major reform was the expansion of the Rashtriya Swasthya Bima Yojana (RSBY) coverage from Rs30,000 to Rs1 lakh, cementing insurance as the long-term plan for health funding. The existing "system" of health finance is based primarily on out-of-pocket payments, with tax benefits available for health insurance. According to the National Sample Survey data, Indian households are increasingly dependent on their own income and are depleting their savings to cover healthcare costs. Because of substantial information asymmetries, insurance is usually regarded as a bad model for healthcare funding. There is an adverse selection problem in the voluntary insurance market where people who buy insurance are sicker on average than the general population. As a result, the pool of insured becomes more hazardous, making insurance pricing problematic. India must also be willing to experiment with new healthcare financing products. One such product is medical savings accounts (MSAs).

Kurian, N.J. (2016) examined the problems of healthcare financing in India as a result of political difficulties. Healthcare has not been a major election campaign theme since 2004, when the United Progressive Alliance pledged to increase healthcare spending to between 2 percent and 3 percent of the gross domestic product. According to the National Health Accounts (NHA), public health expenditure as a percentage of GDP climbed from 0.96 in 2004-05 to just 1.01 in 2008-09. In India, over 80 percent of health care costs are carried by the private sector, whereas in other modern nations, the exchequer bears more than 80 percent of health care expenses. Our public sector accounts for approximately 1 percent of GDP; India's rivals in this regard are Burundi, Myanmar, and Sudan. In India, insurance firms today account for less than 3 percent of healthcare expenditure. However, a foundation has been laid for a major expansion of the health insurance market. Most importantly, insurance covers only hospitalisation costs, not outpatient care. According to NHA statistics, approximately 70 percent of a household's out-of-pocket expenses are for outpatient care that is not covered by insurance.

Gupta, Clements, Teresa, Siu Guin, and Leruth (2001) conducted an analysis of the health care measures incorporated into poverty reduction initiatives. And whether the 1996-launched Heavily Indebted Poor Countries project contributed to debt reduction or not, the article examines several fiscal policy challenges concerning debt relief in 23 nations. Budget formulation and reporting are necessary, and heavily indebted poor countries should mobilise domestic resources to bolster HIPC activities.

Objective of the Study

1. To determine the various financing options accessible in India for health-care expenses.
2. To see health insurance need for coverage costs in India.
3. To examine the government's spending on health care in India.

Methodology

The present study is based on the sources available to finance healthcare expenditure in India. The study relied on secondary data. This study drew on data from the World health statistics published by WHO, the World Bank report, the NHA report, the Insurance Regulatory and Development Authority of India (IRDAI) report, and the National Family Health Survey report, among other sources. Data was also collected from a variety of publications, including journals, periodicals, and books.

In this study, the three major sources of funding for health-care spending in India were examined. Out-of-pocket expenditure, government assistance for individual health care, and health insurance coverage are all examined in the study.

Health Care Financing in India

Out-of-pocket funding, government programmes, and health insurance schemes are all examples of health care financing in India. In India, government funding for healthcare is quite limited. As a result, those who have a sizable sum of money in their savings or who have some form of health insurance are more likely to receive healthcare. Individuals on a low income or living on a subsistence level must either take out a loan or sell their property in order to access healthcare benefits.

India's Out-of-Pocket Expenditure on Healthcare

Out-of-pocket expenses are medical expenses that patients pay for out of their own pockets. The expenses incurred as such were not reimbursed by any other sources. One of the main causes for people in India sliding into poverty is out-of-pocket healthcare expenditure. This is despite the fact that the government was able to reduce out-of-pocket expenditure from 70.61 percent of current health care expenditure in 2010 to 62.401 percent in 2017 through a combination of policy initiatives such as the launch of Ayushman Bharat and medication price controls. WHO (2010) reveals that each year, 100 million people are pushed into poverty due to high out-of-pocket expenditure for healthcare services. WHO (2016) further highlights that health financing systems in low-income and lower middle-income countries rely heavily on out-of-pocket payments, implying that households are the major contributors to the health financing system in 2013.

In 2005, all WHO member states made the commitment to achieve universal health coverage so that all people should have access to the health services they need without risk of financial ruin or impoverishment. Working towards universal health coverage is a powerful mechanism for achieving better health and wellbeing and promoting human development (WHO, 2013). In India, the impoverishment effect of out-of-pocket healthcare expenditure is felt more in the less developed states and rural areas than in the better-off states and urban areas. Private healthcare spending as well as high out-of-pocket expenses are placing a considerable financial burden on households (Berman, L. Bhandari, P. Ahuja, R., 2010; Laishram, L. & Pandey, A. 2013). When it came to health care costs, 35 million individuals were driven into poverty in 1993-94 and 47 million were forced into poverty in 2004-05. (Ghosh, 2011).

Government health spending per person per year is only Rs. 1108, which works out to Rs. 3 per day. As a result, out-of-pocket expenses amount Rs. 2394, accounting for 63 percent of total health spending. In 2016, out-of-pocket costs accounted for 64.20 percent of total health expenditure in India. The rate was 71percent in 2004-05. Despite the fact that it has been lowered, the rate remains unacceptably high.

Table 1: Out-of-Pocket expenditure (Percentage of current health expenditure)

Year	India	World
2000	71.702	19.391
2001	74.106	19.044
2002	73.374	18.61
2003	73.425	18.513
2004	72.483	18.476
2005	73.149	18.618
2006	72.257	18.676
2007	70.817	18.831
2008	69.148	18.8
2009	66.758	18.211
2010	65.185	18.459
2011	62.225	18.533
2012	63.000	18.669
2013	69.073	18.868
2014	67.014	18.503
2015	64.664	18.204
2016	63.206	18.10
2017	62.401	18.181

Source: World Bank

Interpretation

It is evident from Table No. 1 that India’s healthcare financing in the year 2017 was 62.4 percent of total expenditure paid out of pocket, while the world’s average out-of-pocket expenditure is just 18.2 percent. At that time, India's out-of-pocket expenditure was 71.702 percent in the year 2000. At that time, the world's average out-of-pocket expenditure was 19.391 percent. This indicates that most of the healthcare costs are met by the individuals on their own. Government spending on health care is inadequate in India. In 2005, India's share climbed to 73.149 percent, while the global average fell to 18.618 percent. India's out-of-pocket expenditure has been on the decline. In 2011, the rate fell to 62.225 percent, down from 71.702 percent in 2000. This could happen as a result of the adoption of various government programmes and investments in health-care infrastructure. From 2012 onwards, the rate has been on the rise again for a few years. In 2013, out-of-pocket spending was 69.073 percent, and in 2014, it was 67.014 percent. From 2015 onwards, it shows a decreasing tendency. There was still a big drop in the percentage of out-of-pocket costs for current health care expenses. In 2017, that figure was 62.4 percent, down from 71.7 percent in 2000.The reason behind this may be the implementation of various government schemes such as the National Rural Health Mission (NRHM), Rashtriya Swasthya Bima Yojana (RSBY), Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), etc. But the rate in India is still much higher than the global average.

Government’s Spending on Healthcare in India

For the past sixty years or more, health has been among the few issues in India that have received unceasing attention from planners, intellectuals, and the Indian leadership. There have been a series of attempts at various levels to find ways and means to bring about a turnaround in the situation. The formulation of the tenth five-year plan (2002-07) structure came out with certain facts that the investments in health services are low, which seems to be the main reason for the present scenario of the health system in India. The government of India has given emphasis on the health care system through different five-year plans. Different plans and policies were adopted to upgrade the health care system.

In India, health care expenditure is incurred by both the central and state governments. As per the Indian constitution, the primary responsibility of providing health care lies with the state governments, and the bulk of the health expenditure in the country is incurred by them. The Central Government augments state spending in areas of national importance and significant externalities. With the launch of the National Rural Health Mission

(NRHM), the Centre has just started to spend a significant amount of money on basic and secondary health care at the state level. The level of health spending incurred by the centre has increased in tandem with the expansion of the centre's intervention areas. (Choudhury, M. et al., 2011).

In spite of the increase in public expenditure on the health sector, the sector has been accorded a very low priority in terms of the allocation of resources. In India, government spending on health services accounts for less than 1 percent of GDP. The healthcare infrastructure in rural areas is very poor. People are mostly not aware of the facilities provided by the central or state government regarding healthcare. There are a number of different insurance schemes also available, which are mostly unknown. Similarly, there is a very small number of doctors available in rural areas as compared to urban areas. The government of India introduced a policy on the National Rural Health Mission. But the success of the mission is still in doubt.

The first and foremost investment that should be made by the government in the health sector is to setup and operate hospitals to cater to the needs of improved health care services. People below the poverty line cannot afford private sector health care benefits due to high charges. As per the data of the World Bank (2016), it was stated that the poverty rate in rural India is 25 percent, and in urban areas, the rate is 14 percent. According to the RBI report, about 22 percent of people live below the poverty line. In rural areas, the rate is 25.7 percent of the population living in rural areas, whereas the rate is slightly better in urban areas, at 13.7 percent of the urban population. Therefore, a country like India needs more investment in government hospitals. This will serve those people who are living below the poverty line and also those who are not able to get the minimum treatment from the private sector due to high-cost involvement. Investment in hospitals includes infrastructure, labs, machinery and equipment, payment of salaries to employees, and other operating expenses.

Since independence, many hospitals have been set up in urban and rural areas by the government of India. Government funding was made available for the establishment of hospitals of different types, such as primary health care centres (PHCs), subcentres, community health centres, district hospitals, sub-district hospitals, medical colleges, and research institutions, etc.

Table 2: Government Healthcare Expenditure (Percentage of Current Health Expenditure)

Year	Countries						
	India	**Afghanistan**	**Japan**	**UK**	**USA**	**Bangladesh**	**Sri Lanka**
2001	18.887	--	80.964	76.495	45.34	22.071	52.567
2002	18.164	0.891	80.753	77.457	45.214	24.711	53.451
2003	18.716	7.28	79.964	78.557	44.984	25.01	55.081
2004	17.982	5.535	80.274	80.172	45.291	24.432	52.703
2005	20.127	5.319	81.168	81.286	45.391	22.196	52.639
2006	20.506	4.687	80.322	82.055	46.261	23.088	50.964
2007	20.899	5.653	81.249	80.388	46.345	22.871	48.496
2008	22.627	6.121	81.171	81.496	47.499	21.336	43.219
2009	25.61	5.417	81.294	82.74	48.512	20.357	40.601
2010	26.206	5.475	81.972	82.146	48.863	21.028	40.437
2011	28.873	5.606	83.741	81.894	48.942	20.923	42.543
2012	27.989	4.342	83.931	81.221	48.843	20.47	42.224
2013	23.071	5.035	84.261	79.895	49.464	19.73	45.418
2014	23.664	4.96	84.118	80.012	50.69	19.035	44.729
2015	25.64	5.172	84.083	80.008	51.153	17.631	43.958
2016	26.838	5.078	84.037	80.287	50.802	16.422	43.121
2017	32.948	5.096	84.215	79.661	50.65	16.697	41.005

Source: WorldBank

Interpretation:

Table 3 shows that India's government health spending as a proportion of CHE is much lower than that of several of the world's developed countries. There is an urgent and long-term need for India to put more emphasis on the health sector. As can be seen from the data, India trails many other countries in terms of expenditure as a percentage of GDP. Despite the fact that data shows that government spending on CHE is increasing, the rate was around 20 percent in the year 2005, which increased to around 33 percent in the year 2017. In developed countries such as Japan, government spending on healthcare exceeds 84 percent, the United Kingdom exceeds 79 percent, and the United States exceeds 50 percent of current health care expenditure. The rate is much lower for countries like India, Sri Lanka, Bangladesh, and Afghanistan. As a result, the out-of-pocket expenditure in these countries is much higher, and at the same time, the poverty rate is also higher in these countries.

Healthcare Financing through Health Insurance in India

Individuals get health insurance to protect themselves against the danger of incurring medical bills. An insurer can design a routine financing structure, such as a monthly premium or payroll tax, to ensure that money is available to pay for the health care benefits stipulated in the insurance agreement by calculating the overall risk of health care spending within a targeted group. Central organisations, such as government agencies, for-profit businesses, and not-for-profit organizations, are in charge of administering the benefit. In its most basic form, health insurance is defined as "an individual or group acquiring health care coverage in advance by paying a cost known as a premium." In a broader sense, it refers to any arrangement that assists people and households in deferring, delaying, reducing, or completely avoiding payment for health care expenses. Given the applicability of this concept in the Indian context, this is the one we are using.

Health insurance has been recognised as a tool for improving the economy's health. The expense of Medicare or medical treatment is increasing year after year. In reality, Medicare inflation is larger than inflation in food and other commodities. While food and clothing prices rise in single digits, Medicare costs typically rise in double digits. Organizing cash at the eleventh hour can be difficult for someone who hasn't saved much money. Taking out health insurance is one approach to preparing for health-related or medical situations. In terms of disease or ailment coverage, health insurance provides a lot of options. Several health insurance policies, for example, include coverage for as many as 30 critical illnesses and more than 80 surgical procedures. The policy remains in effect even after the compensation payments for certain illnesses have been made.

Health services are collectively funded in most developed countries, either by taxation (as in the case of the United Kingdom's National Health Service), contributions to social health and the demand for Social Health Insurance, or a combination of these methods. Some of the most common features of this type of insurance are: mandatory participation, at least for a large part of the population; open enrollment, which means that you can sign up at any time; and community rating, which means that you can't charge a rate based on your own risk.

Table 3: Number of persons covered under different health insurance policies in India. (Figures in '000')

Name of the Schemes	No. of Persons Covered					
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Government Sponsored Schemes including RSBY	165565	149378	155287	214366	273272	335015
Group Insurance Schemes excluding Govt Sponsered Schemes	32150	34258	33665	48301	57039	70469
Family/Floater Insurance excluding Individual Policies	21719	8458	11096	12022	15855	15972
Individual Insurance excluding Family /Floater Policies	18961	15188	16183	13343	12797	16000
TOTAL	238395	207282	216231	288032	358963	437455

Source: IRDAI

Interpretation

Table 3 reveals that around 437 million people in India are covered under any type of health insurance policy during 2016-17. It accounts for approximately 31.85 percent of India's total population. During 2010-11, only 238 million people were covered by any type of health insurance policy, which is around 20 percent of the total population. Most of them are covered under different government-funded health insurance schemes like RSBY, ESIS, etc. Government health insurance schemes are basically for the poor or for employees working for government organisations. People who belong to the upper or middle class cannot get the benefit of government-sponsored schemes. The benefit of such policies is limited to a few aspects only. RSBY schemes offer a sum assured of up to Rs 30000 only. CGHS covered only government employees. Whereas ESIS is also an employer-based health insurance but covered only those employees whose salary or wages is less than Rs. 21000.

The number of people covered by individual health insurance policies in India is very small. Even in government-based schemes, the number of beneficiaries is very small. Table 3 shows that around 335 million people in India are covered under government-based health insurance schemes during the year 2016-17. which accounts for approximately 24 percent of the total population of the country. This may be one of the reasons for the high out-of-pocket healthcare expenditure in India. The government should introduce a universal health insurance scheme in India like Japan and the USA, which enables people to get equal access to necessary and adequate medical care while spending very little out-of-pocket.

Findings of the Study

1. It has been found that the private sector dominates India's healthcare market. In India, more than half of the health care services are provided by private health care providers.
2. In India, out-of-pocket expenditure for health care is a major source of funding. Individuals typically cover approximately 62 percent of current health-care costs with their own income, savings, loans, or asset sales. Because of this, many of them end up falling below the poverty line.
3. The government of India has taken various initiatives from time to time and invested in various projects like RSBY, NRHM, ESIS, CGHS etc. However, for a country with such a large population as India, these are insufficient. In 2017, the government bore roughly 33 percent of India's current health-care expenditures. The rate is much lower than in developed countries, such as Japan (84 percent), the United Kingdom (79 percent), and the United States (50 percent).
4. The Indian health insurance market is still in its infancy. The study found that about 31 percent of the total population has some kind of health insurance. The majority of them are covered by government programmes or group health insurance provided by their employers. Although the government plans to develop programmes that will cover the majority of the population under health insurance systems, if the plan is effectively implemented, there is a chance that access to adequate healthcare will increase, particularly for the poor.

Suggestions and Conclusion

Most developing countries, including India, are facing lots of pressure to improve their health service delivery systems, which are not up to the mark, largely due to the financial constraints in these countries. From the above discussion, it is clear that the government has not fulfilled their commitment to health spending. This has resulted in the inadequate provision of health facilities in our country. One fundamental reason for the poor functioning of the health system and ill health indicators in India is the low level of investment in healthcare. The low proportion of GDP spent on healthcare is insufficient to meet the demands of a growing population and illness burden. Furthermore, a solid plan for the effective use of existing expenditures must be implemented in order for public expenditure to be properly utilised.

The following measures may be helpful in enhancing India's healthcare system:

1. India's government should be required to invest more in the field of healthcare. It will assist the people of the country to get proper healthcare and solve the country's poverty problem, which is a major concern for the government.
2. The government of India should adopt schemes like universal health care for all, either free of cost or at a concessional rate. This will help to reduce the burden of out-of-pocket expenditure on individuals' healthcare.

3. Schemes like Medical Savings Accounts (MSAs) allow individuals to contribute money to this account on a pre-taxed basis to set aside money for eligible medical services and expenses, including annual deductibles, co-payments, and carryover of the unused funds to the next year.
4. The government or other non-governmental organisations should take the initiative in organising health insurance awareness programmes that lead to a better understanding of the benefits of health insurance among the general population. This may help lower both out-of-pocket costs and government expenditure on healthcare.
5. To conclude, out-of-pocket expenditure on healthcare in India has increased due to the lack of government spending on healthcare, the failure of universal health coverage, and inadequate social health coverage. During 2016-17, out-of-pocket expenses accounted for over 86 percent of private healthcare spending and more than 60 percent of total healthcare spending in the country. Though the rate is decreasing in comparison to recent years, it is still very high.In order to expand the scope of coverage, the government proposes to restructure the "Rashtriya Swasthya Bima Yojana" and also proposes to introduce various new healthcare schemes. It's possible that this will be the first step toward universal health coverage.

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Perceived Service Quality of Airlines: A Study on Passengers of Silchar Town of Assam

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Abstract

In the competitive landscape of the airline industry, service quality stands as a critical factor influencing customer satisfaction and loyalty. The present study delves into the dimensions of reliability, tangibility, responsiveness, empathy, and convenience to evaluate their impact on overall service quality. Data have been collected from 99 respondents. Convenient sampling method was used to collect responses. Descriptive statistics have been used to analyze the collected data. Results reveal that reliability and empathy emerge with the highest mean scores, signifying their pivotal contributions to service quality within the airline sector. Notably, in the context of selected dimensions, both Indigo and Air India consistently outshine SpiceJet, indicating superior performance. This study emphasizes the importance of specific service dimensions in shaping the perceived quality of airline services and highlights the competitive strengths of certain carriers in meeting customer expectations.

***Keywords**: Reliability, Tangibility, Responsiveness, Empathy and Convenience.*

Introduction

Service is an intangible offering provided by organizations to fulfil customer needs and expectations. It involves a series of interactions and experiences between service providers and customers, aiming to deliver value and achieve customer satisfaction. In the airline industry context, service encompasses various touchpoints, including pre-flight, in-flight, and postflight experiences, as well as interactions with airline staff, amenities, and overall service delivery (Wirtz and Lovelock, 2021). Service quality refers to the customers' overall evaluation of the excellence, reliability, and superiority of the services provided by an organization (Parasuraman, Zeithaml, & Berry, 1985). It is a holistic assessment of the performance and delivery of services, considering various aspects such as interactions, outcomes, and customer experiences. Service quality is a critical factor in shaping customer satisfaction, loyalty, and perceptions of value. Understanding and managing service quality is crucial for organizations, including airlines, to continuously assess customer expectations, align service delivery with those expectations, and strive for continuous improvement (Manna'a & Rahmati, 2021). Service quality is not merely the absence of problems or errors but goes beyond meeting basic expectations. It involves exceeding customer expectations and consistently delivering exceptional experiences that meet their needs and preferences. It encompasses the entire customer journey, from pre-service interactions and expectations to the actual service encounter and post-service follow-up.

Review of Literature

The service quality of airlines has become a focal area of research in recent times. Numerous studies have been undertaken both in India and abroad to explore this subject. Below, some of these studies and their findings are discussed.

Gambo (2016) conducted a study to look at the connection between customer happiness in Nigeria and the level of service provided by Nigerian airlines. According to the study, there is a considerable rise in consumer satisfaction with airline service quality in Nigeria when in-flight amenities, airline employee responsiveness, flight schedule dependability, and baggage handling services are all improved. Hassan et al. (2020) conducted a study in order to better understand how service quality affects customer satisfaction in the airline business, specifically for PIA, Oman Airline, and Air Arabia. The study discovered that all airline models were statistically significant, proving that customer happiness is significantly influenced by service quality. According to the regression results, customer satisfaction was significantly predicted by tangibility, dependability, empathy, assurance, and responsiveness. Ali et al. (2021) performed a study in order to better understand how service quality affects patron satisfaction and loyalty in the Pakistani airline business. The study found that consumer happiness and loyalty in the airline business are significantly positively impacted by service quality factors such airline tangibles, terminal tangibles, human services, empathy, and image. The study also discovered a strong positive correlation between customer loyalty and satisfaction. Biswakarma and Gnawali (2021) did a study in the midst of COVID-19, to look into the variables influencing the service quality of domestic airlines in Nepal. The study discovered that, in the COVID-19 scenario, assurance is the most critical aspect as assessed highest agreeability within the service quality dimensions of the airlines. Ishtiaq et al. (2021) undertook a study in order to determine how to achieve total service quality during the COVID-19 pandemic in Pakistan's domestic aviation business. According to the study, responsiveness had the lowest mean value and assurance had the greatest impact on total service quality throughout the epidemic. Although the airlines offered clean, well-maintained aircraft, the majority of them consistently missed their scheduled flight departure and arrival times. All service quality aspects and overall service quality satisfaction were shown to be highly positively correlated in the study, with tangibility having the strongest correlation. Kalaiarasan (2015) conducted a study to determine the correlations between service quality, customer satisfaction, service environment, employee approaches, service efficiency, and demographic factors in the Malaysian airline industry, and to look into the significant factors influencing low-cost airline's customer satisfaction. The study discovered that customer satisfaction with service quality is significantly influenced by the service environment, personnel approach, efficiency of service, and consumer behavioural intention. Ramachandran (2021) did a study to look into the customer satisfaction and service quality aspects of the domestic airline market in India and to offer ways to raise service standards there. According to the study, IndiGo flights are superior to other flight service providers in terms of tangible service quality qualities, and there is a statistically significant difference between how passengers in India perceive the tangibles of various airline businesses. Kumar & Jain (2017) performed a survey in order to learn how passengers view the service quality of a few Indian airlines. The study found that passengers are happy with the in-flight service, in-flight digital service, and back-office operations as examples of service quality elements that are provided. The results show a positive relationship between these three variables and the perceived quality of the service. Walia et al. (2021) performed a study to better understand how service quality affects customer happiness and loyalty in the Indian aviation business. According to the study, there is a correlation between service quality, customer satisfaction, and loyalty in the airline industry as well as a positive relationship between customer satisfaction and customer loyalty. The study found that the most important elements of the reliability and tangibility dimensions, respectively, were giving passengers accurate and thorough information and maintaining cleanliness inside the aeroplane. Additionally, responsiveness and dependability were discovered to be the most important components of service quality. Usha and Kusuma (2017) carried out a study to look into the level of service provided by Air India Ltd. According to the study, the majority of passengers are pleased with Air India Ltd.'s service quality, the majority of passengers have Indian Platinum Cards, the majority of passengers take advantage of the airline's marketing initiatives, and the majority of passengers fly with the airline frequently. Yang & Choi (2020) did a study to look at the relationship between airline service quality parameters and consumer happiness and intention to repurchase. According to the survey, customer satisfaction is positively impacted by an airline's service quality factors, such as formation, responsiveness, personalisation, and connectivity. Additionally, this effect is constant across several airline kinds. The study also showed a strong correlation between customer satisfaction and the likelihood of making another purchase.

Objectives of the Study

1. To assess the perception of passengers about the service quality of airlines.
2. To compare passengers' perceptions of service quality across different airlines.

Scope of the Study

1. The research has been conducted on the citizens of Silchar town of Assam.
2. The responses of the citizens have been measured based on their perception regarding the services provided by airlines.

Limitations of the Study

1. Data have been collected through sample survey, so the probability of sampling error may not be fully eliminated.
2. The present study is constrained by the limitations commonly associated with studies perception-based study.

Research Methodology

The present study is based on primary data. Data have been collected from the passengers of Silchar who have travelled from Silchar airport. In order to identify the dimensions of service quality a thorough literature review have been carried out. After going through the literature available, five dimensions have been identified and used for the present study. A sample of 99 respondents has been considered for the study. The dimensions are reliability, tangibility, responsiveness, empathy and convenience. In order to collect data seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) have been used. Descriptive statistics has been used for the purpose of analysis of data.

Results and Discussion

Table 1: Perception of Passengers about Service Quality of Airlines

Dimensions	Mean	Standard deviation
Reliability	4.85	1.503
Tangibility	4.59	1.505
Responsiveness	4.70	1.432
Empathy	4.82	1.387
Convenience	4.33	1.545

Source: Field Survey

Table 1 shows the perception of passengers about different dimensions of service quality. It was observed that reliability and empathy dimension have received highest mean signifying the importance of these dimensions in service quality. On the other hand, it was noticed that convenience dimensions of service quality received lowest mean score, which means that passengers are not satisfied with that particular dimension. So far as standard deviation is concerned convenience has received highest SD which means that in convenience dimension there is maximum variation in the responses and opposite is the case of empathy.

Table: 2: Perception of Passengers about Reliability Dimension of Service Quality

Components	Mean	SD
The Airline delivers services within the promised time frame	4.92	1.475
The Airline provides correct services at the first instance	4.84	1.441
The Airline has dependable baggage handling mechanism	4.79	1.593

Source: Field Survey

Out of three components of reliability dimensions of service quality, the mean score of passengers' perception about the components "The Airline delivers services within the promised time frame" is the highest which is followed by "The Airline provides correct services at the first instance" and "The Airline has dependable baggage handling mechanism". Thus, the perception of passengers over the component "The Airline delivers services within the promised time frame" is most favourable out of three components reliability dimension service quality since the mean score passenger perception is the highest in case of this component of reliability dimension of service quality. On the other hand, the perception of passengers over the component "The Airline has dependable baggage handling mechanism" is least favourable out of three components of reliability dimension of service quality since the mean score of passengers' perception is the lowest in case of this component of reliability dimension of service quality. The component "The Airline provides correct services at the first instance" has received least standard deviation signifying least variability in the responses.

Table: 3: Perception of Passengers about Tangibility Dimension of Service Quality

Components	Mean	SD
The ambience inside the flight is appealing to the passengers	4.54	1.387
The Airline has comfortable seats	4.83	1.616
The Airline has adequate space for keeping hand baggage	4.40	1.511

Source: Field Survey

Out of three components of Tangibility dimensions of service quality, the mean score of passengers' perception about the components "The Airline has comfortable seats" is the highest which is followed by "The ambience inside the flight is appealing to the passengers" and "The Airline has adequate space for keeping hand baggage". Thus, the perception of passengers over the component "The Airline has comfortable seats" is the most favourable out of the three components of the Tangibility dimension service quality since the mean score passenger perception is the highest in the case of this component of the Tangibility dimension of service quality. On the other hand, the perception of passengers over the component "The Airline has adequate space for keeping hand baggage" is the least favourable out of the three components of the Tangibility dimension of service quality since the mean score of passengers' perception is the lowest in case of this component of Tangibility dimension of service quality. Regarding standard deviation, the component "The ambience inside the flight is appealing to the passengers" has the lowest standard deviation, indicating the least variability in responses. In contrast, the component "The Airline has comfortable seats" shows the highest standard deviation, reflecting the greatest variability in responses.

Table 4: Perception of Passengers about Responsiveness Dimension of Service Quality

Components	Mean	SD
Cabin Crews of the Airline are always swift in delivering service to the passengers	4.96	1.505
The Airline's cabin crews are always ready to address passengers' problems	4.92	1.383
The Airline provides prompt intimation regarding flight cancellation/delay	4.24	1.408

Source: Field Survey

Out of three components of Responsiveness dimensions of service quality, the mean score of passengers' perception about the components "Cabin Crews of the Airline are always swift in delivering service to the passengers" is the highest which is followed by "The Airline's cabin crews are always ready to address passengers' problems" and "The Airline provides prompt intimation regarding flight cancellation/delay". Thus, the perception of passengers over the component "Cabin Crews of the Airline are always swift in delivering service to the passengers" is the most favourable out of the three components of the Responsiveness dimension service quality since the mean score passenger perception is the highest in the case of this component of the Responsiveness dimension of service quality. On the other hand, the perception of passengers over the component "The Airline provides prompt intimation regarding flight cancellation/delay" is the least favourable out of the three components of the Responsiveness dimension of service quality since the mean score of passengers' perception is the lowest in case of this component of Responsiveness dimension of service quality. Regarding standard deviation, the component "The Airline's cabin crews are always ready to address passengers' problems" has the lowest standard deviation, indicating the least variability in responses. In contrast, the component "Cabin Crews of the Airline are always swift in delivering service to the passengers" shows the highest standard deviation, reflecting the greatest variability in responses.

Table 5: Perception of Passengers about Empathy Dimension of Service Quality

Components	Mean	SD
The Airline gives individual attention to its passengers	4.84	1.441
Cabin crew s of the Airline are eager to understand the exact need of specific passenger	4.71	1.402
The Airline provides special care to passengers in case of requirements	4.93	1.319

Source: Field Survey

Out of three components of Empathy dimensions of service quality, the mean score of passengers' perception about the components "The Airline provides special care to passengers in case of requirements" is the highest which is followed by "The Airline gives individual attention to its passengers" and "Cabin crew s of the Airline are eager to understand the exact need of specific passenger". Thus, the perception of passengers over the component "The Airline provides special care to passengers in case of requirements" is the most favorable out of the three components of the Empathy dimension service quality since the mean score passenger perception is the highest in the case of this component of the Empathy dimension of service quality. On the other hand, the perception of passengers over the component "Cabin crew s of the Airline are eager to understand the exact need of specific passenger" is the least favourable out of the three components of the Empathy dimension of service quality since the mean score of passengers' perception is the lowest in case of this component of Empathy dimension of service quality. Regarding standard deviation, the component "The Airline provides special care to passengers in case of requirements" has the lowest standard deviation, indicating the least variability in responses. In contrast, the component "The Airline gives individual attention to its passengers" shows the highest standard deviation, reflecting the greatest variability in responses.

Table 6: Perception of Passengers about Convenience Dimension of Service Quality

Components	Mean	SD
The process of cancellation of ticket of the Airline is easy for the passenger	4.54	1.487
The process of rescheduling the journey with the Airline does not have much difficulty	4.41	1.584
The process of getting the refund due to flight cancellation is smooth and easy	4.04	1.564

Source: Field Survey

Out of three components of Convenience dimensions of service quality, the mean score of passengers' perception about the components "The process of cancellation of ticket of the Airline is easy for the passenger" is the highest which is followed by "The process of rescheduling the journey with the Airline does not have much difficulty" and "The process of getting the refund due to flight cancellation is smooth and easy". Thus, the perception of passengers over the component "The process of cancellation of ticket of the Airline is easy for the passenger" is the most favourable out of the three components of the Convenience dimension service quality since the mean score passenger perception is the highest in the case of this component of the Convenience dimension of service quality. On the other hand, the perception of passengers over the component "The process of getting the refund due to flight cancellation is smooth and easy" is the least favourable out of the three components of the Convenience dimension of service quality since the mean score of passengers' perception is the lowest in case of this component of Convenience dimension of service quality.

Regarding standard deviation, the component "The process of cancellation of ticket of the Airline is easy for the passenger" has the lowest standard deviation, indicating the least variability in responses. In contrast, the component "The process of rescheduling the journey with the Airline does not have much difficulty" shows the highest standard deviation, reflecting the greatest variability in responses.

Table 7: Airlines-Wise Perception of Passengers

Dimensions	Air India	Indigo	SpiceJet
Reliability	5.07	4.98	4.17
Tangibility	4.62	4.66	4.31
Responsiveness	4.43	4.82	4.50
Empathy	4.76	4.88	4.66
Convenience	4.02	4.49	3.96

Source: Field Survey

Table 7 presents a comparison of responses on service quality across different airlines. For reliability, Air India achieved the highest mean score, followed by Indigo and SpiceJet. In terms of tangibility, Indigo led with the highest mean, with Air India and SpiceJet trailing. When it comes to responsiveness, Indigo again received the highest mean, followed by SpiceJet and Air India. In the dimensions of empathy and convenience, Indigo secured the highest mean score, with Air India and SpiceJet following. Overall, the data indicates that Indigo outperformed in most dimensions, with Air India and SpiceJet ranking second and third, respectively.

Conclusion

Service quality is a critical aspect for organizations across various industries, playing a pivotal role in shaping customer perceptions, satisfaction, and loyalty. In the context of the airline industry, where customer experience is paramount, the dimensions of reliability, tangibility, responsiveness, empathy, and convenience hold significant importance. Airlines strive to excel in these dimensions to provide passengers with a seamless and enjoyable travel experience. the outcomes of the study highlight the paramount importance of reliability and empathy in shaping the service quality landscape within the airline sector. The elevated mean scores for these dimensions underscore their central role in influencing passengers' overall perception of service excellence. Moreover, the consistent outperformance of Indigo and Air India over SpiceJet across the selected dimensions reinforces the notion of superior service delivery by these airlines. This suggests that Indigo and Air India have successfully prioritized and excelled in critical aspects such as reliability and empathy, contributing significantly to their positive image and competitive advantage in the highly competitive airline industry. As airlines strive for sustained success, focusing on these key dimensions is crucial for meeting customer expectations, fostering loyalty, and ensuring a differentiated and positive travel experience.

Scope for Future Research

1. Future studies could broaden the scope by increasing sample size and including diverse geographical regions to further investigate service quality in the airline sector.
2. Subsequent research endeavours might emphasize the identification of additional dimensions beyond the initial five, contributing to a more comprehensive understanding and enhancement of service quality within the aviation industry.

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Non Performing Assets (NPA) and its Association with Profitability: A Study on Assam Gramin Vikash Bank

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Abstract

A financial institution plays a vital role for development and growth of the economy of a country. In India where majority of people belong to rural areas, RRBs play a vital role for ease of transactions, providing loans and many financial services. In this context, Assam Gramin Vikash Bank (AGVB) also plays a crucial role for the development and growth of the rural economy in Assam. However in the recent past banking industry in India is challenging with the problem of growing NPA (Khan, S. S. 2019). Loss assets in public and private sector banks in India are continuously increasing (Mutyala, 2019). NPA of banks in India became nuisance for their performance. AGVB is not an exemption from the same challenge. AGVB is struggling in improving their financial performance in the recent past years. There are different reasons among which increasing NPA is also a reason. To cater the need of rural economy in Assam, AGVB need to perform well with a sound financial health. A wealthy bank is considered as one where the assets remain assets only and do not turn into liability. Keeping this in mind, this study tries to analyse the compositions and trends of Non Performing Assets and its association with profitability of AGVB for a period of 10 years i.e., 2011-12 to 2020-21. The study is based on secondary data collected from annual reports of the respective bank. Data has been tabulated and analysed by using Trend line with respect of time, Correlation and Multiple Regression. From the study it is observed that the amount of NPA is increasing during the study period and SSA identified to be the leading contributor for increasing the NPA in AGVB. It is also observed that NPA has a negative association with profitability in AGVB during the study period.

Keywords: *Non Performing Assets (NPA), Regional Rural Banks (RRBs), Sub-standard Asset, Doubtful Assets, Loss Assets, Profitability.*

Introduction

The financial health of a nation is determined by the soundness and effectiveness of its banking sector. The banking sector acts as a middleman in a nation's economic structure that includes manufacture, delivery, exchange and utilization. It will boost financial growth by stimulating the behaviour of funds. It can be possible to say that the banking system of a nation determines the speed of economic growth. Like any other business unit, the efficiency with respect to banking businesses is also determined by their profitability and the amount of assets they hold. Indian banks provide social and economic commitments to the people of the nation through their operations. The Indian banking system helps to achieve the objective of equal distribution of income, and proper regional escalation and also removes monopolies for the sector of trade and commerce managed and run by private entities. A crucial role played by Indian banks to achieve the government's objectives by mobilizing people deposits, a large number of bank branches, loans to priority sectors, job creation, etc. the government needs to impose quality regulations to achieve such societal objectives of the nation that troubled the efficiency of the banking business before liberalization.

During the pre-liberalization era, the banking system of the nation was suffering from various shortcomings viz. reduced productivity, deteriorating asset quality, and technological backwardness that resulted in the increased cost structure. Among these shortcomings, reduced asset quality was identified as the most significant obstacle to the growth and efficiency of Indian banking. The quality of the poor assets of the banks impacts the profitability of the institution, their intermediation costs, liquidity of the bank, profit earning ability and overall operations of banks leading to the accumulation of Non-performing assets (NPAs).

NPA is such type of asset which does not create any profits in any type of bank for 90 days or more. In such a case, the interest or principal amount or both remains unpaid by the borrower. The amount of NPAs determines the efficiency of the banking institution for the reason of credit risk management and also for resource allocation to the productive units (BIS, 2005). NPAs affect the lending capacity of banks as the capital is blocked for a period of time and the process of repayment is troubled which results in additional costs for intermediation and realization of Non Performing Assets (NPAs).

The economic system of any country is highly dependent on its sound banking system. Any issue involving the banking industry will make a negative impact on the economy of any country. The amount of non-performing assets generates various financial issues for the banking sector of the country. The RBI says that NPA is an asset that has also been divided by a financial organization as Sub-standard assets, loss assets and doubtful assets based on the asset classification guidelines. NPAs have a direct influence on the liquidity, profitability, overall asset quality, and the capacity of banks to survive. The amount of default is rising, which is growing NPA and lowering the profitability and asset quality in the financial statements of the banking industry. Non-Performing Asset is a problem that affects the entire economy in addition to the bank. Indian public banking units have more amounts of NPAs than private banks. The NPA must be managed and lowered to preserve the profitability and effectiveness of institutions. The easiest way to determine how well a country's banking system is doing is to look at its NPA level. Indian Regional Rural Banks (RRBs) first began to operate in 1975 to meet the demands of the country's rural economy. Small farmers, craftspeople, and agricultural workers are given special consideration when it comes to loan criteria. The sole regional rural bank in the state of Assam is known as Assam Gramin Vikash Bank and it is dealing with the difficulties made by non-performing assets over time (Bhasin, 2004).

Statement of Problem

NPA is a serious problem for most of the banks in India particularly public sector banks of all kinds. The only Regional Rural Bank in Assam is Assam Gramin Vikash Bank and the same is playing a vital role in catering to the needs of its customers. The majority of the branches of AGVB's lending are in the priority sector, which is the main cause for the NPA of the bank. The records speak that the NPA of the AGVB is increasing over the years. This phenomenon of the bank in question requires a thorough study of this NPA problem to control the same. The study at hand is a humble attempt to probe into some selected aspects of this problem of the said bank which have been put in the objectives of this study.

Conceptual Framework

Banks in India have gone through a significant transformation after the introduction of liberalization and reforms in the financial system which was set in motion in 1991. The objective behind such reforms was to create the organization to face competition, highly effective, efficient and gainful. A healthy banking system reflects the soundness of an economy. Similarly, a poor banking system hampers economic growth. The non-performing asset is a major concern for Indian banks now a day. The amount of NPAs reflects the financial status of the banks. The high amount of NPA indicates high credit defaulters, a reduction in profitability of banks and hampers the quality of assets banks hold. This chapter will deliver a theoretical approach to Non-performing assets.

Performing Assets: Performing Assets are those type of assets which are generate regular income in relation to which no payment has been due till the due date. The performing assets may also call standard assets and it generates continuous income and repayments as and when they fall due.

Non-Performing Assets: An asset becomes non-performing when it ceases to generate income for the bank. Earlier an asset was considered as non-performing asset (NPA) based on the concept of 'Past Due'. A 'non performing asset' was defined as credit in respect of which interest and/ or instalment of principal has remained 'past due' for a specific period of time. However, NPA can be classified as under

Sub-standard Asset: A sub-standard asset was one, which was classified as NPA for a period not exceeding two years. With effect from 31 March 2001, a sub-standard asset is one, which has remained NPA for a period less than or equal to 18 months.

Doubtful Assets: A doubtful asset was one, which remained NPA for a period exceeding two years. With effect from 31 March 2001, an asset is to be classified as doubtful, if it has remained NPA for a period exceeding 18 months. A loan classified as doubtful has all the weaknesses inherent in assets that were classified as sub-standard, with the added characteristic that the weaknesses make collection or liquidation in full, – on the basis of currently known facts, conditions and values – highly questionable and improbable. However, Doubtful Assets are also classified in the following categories:

Doubtful Assets 1 (DA-1): Doubtful up to 1 year.

Doubtful Assets 2 (DA-2): Doubtful up to 1 to 3 years.

Doubtful Assets 3 (DA-3): Doubtful more than 3 years.

Loss Assets: A loss asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

Profitability: Profitability refers to an organization's earning in relation to their expenses. As in general sense, those organizations are more efficient in management they are earning more and more profit than those organisations which are less efficient. However, profit is the key factor in any type of organisation. The profitability parameters which are used in the study discussed below:

Return on Assets: It is a ratio used to assess an organization's profitability and efficiency in relation to its total assets. Higher is the ROA indicates better is the profitability cum efficiency of the bank and vice-versa (Numer P, et.al, 2019, Kevin, S. 2014).

ROA= (Net Income after tax)/(Total Assets) ×100

Return on Equity: The financial performance of return to the shareholder's equity investment is measured by ROE. It is regarded as the measurement of a company's profitability and shows how well it creates profits. The higher ROE, indicates company is better in converting its equity financing into profits (Zoe Hasen, 2019, Kevin, S. 2014).

ROE = (Net Income after tax)/(Shareholder^' s Equity) ×100

Spread: The value of spread can be determined by differentiate the interest received (earned) against the interest paid (spend) by a bank. The bank spread can indicate a bank's profit margin. A positive high spread indicates to a higher profit margin and vice-versa. The formula for spread is-

Spread= Interest earned – Interest paid

Net profit after tax: It refers to the remaining income which an organization has after paying off all the operating expenses for a period. The net profit helps to determine the organization's performance during a particular year.

Review of Literature

Das, S. (2019) found that the level of technical efficiency is not uniform among sample branches of Assam Gramin Vikash Bank during the study period. It was also observed that there are a good number of efficient branches of Assam Gramin Vikash Bank, but the number of inefficient branches was higher than the efficient ones.

Mutyala,S. and B, Harani (2019) was found that loss assets in public and private sector banks in India are continuously increasing, from the investigation it was also found that the level of Non Performing Assets is more in public sector banks as compared to private sector banks.

Khan, S. S. (2019) study found that the institution could get success in the growth of a number of branches, especially in rural sectors. Their performance in terms of certain parameters like Total Deposit, Investment, Profitability, and Recovery has significantly improved. However, Non-Performing Assets have also increased significantly with a growth rate of 29.1 %.

Ibrahim, M and Thangavelu, R (2014) was concluded that the commercial banks have significantly improved their working performance in the areas of NPAs.

Sukul, B. (2017) study was concluded that the situation of HDFC and Axis Bank regarding Non-Performing Assets is praiseworthy but the situation of ICICI bank is fistful as the ratio of Net Non-Performing Assets is increasing by leaps and bounds. So, the top management should look forward to checking it.

Dinh, V.N (2017) study was concluded that income diversification decrease insolvency risk and enhance performance of banks and the relationship between income diversification and bank performance is non-linear.

Bodla, B.S, et. al., (2006) the study was brought out that variables non-interest income, operating expenses, provision and contingencies and spread have significant relationship with net profits.

Kumar. A, and Vasanthi, G (2017) was found that the Net Advances issued by the Public Sector Banks and Foreign Banks have increased over the years. In Public Sector Banks NPA is increasing rapidly. In foreign banks the rate of NPA is also increasing but the growth is slow as compare to the Public Sector Banks.

Research Gap

The review of literature reveals that there are sizable numbers of studies on the efficiency analysis of banks in India both in private as well as public sector. However, few studies were done on Regional Rural Banks in India as found in the literature. Assam Gramin Vikash Bank (AGVB) is the only Regional Rural Bank in Assam, India. A few studies were done on Assam Gramin Vikash Banks mostly in relation to performance evaluation. No such comprehensive study on management of non-performing assets on Assam Gramin Vikash Bank is found in the available literature. However, NPA is a serious issue for entire banking industry in India and Assam Gramin Vikash Bank is not an exemption from the same. Thus there is enough scope for study in key issues of NPA on Assam Gramin Vikash Bank so as to control or minimize the problem as associated with NPA.

Objectives of the Study

- To study the compositions and trends of Non Performing Assets of Assam Gramin Vikash Bank during the study period.
- To examine the association between categorical NPA and profitability of Assam Gramin Vikash Bank.

Data, Variable and Empirical Hypothesis

Sub Standard Assets (SSA): SSAs are those who have not paid their loans as well as interest for a period of 12 Months.

H1: SSA has negative association with profitability.

Doubtful Assets-1 (DA-1): DA-1 means that type of loan who has not paid their loans more than one year.

H2: DA-1 has negative association with profitability.

Doubtful Assets-1 (DA-3): DA-3 is to be classified as doubtful if the loan has not been paid and doubtful more than 3 years.

H3: DA-3 has negative association with profitability.

Loss Assets: Loss Asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly.

H4: LA has negative association with profitability.

Table 1: Compositions of NPA of AGVB

Year	Sub-standard Assets		Doubtful Assets						Loss Assets	
			Doubtful Assets-I		Doubtful Assets –II		Doubtful Assets –III			
	(in ₹'000) (%)	Growth (%)	(in ₹'000) (%)	Growth	(in ₹'000) (%)	Growth	(in ₹'000) (%)	Growth	(in ₹'000) (%)	Growth
2011-12	6,31,252 (40.66)	-	2,95,033 (19.00)	-	2,14,682 (13.83)	-	4,00,598 (25.80)	-	11,113 (0.72)	-
2012-13	6,28,393 (32.99)	-0.45	6,35,087 (33.34)	115	2,46,701 (12.95)	14.91	3,84,706 (20.20)	-3.97	9,877 (0.52)	-11.12
2013-14	16,81,693 (46.25)	167.62	6,62,137 (18.21)	4	4,03,186 (11.09)	63.43	8,87,819 (24.42)	130.78	950 (0.03)	-90.38
2014-15	10,71,894 (29.85)	-36.26	10,50,384 (29.25)	59	6,23,632 (17.36)	54.68	8,45,419 (23.54)	-4.78	74 (0.00)	-92.21
2015-16	60,29,136 (71.39)	462.48	4,98,284 (5.90)	-53	13,19,574 (15.63)	111.59	5,96,440 (7.06)	-29.45	1,676 (0.02)	2,164.86
2016-17	60,98,285 (56.76)	1.15	28,61,484 (26.63)	474	12,90,168 (12.01)	-2.23	4,75,571 (4.43)	-20.27	17,912 (0.17)	968.74
2017-18	64,15,128 (43.27)	5.20	59,65,102 (40.23)	108	14,69,488 (9.91))	13.90	9,60,419 (6.48)	101.95	16,808 (0.11)	-6.16
2018-19	50,97,190 (29.58)	-20.54	48,46,422 (28.13)	-19	62,90,103 (36.51)	328.05	7,68,924 (4.46)	-19.94	2,27,819 (1.32)	1,255.42
2019-20	5,77,326 (3.84)	-88.67	43,70,902 (29.11)	-10	87,54,026 (58.30)	39.17	10,84,223 (7.22)	41.01	2,29,753 (1.53)	0.85
2020-21	17,27,163 (11.72)	199.17	6,03,427 (4.10)	-86	98,54,834 (66.89)	12.57	23,75,125 (16.12)	119.06	1,72,250 (1.17)	-25.03
AVERAGE	**29,95,746**		**21,78,826**		**30,46,639**		**8,77,924**		**68,823**	
MIN	**5,77,326**		**2,95,033**		**2,14,682**		**3,84,706**		**74**	
MAX	**64,15,128**		**59,65,102**		**98,54,834**		**23,75,125**		**2,29,753**	
AAGR		**0.72**		**0.66**		**0.71**		**34.93**		**462.77**
CAGR (2012-2021)	**11.83%**		**8.28%**		**52.99%**		**21.87%**		**35.60%**	

Source: Annual reports of AGVB from 2011-12 to 2020-21
Note: Calculated by Researchers

It is observed from the above table:1 that in Sub-standard Assets the highest growth rate 462.48% of NPA was in the year 2015-16 and lowest in the year 2019-20 with the growth rate (-) 88.67%. In case of Doubtful Assets there are three components which are Doubtful Assets-I (DA-I), Doubtful Assets-II (DA-II) and Doubtful Assets-III (DA-III). In DA-I, the lowest growth rate (-) 86% was in the year 2020-21, in DA-II the lowest in the year 2016-17 with the growth rate (-) 2.23% and in DA-III, lowest growth rate in the year 2015-16 with (-) 29.45%. In terms of highest growth rate, DA-I was highest with 474% in 2016-17, in DA-II the highest growth rate 328.05% was in the year 2018-19 and lastly in DA-III, the highest growth rate 130.78% was in the year 2013-14. When consider Loss Assets, the highest growth rate was in the year 2015-16 with 2164.86% and the lowest growth rate was in the year 2014-15 with the growth rate (-) 92.21%.

In the compositions of NPAs, the AAGR was the maximum for loss assets (462.77%) then Doubtful Assets-III (34.93%), Sub-standard assets (0.72%), Doubtful Assets-II (0.71%) and Doubtful Assets-I (0.66%). On the other hand, the CAGR is recorded maximum for Doubtful Assets-II (52.99%) then loss assets (35.60%), Doubtful Assets-III (21.87%), Sub-standard Assets (11.83%) and Doubtful Assets-I (8.28%). Considering the average NPAs under the five categories, the highest share was recorded for Doubtful Assets-II followed by Sub-standard Assets, Doubtful Assets-I, Doubtful Assets-III and Loss Assets.

Table 2: Straight line trend equations of NPA's Composition of AGVB in relation to Annual Growth Rate with respect to time

Variables	Equation	R2	P value	Trend
Sub-standard Assets	y =133.96 - 0.066t	0.011	0.788	Downward
Doubtful Asset 1	y =283.3 - 0.140t	0.052	0.553	Downward
Doubtful Asset 2	y =-122.6 + 0.061t	0.027	0.674	Upward
Doubtful Asset 3	y =-10853 + 5.398t	0.051	0.557	Upward
Loss Asset	y =-24491 + 12.37t	0.001	0.915	Upward

Source: Computed by the researchers

Table 2 depicts the trend equations with respect to time for the five compositions namely, Sub-standard Assets, Doubtful Assets-I, Doubtful Assets-II, Doubtful Assets-III and Loss Assets. It is observed from the table that the trend line equations of Sub-standard Assets and Doubtful Assets-I have shown that the regression coefficients were negative which implies that the growth in Sub-standard Assets and Doubtful Assets-I of AGVB are declining over the years.

On the contrary, the trend line equations of the other three compositions in the table namely, Doubtful Assets-II, Doubtful Assets-III and Loss Assets have shown that the regression coefficients were positive which implies that the growth in NPA under these categories declined during the study period.

It is observed from the table that the coefficient of regression (R2) is quite low ranging between 0.001 to 0.052. It is also observed that the p-value is greater than 0.05 hence, it may be concluded that none of the coefficients of all five compositions are statistically significant.

Figure 1

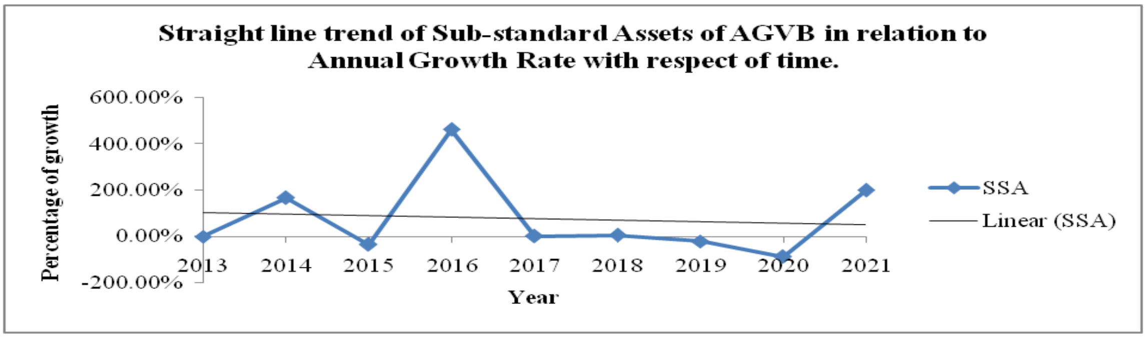
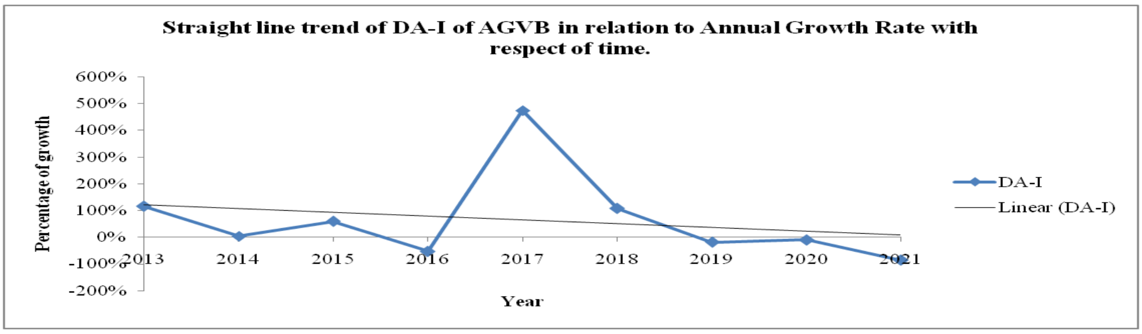


Figure 1 has depicted the line chart of growth in Sub-standard assets of AGVB during the study period. It is observed a fluctuation in the growth rate of Sub-standard assets with a maximum in 2016 and a minimum in 2020. So far as the linear trend is concerned, it has shown a declining trend during the period of study.

Figure 2



In figure 2, the growth in DA-I is ranging in between (–) 86 to 474. However, the linear trend with respect to time has shown a declining trend during the study period.

Figure 3

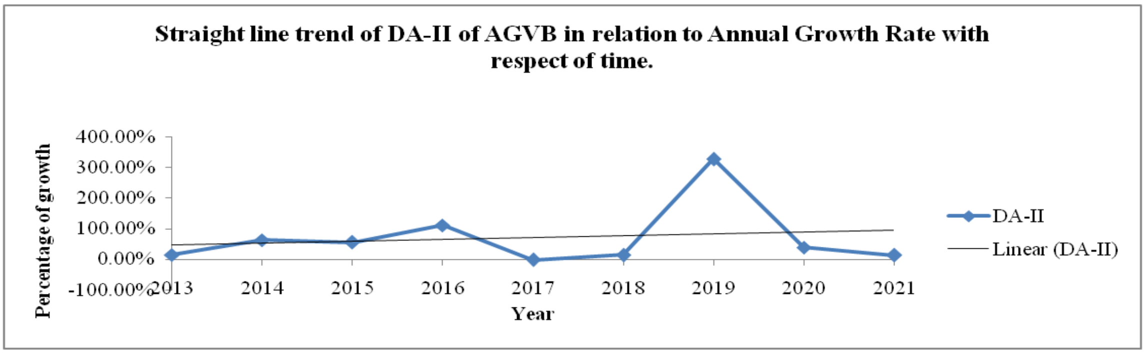


Figure 3, it is observed from Figure 3 that growth in DA-II has shown the highest spike in 2019 in comparison to the rest of the years. However, the linear trend with respect to time has shown an increasing trend during the study period.

Figure 4

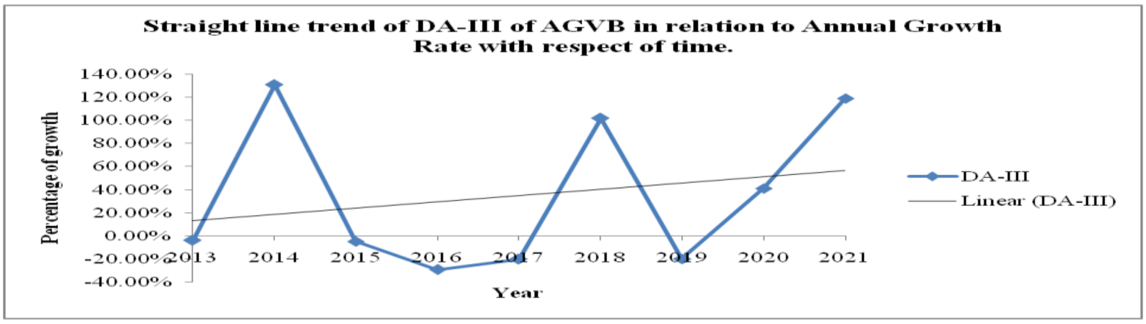


Figure 4 has depicted the growth in DA-III during the study period. It has observed three higher spikes in the chart which indicates fluctuations in the growth of DA-III. However, the linear trend with respect to time has shown an increasing trend over the years.

Figure 5

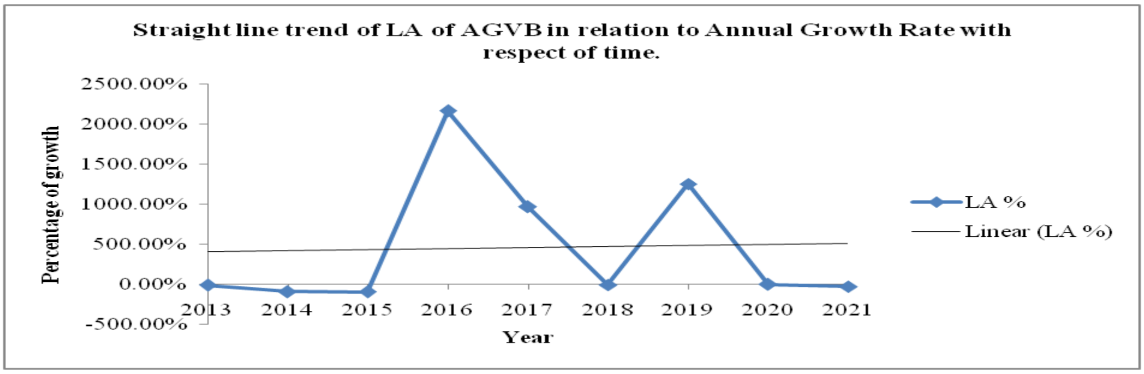


Figure 5 has depicted the line chart of growth in Loss Assets (LA) of AGVB during the study period. It is observed a fluctuation in the growth rate of LA with a maximum in 2016 and a minimum in 2015. So far as the linear trend is concerned, it has shown an increasing trend during the period of study.

Table 3: Growth index of NPA of AGVB during the study period

Year	Sub-Standard Assets	Doubtful -I	Doubtful-II	Doubtful-III	Loss Assets	Total NPA
2011-12	100.00	100.00	100.00	100.00	100.00	100.00
2012-13	99.55	215.26	114.91	96.03	88.88	122.68
2013-14	266.41	224.43	187.81	221.62	8.55	234.16
2014-15	169.80	356.02	290.49	211.04	0.67	231.30
2015-16	955.11	168.89	614.66	148.89	15.08	543.91
2016-17	966.06	969.89	600.97	118.72	161.18	691.93
2017-18	1,016.25	2,021.84	684.50	239.75	151.25	954.93
2018-19	807.47	1,642.67	2,929.96	191.94	2,050.02	1,109.73
2019-20	91.46	1,481.50	4,077.67	270.65	2,067.43	967.12
2020-21	273.61	204.53	4,590.43	592.89	1,549.99	948.86

Source: Calculated by Researchers

Table 4: Correlation matrix showing association between the parameters of profitability and Components of NPA of AGVB

	Variables		ROA	ROE	Spread	Net Profit	SSA	DA-I	DA-II	DA-III	LA
Profitability Parameters	ROA	Pearson Correlation	1	.997**	.274	.685*	-.200	-.707*	-.773**	-.613	-.700*
		Sig. (2-tailed)		.000	.444	.029	.579	.022	.009	.059	.024
	ROE	Pearson Correlation	.997**	1	.281	.666*	-.212	-.736*	-.734*	-.578	-.667*
		Sig. (2-tailed)	.000		.432	.036	.556	.015	.016	.080	.035
	Spread	Pearson Correlation	.274	.281	1	-.091	-.190	-.590	-.289	.272	-.545
		Sig. (2-tailed)	.444	.432		.802	.599	.073	.418	.448	.104
	Net Profit	Pearson Correlation	.685*	.666*	-.091	1	-.338	-.514	-.504	-.461	-.429
		Sig. (2-tailed)	.029	.036	.802		.339	.129	.138	.180	.216
Components of NPA	SSA	Pearson Correlation	-.200	-.212	-.190	-.338	1	.496	-.118	-.158	-.100
		Sig. (2-tailed)	.579	.556	.599	.339		.145	.744	.664	.783
	DA-I	Pearson Correlation	-.707*	-.736*	-.590	-.514	.496	1	.311	.000	.458
		Sig. (2-tailed)	.022	.015	.073	.129	.145		.382	.999	.183
	DA-II	Pearson Correlation	-.773**	-.734*	-.289	-.504	-.118	.311	1	.760*	.929**
		Sig. (2-tailed)	.009	.016	.418	.138	.744	.382		.011	.000
	DA-III	Pearson Correlation	-.613	-.578	.272	-.461	-.158	.000	.760*	1	.513
		Sig. (2-tailed)	.059	.080	.448	.180	.664	.999	.011		.129
	LA	Pearson Correlation	-.700*	-.667*	-.545	-.429	-.100	.458	.929**	.513	1
		Sig. (2-tailed)	.024	.035	.104	.216	.783	.183	.000	.129	

Source: Calculated by researchers using SPSS

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

All the components of Non-performing assets have shown an increasing trend during the period. However, it has started decreasing in the recent past three years. Trend line of loss asset is in the top followed by Doubtful Assets-III. Sub-standard assets seem to have flatter trend in comparison to other components of NPA under study. Increasing trend of NPA for almost all the components is alarming for Assam Gramin Vikash Bank, therefore it need to manage properly particularly loss asset.

Table 5: Expected association of selected variables of NPA with Return

Variable	Definition	Expected Relation with Return
Sub-standard Asset (SSA)	SSA is to be classified as Non Performing Asset for a period of 12 Months.	Negative
DA-I	DA-I is to be classified as doubtful if it has remained doubtful up to 1 year.	Negative
DA-II	DA-II is to be classified as doubtful if it has remained doubtful 1 year to 3 years.	Negative
DA-III	DA-III is to be classified as doubtful if it has remained doubtful more than 3 years.	Negative
LA	Loss Asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly.	Negative

Table 4 shows that in the case of net profit after tax as measured in terms of absolute value found a negative association with all the compositions of NPA i.e. SSA, DA-I, DA-II, DA-III and LA. Low degrees of the association are observed between the net profit after tax and the compositions of NPA of AGVB. Moreover, none of the coefficients of correlation was found to be statistically significant which implies that their associations are casual.

Spread which is measured in terms of absolute value has found a negative association as expected with all compositions of NPA such as SSA, DA-I, DA-II, DA-III and LA. The coefficients of correlation between Spread and the compositions of NPA are below 0.6, which indicates either a moderate or low degree of association. Furthermore, none of the coefficients of correlation were found to be statistically significant which implies that their associations are casual.

Table also shows the correlation matrix between the compositions of NPA and the profitability parameters i.e. ROA of AGVB. It is observed that, as expected, all the compositions of NPA such as SSA, DA-I, DA-II, DA-III and LA are negatively associated with Return on Asset (ROA). Out of all five NPA compositions, association of three compositions such as DA-I, DA-II and LA are found statistically significant with ROE at 5%, 1% and 5% levels respectively. However, the association is not significant for SSA and DA-III with ROA.

It is also understandable from the above table that, like ROA, all the compositions of NPA such as SSA, DA-I, DA-II, DA-III and LA are negatively associated with Return on Equity (ROE) as expected. Out of all five NPA compositions, association of three compositions such as DA-I, DA-II and LA are found statistically significant with ROE at 5% level. However, the association is not significant for SSA and DA-III with ROE.

Conclusion and Recommendation

From the first objective it may concluded that the NPA of AGVB is increasing over the year from all the aspects and SSA is most increasing factor. So, bank must be look into that factor.

From the second objective it was observed that DA-I and DA-II are most dangerous factors which directly impact on the profitability.

The problem of NPA is a serious issue which may impact on the growth of the particular bank and it may destroy the sound financial position of the bank. So, the problem of NPA must be handled in such a manner that would not ruin the financial position and affect the image of the bank.

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