Original article

Evidence-based Stock Price Behaviour Around Cash Dividend Announcements in an Emerging Market Set-up

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Abstract

This article examines how stock prices behave following cash dividend announcements in the Indian equity market considering 3,671 cash dividend announcements during the period 2012–2019, using both aggregate-level and firm-level analysis. Further, the study investigates the factors that lead to the generation of abnormal gain or loss following dividend announcements. We found that cash dividend announcements generate abnormal stock returns in the Indian equity market immediately after the dividend announcement. However, this impact persists for a very short spell, and after that, the stock prices normalize gradually. Results also show that firms with a higher promoter shareholding gain less on dividend announcements. The empirical evidence of this study thinly supports the *information signalling theory* and *dividend clientele* theory in the Indian market.

Keywords

Cash dividend, abnormal returns, event study, emerging economies, India

Introduction

The influence of cash dividend announcements on stock prices has remained an active area of research in corporate finance over the decades. The cash dividend is an essential form of pay-out policy and a method of transferring wealth to shareholders. The question of why firms pay cash dividends despite a distinct tax disadvantage compared to capital gains has long confounded researchers (Chatterjee & Dutta, 2017). Existing studies on cash dividend announcements have so far focussed mostly on developed economies, which are quite different from emerging economies. The growth rate of the corporate sector is higher in emerging economies compared to developed economies. In emerging economies like India, the corporate sector has a cryptic structure due to the presence of family-owned business groups and imperfect capital markets. Here, family-owned corporations with substantial ownership rights dominate the corporate landscape. There are very few in-depth studies in India focussing on this aspect. Existing

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studies have mostly examined the impact of dividend announcements on the stock prices at an aggregate level (Anwar et al., 2017; Chatterjee & Dutta, 2017). However, this study is unique in that it focusses not only on an aggregate level analysis but also examines each cash dividend announcement (3,671 announcements) to understand its impact on stock return. Thereby, we expect to get different scenarios, like gain or loss or no impact in terms of abnormal stock returns following dividend announcements. Further, we then try to identify the factors that drive the abnormal stock returns around dividend announcements. To the best of our knowledge, this is the first study, at least in the emerging market context, which explores this aspect, based on analysing each cash dividend announcement and its impact on stock returns.

Another critical aspect that makes India interesting for analysis is the corporate dividend tax (CDT).[1] Indian companies are required to pay CDT (at present, the effective rate is 20.35%) to the government before distributing dividends to shareholders, leaving a reduced amount of dividend available to shareholders. However, shareholders are not required to pay any further tax on their dividend income. But if the amount of dividend received by a shareholder exceeds INR 1 million, he/she will have to pay an additional 10% dividend tax. In consequence, investors (especially wealthy investors) may not prefer cash dividend, and instead, may prefer to reinvest that amount in the firm. This reinvestment may leverage the stock price favourably, and shareholders may luxuriate in capital gains. If the share is held for more than a year, shareholders would realize long-term gain, which was not taxable till the FY 2017–2018. If it is held for less than a year, the short-term capital gain tax at 15% has to be paid.[2] In essence, all shareholders indirectly pay higher dividend tax than short-term or long-term capital gain tax. Therefore, in India, there was a definite tax disadvantage for cash dividends compared to capital gains during our study period.

The concentrated ownership pattern of Indian firms is another distinct point to be considered here. Interestingly, promoters (i.e., founding families) own a majority of Indian firms, and usually, they do not prefer cash dividends because of the tax disadvantage and prefer capital gains over dividends. The average aggregate equity holding of promoter and non-promoter institutions in our sample firm is about 72% during the study period (see Annexure 1), and they hold equities mainly for controlling firms and for long-term price appreciation. These shareholders do not (usually) respond to dividend announcements, unlike retail investors. Also, the degree of shareholders' activism, including large pension funds and hedge funds, is less in India, compared to developed economies like the USA, where equity is held widely. Hence, investors' behaviour to dividend announcements in India is quite different from that in developed markets. Prior studies exhibit that investors prefer capital gains over dividends if there is a tax advantage with capital gains (Modigliani, 1982). Hence, the outcome of this study facilitates the understanding, by and large, of the Indian stock market and investors' reaction to an essential corporate announcement of dividend payment.

Many theories have been put forward to explain the idea behind distributing cash dividends. However, three significant theories explain the affinity between dividend and stock price: *The Information-Signalling Hypotheis, The Free Cash Flow Hypothesis* and *The Dividend Clientele Hypothesis*. Several studies provide sustenance for the information content of these hypotheses (Woolridge, 1983). *The Information-Signalling Hypothesis* explains that due to the presence of information asymmetry, notifications of cash dividends convey new information to the market. Agency theory categorizes managers as agents who run the business on behalf of shareholders (Principal); at the same time, managers' minds are hard to read. However, shareholders can perceive from managers' actions that firms that are paying regular dividends are making money. Therefore, information on cash dividend announcements gives a positive signal to the stock market participants regarding the future of the firm.

According to the *Free Cash Flow Hypothesis*, cash dividends may perform the role of observing and controlling mechanisms over the management, in order to lower agency costs (Easterbrook, 1984). The agency problem separates proprietorship from the jurisdiction of the firm. Managers may be hesitant in paying out dividends, as they want unhindered free cash flow into the firm. Further, managers hold cash as custodians, on behalf of shareholders. If there are no profitable investment opportunities, it is desirable to return the surplus cash to the shareholders. In other words, companies with enormous free cash flows can afford to pay a generous dividend to shareholders instead of retaining it in the business. Further, Miller and Modigliani (1961) and Black and Scholes (1974) formalized the tax preferences of investors as the tax clientele effect. *The Clientele Hypothesis* became prominent due to differences in the tax preferences of investors, as some investors prefer earnings in the form of a dividend, while others may desire to retain those earnings in the firm. The differential in tax preference may account for the price inefficiency in the market (Trabelsi et al., 2019). Among these theories, the Signalling Hypothesis provides stronger support to explain the market reaction to cash dividend announcements (Woolridge, 1983). Meza et al. (2020) examined the relationship between the dividend signalling hypothesis and a firm's life cycle using a sample of US firms during 2000–2014. They observed that the relationship between dividend changes and subsequent earnings changes is different for different life stages and also the changes in the amount of the dividend that provide some information about future earnings, especially during the early stages.

We have designed the article as follows. The second section reviews the existing literature. The third section describes the main objective of the study. The fourth section explains the research design, data and methodology. The fifth section presents the analysis and discussion, and finally, the sixth section concludes the study with managerial implications.

Review of Literature

The literature is extensive, with remarkable disagreements on whether dividend announcements contain important information and influence stock prices. Watts (1973) found that unexpected dividends provide little information to the market. Asquith and Mullins (1983) examined price reaction to dividend inception and discovered outstanding positive abnormal returns on the announcement day, but not after that. Saleh (2007) argued that investors achieve positive abnormal returns in the pre-announcement period, while Beer (1993) observed that firms that pay fresh dividends receive a relatively more favourable market response than firms that pay consistent dividends. Machaely et al. (1995) showed that there are no abnormal returns following dividend initiations, but significant negative returns following dividend omissions.

Several studies indicate a positive association between dividend changes and stock returns (Yilmaz & Gulay, 2006). The findings of these studies are in line with the results of similar studies in developed markets like the USA and the UK. Such empirical results support the signalling hypothesis, explaining that dividend announcement information gives a positive signal to the investors in the market and generates positive abnormal returns (Koch & Sun, 2004). Studies have also reported the relationship between changes in dividend and stock price. They underpin the use of dividends as a motivation to positive returns because investors take this occurrence as good news (Koch & Sun, 2004). Existing studies have also confirmed that alterations in cash dividends have dainty incremental value (Benartzi et al., 1997). Asem (2020) examined the abnormal returns preceding dividend changes on the characteristics that determine the announcement returns. The study shows that the difference in abnormal returns

preceding dividend changes that have large and minimal effects is similar to that for unchanged dividends, indicating the lack of informed trading activity preceding dividend changes in the equity market.

Michayluk et al. (2021) investigated the market reaction to unchanged dividend announcements when an increase was likely to have been expected. They found that that failing to increase the dividend is associated with significantly positive abnormal returns that are greater in magnitude for more entrenched dividend-increase records, supporting a contrast-effect hypothesis. Koo and Chae (2020) examined the dividend month premium in the Korean stock market using the capital asset pricing model, Fama–French three-factor model and the Fama–French–Carhart four-factor model. They found positive abnormal returns in predicted dividend months and the stocks price remained the same in other months

Furthermore, dividend announcements are equally important in those markets where the corporate ownership structure is spectacularly different from that of developed economies. Frank and Jagannathan (1998) observed that though both dividend and capital gains are tax-free in the Hong Kong Stock Market, positive abnormal returns exist on ex-dividend dates. Maitra and Dey (2012) used the CAPM and Market Model, and observed that significant abnormal returns, whether positive or negative or both, are more applicable under the CAPM model upon dividend announcement. Kumar and Raju (2013) found that dividend announcements act as a signalling mechanism, leading to an immediate upward swing in the share price movement.

Existing studies looked into the shareholders' response to dividend tax. Usually, investors in lower tax brackets prefer high dividend-paying stocks and *vice versa* (Litzenberger & Ramaswamy, 1982). Investors consider both capital gains tax and dividend tax while choosing their preferences. Shareholders in higher tax brackets relative to those who are in lower tax brackets show a preference for capital gains over dividend income (Balachandran et al., 2012; Li & Tran, 2019; Veliotis, 2019). Broadly, a negative linkage exists between the dividend preferences of investors and the applicable dividend tax rate (Collins & Kemsley, 2000).

A set of studies have examined the factors that drive the dividend decisions of firms. Park and Rhee (2017) found that a firm's investment policy more often guides the market reaction to dividend change announcements. Thakur and Kannadhasan (2018) investigated the determinants of dividend policy of firms belonging to different quartiles. They found that the size of a firm is consistently significant in all quartiles. However, leverage and profitability are significant only in few quartiles.

Some studies also explored the indicators of abnormal returns generated around dividend announcements. Henry et al. (2017) found evidence of intensive trading by institutional investors during two quarters before dividend announcements. While Zhang (2018) found informed options trading as a potential predictor of dividend change, Asem (2020) did not find any such evidence in the pre-announcement period of dividend change. Ngoc et al. (2021) investigated the impact of the COVID-19 pandemic on listed firms' performance and the abnormal stock returns in Vietnam considering the earnings announcements on Q1/2020 and Q4/2019. They found significant impacts of the COVID-19 pandemic on the business performance and the level of influence varies among sectors.

Some studies have examined the announcement effect of cash dividend on stock returns in the Indian context. Broadly, Indian studies have established that dividend announcements have a positive impact on stock returns (Anwar et al., 2015, 2017; Kumar & Raju, 2013). However, the absence of the signalling effect of the dividend announcement on stock returns is also evident in India (Chatterjee & Dutta, 2017). Given the paucity of studies, there is a need for in-depth research in this field, especially in an emerging market context like India. Existing studies have mostly used small samples of dividend announcements, leading to a problem in generalizing the findings. The consideration of firm-level dividend announcements, in addition to aggregate-level analysis, and exploring the factors behind the abnormal stock returns

around the dividend announcements, are the new and unique contributions of this study. The results are expected to help managers and investors to understand the linkage between cash dividend announcements and stock returns in the Indian stock market.

Objectives of the Study

The objectives of this article are three-fold. First, to empirically test whether cash dividend announcements generate any abnormal return around the dividend announcements at an aggregate level. Second, to test what proportion of total cash dividend announcement do actually generate abnormal gain (or loss) considering the case of each dividend announcement. Third, to identify the factors that led to the generation of abnormal gain or loss following dividend announcements. Overall, the central objective of this article is to explore and examine how cash dividend announcements influence the stock return in the Indian equity market, considering both the aggregate-level and firm-level analysis of dividend announcements.

Methodology—Data source, Sample Frame andEmpirical Model

Data and Sample

Initially, the study considered cash dividend announcements of all companies, which are part of the Standard and Poor BSE 500 index[3]at any time during the study period from 1 April 2011 to 31 March 2019, and identified 817 companies. This study considered the pre- covid-19 pandemic period. We have not considered the FY 2019–2020 period consciously because of the severe impact of the COVID-19 pandemic on the Indian stock market. During March 2020, the stock prices of most Indian firms were highly negatively impacted due to the nationwide lockdown and uncertainties about production, revenue, earnings and profitability. Therefore, most Indian firms did not declare dividends in FY 2019–2020. Further, from June 2020 onwards, the Indian equity market started improving sharply, and this improvement was due to the unlocking of the country and the start of economic activities in the country along with different measures taken by the government. Since there are several confounding events impacting stock prices during this period, we have excluded this period from our study. Interestingly, both the sharp decline in stock prices and their sharp recovery during the subsequent period were not because of our focussed corporate event (i.e., dividend announcements). Consideration of this period will lead to erroneous results and will divert the main research question.

Several conditions were applied for the final sample selection. First, the companies' shares on which cash dividends are announced are ordinary equity shares, and all the firms are non-financial. Financial sector companies are excluded as they follow different accounting practices and norms. Second, the shares of each company should have been traded for at least 142 days in the 250 trading days immediately preceding the announcement date, and their daily prices are available. Third, since the study focusses on analysing the impact of cash dividend announcements, there should not be any other announcement like stock split, bonus issue, share buyback, mergers, acquisitions, amalgamation or any such financial event during the event windows. Following these criteria, we finally arrived at 595 non-financial firms with 3,671 cash dividend announcements across the study period.

These companies represent 20 industry sectors of the economy. The market returns are derived from the BSE 500 index procured from the official website of BSE. Data on dividend announcements, financial variables and stock prices are sourced from 'Prowess IQ', a database maintained by the Centre for Monitoring Indian Economy (CMIE). Several published empirical studies used the Prowess database (e.g., Bertrand et al., 2002; Chatterjee & Dutta, 2017; Khanna & Palepu, 2000). Interestingly, promoter and non-promoter institutions own a majority of these companies' equity. Anexxure 1 shows that out of 595 sample firms, the average aggregate shareholding by promoter and non-promoter institutions is about 72%, while that of non-promoter and non-institutional shareholders is only 28% .

Event Study Methodology

The event study methodology is a widely used, popular method to measure the economic impact of any event by analysing security prices around the event day. In the finance literature, the event study methodology is successfully used around corporate events like amalgamation, bonus issues, share repurchase and stock splits. This study also uses the event study methodology to examine the impact of cash dividend announcements on stock returns (Chatterjee & Dutta, 2015; Peterson, 1996).

Event Window and Estimation Window

Since the stock price of a company is affected by several factors, it is important to decide how long the event window should be. In a relatively long period, various factors may influence the stock returns. Campbell and Ohuocha (2011), and Anwar et al. (2017) considered 31 days as an event window, 15 days prior and 15 days after the announcement day. Chatterjee and Dutta (2017) used 21 days as the event window for a dividend announcement study. Hence, here the event window examined is 29 trading days, 14 days before the dividend announcement day, and 14 days after the announcement day, along with the announcement day (day 0) itself. The estimation window indicates the period considered to estimate the expected returns. In the process of estimating abnormal returns following the market model, the regression is estimated based on market return and the respective company's stock price data of the previous six months, counting to around 128 trading days. Therefore, the estimation window considers 128 observations, as it is likely that investors form their stock returns expectation based on the recent past. The BSE 500 index is used to derive the market return.

Estimation Model—The Market Model Approach

The event study methodology is widely used to estimate abnormal returns (Mackinlay, 1997). The study employs the market model to estimate the expected (normal) returns.

The market model establishes a linear relationship between individual stock return and the market return that follows from joint normality:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \tag{1}$$

where $E(\epsilon_{it}) = 0$ and $Var(\epsilon_{it}) = \sigma_i^2$

R_{it} denotes return on stock i and R_{mt} represents market return

For estimating Equation (1), the estimation window is from −142 days to −15 days; date 0 is the event date (i.e., dividend announcement date) and the event window is from −14 days to +14 days.

After running ordinary least square (OLS), α_i and β_i are estimated from Equation (1). The OLS regression is performed on the data relating to the estimation window. By using these estimates, abnormal returns for security 'i' at the time 't' in the event window are calculated as:

$$\text{AR}_{it} = R_{it} - \alpha_i - \beta_i R_{mt} \tag{2}$$

Abnormal return denotes the difference between expected daily return and the actual return of a particular day. Next, from daily abnormal returns of all the announcements, the average abnormal return (AAR) is obtained as follows:

$$\text{AAR} = \sum_{N}^{i=1} \frac{\text{AR}_{it}}{N}$$

where N is the total number of dividend announcements. Following this process, the AARs are derived for the event window −14 days to +14 days. Similarly, we compute the cumulative average abnormal returns, $\text{CAAR}_{[T_1, T_2]}$ for each event window, $[T_1, T_2]$ as:

$$CAAR_{[T_1, T_2]} = \sum_{t=T_1}^{T_2} \sum_{i=1}^{N} \frac{\text{AR}_{it}}{N}$$

where N is the number of dividend announcements.

We present the analysis in two ways. First, we examine the stock returns around the dividend announcement date. Here, the daily AARs are calculated over −14 and +14 trading days, including the dividend announcement date. For each of these days, we test the hypothesis that returns are significantly different from zero. Next, we compute the cumulative average abnormal returns (CAARs) for different event windows. CAAR is the sum of the daily AARs for a specified event window period. We perform these analyses not only at an aggregate level, but also for each dividend announcement.

Second, based on the results of the analysis explained above, the study tries to look into the possible factors behind the success or failure of dividend announcements in improving stock returns.

Analysis and Discussion

Abnormal Returns Around Dividend Announcements

First, the study analyses the AARs over pre-14 to post-14 days. Whether each of the day's AAR is different from zero is tested through the *t*-test. Table 1 reports the results.

Table 1 shows that AARs in the pre-announcement period (pre-14 days) are mostly negative but are significant on days 1, 6, 7 and 12. They are positively significant only on day 8. Although AARs in the pre-announcement period on days 5, 9, 11 and 14 are positive, they are statistically insignificant. Interestingly, the AAR on the announcement day is positive and significant (0.069%). In the post-announcement period, days 1, 2 and 3 report positive and significant AARs. After that, they turn negative from day 4 onwards till day 9, but are statistically insignificant. For the remaining days, the AAR is

Table 1. Daily AARs Around the Dividend Announcement Day.

Event Days	AAR (%)	p-Value
Pre-14	0.0002	0.27
Pre-13	−0.0549	0.15
Pre-12	−0.0961	0.06*
Pre-11	0.0054	0.19
Pre-10	−0.0565	0.15
Pre-9	0.0184	0.29
Pre-8	0.6640	0.07*
Pre-7	−0.040	0.09*
Pre-6	−0.0688	0.04**
Pre-5	0.0088	0.18
Pre-4	−0.0572	0.11
Pre-3	−0.0247	0.32
Pre-2	−0.0205	0.19
Pre-1	−0.0402	0.07*
Ann day	0.0689	0.06*
Post-1	0.0152	0.02**
Post-2	0.2549	0.02**
Post-3	0.2007	0.00***
Post-4	−0.0793	0.18
Post-5	0.0609	0.34
Post-6	−0.0340	0.71
Post-7	0.0140	0.56
Post-8	−0.0014	0.15
Post-9	−0.0501	0.43
Post-10	0.0964	0.29
Post-11	0.1721	0.08*
Post-12	0.1529	0.23
Post-13	0.0599	0.61
Post-14	0.1796	0.19

Source: The authors.

Note: (1) The null hypothesis tests whether the average abnormal returns are equal to zero.
(2) *$p < 0.1$; **$p < 0.05$; and ***$p < 0.01$.

statistically insignificant except on day 11, which exhibits positively significant AAR. These results indicate, on an aggregate, that dividend announcements by Indian companies generate some positive abnormal returns as soon as they are announced, and this information positively impacts stock returns only in the next few days (here, three days after the announcement). After that, the market absorbs the information, and stock prices normalize.

Next, we present the cumulative average abnormal returns (CAARs) in Table 2 for various event windows. We present CAARs for three different periods. Panel I shows CAARs around the dividend announcement day, Panel II presents CAARs before the announcement date and Panel III exhibits CAARs on and after the announcement date.

Table 2 shows that firms have experienced positive CAARs around the dividend announcement day. For windows $(-1, +1)$, $(-2, +2)$ and $(-7, +7)$, the CAARs are positive and significant. For other windows in Panel I, the CAARs are positive but insignificant. The CAAR during the pre-announcement window $(-7, -1)$ and $(-3, -1)$ is negative and significant, while it is negative but insignificant for windows $(-10, -1)$ and $(-14, -1)$. On the other hand, the CAAR for windows $(0, +3)$ and $(0, +7)$ is positive and significant, while it is positive but insignificant for windows $(0, +10)$ and $(0, +14)$. Combining all the

Table 2. Cumulative Abnormal Returns Around Announcement Date.

Event Windows	CAAR (%)	p-Value
Panel I: Combined period		
$(-1, +1)$	0.0439	0.02**
$(-2, +2)$	0.2783	0.04**
$(-3, +3)$	0.4543	0.16
$(-4, +4)$	0.3178	0.24
$(-5, +5)$	0.2656	0.21
$(-7, +7)$	0.1368	0.04**
$(-10, +10)$	0.2102	0.40
$(-14, +14)$	0.6294	0.27
Panel II: Pre-announcement date		
$(-14, -1)$	−0.3597	0.42
$(-10, -1)$	−0.2143	0.19
$(-7, -1)$	−0.2426	0.00***
$(-3, -1)$	−0.0853	0.02**
Panel III: On and after the announcement date		
$(0, +3)$	0.5297	0.03**
$(0, +7)$	0.3795	0.05**
$(0, +10)$	0.4245	0.18
$(0, +14)$	0.9890	0.43

Source: The authors.

Note: (1) The null hypothesis tests whether the cumulative average abnormal returns are equal to zero.
(2) *p < 0.1; **p < 0.05; and ***p < 0.01.

three periods, it is evident that on and after the dividend announcements, the CAARs start improving and have generated positive CAARs mainly for the windows immediately after the dividend announcements. These results are consistent with the results shown in Table 1 that dividend announcements by Indian companies generate some additional returns immediately after the announcement, and this impact persists for the next few days only and not over a more extended spell.

Factors Behind Average Abnormal Returns

The finding is fascinating that, after the dividend announcement, there is an increase in returns. However, this positive impact remains only for a short spell, and gradually stock prices normalize. Hence, to probe into this matter, another set of analyses is performed. The hypothesis that AAR is equal to zero is carried out for the windows (−5, −1) and (0, +5) for each of the 3,671 dividend announcements. Various possibilities may emerge based on whether the returns are positive or negative, and significant or insignificant. If the AARs are significantly different from zero (whether positively or negatively significant), then only the signs are considered. Positive and negative significant AARs are denoted as '+' and '−', respectively. No sign is considered if the AAR is not significantly different from zero, and it is categorized as zero (insignificant). Therefore, every possibility in these pre- and post-announcement windows can be classified as 'gain', 'loss' or 'no impact'. For instance, if the AAR of a company is insignificant in the pre-announcement period, but negatively (positively) significant in the post-announcement period, it is a loss (gain); likewise, if the company had a positively (negatively) significant AAR in the pre-announcement period, but insignificant AAR in the post-announcement period, then it is a loss (gain). The manifestation of dividend announcements under each category is listed in Table 3. It shows that out of 3,671 dividend announcement cases, there is no impact in 2,760 cases (about 75%), in 698 cases (about 19%) companies have gained and in 213 cases (about 6%) companies have lost after dividend announcements.

Table 3. Categorization Based on AAR Significance and Sign.

Pre-5 Day's AARs	Post-5 Day's AARs	Category	No. of Announcements
0	+	Gain	294
0	−	Loss	70
0	0	No impact	1894
+	0	Loss	92
−	0	Gain	137
+	−	Loss	51
+	+	Gain/loss/no impact*	631 (no impact)
−	+	Gain	267
−	−	Gain/loss/no impact*	235 (no impact)
Total number of announcements: 3,671			
Total number of gainers: 698; losers: 213			

Source: The authors.

Note: * To be checked further by comparing the values of pre- and post-AARs. If they are not different, then no impact. Depending on which return is higher, it can be Gain or Loss for the company

To identify the possible factors which have played a significant role in determining the additional returns after the dividend announcement, multiple regression analysis is performed on 911 dividend announcement cases that have either gained (when return improves after dividend announcements) or lost (when return falls after dividend announcements) as per the classification in Table 3. For the above-mentioned multiple regression technique, we have followed the approach of Mukherjee and Chatterjee (2019) who applied a similar methodology in respect of share repurchases. Also, Lonie et al. (1996) and Gunasekar age and Power (2006) used a similar approach.

In three separate regressions, we considered three different dependent variables, namely, the AARs in the previous five days of the announcement, AARs on the dividend announcement day and AARs five days post-announcement. As possible determinants, the study considers DPR (dividend payout ratio, indicating the percentage of net income paid to the shareholders as a dividend), MCAP (the natural logarithm of market capitalization of the firm on the announcement date), PROMSH (promoters' shareholding), PROF (Profitability, measured by Return on Assets), AGE (the natural logarithm of age of the firm), SIZE (size of the firm, measured as the natural logarithm of total assets), LEV (leverage, derived as long-term debt divided by total assets) and GROWTH opportunities (growth opportunities of the firm, measured as market to book value ratio).

Theoretically, it may be argued that DPR, MCAP, PROF, AGE and SIZE are likely to influence additional returns positively. When the pay-out size is large, investors get a handsome amount of dividend, which can create a positive impact on the market. Similarly, dividend announcements by profitable firms are likely to create more positive sentiment in the market than those of less profitable or loss-making firms. Generally, large and mature firms can afford to pay higher dividends, and these firms garner considerable attention from the corporate media. As a result, dividend announcements by large and long-established firms are likely to influence additional returns positively.

On the other hand, LEV, PROMSH and firms' GROWTH are likely to influence additional returns negatively. Higher dividend payments by firms with high LEV may not be perceived well by lenders, and it can lead to bankruptcy risk in the event of failure to service the debt. Likewise, PROMSH is likely to impact additional returns negatively because when PROMSH is high, the maximum amount of dividend goes to the promoters and a lesser amount of dividend is available to other investors. Therefore, stock returns of firms with high PROMSH may not be impacted significantly by dividend announcements. Usually, young and growing companies do not pay high dividends, as they reinvest their profits into the business to fund future growth. Hence, higher dividend payments by growth firms may not be perceived as the right decision. Therefore, additional returns of growth firms are likely to decline after dividend announcements. However, it is a debatable matter whether growth firms should continue to pay dividends or reinvest their profits for wealth maximization.

Before regression, both stock prices and market indices went through the stationarity test using the Philips-Peron unit root test. As customarily expected, both stock prices and market indices are found to be non-stationary at level, but both are observed to be stationary at first difference, implying that all returns are stationary. Also, the correlation between the independent variables, viz., DPR, MCAP, PROMSH, PROF, AGE, SIZE, LEV and GROWTH opportunities has been checked, and the correlation coefficients are quite low (less than 0.50) among all the pairs. In no case is it at a level that would indicate the multicollinearity problem. Table 4 reports the correlation matrix. Also, we checked multicollinearity through tolerance and variance inflation factor(VIF). In our model, the higher tolerance values (ranging from 0.698 to 0.838) and lower VIF values (ranging from 1.183 to 1.479) indicate the non-existence of multicollinearity.

Table 4. Correlation Matrix.

Variables	A	B	C	D	E	F	G	H
DPR (A)	1.0							
MCAP (B)	0.23	1.0						
PROMSH (C)	−0.38*	0.06	1.0					
PROF (D)	0.25**	0.08	0.09	1.0				
AGE (E)	0.29**	0.16**	0.14	0.03	1.0			
SIZE (F)	0.04	0.31*	0.21**	0.32	0.06*	1.0		
LEV (G)	−0.15	0.09	−0.27	0.26	0.27	0.15	1.0	
GROWTH (H)	−0.09	0.25*	0.40*	0.08*	−0.1	0.18*	0.4	1.0

Source: The authors.

Note: $*p < 0.1$; $*p < 0.05$; and $***p < 0.01$.

To check the presence of autocorrelation, if any, in the residuals, the Durbin–Watson (DW) statistic was employed. The thumb rule says if the DW value is 2, the non-existence of first-order autocorrelations can be assumed. The DW values in regression models (Tables 5 and 6) indicate the non-existence of severe autocorrelations in the residuals. While running regressions (Tables 5 and 6), we considered the values of all explanatory variables one month prior to the dividend announcement date to avoid the reverse causality problem, if any. Also, since dividend distribution tax (DDT) is paid as a fixed percentage of the dividend amount, no separate effect can be expected for DDT. Hence, we do not consider DDT as a separate explanatory variable.

Table 5 presents the regression results for gainers and losers (911 dividend announcements) and Table 6 reports the regression results of all the 3,671 dividend announcements.

Table 5 reveals that the pre-announcement AARs are positively affected by PROF and MCAP, implying that profitable firms and firms with higher MCAP generate higher average abnormal returns. Other factors do not have any significant impact on AAR. On the announcement day, the AAR is positively influenced by the DPR, PROF, GROWTH and MCAP, signifying that profitable firms, firms with higher MCAP and growth firms gain more on announcements of dividends. Further, dividend announcements generate additional returns when the pay-out size is more. However, the announcement day AAR is not influenced by SIZE, LEV and PROMSH.

In the case of post-5 days' AAR, DPR, PROF and growth opportunity continue to impact the AARs positively. Besides, the AAR is also positively influenced by MCAP, signifying that larger firms in terms of the market valuation of equity gain more after dividend announcements. Further, PROMSH has negatively impacted AAR, indicating that firms with higher PROMSH, gain less after a dividend announcement. In companies where the PROMSH is high, the maximum amount of dividend goes mainly to the promoters, leaving very little for the non-promoter shareholders. This could be the possible reason behind this finding. Here too, LEV, SIZE and AGE do not impact the AARs. These results are almost in line with our expectations, except for growth opportunities. Growth firms also gain more on the announcement of cash dividends. Possibly, dividend payment gives a positive signal to the markets about the financial health and prospect of the growth firms, and this is why growth firms reward their shareholders through cash dividends.

Table 5. Regression Results for Gainers and Losers (911 announcements).

	AAR (−5, −1)		Ann Day AAR		AAR (+1, +5)	
	Coeff.	p-Value	Coeff.	p-Value	Coeff.	p-Value
Constant	0.040	0.00***	0.051	0.00***	0.062	0.01**
DPR	0.031	0.34	0.049	0.07*	0.044	0.03**
Promoter share	−0.004	0.29	−0.005	0.25	−0.002	0.09*
Ln (market cap)	0.042	0.04**	0.069	0.06*	0.081	0.03**
ROA	0.004	0.06*	0.003	0.02**	0.005	0.02**
Ln (firm's age)	0.012	0.49	0.027	0.19	0.032	0.86
Firm's size	0.011	0.17	0.027	0.26	0.029	0.04**
Leverage	−0.019	0.36	−0.017	0.28	−0.038	0.18
Growth opportunity	0.026	0.51	0.019	0.06*	0.396	0.04**
Adjusted R^2	0.27		0.31		0.32	
DW statistic	1.83		1.82		1.95	
p-Value (F-statistic)	0.032		0.026		0.016	

Source: The authors.

Note: *$p < 0.1$; **$p < 0.05$; and ***$p < 0.01$.

In order to confirm the above findings, the study ran another set of regression with all the 3, 671 dividend announcements after categorizing the companies as small-cap, mid-cap and large-cap as per the BSE classification. Companies with MCAP of up to INR 20,000 million at the time of dividend announcements are categorized as small-cap firms. Companies with MCAP between INR 20,000 million and INR 100,000 million are mid-cap companies, and companies with MCAP exceeding INR 100,000 million are large-cap companies. The regression results are presented in Table 6.

Table 6 exhibits that DPR, PROF and growth opportunity positively influence the announcement day AARs of mid-cap and small-cap firms. The PROMSH is negatively associated with announcement day AAR. The findings are, by and large, similar for large-cap firms as well. Interestingly, the announcement day AAR is negatively impacted by firms' leverage for small-cap firms, implying that small-cap firms with a lesser degree of LEV gain more from cash dividend announcements. In other words, the market does not encourage dividend distribution by smaller firms with high LEV. For all three categories of firms, PROMSH is negatively associated with announcement day AAR, signifying that firms with higher PROMSH gain less from dividend announcements.

Looking at the post-5 days' AARs, the results are almost identical. The DPR, PROF and growth opportunity positively influence the AARs of mid-cap and small-cap firms. The PROMSH continues to influence AARs negatively. Here too, LEV has a negative impact on AAR for small-cap firms only. For large-cap firms, the results are almost similar here. DPR, PROF and growth opportunity continue to impact the post-5 days' AAR positively. Additionally, for large-cap firms, MCAP has positively influenced the post-5 days' AAR, indicating that more substantial firms in terms of the market valuation of equity, gain more than smaller firms after the dividend announcement. The AGE does not show any impact on AAR for any categories of firms under both the announcement day AAR and post-5 days' AAR measure. These results are in tune with our expectations regarding the factors that drive abnormal returns in and around the cash dividend announcements.

Table 6. Regression Results for All Firms (3,671 announcements).

	Ann Day AAR		Post-5 Days' AAR	
	Coeff.	p-Value	Coeff.	p-Value
Panel I: Large-cap firms				
Constant	0.091	0.01***	0.083	0.00***
DPR	0.011	0.03**	0.025	0.02**
Promoter share	−0.014	0.04**	−0.018	0.03**
Ln (market cap)	0.002	0.28	0.004	0.04**
Profitability	0.056	0.08*	0.182	0.07*
Ln (firm age)	0.038	0.17	0.027	0.18
Firm size	0.038	0.64	0.196	0.29
Leverage	−0.001	0.32	−0.009	0.19
Growth opportunities	0.026	0.04**	0.028	0.03**
Adjusted R^2	0.281		0.326	
DW statistic	1.88		1.89	
p-Value (F-statistic)	0.025		0.034	
Panel II: Mid-cap firms				
Constant	0.024	0.02**	0.0429	0.00**
DPR	0.011	0.03**	0.018	0.01***
Promoter share	−0.001	0.08*	−0.011	0.02**
Ln (market cap)	0.0015	0.46	0.0012	0.37
Profitability	0.004	0.04**	0.016	0.03**
Ln (firm age)	0.002	0.17	0.009	0.26
Firm size	0.009	0.18	0.008	0.42
Leverage	−0.018	0.48	−0.004	0.38
Growth opportunities	0.005	0.02**		0.02**
Adjusted R^2	0.353		0.347	
DW statistic	1.92		1.83	
p-Value (F-statistic)	0.016		0.018	
Panel III: Small-cap firms				
Constant	0.029	0.04**	0.026	0.01***
DPR	0.011	0.03**	0.009	0.02**
Promoter share	−0.017	0.02**	−0.024	0.02**
Ln (market cap)	0.001	0.27	0.003	0.36
Profitability	0.002	0.03**	0.009	0.02
Ln (firm age)	0.006	0.29	0.003	0.35
Firm size	0.004	0.56	0.018	0.29
Leverage	−0.012	0.04**	−0.008	0.04
Growth opportunities	0.002	0.02**	0.006	0.04
Adjusted R^2	0.372		0.384	
DW statistic	1.88		1.91	
p-Value (F-statistic)	0.001		0.001	

Source: The authors.

Note: *$p < 0.1$; **$p < 0.05$; and ***$p < 0.01$.

Conclusion and Managerial Implications

This article examines the impact of cash dividend announcements on stock returns in an emerging economy, India. By using the 'event study' methodology, we tried to examine whether the cash dividend announcements generate any additional return in the Indian equity market. Several important insights are generated from this study. The article provides an opportunity to empirically test the validity and applicability of different dividend theories in the context of a large emerging economy. The article contributes to the literature not only by looking at a large number of dividend announcements as a corporate practice, but also by examining the additional returns on each announcement and finding out the factors that might be responsible for determining the average additional returns.

The results are quite compelling and activate many questions, which may be explored further. First, Indian companies, on average, experience improvement in stock returns immediately after the dividend announcement, but this positive impact remains active in the market for a very short spell. After that, stock prices normalize in the market after absorbing this information. Thus, *The Information Signalling hypothesis* is somewhat evident here, but for a short period only. Second, about 75% of firms did not experience any impact, while 19% of firms gained, and about 6% of firms lost after the dividend announcement. Here, investors prefer capital gains over cash dividends because of distinct tax disadvantages associated with dividend income. This finding supports *The Dividend Clientele Hypothesis,* as a majority shareholders of Indian firms (i.e., promoters) prefer capital gains over dividends.

Third, firms with higher PROMSH, gain less on dividend announcements. In Indian companies, promoters and institutional shareholders hold majority equity, leaving a small portion for non-promoter and non-institutional shareholders (as evident in Annexure 1). Interestingly, promoters and institutional shareholders do not trade actively in response to corporate announcements like dividend. They primarily focus on capital gains and control over the companies with a long-term perspective than just dividend income. Mostly non-promoter and non-institutional shareholders trade actively in the market. This finding is contradictory to the findings of Allen et al. (2000), Chen et al. (2009) and Guay and Harford (2000), which focussed on developed economies characterized by widespread equity ownership. Like other emerging economies, the Indian stock market is often characterized by relatively thin trading, because of concentrated ownership structures with high PROMSH. This ownership pattern can be a crucial reason supporting the findings of this study.

Managers can get the idea that dividend announcements do not necessarily boost stock prices in the Indian market. Hence, dividend payments by companies do not influence investors' decisions on investment in shares. Instead, dividend payment should be considered independently as a mechanism of corporate pay-out policy. The results may help investment managers, investors and regulators understand the behaviour of the Indian equity market with respect to dividend announcements. It is important to explain that the pandemic crisis period during which the Indian equity market sharply declined and thereafter rapidly moved upward within a short span of time, is not considered in this analysis, as there are several confounding events during this period. Due to those confounding events, the impact of the main corporate event (i.e., dividend announcments) on stock returns will not be captured properly. However, it is also important to note that these findings have deep linkage with various corporate dividend theories as explained above, and these findings are valid in the post-pandemic crisis period as well when the equity market came into normalcy.

Limitations and Future scope of Research

The present study has analysed the stock price behaviour of Indian firms around all cash dividend announcements. We have not classified the dividend announcements into dividend cuts as well as dividend increases. It would be interesting to empirically examine whether stock prices of Indian firms behave differently to dividend cut announcements vis a vis dividend increase announcements using the approach followed in this study.

Annexure 1. Ownership Pattern of Sample Firms, 1 April 2011 to 31 March 2019.

Financial Year	Prom (%)	Non-prom Inst (%)	Prom + Non-prom Inst (%)	Non-prom non-Inst (%)	Total (%)
2011–2012	53.52	18.59	72.11	27.89	100
2012–2013	53.66	18.59	71.95	28.05	100
2013–2014	54.01	17.52	71.53	28.47	100
2014–2015	53.34	17.97	71.31	28.69	100
2015–2016	53.31	17.30	70.61	29.39	100
2016–2017	53.62	18.34	71.96	28.04	100
2017–2018	53.40	18.96	72.36	27.64	100
2018–2019	52.97	19.82	72.79	27.21	100
Average	53.48	18.35	71.83	28.17	100

Source: The authors.

Notes

1. The CDT is abolished from the FY 2020–2021. So it was in existence during the study period of this article.
2. From the financial year 2018–2019, short term capital gains attract 15% tax, and long-term gains attract 10% tax when the net gain exceeds ₹0.10 million. Long-term capital gain was tax-free during the study period, except the FY 2018–2019.
3. The Bombay Stock Exchange (BSE), established in 1875, is the first-ever stock exchange of Asia and also the first listed stock exchange of India. Being the fastest stock exchange in the world with a speed of 6 microseconds, its equity index, BSE 500, is designed as a broad representation of the Indian market. It includes 500 stocks of companies spread across major industries in the Indian economy.

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Exploring the dynamic linkage between gold price, exchange rate and stock market indices: Evidence from an Emerging Economy, India

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Abstract:

This paper examines the dynamic linkage between gold price, exchange rates and stock market indices in an emerging market context, India. Consumption of gold is mostly common in household sector of India. Moreover, it can also be contemplated as an alternative investment route mainly to safeguard against financial risk obligations. The study considers 232 monthly observations of each of these variables from 1st January 2000 to 30th April 2019. Using Johansen Co-integration, we find a long run co-integration among gold price, exchange rate and stock market indices. The Vector Error Correction Model (VECM) shows the unilateral causality from stock market index and exchange rates to gold prices. Pairwise Granger causality exhibited bidirectional causality between exchange rate and gold prices. Our findings have important implications for financial market analysts, investors, regulators and policy makers in understanding the role of monthly stock price movement and exchange rates on gold prices in India.

Key Words: Gold Price, Nifty, Johansen co-integration, Vector Error Correction Model (VECM), Granger causality, India

Introduction

Indian financial and commodity markets had experienced a volatile situation in the recent past in terms of crude oil prices, gold prices, stock market index etc. followed by continuous fall in the value of rupee against dollars. Various rules and regulations were stipulated to govern the overall activities of stock market as; it usually gets affected by various domestic and other factors such as rise in gold and crude oil prices (Phoong, Ismail and Sek, 2013).

While forming a portfolio, gold is considered as one of the most valuable element (Bilal, Talib, Haq, Khan and Naveed, 2013). Gold is usually treated as an investment especially for regular investors. If the economy of a country is improving, it means demand for gold is also increasing. Official gold reserves maintained by central bank of a country helps to protect against financial risk obligations.

Gold can also be used to hedge against inflation risk mainly, for an import-dependent country like India. Another most important factor that affects gold price is the real interest rates, which is the opportunity cost of holding gold after deducting inflation. If real interest rates are low, people will be more willing to invest in gold. In 2008 financial crisis, the economic scenarios of US and the debt market in European countries suffered a lot which in turn, causes a hike in prices of gold unrestrictedly.

Factors considered in this study and reciprocity between them:

Gold Price and Exchange Rate:

There exist an inverse relationship between gold price and exchange rates. Prices of gold are usually determined by US dollar fluctuations. With the decrease in US dollar, people of other countries of different currencies start investing in gold (as gold is priced in US dollar) and vice-versa.

Gold Price and Stock Market Indices:

Gold price has the most significant impact on stock market indices both in long - run as well as in short - run. Gold is considered as a very good and a traditional substitute of stock because of its availability and a hedging tool against inflation. An increase in the gold price might instigate investors to withdraw their money from stock market which leads to a decrease in stock index.

Exchange Rate and Stock Market:

Volatility in stock market may cause problems with regard to foreign investment especially in small developing economies. With the increase in international competitiveness, export gets increased thus; exchange rates can have a positive impact on stock prices. But volatile exchange rates make international trade and investment decisions more difficult hence, leads to a greater exchange rate risk. Inflation trends, factors affecting industry and various other sectors and depreciation in exchange rates may have a significant impact on stock prices and volatility.

Although there are studies on the relationship between gold prices, oil prices, stock market indices and USD rate both on global and Indian economy but, very few studies have tried to explore the relationship between gold prices, stock market indices and USD rate specially, where a greater part of gold demand is met through imports in a developing (or emerging) economy like India which further affects USD rate. Moreover, many researchers have used autoregressive methods, moving average methods, mixed autoregressive moving average methods to study this relationship. But using these models or methods is sometimes not suitable to estimate accurately financial or economic data due to various non-linear properties such as asymmetry, volatility, clustering etc. In this backdrop, the article empirically examines a long or short- run relationship between gold prices, stock market indices of BSE 500, S&P CNX NIFTY (NSE) and USD/INR exchange rate. The findings of the study will be helpful for financial market analysts as well as investors to better understand as to how stock market indices and exchange rates influence gold prices in Indian perspective.

The paper is designed as follows. Second section outlines the literature review, third section highlights data and methodology, forth section explains research analysis and empirical results and finally, fifth section concludes the paper.

LITERATURE REVIEW

Gold is one of the precious metals from ancient times. People who invest in stock markets use gold as prime collaterals in case of unfavorable market conditions.

Gold Price vs Stock Index

Dirk and Baur (2010) examined that, gold is considered to be a haven in case of any turbulence in the financial market. When the stock market condition deteriorates, then the investors try to come out of risky assets such as shares, debentures, and invest in gold (Narang and Singh, 2012).

Many studies have been conducted in Asian countries to study the impact of gold prices on stock prices by taking weekly or monthly data. Johansen's multivariate co-integration test and Vector Error Correction Model (VECM) are usually used to determine Causality. The Indian stock market is influenced mainly by domestic macroeconomic factors and less by global factors, especially in the long run (Srivastava, 2010). Shahzadi and Chohan (2012) studied the relationship between gold prices and the index of the Karachi Stock Exchange over five years from 2005 to 2010. The result showed that, there is a negative and long-term relationship between the two. Sindhu (2013) reported interdependence between gold prices and the inflation rate and also showed that, there is an inverse relationship between gold prices and USD. Horng and Huang (2013) studied the bi-variate asymmetric IGARCH

to understand the impact of the gold market on the financial market. The result showed that, if any positive change happens in the gold market, it makes a significant impact on the risk and return of both Thailand and Malaysian markets. Sreekanth and Veni (2014) focused on various econometric tools that have been considered to study the causal relationship between gold prices and stock index for 9 years from 2005-2013. The study revealed that gold prices are explaining both the long and short-run movements of S&P CNX Nifty.

Stock Index vs other macro economic variables

Saxena and Bhadauriya (2012) focused on the causal relationship between international crude oil prices and various other macro-economic variables. The study revealed that balance of payment (BOP) and foreign exchange reserves are having a significant impact on international crude oil prices but, none of the macroeconomic variables are making any significant impact on crude oil prices. Tripathy and Seth (2014) had taken various macroeconomic variables such as inflation, interest rate, exchange rate etc and many market performance indicators such as sensex, market capitalization and market turnover and tried to find out a causal relationship between stock market performance and other macro-economic variables from July 1997 to June 2011 by using monthly data. The study revealed that, the stock price movement not only affected by the actions of macroeconomic variables, but some of the macroeconomic variables

also get affected by the movement of stock prices. Tomar and Singh (2016) studied bidirectional causality for the stock market and exchange rate and gold prices and crude oil. Ingalhalli, B.G., and Reddy (2016) tried to find a causal relationship between oil, gold, stock prices, and exchange rate. Granger causality results showed that, oil prices make a positive impact on gold prices and exchange rates. On the other hand, the exchange rate is affected by changes in oil prices and the stock price index. Singh and Sharma (2018) analyzed co-integration and causality between crude oil prices and other macroeconomic variables across the global financial crisis of 2008. The authors concluded that, the co-integration and causality relationship is dynamic, and the global financial crisis of 2008 made an effect on this relationship.

DATA AND METHODOLOGY

The stock market in India is mainly represented by National Stock Exchange of India Ltd. (NSE Ltd.) and Bombay Stock Exchange Ltd. (BSE Ltd.). The NSE Ltd. is formed in 1992 and at present, is the largest stock exchange in India. The data set in the present study relate to BSE and NSE Ltd and represents, the monthly closing prices of BSE 500[1] and S&P CNX NIFTY[2] indices. Gold prices are procured from World Gold

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[1] = S&P BSE 500 index is designed to be a broad representation of the Indian market. It consists of top 500 companies listed at BSE Ltd.

[2] = The Standard and Poor's CNX Nifty stock index is composed of 50 of the largest and most liquid stock found on the National Stock Exchange of India.

Council. The USD/INR exchange rates are procured from www.oanda.com. The gold price data are converted into Indian currency per troy ounce. The sample consists of 232 monthly observations of each of the variables, ranging from 1ˢᵗ January, 2000 to 30ᵗʰ April, 2019.

We have done natural logarithms of data to obtain their growth figures and to examine the economic relationship among gold prices, BSE 500, S&P CNX NIFTY and USD/INR exchange rate. Augmented Dickey-Fuller (ADF) and Phillips-Peron (PP) test is conducted to eliminate the unit root from the dataset. Johansen co-integration model is also used to verify the number of co-integrating relationships among dependent and independent variables. VECM and WALD's coefficient test is done to make a proper estimation of long run and short run causality among the variables. Problem of serial correlation and heteroskedasticity are taken care of by conducting Breusch-Godfrey Serial Correlation LM Test and Breusch-Pagan-Godfrey test of heteroskedasticity. Pairwise Granger causality test is also exhibited to determine causality relationship among the variables.

RESEARCH ANALYSIS AND EMPIRICAL RESULTS

Unit Root Test Results

The most important thing in time-series analysis is to make the data free from unit root or random walk, which means that the mean, variance and covariance remain constant over time for all t. The testing procedure of ADF test has been prescribed by Elliot, Rothenberg and Stock (1996) where, t is the time or trend variable, change in Y_{t-1} is the lagged difference terms and null hypothesis is $\delta = 0$. The actual reason for inclusion of lagged difference terms is to find out that error terms are serially independent (Dickey and Fuller, 1981).

$$\Delta Y_t = \beta_1 + \beta_2 + \delta Y_{t-1} + \alpha i \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t$$

...(1)

The ADF or unit root test has been conducted for intercept (constant) and trend and intercept (time trend) at level and first difference to convert the data into stationary.

Table 1 show the trending behaviour of the data which varies according to different situations and economic theories.

Table 1: Different situations in Augmented Dickey-Fuller unit root test based on Constant and Time Trend

Situations	Possibilities under Null Hypothesis (H$_0$)	Equation
1	Pure Random Walk	$Y_t = Y_{t-1} + \varepsilon_t$
2	Random Walk with drift	$Y_t = \alpha + Y_{t-1} + \varepsilon_t$
3	Deterministic Trend	$Y_t = \alpha + \beta_t + \varepsilon_t$
4	Random Walk with drift and deterministic trend	$Y_t = \alpha + Y_{t-1} + \beta_t + \varepsilon_t$

Situation 1: Y_t is the value at time t, Y_{t-1} is the last period value and ε_t is a stochastic component which is independent and identically distributed with mean and variance.

Situation 2: A constant or drift (α) is added here.

Situation 3: The value at time t is regressed on a time trend β_t.

Situation 4: This situation depicts an increasing time trend. It shows that value at time t is regressed on a drift (α), last period's value (Y_{t-1}), a trend (β_t) and a stochastic component (ε_t).

Phillips-Perron (PP) test which is a non-parametric correction is also conducted to verify that time-series is integrated of order 1. The PP test can be robust with unspecified autocorrelation and heteroskedasticity in the entire process of test equation (Phillips and Perron, 1988).

The hypotheses are constructed as follows:

Intercept & Trend and Intercept (At Level)

H_0: Gold Price has unit root ($\alpha = 0$).

H_A: Gold Price does not have unit root ($\alpha < 0$).

Table 2 and 3 show that null hypothesis cannot be rejected. The values of test statistic are also lower than critical values at 1%, 5% and 10% level of significance which depicts that, data is not stationary both at intercept (constant) and trend and intercept (time trend) at level. Therefore, we can conclude that, our dependent variable i.e., gold price has unit root.

Table 2: Stationary test for unit root (Intercept at Level); H_0: Data has a unit root

Level Data	Test Critical Values				
ADF test statistic	t-Statistic	1%	5%	10%	Prob.
Gold Price	-0.2118	-3.4584	-2.8738	-2.5733	0.9827
BSE 500	-0.5839	-3.4584	-2.8738	-2.5733	0.8869
S&P CNX Nifty	-0.5745	-3.4584	-2.8738	-2.5733	0.8796
USD/INR Exchange Rate	-1.4176	-3.4584	-2.8738	-2.5733	0.6577
Level Data	Test Critical Values				
PP test statistic	t-Statistic	1%	5%	10%	Prob.
Gold Price	0.0864	-3.4584	-2.8738	-2.5733	0.9637
BSE 500	-0.1343	-3.4584	-2.8738	-2.5733	0.9341
S&P CNX Nifty	-0.3411	-3.4584	-2.8738	-2.5733	0.9245
USD/INR Exchange Rate	-0.9642	-3.4584	-2.8738	-2.5733	0.8488

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

Table 3: Stationary test for unit root (Trend and Intercept at Level); H_0: Data has a unit root

Level Data	Test Critical Values				
ADF test statistic	t-Statistic	1%	5%	10%	Prob.
Gold Price	-0.3321	-4.5526	-3.7837	-3.3173	0.9943
BSE 500	-0.4439	-4.5526	-3.7837	-3.3173	0.8732
S&P CNX Nifty	-0.5342	-4.5526	-3.7837	-3.3173	0.9291
USD/INR Exchange Rate	-1.3976	-4.5526	-3.7837	-3.3173	0.7873
Level Data	Test Critical Values				
ADF test statistic	t-Statistic	1%	5%	10%	Prob.
Gold Price	0.1155	-4.5526	-3.7837	-3.3173	0.9422
BSE 500	-0.1448	-4.5526	-3.7837	-3.3173	0.8344
S&P CNX Nifty	-0.3815	-4.5526	-3.7837	-3.3173	0.9122
USD/INR Exchange Rate	-0.9758	-4.5526	-3.7837	-3.3173	0.8677

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

The model fit summary is given in table 4, specifying therein the coefficient of determinants (R^2) and adjusted coefficient of determinants (adjusted R^2) for Intercept and Trend and Intercept. Moreover, associated prob (F-statistic), Akaike Info criterion, Schwarz criterion and Hannan-Quinn criterion are also considered to give an overview of model fit summary. The model fit summary shows that, the R^2 and adjusted R^2 result is very much dissatisfactory and the probability value of F-statistic is not significant at 1% level hence, we can conclude that, the null hypothesis will be accepted which means Gold Price (dependent variable) has unit root and the data is not stationary in nature.

Table 4: Model fit summary

Particulars	Summary for	
	Intercept	Trend and Intercept
R-squared	0.1286	0.4145
Adjusted R-Squared	0.1303	0.3231
Log Likelihood	-20.9651	-16.9313
F-statistic	3.4912	3.1744
Prob(F-statistic)	0.1724	0.1446
Akaike Info Criterion	2.0899	2.5216
Schwarz criterion	2.1443	2.1342
Hannan-Quinn Criterion	2.1172	2.0448

Source: Authors own findings

Intercept & Trend and Intercept (At First Difference)

First differencing of the gold price both for intercept (constant) and trend and intercept (time trend) is done to eliminate the unit root.

The hypotheses are constructed as follows:

H_0: Gold Price has unit root ($\alpha = 0$).

H_A: Gold Price does not have unit root ($\alpha < 0$).

Table 5 and 6 shows that, the values of test statistic are higher than the critical values at 1%, 5% and 10% level of significance which depicts that, data is stationary both at intercept (constant) and trend and intercept (time trend) at first difference. Therefore, we can conclude that, our dependent variable i.e., gold price does not have unit root.

Table 5: Stationary test for unit root (Intercept at First Difference)

H_0: Data has a unit root

First Differenced Data	Test Critical Values				
ADF test statistic	t-Statistic	1%	5%	10%	Prob.
Gold Price	16.4397	-3.4585	-3.0299	-2.6551	0
BSE 500	13.4255	-3.4585	-3.0299	-2.6551	0
S&P CNX Nifty	12.5944	-3.4585	-3.0299	-2.6551	0
USD/INR Exchange Rate	10.2342	-3.4585	-3.0299	-2.6551	0

First Differenced Data	Test Critical Values				
ADF test statistic	t-Statistic	1%	5%	10%	Prob.
Gold Price	16.4942	-3.4585	-3.0299	-2.6551	0
BSE 500	13.7128	-3.4585	-3.0299	-2.6551	0
S&P CNX Nifty	13.8632	-3.4585	-3.0299	-2.6551	0
USD/INR Exchange Rate	10.5829	-3.4585	-3.0299	-2.6551	0

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

Table 6: Stationary test for unit root (Trend and Intercept at Level)

H_0: Data has a unit root

First Differenced Data	Test Critical Values				
ADF test statistic	t-statistic	1%	5%	10%	Prob.
Gold Price	16.2461	-4.9983	-3.4293	-3.1381	0
BSE 500	14.2178	-4.9983	-3.4293	-3.1381	0
S&P CNX Nifty	13.4369	-4.9983	-3.4293	-3.1381	0
USD/INR Exchange Rate	10.3874	-4.9983	-3.4293	-3.1381	0
First Differenced Data	Test Critical Values				
ADF test statistic	t-statistic	1%	5%	10%	Prob.
Gold Price	16.3855	-4.9983	-3.4293	-3.1381	0
BSE 500	14.0923	-4.9983	-3.4293	-3.1381	0
S&P CNX Nifty	13.0481	-4.9983	-3.4293	-3.1381	0
USD/INR Exchange Rate	10.5827	-4.9983	-3.4293	-3.1381	0

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

Table 7 shows that, R^2 and adjusted R^2 of Intercept (Constant) and Trend and Intercept (Time Trend) are above 60% which is quite satisfactory. The result also shows that, the p-value of F-statistic is significant at 1% level. Therefore, we can accept the alternative hypothesis which highlights the fact that, gold price is stationary in nature, which means the mean and variance will remain constant overtime at first difference.

Table 7: Model Fit Summary at First Difference

	Summary for	
Particulars	**Intercept**	**Trend and Intercept**
R-squared	0.7559	0.7328
Adjusted R-Squared	0.6786	0.6955
Log Likelihood	-18.1412	-18.0643
F-statistic	20.5293	20.7431
Prob(F-statistic)	0	0
Akaike Info Criterion	2.4417	2.3244
Schwarz criterion	2.4021	2.3911
Hannan-Quinn Criterion	2.2622	2.3532

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

Determination of Lag Order Intervals

We have checked the lag selection process before moving on to long run co-integration. Based on vector auto regression (VAR) and lag selection criteria, we have selected lags of 3 order intervals. The lags are selected on the basis of LR test, SIC and Hannan-Quinn information criteria.

Table 8: Determination of Lag Order Intervals

Lag	LL	LR	FPE	AIC	SIC	HQ
0	-4126.384	NA	3.277e+20	61.455	61.297	61.322
1	-4021.692	2371.562	3.198e+14	45.128	46.098	45.056
2	-3987.543	878.784	3.122e+14	44.241	44.331	43.087
3	-3841.422	49.876**	2.988e+14	44.441	44.409**	43.139**
4	-3754.401	45.611	2.723e+14	44.522	44.558	43.568

Notes: * represents lag order intervals selected by the information criteria

LR: Sequential modified LR test statistic (at 5 percent level of significance); LL: Log Likelihood; FPE: Final Prediction Error; AIC: Akaike Information Criterion; SIC: Schwarz Information Criterion; HQ: Hannan-Quinn Information Criterion.

Source: Authors own Findings

Once we have determined the number of lags, next step will begin with testing the co-integration amongst the variables.

Johansen Co-integration Test Results

Johansen Co-integration test is usually used to assess the existence of long run co-integration among the variables, Johansen and Juselius (1992) and Johansen and Juselius (1994). In Johansen Co-integration test, the eigen values are arranged in a descending order which is shown below:

$$\lambda_1 \geq \lambda_2 \geq \lambda_3 \geq \lambda_4 ..... \geq \lambda n \qquad ....(2)$$

The test statistic depicts that, λ_{max} test usually examines the null hypothesis against the alternative hypothesis and the co-integration rank equal to r against the co-integration rank which is equal to r +

1 (Johansen, 2000). The equation is given below:

$$\lambda_{max}(r, r+1) = - T \ In \ (1 - \lambda_{r+1}) \qquad ....(3)$$

In the equation above, λ is the eigen value. The test is repeated for r = 1............k until one fails to reject the null hypothesis.

The λ_{trace} test examines the null hypothesis against the alternative hypothesis that, the co-integration rank is equal to r against the co-integration rank which is equal to k or greater than r. The equation is given below:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{k} I_n(1 - \lambda_i)$$

$$.....(4)$$

In the equation above, r = k, k-1, k-2, ..., 0 and λ_i is the estimated value for the ith ordered eigen value from the $\prod$ matrix.

Therefore, the entire econometric equation of Johansen Co-integration Test is given below:

$$X_t = \mu + \varphi D_t + \prod_p X_{t-p} + ... + \prod_1 X_{t-1} + e_t$$

..........(5)

Where, t = 1.......T ;

X_t = the function of X_0 to X_k ;

D_t = Deterministic dummies, which may have a constant, a linear term or seasonal dummies (Johansen, 2000).

The number of lags or lag intervals included in the hypothesis is (1 3) which depicts the proportion of dependent and independent variables explained by the lag interval and also determines a long run relationship in the multivariate model.

H_0: There exist co-integrating relationships between dependent and independent variables.

H_A: There exist no co-integrating relationships between dependent and independent variables.

Table 9 shows that, the trace statistics at r = 1 and 3 are 29.78095 and 5.2104 are more than the critical values of 29.39707 and 3.8414 and are also significant at 5% and 10% level whereas, the trace statistics at r = 2 of 10.44704 is less than the critical value of 15.49471. The result depicts that, the null hypothesis of co-integrating equations at r = 1 and 3 is rejected and at r = 2 is accepted. Therefore, it can be concluded that, there are at most two co-integrating equations between dependent and independent variables that affects gold price.

Table 9: Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Trace Statistic	Critical Value	Sig.Value (Prob.)
At most 1*	29.7809	29.397	0.0848***
At most 2	10.447	15.4947	0.2479
At most 3*	5.2104	3.8414	0.0249**

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

We have also conducted maximum eigen value test statistics to determine the co-integrating relationships between dependent and independent variables. Table 10 depicts that, the max-eigen statistic at r = 1 and 3 are 23.93391 and 5.2104 is more than the critical values of 21.2426 and 3.6324 respectively and at r = 2, max-eigen statistic is 10.44694 which is less than the critical value of 14.2646 and at the same time not statistically significant. The probability values at r = 1 and 3 is significant at 10% and 5% level. This result shows a rejection of null hypothesis at r = 1 and 3 and acceptance of null hypothesis at r = 2, which means there are at most two co-integrating relationships between dependent and independent variables. Hence, it can be concluded that, there is a long run relationship between gold prices, BSE 500, S&P CNX NIFTY and USD/INR exchange rate at most level 2.

Table 10: Unrestricted Co-integration Rank Test (Maximum Eigen value)

Hypothesized No. of CE(s)	Eigen Value	Max-Eigen Statistic	Critical Value	Sig.Value (Prob.)
At most 1*	0.6057	23.9339	21.2426	0.0705***
At most 2	0.4576	10.4469	14.2646	0.1842
At most 3*	0.3439	5.2104	3.6324	0.0249**

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own findings

Vector Error Correction Model

In this study, we have used Vector Error Correction Model to examine the relationship between gold prices, S&P CNX NIFTY, BSE 500 and USD/INR exchange rate. If two variables are co-integrated then, the relationship between such two variables can be defined as Error Correction Model i.e., ECM (Gujrati, 2005). Therefore, VECM model incorporates error correction features to a multi factor model such as VAR. The VECM equation can be written as follows:

$$\Delta X_t = \mu + \varphi D_t + \prod X_{t-p} + \prod_{p-1} \Delta X_{t-p+1....} + ... + \prod_1 \Delta X_{t-1} + e_t$$

$$..........(6)$$

Where, t = 1....................T

Table 11: Results of Vector Error Correction Estimates

Independent Variables	Gold Price (DLOGGP)
DLOGGP (-1)	1.000000
DLOGS&P CNX NIFTY (-1)	0.000000
DLOG BSE500 (-1)	– 0.2742
	(0.0833)
	[-3.2917]
DLOGEXC (-1)	-0.8336
	(0.2749)
	[-3.0323]
C	-0.0062
Error Correction	D(DLOGGP)
Standard Errors () and t-statistic []	
Co-integration Equation 1	-0.8579**
	(0.0653)
	[-13.1378]
DLOGGP (-1))	-0.0648
	(0.0696)
	[-0.9310]
DLOGGP (-2))	-0.0833
	(0.0709)
	[-1.1748]
DLOGGP (-3))	-0.0484
	(0.0716)
	[-0.6759]
DLOGS&P CNX NIFTY (-1))	-0.8946**
	(0.0634)
	[-14.1104]
DLOGS&P CNX NIFTY (-2))	-0.4083**
	(0.0296)
	[-13.7939]

DLOGS&P CNX NIFTY (-3))	1.1648
	(0.2143)
	[5.4353]
DLOG BSE500 (-1))	0.5986
	(1.6199)
	[0.3695]
DLOG BSE500 (-2))	2.4754**
	(0.1629)
	[-15.1958]
DLOG BSE500 (-3))	-0.4726
	(1.5821)
	[-0.2987]
DLOGEXC (-1))	-0.6519**
	(0.0477)
	[-13.6667]
DLOGEXC (-2))	-0.1844
	(0.1529)
	[-1.2060]
DLOGEXC (-3))	-0.1937
	(0.1462)
	[-1.3248]
C	-0.0005
	(0.0023)
	-0.2173
R-squared	0.5221
Adj. R-squared	0.4778
F-statistic	18.1200
Akaike AIC	-3.4785
Schwarz SC	-3.3734

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

() signifies co-efficient; [] signifies standard error

Source: Authors own Findings

We have applied three lags in VECM. Table 11 demonstrates that, CNX Nifty shows a unilateral causality and also has negative and significant impact on gold prices at 5% level of significance at both first and second order lag intervals. However, BSE 500 has unilateral causality towards gold prices only at second order lag intervals at 5% level of significance. In case of USD/INR exchange rate, it is integrated at first order lag period at 5% level of significance. The adj R^2 value is 0.4778, which explains that there is a variation of 48 percent in this study. Moreover, R^2 is 0.5221, which is not so high that means, the model is explaining 52% of the variability of the response data around its mean. However, the causality in

VECM is further verified by using ordinary least square (OLS) method of regression.

Ordinary Least Square Regression

Dependent Variable: D(DLOGGP)

$D\ (DLOGGP)\ =\ C(1)\ *\ (DLOGGP(-1)$ $-0.2742*DLOGBSE500\qquad(-1)\qquad-$ $0.8336*DLOGEXC(-1)\qquad-0.0062)\qquad+$ $C(2)*DLOGGP(-2)\ +\ C(3)*DLOGGP(-3)$ $+\ C(4)*DLOG\ S\&P\ CNXNIFTY\ (-1)\ +$ $C(5)*DLOG\ S\&P\ CNXNIFTY\ (-2)\ +$ $C(6)*DLOG\ S\&P\ CNXNIFTY\ (-3)\ +$ $C(7)*DLOG\ BSE500\ (-1)\ +C(8)*\ DLOG$ $BSE500\ (-2)\ +\ C(9)*\ DLOG\ BSE500\ (-3)\ +$ $C(10)*DLOGEXC(-1)+C(11)*DLOGEXC$ $(-2)\ +C(12)*\ DLOGEXC\ (-3)\ +\ C(13)$

……… (7)

Table 12: Results of Ordinary Least Square Regression

	Co-efficient	Standard error	t-statistic	Prob.
C(1)	-0.8579	0.0653	-13.1378	0.043**
C(2)	-0.0648	0.0696	-0.9310	0.4653
C(3)	-0.0833	0.0709	-1.1748	0.1438
C(4)	-0.0484	0.0716	-0.6759	0.6563
C(5)	-0.8946	0.0634	-14.1104	0.027**
C(6)	-0.4083	0.0296	-13.7939	0.030**
C(7)	-1.1648	0.2143	-5.4353	0.5231
C(8)	-0.5986	1.6199	-0.3695	0.113
C(9)	-2.4754	0.1629	-15.1958	0.022**
C(10)	-0.4726	1.5821	-0.2987	0.139
C(11)	-0.6519	0.0477	-13.6667	0.034**
C(12)	-0.1844	0.1529	-1.2083	0.114
C(13)	-0.1937	0.1462	-1.3248	0.219

R-squared	0.5221		Durbin-Watson stat	2.0245
Adj. R-squared	0.4778		S.E of regression	0.0388
F-statistic	18.1200		Sum squared resid	0.2846
Akaike AIC	-3.4785		Log-likelihood	342.4110
Schwarz SC	-3.3734		Mean dependent var	-0.0002
			S.D. dependent var	0.0544

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own Findings

Table 12 shows that, C(1) depicts the long run association ship among the co-integrating vectors and it is the co-efficient of co-integrating equation which is an error correction term. In the study, the value of C(1) is -0.8579 which is negative and statistically significant at 5% level. Therefore, we may conclude that, there is long run causality having a speed of adjustment with 85.79 percent that flows from CNX Nifty, BSE 500 and USD/INR exchange rates towards gold prices in India. The F-statistic represents existence of long run causality between CNX Nifty, BSE 500, USD/INR exchange rates towards gold prices in India and measures the overall significance of the model.

Moreover, C(2) shows a long run impact of CNX Nifty, BSE 500, USD/INR exchange rate on gold prices for various series (Dutta and Chatterjee, 2019).

Wald Test

Wald test is a F-test that measures the significance of all the independent variables used in the study that is, log BSE 500, log S&P CNX NIFTY and log USD/INR exchange rate. The wald test depicts the

following hypotheses:

$$H_0 = \beta_{BSE\ 500} = \beta_{s\&p\ cnx\ nifty} = \beta_{exc} = 0$$

$$H_A = \text{At least some are non-zero}$$

Null hypothesis states that, all independent variables are equal to zero which means, there is no short run causality flows from DlogS&PCNXNifty, DlogBSE500, DlogExchangeRate towards gold prices in India.

Wald's Co-efficient Test

Wald Test: C(5) = C(6) = C(7) = C(8) = C(9) = C(10) = C(11) = C(12) = C(13) = 0

Table 13: Results of Wald Test

Test Statistic	Value	Probability
F-statistic	5.956123	0.0000*
Chi-square	36.63720	0.0000*
Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).		
** implies that values are significant at 5 per cent level (critical value: 1.96).		
*** implies that values are significant at 10 per cent level (critical value: 1.65).		

Source: Authors own Findings

Table 13 shows that, the value of Chi-square is 36.63720 with a probability of 0.000 which means there is an acceptance of alternative hypothesis and rejection of null hypothesis.

Table 14: Null Hypothesis Summary

Normalized Restriction	Value	Std. Error
C(5)	-0.8946	0.0634**
C(6)	-0.4083	0.0296**
C(7)	-1.1648	0.2143
C(8)	-0.5986	1.6199
C(9)	-2.4754	0.1629**
C(10)	-0.4726	1.5821
C(11)	-0.6519	0.0477**
C(12)	-0.1844	0.1529
C(13)	-0.1937	0.1462

Restrictions are linear in co-efficients

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own Findings

Table 14 depicts that, in terms of short run causality, BSE 500 and USD/INR exchange rate is weakly significant towards gold prices in India whereas, S&P CNX Nifty adjusts itself towards gold prices in the short run.

Serial Correlation

Serial Correlations occurs in time series as the errors associated with a given time period can be taken over into future time periods (Shiva and Sethi, 2015). For example: The correlation between two time series such as x_1, x_2,........., x_{10} and y_2, y_3, ...y_{11}, where x and y are two different time-series can be called as *serial correlation* (Gujarati, 2005). Hence, when error terms from different time periods are correlated, we can conclude that, they are serially correlated. The presence of serial correlations has been checked through Breusch-Godfrey Serial Correlation LM test and the hypotheses are constructed as follows:

H_0: There is no serial correlation among the variables.

H_A: There is serial correlation among the variables.

Table 15 shows that, the Breusch-Godfrey Serial Correlation Lagrange Multiplier test has an observed R^2 value of 4.054 and F-statistic has a value of 2.3186 with a probability of 0.12423 and 0.11358, which shows a rejection of alternative hypothesis and acceptance of null hypothesis at 5% level of significance. Therefore, the model is free from serial correlations.

Table 15: Results of Serial Correlation

F-statistic	2.3186	Prob (F-statistic)	0.12423
Observed R square	4.054	Prob (Chi-square)	0.11358
Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).			
** implies that values are significant at 5 per cent level (critical value: 1.96).			
*** implies that values are significant at 10 per cent level (critical value: 1.65).			

Source: Authors own Findings

Test of Heteroskedasticity

The problem of heteoskedasticity exists as error variance changes proportionally with a variable. In a time-series regression model, if the dependent variable (i.e, gold prices) changes significantly from beginning to the end of the series, then we can conclude that, there is hetroskedasticity in regression analysis. Breusch-Pagan-Godfrey test is used for checking heteroskedasticity. The hypotheses for this test are constructed as follows:

H_0: Residuals Ware not heteroskedastic

H_A: Residuals are heteroskedastic

Table 16: Results showing Heteroskedasticity among residuals

F-statistic	2.4434	Prob (F-statistic)	0.13223
Observed R square	4.6852	Prob (Chi-square)	0.11466
Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).			
** implies that values are significant at 5 per cent level (critical value: 1.96).			
*** implies that values are significant at 10 per cent level (critical value: 1.65).			

Source: Authors own findings

From table 16, it can be observed that, the F-statistic and observed R-square are 2.4434 and 4.6852 with a p-value of 0.13223 and 0.11466, which shows a rejection of null hypothesis and acceptance of alternative hypothesis at 5% level of significance. Hence, it can be concluded that residuals are not heteroskedastic.

Pairwise Granger Causality Tests

In the study, we have conducted Granger causality test to explore the short-term causal relationship between gold price, stock price indices and exchange rates of India. Granger causality signifies whether the past values of x significantly predict the future values of another variable y, then x is considered to Granger cause y and vice-versa (Granger, 1969). The equation for testing Granger causality is given below:

$$X_t = \alpha_1 + \sum_{k=1}^{n} \beta_{1k} X_{t-k} + \sum_{k=1}^{n} \gamma_{1k} Y_{t-k} + e_{1t} \qquad \text{...............(8)}$$

$$Y_t = \alpha_2 + \sum_{k=1}^{n} \beta_{2k} X_{t-k} + \sum_{k=1}^{n} \gamma_{2k} Y_{t-k} + e_{2t} \qquad \text{...............(9)}$$

Where;

x_t and y_t = variables to be tested;

t= time period;

k = number of lags;

n = maximum number of lagged observations;

e_{1t} and e_{2t} = white noise error terms that mutually uncorrelated.

Testing null hypothesis (H$_0$): $\gamma_1 = \gamma_2 = \ldots\ldots = \gamma_n = 0$ for all lags, against γ_1 is not equal to γ_2 is not equal to γ_n is not equal to 0 for some lags. If both γ_1 and γ_2 are significant then, bi-directional causality runs; if coefficients of γ_1 are significant but γ_2 not then, y granger causes x and vice-versa; if γ_1 and γ_2 are not statistically differs from 0, then both x and y are independent in nature. Table 17 shows that, there exist a short run causal relationship between gold prices and S&P CNX Nifty and gold prices and BSE 500 at 1 and 10 percent level of significance. However, bidirectional causality exhibited between exchange rate of USD/INR and gold prices; S&P CNX Nifty and exchange rate of USD/INR and BSE 500 and exchange rate of USD/INR.

Table 17: Results of Pairwise Granger Causality Test

Sample: 2000-2019 (Monthly data) Lags: 3				
Hypotheses	Null	F-Statistic	Probability	Decision
DGP does not Granger cause DS&P CNX NIFTY	r = 1 r $\leq$ 1	4.3584	0.0148	Reject*
DGP does not Granger cause DBSE500	r = 1 r $\leq$ 1	2.6909	0.0889	Reject***
DEXC does not Granger cause DGP	r = 1 r $\leq$ 1	2.8235	0.0624	Reject***
DGP does not Granger cause DEXC	r = 1 r $\leq$ 1	6.7505	0.0002	Reject*
DBSE500 does not Granger cause DEXC	r = 1 r $\leq$ 1	2.1138	0.0993	Reject***
DEXC does not Granger cause DBSE500	r = 1 r $\leq$ 1	3.0084	0.0311	Reject**

DS&P CNX NIFTY does not Granger cause DEXC	r = 1 r ≤ 1	2.5632	0.0556	Reject**
DEXC does not Granger cause DS&P CNX NIFTY	r = 1 r ≤ 1	2.4024	0.0685	Reject***

Notes: * implies that values are significant at 1 per cent level (critical value: 2.58).

** implies that values are significant at 5 per cent level (critical value: 1.96).

*** implies that values are significant at 10 per cent level (critical value: 1.65).

Source: Authors own Findings

CONCLUSION

Using 'time-series regression', the study examines causal relation between gold prices, S&P CNX Nifty, BSE 500 and USD/INR exchange rates from 1st January, 2000 to 30th April, 2019. The findings of the study reflect a significant relationship between gold prices, S&P CNX Nifty, BSE 500 and USD/INR exchange rates with an adjusted R^2 of 47.78. Gold has a long term perspective. The Johansen Co-integration test shows that, there is a long run equilibrium relationship between independent and dependent variables. Moreover, the speed of adjustment with which the financial markets (inclusive of banks and financial institutions) adjust itself with gold prices is high both in long and short run scenario. In the short run we have seen that, gold prices are highly influenced by S&P CNX Nifty in comparison to BSE 500 and exchange rates of USD/INR. Hence, short run strategies can be formed after making proper evaluations of USD/INR exchange rates to make an impact on gold prices. The Granger Causality test also reflects the existence of unidirectional causality between gold prices and stock price indices and bidirectional causality between gold prices and exchange rates of USD/INR; S&P CNX Nifty and exchange rate of USD/INR and BSE 500 and exchange rate of USD/INR. Hence, the study provides an insight about the price discovery mechanism of gold prices in Indian economy where, Indian stock market plays a salient role both in short and long term. In India, gold is mostly used by household sector either for meeting up social or cultural demands or as alternative saving method. The involvement of Indian financial markets, consist of financial institutions and banks on holding gold are not so remarkable. In our study, we can observe that, in long run, the speed of adjustment with which the stock markets and exchange rates adjust themselves with gold prices in India is considerably high while, short term strategies can be designed after proper assessment of USD/INR exchange rates preponderating in the present market framework. On the other hand, in the current global condition

especially in US and European markets, the global investors prefers equity and other riskier assets instead of holding 'gold' as a 'port in a storm'.

Our study provides meaningful insights about the linkage between gold prices, stock market indices and exchange rate of USD/INR in Indian context. However, this study will also provide a large platform to budding researchers to further highlight other important variables that may affect the gold price or can use larger samples or larger time period or alternative methodologies with respect to India or any other Asian countries.

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An Empirical Study on Role of Women in Financial Decision Making of a Family: An Evidence from Kolkata, India

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Abstract: Financial knowledge has been recognized as an important element of financial decisions. In most of the developing countries like India financial education is not included in the curriculum of the students, but financial education plays a key role in financial decision making process. This study focused on financial literacy among women of Kolkata and their role in financial decision of their family. The present study is exploratory and empirical in nature. This study is based on information available through a structured questionnaire. The collected data has been analyzed through SPSS package by using different statistical tools.

***Index Terms* - Financial knowledge, financial education, financial decision, women's role, family's financial decision.**

1. Introduction

In modern era huge chunk of population across the globe are in a great trouble while making financial decisions effectively and efficiently as the complexity of financial market and financial products are gradually increasing. Financial knowledge has been recognized as an important element in making effective financial decisions. After the global financial crisis financial knowledge i.e. financial literacy is appearing as the primary concern of the policymakers, globally. Financial literacy is nothing but the skill and perception about personal management of financial resources. It provides twin benefit of protecting individual from financial frauds as well as ensures planning for financially secure future. Research shows that common people of our society assumed that women possess less financial knowledge than men. Twenty first century is also the witness of male dominance regarding the household related capital expenditure and investment. In the year 2010 for the first time financial literacy of women got priority. Proper financial education can ensure women's better selection and utilization of various financial opportunities.

2. Literature review

Akshita (2016) tried to measure the financial decision making skill of the women of Rajasthan on the basis of their personal financial knowledge, financial attitude and behavior. The author ultimately found that poor financial literacy level among the Indian women irrespective of working or non-working is the greatest concern for the interdependency of women.

Lussardi (2017) stated that women possess significantly low level of financial literacy than that of men. Financial literacy which is one of the important predictor of personal financial attitude of the people that in case of the women are in an alarming stage and not a good indicator in the field of financial management and decision making. This study also revel the fact that in maximum cases all the relevant financial decision of the family have been taken by the male member not the opposite sex.

Gopeekrishna & Geetha (2018) stated that financial knowledge, financial decision making, financial management etc. are the key factors that determinates financial empowerment. Self-help group's women in Kerala are found to have positive financial attitude toward their financial goals but they do not possess a suitable medium to channelized their hard earn money into investment. Man in the families encouraging their women to take loan but they never encourage participation in purchase or any investment oriented decision. In this situation SEG plays a significant role not only to boosts omen employment but also to encourage their financial independences.

Roy & Jain (2018) tried to find out a linkage in between financial literacy, financial knowledge, attitude and behavior of the female respondents of Jaipur city. They concluded that the general financial awareness relating to the tools and techniques of financial planning of the women are not satisfactory.

3. Objectives of the Study

In specific terms some of the objectives may be enumerated as follows:
1. To study the perception of women in financial decision making in their family.
2. To understand the financial decision making level of the women respondents among Household related financing decision, Savings & Borrowing decision and Investment decision related variables.
3. To assess the dependency of financial decision related variables upon demographic factors.

4. Research Methodology

The present study is exploratory and empirical in nature. Data has been collected exclusively from the women of Kolkata. This study is based on information available through a structured questionnaire. For collecting primary data questionnaire was formed with the help of various expert and after several round of pilot survey it was finalized. Most of respondents were contacted personally or data were collected through mailed questionnaire. Moreover, available information on this context published in different journals, books, magazines, dailies and websites has also been taken into consideration for the study as secondary source.

The collected data has been analyzed through SPSS package by using different statistical tools (viz. descriptive statistics, analysis of variance etc.). Some other qualitative data analysis techniques (Scaling techniques) has also been adopted to extract the relevant information from raw data and that are interpreted properly for conclusions and recommendations of the study.

For measuring financial decision level of the respondents this study has been considered three variables, they are as follows: Household related financing decision, Savings & Borrowing related decision and Investment related decision.

5. Data Analysis and Findings

In this section data have been analyzed from the responses received through questionnaire of 110 female respondents of Kolkata. This study focusing not only restricts itself while assessing the financial decision making capabilities of working women but also considers the views of housewives. This section contains general profile of respondents, financing decision level of the respondents among different financial decision related variables and different variables measuring financial decisions and their dependence on various demographic factors.

5.1 Demographic Profile of the Respondents and their Perception

110 female respondents were taken from Kolkata. As this paper focused on the financial decision making level of the female member of a family, the minimum age of the respondent is considered as 20 years and they must be completed their graduation and involved in the financial decision making process of their family.

Table 1: Demographic Profile of the Respondents

Demographic characteristics	Class	Frequency	Percentage
Age (Years)	20 to below 30	35	31.8
	30 to below 40	27	24.5
	40 to below 50	19	17.3
	Above 50	29	26.4
	Total	**110**	**100**
Educational Qualification	UG	25	22.7
	PG	53	48.2
	Professional	32	29.1
	Total	**110**	**100**
Employment status	Housewives	32	29.1
	Self employed	20	18.2
	Business	17	15.5
	Service	41	37.3
	Total	**110**	**100**
Monthly Family Income (Rs. in Thousand)	Below 25	3	2.7
	25 to below 50	40	36.4
	50 to below 75	9	8.2
	Above 75	58	52.7
	Total	**110**	**100**

Demographic characteristics of the sample reveals that 31.8% of the sample are within the age group of 20 to below 30years, 24.5% of the sample are within 30 to below 40 years, whereas only 17.3% of the sample are in 40 to below 50 age band and 26.4% of the sample are within the age group of above 50 years. In terms of educational qualification about 22.7% are graduate, 48.2% are post graduate and the rest 29.1% are having higher professional qualification. Employment status of the respondents reveals that majority i.e. 37.3% of the sample are from service holders, followed by 29.1% who are the homemaker, 18.2% of the sample are from self-employment and rest i.e 15.5% are from the category of business women. Income level of the respondents shows that only 2.7% of the respondents are having monthly family income less than Rs.25,000, 36.4% of the sample are having monthly family income between Rs.25,000 to below Rs.50,000. Only 8.2% of the sample are falling in the category those who are having a monthly family income between Rs.50,000 to below Rs.75,000, whereas majority of the respondents are within the monthly family income of above Rs.75,000.

5.2 Financial Decision level of the Respondents among Different Financial Decision Related Variables

In this study financial decision related attributes of the sample respondents have been measured with the help of a bipolar scale (1-2-3-4-5). Two extreme end of the scale 1 signifies extreme low financial decision making level and the other end of the bipolar scale 5 signifies extreme high financial decision making level. To measure financial decision level of the respondents the present study considers total three segments like: Household related financing decision, Savings & Borrowing related decision and Investment related decision.

Table 2: Reliability Statistics

	Cronbach's Alpha
Household related financing decision	0.819
Savings and Borrowing related Decision	0.786
Investment related Decision	0.682

Source: SPSS

Cronbach's alpha coefficient confirms the internal consistency of the set of items of a given scale. In general, any value greater than 0.50 is desirable under the Cronbach's alpha. The above value of cronbach alpha ensure that the internal consistency of the dataset is satisfactory.

Table 3: Household financing decision related Score of the Respondents

Decision level	Average Score	Frequency	Percentage (%)
Low	1—below 2	13	11.8
Medium	2—below 3	11	10.0
High	3—below 4	62	56.4
Very high	4—5	24	21.8
Total		110	100

Source: SPSS

The financing decisions of the household are very crucial as well as a complex thing that need to perform well, so that the proper utilization of the limited fund earned by a household is being ensured. This decision ultimately leads a household in performing their saving and investment behavior. Generally this decision are taken by a women in a family. An adequate financing decision ensures growth and development of the economy of a country. The above table depicts that 56.4% of the respondents are having high level of household relating financial decision making capability whereas only 21.8% of them possessed very high level of financial decision making capabilities. 11.8% and 10% of the sample showing low and moderate level of financing capabilities.

Table 4: Saving and borrowing decision related Score of the Respondents

Decision level	Average Score	Frequency	Percentage (%)
Low	1—below 2	00	00
Medium	2—below 3	5	4.5
High	3—below 4	27	24.5
Very high	4—5	78	70.9
Total		110	100

Source: SPSS

Saving and borrowing related decisions are very important for the economic growth of the country, in this study it has been observed that in a family in this modern era beside male members females are also playing an important role in in saving and borrowing part of their family. It has been studied that housewives and business women are actively participate in the saving part of the family. From the above table is has been found that 70.9% of the respondents are having sound financial knowledge in saving and borrowing part. Whereas only 4.5% of the respondents are having moderate level of financial knowledge in this field.

Table 5: Investment decision related Score of the Respondents

Decision level	Average Score	Frequency	Percentage (%)
Low	1—below 2	1	.9
Medium	2—below 3	4	3.6
High	3—below 4	30	27.3
Very high	4—5	75	68.2
Total		110	100

Source: SPSS

Investment decisions ensures optimum utilization of the hardly earned money of an individual. In our study it has been found that 68.2% of the respondents are very much skilled while taking their investment related decisions. They tactfully select various financial instruments for effective utilization of their savings. 27.3% of the respondents are having high level of investment oriented

decision making capabilities, whereas only 0.9% and 3.6% of the respondents possess low and moderate level of investment related decision making capabilities.

5.3 Dependency of Financial Decision Related Variables upon Demographic Factors

In this sub-section the dependency of the financial decision related variables on age, educational qualification, employment status and monthly family income have been studied.

Table 6: Dependency of Household Related Financing Decision Variables on Demographic Profile of the Respondents

Demographic Profile	F- value	P – value
Age	4.564	0.029**
Educational Qualification	0.920	0.338
Employment Status	5.640	0.026**
Monthly Family Income	1.299	0.256

Source: SPSS

**Indicates significant at 0.05 level

The variation of the household related financing decision across age, educational qualification, employment status and monthly family income have been studied. The F and P value of the one way ANOVA table reveals that the household related financing decision are highly dependent on age (F value= 4.564, p value= .029) and Employment status (F value= 5.640, p value= .026). Other factors are showing moderate to low level of dependency.

Table 7: Dependency of Saving & Borrowing Related Decision Variables on Demographic Profile of the Respondents

Demographic Profile	F- value	P – value
Age	1.352	0.260
Educational Qualification	8.551	0.01**
Employment Status	6.004	0 .028 **
Monthly Family Income	1.967	0.141

Source: SPSS

**Indicates significant at 0.05 level

The variation of the saving & borrowing decision across age, educational qualification, employment status and monthly family income have been studied. The F and P value of the one way ANOVA table reveals that the saving & borrowing decision are highly dependent on educational qualification of the respondents (F value= 8.551, p value= .01) and Employment status (F value= 6.004, p value= .028). Other factors are showing moderate to low level of dependency.

Table 8: Dependency of Investment Related Decision Variables on Demographic Profile of the Respondents

Demographic Profile	F- value	P – value
Age	5.685	0.001**
Educational Qualification	3.023	0.033**
Employment Status	2.227	0 .396
Monthly Family Income	5.439	0.002**

Source: SPSS

**Indicates significant at 0.05 level

The variation of the Investment decision across age, educational qualification, employment status and monthly family income have been studied. The F and P value of the one way ANOVA table reveals that the investment oriented decisions are highly dependent on age (F value= 5.685, p value= .001) educational qualification (F value= 3.023, p value= .033) and Monthly family income (F value= 5.439, p value= .002). Only one factor i.e. Employment Status is showing moderate level of dependency.

6. Conclusions

The main purpose of the study to explore the family's financial decision making capabilities of the women of Kolkata district in West Bengal, India. It can be concluded that most of the women are involved in household related financial decision of their family, which is most important as well as complex decision by nature. This study has found that near about 70% of Kolkata's women are having sound knowledge in household relating and saving and borrowing related financial decision making capabilities. 68.2% of the respondents are very much skilled while taking their investment related decisions. They tactfully select various financial instruments for effective utilization of their savings. It has been observed that the household related financing decision are highly dependent on age and Employment status, whereas the saving & borrowing decision are highly dependent on educational qualification and Employment status and investment oriented decisions are highly dependent on age educational qualification and Monthly family income.

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An Empirical Study on Financial Literacy and Financial Decision with Special Reference to the Service Sector of Kolkata

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Abstract: Financial literacy is the ability to use skills and knowledge to take effective and informed money-management decisions. For a country like India, it plays a bigger role as it is considered an important adjunct to promotion of financial inclusion and ultimately financial stability. Financial literacy and financial stability are two key aspects of an efficient economy. Financial literacy enhances individuals' ability to ensure economic security for their families. This paper basically focused upon general financial literacy, banking related literacy, postal savings literacy and insurance related literacy of the service holders of different private companies. Here the causes, symptoms, consequences, are studied empirically based on a sample of 150 respondents.

***Index Terms* - Financial literacy, financial stability, financial inclusion**

1. Introduction

Financial literacy refers to the set of skills and knowledge that allows an individual to make informed and effective decisions with all of their financial resources. Financial literacy also involves the proficiency of financial principles and concepts such as financial planning, compound interest, managing debt, profitable savings techniques and the time value of money. The lack of financial literacy may lead to making poor financial choices that can have negative consequences on the financial well-being of an individual. The main steps to achieving financial literacy include learning the skills to create a budget, the ability to track spending, learning the techniques to pay off debt and effectively planning for retirement. These steps can also include counselling from a financial expert. Education about the topic involves understanding how money works, creating and achieving financial goals, and managing internal and external financial challenges. This field demonstrates the behaviours and attitudes of a person possesses about money that is applied to his daily life. Financial literacy shows how an individual makes financial decisions. This skill can help a person develop a financial road map to identify what he earns, what he spends and what he owes. This topic also affects small business owners, who greatly contribute to economic growth and stability. Financial illiteracy affects all ages and all socioeconomic levels. Financial illiteracy causes many people to become victims of predatory lending, subprime mortgages, and fraud and high interest rates, potentially resulting in bad credit, bankruptcy or foreclosure. The lack of financial literacy can lead to owing large amounts of debt and making poor financial decisions. In India, there are also certain erroneous beliefs associated with financial literacy, the most common being the myth that one who is 'literate' or 'rich' is also 'financially literate'. Lack of basic financial understanding leads to unproductive investment decisions. We can achieve the desired results from financial literacy only when we start educating our children.

2. Literature Review:

Bhushan and Medury (2013) Suggest that overall financial literacy level of respondents is not very high. Financial literacy level gets affected by gender, education, income, nature of employment and place of work whereas it is found that the people who are government employee has less level in comparison to the privet employee, geographical region do not affect the level of financial literacy. The level of financial literacy among the working young in urban India is similar to the levels that prevail among comparable groups in other countries i.e. the influence of several socio-demographic variables like influence of family income and gender on various dimensions of financial literacy is similar as recorded in other studies in Indian context.

French & McKillop (2016) stated that a positive correlation exist between poor financial literacy and debt problem. They found that those with superior money-management skills have reduce debt to income level, prefer less borrowing from high cost vendors such as money lender, high-street loan shop etc.

Garg & Singh (2017) concluded that financial literacy is the basic understanding of the financial matters and application of them to make relevant and adequate financial decisions. He also observed that educational qualification significantly related with each

other. They also added that for a highly qualified person, gender, marital status, age, residential status does not have significance influence in their financial decision. They also suggested the need of organising financial literacy related program that may boost the financial literacy level.

Dinesha (2018) investigated in the study that in comparison to the rest of the world, India has poor financial literacy rate. Financial illiteracy creates a burden upon India via higher cost of financial safety and lesser socio economic prosperity. Unproductive investment is the result of lack of awareness regarding financial instrument. He observed that financial knowledge enrich common people's ability to ensure a healthy economic situation of their family.

Lusardi (2019) stated that not only in developing country but also in so many developed country having well developed financial market lack of financial awareness is the acute concern and need to take immediate action. It also suggested in this study that in modern world financial literacy should be treated as importance as basic literacy.

3. Objectives of the Study

This paper basically focused upon general financial literacy, banking related literacy, postal savings literacy and insurance related literacy of the service holders of different private companies. The main objectives of this paper are as follows:
  a) To assess the financial literacy level of the respondents among general, Banking, Postal savings and Insurance related variables.
  b) To understand how financial literacy related variables are co related with each other's.

4. Research Methodology

Data has been collected exclusively from service holders of different private companies, who are from Science, Commerce and Arts backgrounder respondents of Kolkata. Most of the respondents have been either contacted personally in their work places after making prior appointments or their responses collected by sending mailed questionnaires as they were located at faraway places. Stratified sampling technique has been adopted where each sector (Science, Commerce and Arts) has been treated as a stratum. Further quota sampling applied in each stratum for data collection through structured questionnaires. The collected data has been analyzed through SPSS package by using different statistical tools (viz. descriptive statistics, correlation etc.) for interpretation of the data.

5. Data Analysis and Findings

This is the most important part of the paper, which deals with the cross-sectional study of respondents. Here the causes, symptoms, consequences, are studied empirically based on a sample of 150 respondents.

Reliability of the Data Sets Used for Different Scales:

Cronbach's alpha coefficient confirms the internal consistency of the set of items of a given scale. The present data set for the study shows Cronbach's alpha for General Financial Literacy scale equal to 0.869. Similarly reliability of the set of items for banking related literacy, postal savings literacy, and insurance related literacy tested and the values are respectively 0.820, 0.729, and 0.944. In general, any value greater than 0.50 is desirable under the Cronbach's alpha. Cronbach's alpha for the coping checklist under these heads are > 0.50.

5.1 Demographic Characteristics of Respondents

Demographic characteristics of the sample reveals that 20% of the sample are within the age group of 21 to 25 years, 31.33% and 20% of the sample are within 26-30 and 31-35 years age bracket, whereas 26.67% of the sample are from 36-40 age group. So far as gender is concerned 53.33% of the sample are male and rest 44.67% are female. Marital status of the sample reveals that 41.33% of the total sample are married and rest 58.67% are unmarried. In terms of educational qualification about 60% of the respondents are graduate, 26% are post-graduate and rest 14% of the respondents are having other professional qualification. Stream of education reveals that 40.67% of the sample are from science background followed by 27.33% from Commerce and 31% from arts background. It is revealed that 22.67 of the respondents have their monthly income less than rs.10,000; monthly earnings of 36% of the respondents fall within Rs.10,000-25,000, 24.64% of the respondents earn Rs.25,000-50,000 per month, 10.66% of the respondents fall within Rs.50,000-75,000, monthly earning of only 6% of the respondents are above Rs.75,000.

5.2 Descriptive statistics showing the financial literacy level of the respondents:

The financial education related attributes of the sample respondents have been measured with the help of a bipolar scale (1-2-3-4-5). Two extreme end of the scale 1 signifies extreme low financial literacy attributes and the other end of the bipolar scale 5 signifies extreme high financial literacy characteristics. Altogether there are 4 personality attributes, like: General Financial Literacy, Banking related literacy, Postal saving related literacy and Insurance related literacy etc. which are depicted from extreme low to extreme high financial literacy level from left to right of the scale.

Table 1. Descriptive Statistics of General Financial Literacy:

	Frequency(%)					Mean	S.D.
	1	**2**	**3**	**4**	**5**		
Financial education helps people to understand the risk and return associated with financial market as well as financial products.	0 (0)	0 (0)	21 (14)	112 (74.7)	17 (11.3)	3.97	.504
Financial education helps people to select right financial products for investment purpose.	0 (0)	0 (0)	34 (22.7)	74 (49.3)	42 (28)	4.05	.712
Personal financial planning involves maintaining an adequate financial records, minimizing expenditure and preparing plans for future financial goals.	0 (0)	0 (0)	46 (30.7)	95 (63.3)	9 (7)	3.75	.555
Financially educated person must follow the Union Budget and assess his/her current financial position in respect of immediate preceding budget.	0 (0)	37 (24.7)	30 (20)	64 (42.6)	19 (12.7)	3.43	.999
One of the reason of economic recession is inequality in resource allocation and distribution of income can removed through proper Financial Education.	0 (0)	48 (32)	102 (68)	0 (0)	0 (0)	3.68	.468
Financial education increases the financial awareness of the people as a result they are not willingly to invest their savings in any unorganized sectors and able to protect themselves from financial scams.	0 (0)	3 (2)	147 (98)	0 (0)	0 (0)	3.98	.140

Source: SPSS

Financial literacy also involves the proficiency of financial principles and concepts such as financial planning, compound interest, managing debt, profitable savings techniques and the time value of money. The lack of financial literacy or financial illiteracy may lead to making poor financial choices that can have negative consequences on the financial well-being of an individual. It can be concluded that people who have highly expertise knowledge in general finance are very few only 7.3%, on the other hand 23.3% do not possess the poor personal financial knowledge, which affects the personal money management decisions.

Table 2. Descriptive Statistics of Banking Related Literacy:

	Frequency(%)					Mean	S.D.
	1	**2**	**3**	**4**	**5**		
Financially educated people have complete idea about different types of banking institutions and there rendering services	0 (0)	0 (0)	38 (26)	105 (70)	6 (4)	3.78	.503
RBI can control Inflation through imposition restriction upon supply of money.	0 (0)	1 (0.7)	32 (21.3)	117 (78)	0 (0)	3.77	.436
Financially educated people have complete idea about bank rates, discounting facilities, remittance facilities etc.	0 (0)	6 (4)	82 (54.7)	58 (38.7)	4 (2.7)	3.40	.613
They have the idea about the collection and payment of credit instrument facility of banks	1 (0.7)	0 (0)	30 (20)	105 (70)	14 (9.3)	3.87	.583
They possess the idea that bank offers consultancy services about investments in various financial instrument.	1 (0.7)	1 (0.7)	41 (27.3)	98 (65.3)	9 (6)	3.75	.601

Source: SPSS

Banking related literacy is required to make our savings effective. Through this literacy variables one can understand regarding various interest rates, deposit schemes, different facilities such as, discounting facilities, remittance facilities etc., and payment of credit instrument facilities. These knowledge ultimately helps a person to take financially sound decisions. From the above table it has been revealed that around 60-70% people possessed the high level of literacy in this segment, which ultimately indicates that the service holders of different private companies in Kolkata have the adequate financial knowledge in this segment.

Table 3. Descriptive Statistics of Postal Savings Literacy:

	Frequency(%)					Mean	S.D.
	1	2	3	4	5		
Basic knowledge about post office savings account/5-years recurring deposit account.	0 (0)	65 (43.3)	37 (24.7)	44 (29.3)	4 (2.7)	2.91	.912
Idea about Post Office Monthly Income Scheme (POMIS).	0 (0)	46 (30.7)	38 (25.3)	61 (40.7)	5 (3.3)	3.17	.908
Basic idea about Kishan Vikas Patra (KVS) and investment through it in Post Office.	0 (0)	42 (28)	28 (18.7)	80 (53.3)	0 (0)	3.25	.868
Now a days post office offers e-payments, have basic knowledge regarding this facility.	1 (0.7)	30 (20)	45 (30)	74 (49.3)	0 (0)	3.28	.804
The bold step of Indian Post office in Financial Inclusion era, offering ATM and cheque book facility, possess basic knowledge regarding these.	1 (0.7)	2 (1.3)	11 (7.3)	134 (89.3)	2 (1.3)	3.89	.436
In remote area where banks doesn't able to spread their wings, post Office is the only medium to channelize the savings in the main stream.	1 (0.7)	0 (0)	35 (23.3)	114 (76)	0 (0)	3.75	.480
Have idea about post office's International money transfer facility.	1 (0.7)	115 (76.7)	3 (2)	30 (20)	1 (0.7)	2.43	.839

Source: SPSS

Postal savings financial knowledge helps an individual to understand the various savings and investment opportunities offered by Indian post office. Post office is the oldest pillar of financial inclusion, that's why it is considered as an important determinant of financial literacy of the respondents. In this section knowledge of the respondents regarding post office savings account, Post Office Monthly Income Scheme (POMIS), KishanVikasPatra (KVS) and investment through it in Post Office, e-payments, Money Order facility, ATM and cheque book facility, Postal Life Insurance policy, International money transfer facility etc. have been tasted. It has been observed that around 60% do not possess the sound knowledge regarding postal savings schemes, POMIS, international money transferring facilities etc.

Table 4. Descriptive Statistics of Insurance Related Literacy:

	Frequency(%)					Mean	S.D.
	1	2	3	4	5		
Insurance leads to a secure future, betterment of life.	1 (0.7)	0 (0)	3 (2)	143 (95.3)	3 (2)	3.98	.317
Possess the knowledge about different Insurance company and their product.	0 (0)	4 (2.7)	38 (25.3)	108 (72)	0 (0)	3.69	.517
For getting 80C Deduction (Tax benefit) people buy an insurance policy of LIC.	1 (0.7)	69 (46)	52 (34.7)	25 (16.7)	3 (2)	2.73	.816
Proper selection of insurance scheme can give us security and reduces the uncertainty in every step of life.	0 (0)	0 (0)	1 (0.7)	146 (97.3)	3 (2)	4.01	.163
There is a difference between Life Insurance, General Insurance and Medical Insurance.	0 (0)	0 (0)	25 (16.7)	122 (81.3)	3 (2)	3.85	.408
Auto insurance company determine our premium based on type and expected life span of the vehicle.	0 (0)	12 (8)	132 (88)	3 (2)	3 (2)	2.98	.425
The main reason to purchase medical insurance is to compensate the future medical expenses.	1 (0.7)	2 (1.3)	129 (86)	9 (6)	9 (6)	3.15	.564
Micro-insurance involves small amount and it for poor people.	1 (0.7)	11 (7.3)	64 (42.7)	74 (49.3)	0 (0)	3.41	.656
Agriculture related insurance are crop insurance & livestock insurance.	0 (0)	6 (4)	54 (36)	90 (60)	0 (0)	3.56	.573

Source: SPSS

Insurance related knowledge of the respondents are assessed in this part through various question such as basic idea about insurance, purpose of buying insurance policy, whether purchase insurance is to protect them from sustaining a future loss, different types of insurance like Life Insurance, General Insurance and Medical Insurance, Micro Insurance, Agricultural Insurance etc. It has been observed from the above table that very few people have adequate knowledge in this segment. Around 60-70% of the respondents have basic idea about LIC, GIC, medical insurance but they have less knowledge regarding the financial planning though insurance.

*5.*3 Association of Various Financial Literacy Variables:

Table 5. Pearson's Correlations of Financial Literacy Variables

		General Financial Literacy	*Banking Related Literacy*	*Postal Savings Literacy*	*Insurance Related Literacy*
General Financial Literacy	Pearson Correlation	1	.558[**]	.518[**]	.339[**]
	Sig. (2-tailed)		.000	.000	.000
	N	150	150	150	150
Banking Related Literacy	Pearson Correlation	.558[**]	1	.410[**]	.394[**]
	Sig. (2-tailed)	.000		.000	.000
	N	150	150	150	150
Postal Savings Literacy	Pearson Correlation	.518[**]	.410[**]	1	.422[**]
	Sig. (2-tailed)	.000	.000		.000
	N	150	150	150	150
Insurance Related Literacy	Pearson Correlation	.339[**]	.394[**]	.422[**]	1
	Sig. (2-tailed)	.000	.000	.000	
	N	150	150	150	150

Source: SPSS

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

From the above table it can be observed that all correlations are positive i.e. they move in same direction. The highest correlation is between general financial literacy and banking related literacy (+0.558) followed by postal savings literacy (+0.518), followed by insurance related literacy (+0.339). So, it is likely that these variables may be good predictors of the financial literacy factor that influence financial decision. In addition, correlation between any two independent variables are not very high (not more than 0.80) which imply may be there is non-existence of multi-collinearity i.e. the variables are explaining different aspects of financial literacy.

6. Concluding Remarks

In recent time it can be observed that COVID 19 pandemic is giving rise to worldwide economic crisis. In this hard time financial education may be used as one of the weapon to cope up with this financial distress. General financial literacy and post office related literacy are highly dependent with various demographic factors like age, educational qualification etc. Around 65% of the respondents don't aware about various scheme of investment as well as savings offered by various financial institutions. Lack of awareness penalize them from secure savings, choosing the best course of alternative and gaining the higher rate of return. A large section of respondents are not taking the advantages of insurance sector. They use it as a mare saving tool. Maximum of them are risk avoider, they prefer to keep their money in banks. They fear to invest their money in stock market or mutual funds. It can be said that better financial knowledge helps in better financial decision making process which ultimately leads to a secure financial future.

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A STUDY ON DIGITAL FINANCIAL LITERACY WITH SPECIAL REFERENCE TO KOLKATA, INDIA

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ABSTRACT
Financial literacy is nothing but a set of skills and knowledge that allows an individual to make an informed and effective decisions with all of his/her existing financial resources. One of its important components is digital financial literacy. The current era is the witness of India's movement towards digitalization in every sector of its economy. The Digital India is a flagship programme of the Government of India with an aim to transform India into a digitally empowered society and knowledge economy. This paper focused on various aspects of digital financial literacy. The present study is empirical and exploratory in nature. Moreover, available information on this context published in different journals, books, magazines, dailies, and websites has also been taken into consideration for the study as a secondary source.

KEYWORDS
digital India, financial literacy, digital financial literacy, knowledge economy.

JEL CODES
D14, G21, G23.

I.   INTRODUCTION

In recent era digitalization in the financial sector brings a drastic change in the Indian economy. Thus in this digital era of twentieth-century Digital Financial Literacy becomes increasingly important in financial planning and management. It creates the awareness of various e-medium that currently used in financial management. Basically digital financial Literacy is a mixture of Digital, Financial system, and Literacy. Digital financial literacy refers to the acquired skill and knowledge which ultimately ensures effective use of digital devices while doing a financial transaction. The various dimension of digital financial literacy are discussed below:

Knowledge regarding digital financial Goods and Services: It states that an individual should have a basic level of understanding regarding various financial products and services. It also creates awareness of non-traditional i.e. products and services offered through digital means such as e-commerce, m-commerce. These services can broadly be classified into four categories, such as

i)   Payment: Which basically includes digital wallets, crypto assets, digital money, etc.

ii)   Asset management: It includes mobile trading, internet banking, robo advisors, trading of crypto currency, online brokers etc.

iii)   Alternative finance: It includes peer to peer (P2P) lending, supply chain finance, crowd funding etc.

iv)   Others: Online insurance services etc.

Awareness of Digital financial risk: When an individual or a firm uses a digital financial system they must take into account the additional risk of it which is not only diverse by nature but also harder to identify. We can categorise these risk into following categories:

i)   Phishing: It is an unscrupulous attempt to obtain sensitive information such as user name, password, and other card details by hiding one as a trustworthy entity in an electronic mood of communication.

ii)   Spyware: It can capture information like username, password, email messages, browsing habit, debit/credit card related information etc. and can transmit these data to another person's computer through the internet.

iii)   Pharming: It is a cybercrime that has involved in the manipulation of the traffic of a website and confidential information is stolen.

II.   LITERATURE REVIEW

Saini (2019) stated that the concept of digital financial literacy, awareness level and access of digital financial products. The study also put emphasis on the awareness campaigns regarding the use of digital instruments. This study concluded that there was a positive correlation among the level of education, awareness, and use of digital means in financial transactions.

Kumar et al. (2019) focused upon youth awareness towards financial inclusion and also identified the preferred medium of digital banking to promote digital financial literacy. Digital financial literacy has a positive impact on financial inclusion. They also found that youth were not enough confident regarding the use of digital technology in financial transactions due to security related issues.

Ganeshappa (2019) concluded that the delivery of financial products depends upon digital platform. The benefit of financial inclusion may reach to the rural people through a digital medium with cooperation, coordination of stakeholders, policymakers, and various financial institutions.

Nayak (2018) stated that lack of financial literacy, lack of modern infrastructural facility, non-adaptability of customers towards the use of digital means in the financial transactions are the biggest challenge toward the implementation of digital financial literacy in rural India. Banking sectors may approach the school and college goers to make them understand the merits of digital literacy and tell them to spread the message to the rural areas.

III.   OBJECTIVES OF THE STUDY

Primarily this study put stress on digital financial awareness, digital financial behaviour, and digital financial empowerment of the respondents. Different initiative has been taken by formal financial institution to spread digital awareness. So the present study devoted to:

- Understand the variation of digital financial literacy with various demographic factors of the respondents.
- Assessed the digital financial literacy level of the respondents of South Kolkata.
- Examine the dependency of digital financial literacy on various demographic factors of the respondents.

IV.   RESEARCH METHODOLOGY

The present study is empirical and exploratory in nature. Most of the respondents have been either contacted personally in their work places after making prior appointments or their responses have been collected by sending a mailed questionnaire as they were located at faraway places. The total number of respondents are 150 from South Kolkata. The collected data has been analysed through SPSS package by using different statistical tools. Reliability of the data sets used for different scales, mean score, descriptive statistics, one-way ANOVA are used while analysing the data. This study has conducted from October 2019 to March 2020. Random and convenient sampling techniques were adopted while collecting data.

RESEARCH HYPOTHESIS

H1: there is a significant relationship between age and digital financial literacy

H2: there is a significant relationship between gender and digital financial literacy

H3: there is a significant relationship between educational qualification and digital financial literacy

Cronbach's alpha coefficient confirms the internal consistency of the set of items of a given scale. The present data set for the study shows Cronbach's alpha for Digital Financial Literacy scale equal to 0.890. In general, any value greater than 0.50 is desirable under the Cronbach's alpha.

V. DATA ANALYSIS AND FINDINGS

At this stage an exploratory study with detailed analysis has been drafted. It includes demographic profile, socio-economic status, awareness and impact of digital education, descriptive statistics, and dependency of digital literacy on various demographic factors.

TABLE 1: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Demographic Characteristics	Class	Frequency	Percentage (%)
Age (Years)	21-30	30	20
	31-40	47	31.33
	41-50	33	22
	Above 50	40	26.67
	Total	**150**	**100.0**
Gender	Male	83	53.33
	Female	67	44.67
	Total	**150**	**100**
Educational qualification	Graduate	90	60
	Post Graduate	39	26
	Others	21	14
	Total	**150**	**100.0**
Annual income (Rs. in lakh)	Below 2.5	88	58.67
	2.5 – 5	37	24.67
	5-10	16	10.66
	Above 10	9	6
	Total	**150**	**100**

The demographic profile shows that 31.33% of the total respondents belong to 31-40 age bracket followed by 26.67%, 22%, and 20% of respondents belongs to above 50 years, 41-50, and 21-30 years' age bracket. 53.33% of the respondents are male and rest are female. 60% of the respondents are graduate followed by 26% postgraduate respondents. 58.67% respondents are having annual income below Rs.2, 50,000 followed by 24.67% of respondents who are having an annual income of Rs.2, 50,000-5, 00,000. Only 6% of the respondent falls in above 10, 00,000 annual income category.

TABLE 2: VARIATION OF DIGITAL FINANCIAL LITERACY AS PER AGE OF THE RESPONDENTS

Age	Mean score
21-30	4.0515
31-40	4.0296
41-50	3.5091
51 & above	2.3444

From the aforesaid table it can be seen that the digital financial literacy score is maximum in the case of the respondents whose age group belongs to 21-30 i.e. it can be said that people of the young age group are having sound digital financial knowledge in comparison with other age group of respondents. It can also be observed that the respondents who are in a higher age group i.e. 51 & above are having minimum digital financial literacy scores.

TABLE 3: DIGITAL FINANCIAL LITERACY WITH GENDER

Gender	Mean Score
Male	3.4970
Female	4.0597

From the above table it is observed that the mean score of digital financial literacy of female respondents are 4.0597 followed by 3.4970 of male respondents, which reveals that female respondents are more digitally literate than male. It is also observed that while doing financial transaction female respondents would like to use digital platforms than male respondents.

TABLE 4: DIGITAL FINANCIAL LITERACY WITH EDUCATIONAL QUALIFICATION

Educational Qualification	Mean score
Graduate	3.4722
Postgraduate	4.0485
Others	3.5531

It can be said from the above table that average digital financial literacy score is highest i.e. 4.0485 in case of respondents who have completed their post-graduation i.e. it can say that digital financial literacy is highest for those respondents who are having maximum educational qualification. And for the respondent who, just completed their graduation is having a digital financial literacy score of only 3.4722. So it can be observed that digital financial literacy and educational qualification of the respondents are directly correlated with each other.

Descriptive Study of the Digital Financial Literacy Level among the Respondents of South Kolkata

The digital financial literacy related attributes of the sample respondents have been measured with the help of a bipolar scale (1-2-3-4-5). Two extreme ends of the scale 1 signifies extremely low digital financial literacy attributes and the other end of the bipolar scale 5 signifies extremely high digital financial literacy characteristics. The attribute is depicted from extreme low to extreme high digital financial literacy level from left to right of the scale.

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TABLE 5: DIGITAL FINANCIAL LITERACY OF THE RESPONDENTS

Literacy Level	Frequency	Percentage (%)
Low	01	0.7
Moderate	116	77.3
High	33	22
Very High	00	00
Total	**150**	**100**

From the above table it can be observed that 77.3% of respondents are having moderate digital financial literacy level followed by 22% who are having high digital financial literacy level and only 0.7% are having low digital financial literacy level. It can be said that apart form 0.7% of the total respondents all are aware of digital financial literacy and its benefits. They possess a basic literacy level in this segment. On the contrary none of them are highly skilled in this segment.

Dependency of Digital Financial Literacy on Demographic Factors

In this sub-section the dependency of the digital financial literacy variables on age, gender, and educational qualification has been studied.

TABLE 6: DEPENDENCY OF THE DIGITAL FINANCIAL LITERACY ON AGE, GENDER, EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

Literacy Variables	Age		Gender		Educational Qualification	
	F value	P value	F value	P value	F value	P value
Digital Financial Literacy	5.202	0.001*	1.342	0.249	2.135	0.045*

*Indicates significant at 0.05 level

From the above table it is observed that there is a significant association which is statistically significant between age, educational qualification, and digital financial literacy. So for age and educational qualification the study can reject null hypothesis and can accept the alternative hypothesis i.e. there is a significant relationship between age, educational qualification and digital financial literacy.

VI. CONCLUSION

It can be concluded from the study that people of South Kolkata possess a moderate level of digital financial literacy. Sometimes it has been found that they are not completely aware the benefit of digitalization in financial matters, this is one of the reason for their ignorance to use digital platforms while doing a financial transaction. It is also observed from the study that females have a more digital financial literacy rate than male respondents. Digital financial literacy directly varies with age and educational qualifications of the respondents. Younger people are more familiar with the modern instruments of digitalization which is one of the reasons for their digital empowerment. In the recent arena digital financial literacy is one of the crucial weapons of financial inclusion and paperless cum green economy. The goal of a paperless economy may possible through an awareness campaign, advertising, talk- shows, etc. organised by formal financial institutions.

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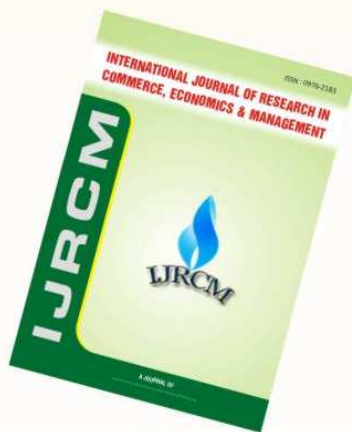
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A Study on Financial Performance of Britannia Industries Ltd. for the Period 2014-15 to 2018-19

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Abstract

Britannia Industries Ltd. is one of the largest brand in the food processing sector of India. It is listed on the BSE ad NSE. Its product portfolio consists Biscuits, Bread, Cakes, Rusk and dairy product. It flies its wings in more than 60 countries across the globe. This study is basically focused upon the profitability and liquidity position of Britannia Industries Ltd. This study is explanatory and exploratory in nature. Ratio analysis technique and descriptive statistics is used in the study for doing the profitability and liquidity analysis. It is purely based on secondary data which are collected from financial statements various books, magazines, annual reports of the company.

Keywords: Financial Statements, Financial Position, Ratio Analysis, Liquidity, Profitability.

1. Introduction

The first and foremost objective of financial statement is to convey accounting information to the stakeholders of the business. As per the provision of Companies Act 2013 a company must have to prepare various financial statement like statement of profit and loss. Balance sheet, cash flow statement etc. these financial statement helps the stakeholder to analysis the financial position of the companies which ultimately leads them towards a proper investment decision. Ratio analysis is one of the analytical tool which depicted the significant relationship between two accounting figures shown in the financial statement. Liquidity ratios indicates the ability of the firm to meet its

short term obligation, on the other hand profitability ratios measures profit earning capacity of the firm. This study is basically focused upon the profitability and liquidity position of Britannia Industries Ltd. which is one of the largest brand in the food processing sector of India. Its product portfolio consists Biscuits, Bread, Cakes, Rusk and dairy product. It flies its wings in more than 60 countries across the globe. Britannia was started its business in Kolkata in the year 1892 with the investment of ₹ 295. With effect from 3rd October 1979 its name was changed from Britannia Biscuit co. Ltd. to Britannia Industries Ltd. in the year 1989 the executive office of the company shifts to Bangalore. In 1997 it launches its dairy products. It received 'super brand' award in the year 2004. In 2012 it was awarded the Global Performance Excellence award (GPEA) by Asia Pacific Quality Organization.

2. Literature Review

Pandey (2010) stated that ratio is used as a standard for assessing the financial position and performance of a company. The accounting figures that are reported in the financial statement they may always not provide useful information. According to the author the relationship between two accounting figures expressed mathematically is known as financial ratio. Ratios help in summarizing a large quantity of data and also helps to evaluate the qualitative aspects about the firm's performance.

Srinivasan (2018) stated in his study that ratio analysis techniques helps to judge the financial position of the company over a period of years. It acts as a useful tool for decision making. The author has used gross profit ratio, operating profit margin, net profit ratio, ROA, ROE to study the profitability position of Vellore Cooperative Sugar Mills for the period for the year 2013-2017 and so far liquidity analysis is concern the author has used current ratio, quick ratio and cash ratio. According to author the company should use their operating assets judiciously and should also try to minimize the non-operating expenses as far as practicable.

Roy (2018) stated that ROA and ROCE has more predictability power than other ratios. The author also found that ROE of the firm is dependent on asset turnover ratio, ROA and ROCE of the firm. The author suggest that financial efficiency ratio should be used on a regular basis to monitor the financial performance.

Ingale & Priya (2018) have used ROA, ROI, ROE, EPS, DPS, P/E ratio to study the profitability position of Steel Authority of India Limited and for liquidity analyses they have used inventories turnover ratio, working capital turnover ratio, current ratio, liquid ratio. The authors have suggested to take a short term for one year to increase the current assets or for reducing the current liabilities.

Thomas and Basariya (2019) stated that operating performance ratio is used to judge the management efficiency and it also helps to know how efficiently the firm's assets are employed and managed whereas, profitability ratios helps to assessed the earning performance against sales or investment. Ratio analysis helps to analyze how far the management is efficient to convert the revenue into profit for the shareholders.

3. Objectives of the Study

1)   To analyze the profitability position of Britannia Industries Ltd.

2)   To analyze the liquidity position of Britannia Industries Ltd.

4. Research Methodology

The research paper is based on secondary data. The data was collected from company's website, other financial websites. The period of study was from 2014-15 to 2018-19. The tools used for the study were profitable ratios, liquidity ratios and descriptive statistics of the same are used for analyzing the data.

5. Data Analysis & Findings

The present study is exploratory and quantitative in nature. It solely depends upon secondary data collected from different financial websites, books, journals etc.

5.1 Profitability Ratios

Profitability ratios are used to judge the profit earning capacity of the firm. The survival and growth of a firm depends upon the earning capacity of the firm. The operating efficiency of a company is measured with the help of profitability ratios. So all the stakeholders are interested to analysis the profitability of the company.

Normally two types of profitability ratios are calculated:

a) Profitability in relation to Sales: In our paper we have studied Net Operating Profit ratio and Net Profit Ratio.

b) Profitability in relation to Investment: In relation to this, we have studied Return on capital employed and Return on Equity.

Operating Profit Ratio

This ratio talks about the relationship between sales and operating profit. It shows the percentage of profit that a company earns from its operating activities i.e before deduction on interest charges and taxes. Operating Profit means the profit earns from the ordinary courses of business. Operating profit ratios is an indicator about the operational efficiency of a firm. The ratio is calculated as

Operating Profit Ratio= Operating Profit / Net Sales x 100

Operating Profit=Gross Profit – Operating Expenses

Or, Operating Profit= Net Profit + Non-Operating Expenses – Non Operating Income

Or simply we can called Operating Profit as Earnings before Interest and Tax i.e. EBIT.

The operating Profit ratio of Britannia Industries Ltd. is depicted in the following diagram for the period 2014-15 to 2018-19.

Figure 1: Figure showing Operating Profit Ratio of Britannia Industries Ltd. for the Period 2014-15 to 2018-19
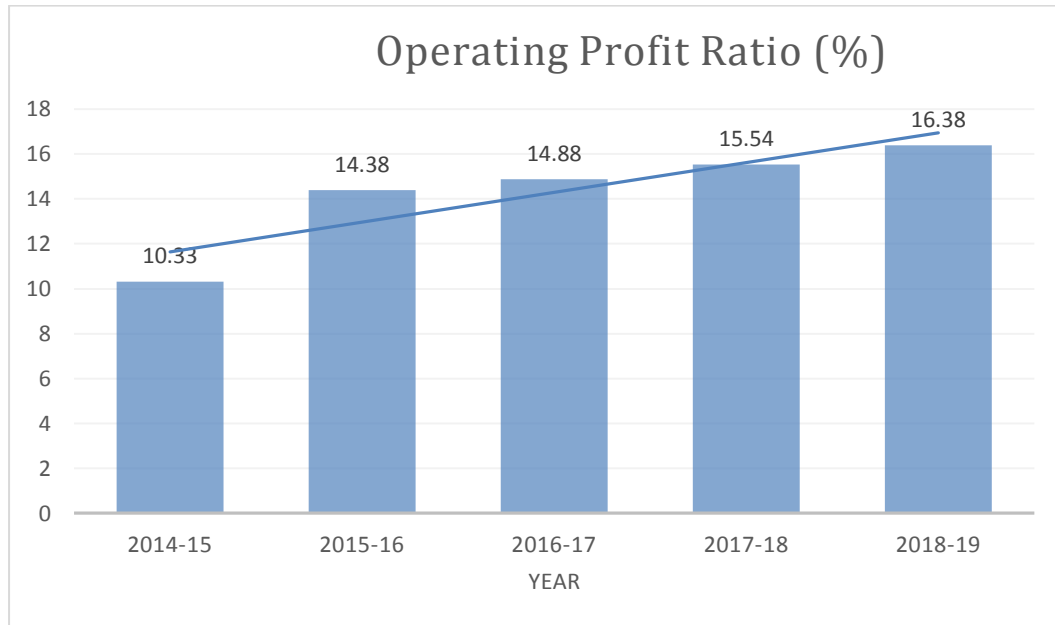
Table 1: Descriptive Statistics of Operating Profit Ratio

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Operating Profit Ratio	5	10.33	16.38	14.3020	2.34348	-1.671	3.19
Valid N (listwise)	5						

From the above diagram it can be observed that Operating Profit ratio is showing an increasing trend over last five years that means it can be concluded that in the current financial year i.e. 2018-19 after payment of operating cost only 16.38% is left for paying interest, tax and dividend. The higher the ratio the better is the position of firm. The firm position to pay the interest, tax and dividend is improving over the years. The average operating ratio that the company is earning is 14.30% i.e. on an average on sales of ₹ 100, the operating profit is ₹ 14.30.

Variability in operating profit ratio is last five years is 2.34% i.e. we can say fluctuation in operating ratio during our period of study is low.

The skewness is -1.671 indicating clustering of data on the right hand with some extreme values on the left hand side.

The kurtosis is 3.19 which indicates hugely peaked and heavy tailed.

Net Profit Ratio

Net Profit ratio shows the relationship between net profit i.e. PAT and Net Sales. This ratio is very important especially for the shareholders as net profit ratio reveals the percentage of profit left after deducting all expenses. Net Profit ratio reveals the reward to the shareholders for taking the risk in investment. The net profit ratio indicates the firm efficiency in manufacturing administering and selling the products. Adequate net profit ratio gives satisfactory return on shareholders, funds. So higher the ratio the better is the position of the company. The net profit ratio is calculated as

Net Profit Ratio= Net Profit / Net Sales x 100.

The Net Profit ratio of Britannia Industries Ltd. is depicted in the following diagram for the period 2014-15 to 2018-19

Figure 2: Figure showing Net Profit Ratio of Britannia Industries Ltd. for the period 2014-15 to 2018-19
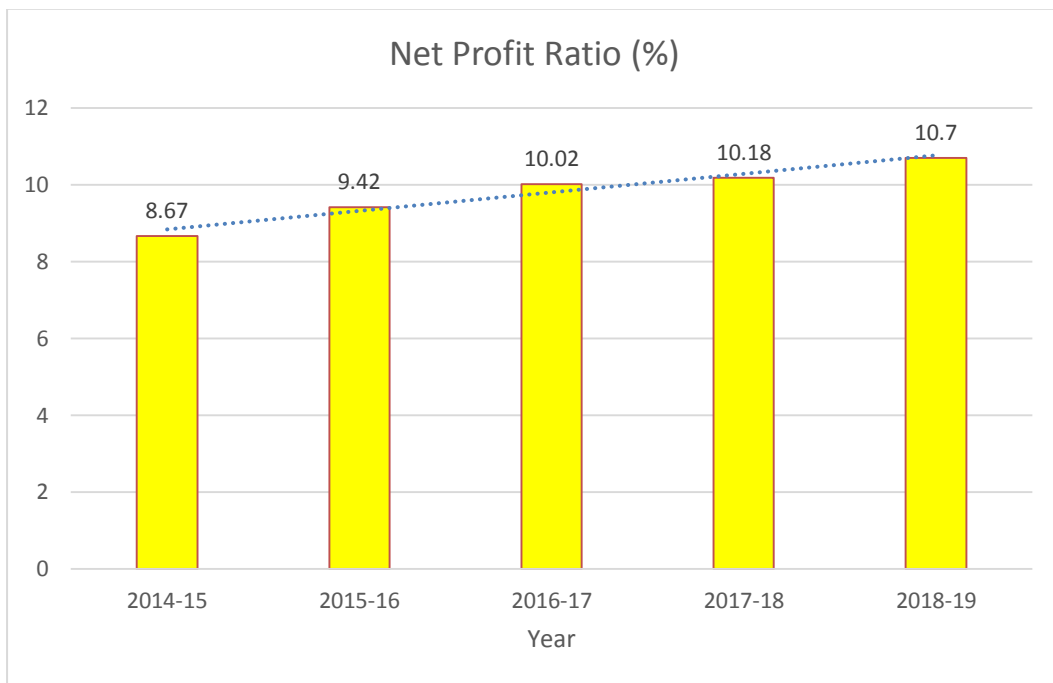
Table 2: Descriptive Statistics of Net Profit Ratio

	N	Minimum	Maximum	Mean	Std. Deviation
Net Profit ratio	5	8.67	10.70	9.7980	0.77847
Valid N (listwise)	5				

From the above table it can be noted that Net Profit ratio or margin is showing an upward trend over the years. From 8.67% in 31.03.2015 it has increase to 10.70%. Like Net operating ratio, Net profit ratio is also showing an increasing trend over the years. So, the performance of the company so far net profit margin is concerned is satisfactory. So it can be concluded that the return on the shareholders' investment is satisfactory. During the period of study the average net profit of the company was 9.80% i.e. we can say the company is earning a net profit of ₹ 9.80, against sales of ₹ 100.

The variability in the Net Profit ratio is only 0.77% which is very low. This is also exhibited from the minimum and maximum value. That means there is no significant fluctuation in net profit ratio during our period of study.

Return on Capital Employed (ROCE)

The firm employed in net assets is known as capital employed. Capital employed is equal to net worth plus long term debt. Capital employed pools of investment invested by shareholders and lenders. Return on investments gives an indication as to whether the investors of the fund are earning adequate return or not. It implies how well the investment of the company is being managed to earn profit. Its shows the relationship between net profit before interest and taxes and the capital employed in the business. Return on capital employed can be computed by

Return on capital employed= Earnings before interest and tax (EBIT) / Capital Employed x 100

The Return on capital employed of Britannia Industries Ltd. is depicted in the following diagram for the period 2014-15 to 2018-19:

Figure 3: Figure showing Return on Capital Employed of Britannia Industries Ltd. for the period 2014-15 to 2018-19
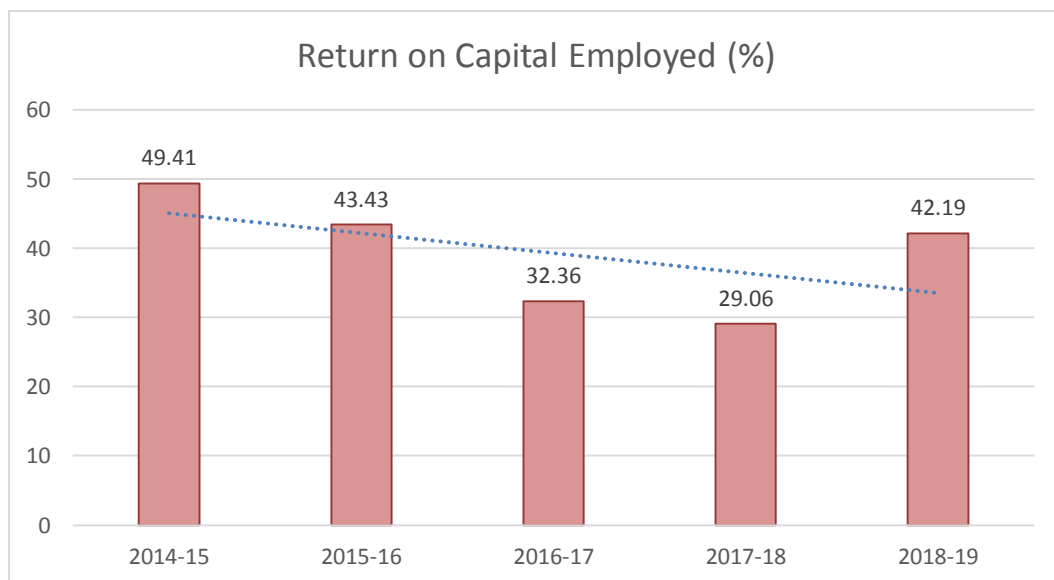
Table 3: Descriptive Statistics of Return on Capital Employed(ROCE)

	N	Minimum	Maximum	Mean	Std. Deviation
ROCE	5	29.06	49.41	39.2900	8.37618
Valid N (listwise)	5				

From the above table it can be observed that return on capital employed was showing a decreasing trend till the last year. However in the immediate last year i.e on 31.03.19 the company is showing a significant increasing in return on capital employed. But in the last five years, the highest Return on capital employed was found to be 49.41% in 31.03.2015. But after that Return on capital employed never exceeded 49.41%. The average return on capital employed in the last -5- years is 39.29% which indicate than on an average the investors are earning ₹ 39.29, against their investment of ₹ 100.

The variability in return on capital employed is 8.37% which means that return on capital employed fluctuates during our period of study.

Return on Equity (ROE)

The return on equity is profit after tax divided by shareholders' equity. ROE indicates how the resources of the firm are being utilized by management. This ratio serve to be important tool for analyze of the company by the present and the potential shareholders. This ratio gives the idea of the amount of earning against each rupee which shareholders invested in the company. Return on equity can be computed by

ROE= Profit after taxes / Net Worth (equity)

The Return on equity of Britannia Industries Ltd. is depicted in the following diagram for the period 2014-15 to 2018-19:

## Figure 4: Showing Return on Equity of Britannia Industries Ltd. for the period 2014-15 to 2018-19
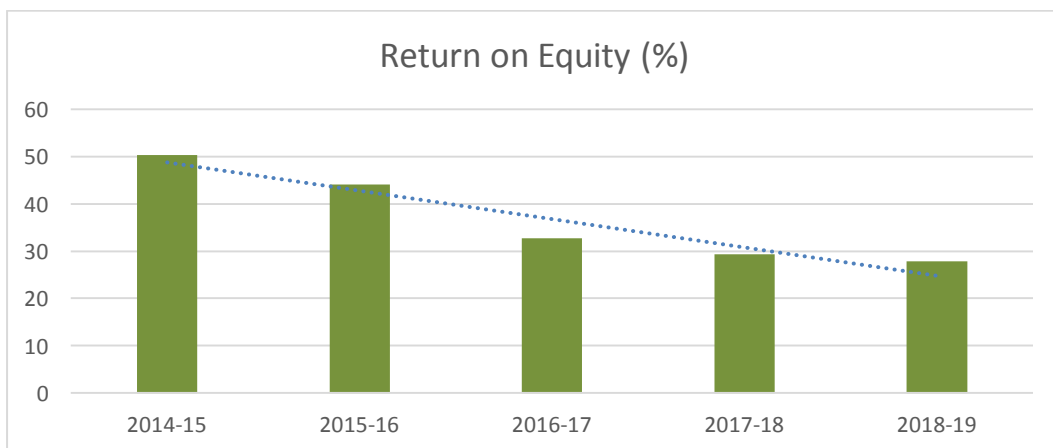
Table 4: Descriptive Statistics of Return on Equity(ROE)

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	5	27.78	50.37	36.8320	9.89343
Valid N (listwise)	5				

The return on equity is not satisfactory in the immediately preceding financial year 2018-19. The highest return on equity was 50.37% in 2014-15, after that it is constantly falling. So it can be observed that the net worth or the equity are not been utilized properly. Net profit margin is showing an increasing trend whereas Return on equity is showing a decreasing trend. So, the main reason is issue of share capital during our period of study. Since the number of equity share are increasing as a result return on equity is falling. The average of return on equity during our period of study founds to be 36.83% that means for every ₹ 100 invested, the shareholder is earning on an average ₹ 36.83 which is satisfactory. But there is scope of improvement as downward trend in ROE is found from the analysis.

The variation found in return on equity during our period of study in 9.89% which indicates that there is variation in ROE during our period of study.

5.2 Liquidity Analysis

The study of liquidity analysis helps the firm to understand its short term position i.e. whether the firm is in a position to pay off its current obligations. The firm should not suffer from too much liquidity or illiquidity. Therefore the firm needs to do balance between liquidity and short of liquidity. In our study the following ratios are studied:

Current Ratio

The current ratio exhibits the short term solvency position of the company. By analyzing the current ratio, one can understands that whether the current assets are adequate to pay off the current liabilities. Generally a standard ratio of 2:1 is considered satisfactory. Ratio significantly greater than 2:1 is considered bad as implies excess liquidity means excessive blockage of current assets and ratio significantly less than 2:1 is also considered bad because it indicates low liquidity i.e. the firm is not having sufficient current assets to meet its current liabilities.

Table 5: Table Showing Current Ratio during 2014-15 to 2018-19

For the year ending	31.3.2019	31.3.2018	31.3.2017	31.3.2016	31.3.2015
Current Ratio (Times)	1.94	2.03	1.84	1.06	1.19

The benchmark current ratio is 2:1. In the immediately preceding year the current ratio of the company is 1.94 which is very close to 2:1. Also the current ratio improves a lot over the five year period. Although in the immediately financial year it is less than the benchmark of 2:1, but not significantly less. So, it can be said the company has enough current assets to pay off its current liabilities at any point of time.

Quick Ratio

Quick ratio also known as acid-test ratio, founds out the relationship between quick assets and current liabilities. Quick assets is found out by deducting inventory from current assets. Quick assets means any asset which can be readily converted into cash without loss of value. So inventory is excluded from current assets to find out quick assets. The standard quick ratio is 1:1, which means that any time the company is having sufficient quick assets to pay off its current liabilities.

Table 6: Table showing quick RATIO during 2014-15 to 2018-19

For the year ending	31.3.2019	31.3.2018	31.3.2017	31.3.2016	31.3.2015
Quick Ratio (Times)	1.49	1.59	1.29	0.77	0.90

The quick ratio for the company is satisfactory. The standard quick ratio is 1:1. In case of Britannia Industries Ltd. from 31.03.2017 the quick ratio is more than 1 which is satisfactory. It indicates that the quick assets are sufficient to meet the current liabilities at any point of time.

Inventory Turnover Ratio

The efficiency of the firm in production and selling of it product is judged by Inventory turnover ratio. By analyzing the inventory turnover ratio it can be understood how fast the inventory are being converted into sales. If the inventory turnover ratio is high then it can be concluded company's inventory management is satisfactory and vice versa. Low inventory turnover ratio indicate piling up of closing stock. Inventory turnover ratio is calculated as

Inventory turnover = Cost of goods sold / Average inventory

Table 7: Table showing Inventory Turnover ratIo during 2014-15 to 2018-19

For the year ending	31.3.2019	31.3.2018	31.3.2017	31.3.2016	31.3.2015
Inventory Turnover Ratio (Times)	14.58	15.65	13.96	20.70	20.76

The higher the ratio the better it is. In the current financial year i.e. for the year ended 31.03.2019 the performance is not promising in compared to the last year. The firm needs to monitor its inventory management to further improve the inventory turnover ratio. The low inventory turnover indicate that company is facing the problem of accumulation of large excessive inventory which will increase the cost thereby reducing the profit.

6. Conclusions

Financial statement analysis helps the stakeholders to understand the financial position of the company that ultimately helps them to take relevant investment decisions. This study focused on assessing the financial performance of Britannia Industries Ltd. for the period 2014-15 to 2018-19.

For analyzing the financial performance of Britannia Industries Ltd. the paper throw light upon profitability ratios such as operating profit ratio, net profit ratio, return on capital employed, and return on equity, liquidity ratios such as current ratio, quick ratio, and stock turnover ratio of the aforesaid company.

The overall profitability of the company is satisfactory as observed from the ratio analysis of different profitability ratios. However, return on equity is not very promising compared to 2016-15 and 2014-15. So far liquidity position is concerned, the short term liquidity position of the company is sound. The company has sufficient current and quick assets to pay the current liabilities. The stock turnover ratio of the company is not so sound. The company needs to monitor inventory management policies.

The return on equity is depicting a decreasing trend, whereas net profit margin is improving. So, directors of Britannia Industries Ltd. can focus on buyback of shares that will also prevent dilution of control. The company needs to strictly monitor their inventory policy. Britannia Industries Ltd. needs to come with alternative inventory policies for example just in time inventory policy etc. The company needs to give a discount or write off the stocks to get rid of the huge amount of unsold stock.

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FINANCIAL LITERACY A FORWARD TO FINANCIAL EMPOWERMENT: AN EMPIRICAL STUDY ON ACADEMIC SECTOR IN KOLKATA

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Abstract:

Financial literacy is the summation of financial knowledge, financial attitude, financial behaviour, and financial skill of an individual. In the modern era the financial market becomes too complex and offers so many complex financial instruments, in this situation financial knowledge is the ultimate weapon that helps an individual to understand the financial market and its offering and to take the rational decision of investment. It ensures planning for a financially secure future. Financial literacy is also known as personal money management which not only helps us to understand financial risk and return but also helps us to protect us from any financial fraud. This paper basically focuses on some demographic factors like age, gender, marital status, monthly income, stream of education, educational qualification, and their impact on financial literacy. While assessing the financial literacy level of the respondents it has chosen eight financial literacy variables and assessed the literacy level in all the segments.

Key Words:

Financial Literacy, Financial Risk, Financial Planning, Money Management

1. Introduction

In the twenty-first century a huge chunk of the Indian population is facing trouble while making a financial decision as the financial market becomes too complicated and offers a variety of financial products that are complex in nature than earlier days. Financial knowledge popularly known as financial literacy is the only weapon for overcoming these problems. In order to understand the risk and return which is associated with complex financial products, financial literacy is mandatory. Financial literacy depicts the ability to understand financial information and also helps in making relevant personal financial decisions like saving, investing, budgeting, cash management, debt management, risk management, planning, etc. It helps people to understand different financial principles, financial products like bank accounts, savings, and investment plans, etc. Financial literacy is nothing but the skill and perception about personal management of financial resources which ultimately helps to achieve financial empowerment. Financial empowerment refers to basic knowledge that may require financial planning and decision making. It provides twin benefit of protecting an individual from financial frauds as well as ensures planning for a financially secure future. Financial literacy gives consumers the necessary knowledge, skill, and power which are required to assess the suitability of various financial products and investments available in the financial market. Financial education becomes an important life skill for everyone, in fact, changing the financial scenarios. Financial education helps to achieve financial literacy through financial empowerment which ultimately enhances financial planning. "As a complement to financial inclusion and financial consumer protection, financial education is also important to restore confidence and trust in financial markets, and can support financial stability." (OECD, 2015). So it can be said that financial literacy is the prerequisite of financial empowerment and inclusive economic growth of the country. In 1787 John Adams felt the need for financial literacy while dealing widespread financial distress in America. For a healthy financial system financial literacy is considered a key pillar. In the modern arena it grabs the attention of several groups like policymakers, financial regulators, and government. It helps common people to enhance their understanding of financial matters which ultimately helps them in processing that financial information and to make effective decisions. Financial literacy plays an important role in poverty reduction by developing basic skills and knowledge relating to money management. It also helps individuals in handling their risk of the operation. It also helps in promoting a healthy saving and investing habit, reducing impulsive spending habits.

2. Literature Review

Marriott & Mellett (1996) depicted in their study that financial literacy does not

mean that a person would able to take the right decision regarding the financial matters as that person may not be familiar with the particular financial instrument regarding which he/she might make the decision.

Mason & Wilson (2000) tried to explore the actual meaning of the financial literacy. They came out with the idea that financial literacy and financial awareness are not similar in their way. They also found that building adequate concept was totally ignored whereas financial literacy was encouraging among the individuals.

Worthington (2006) shown that stress is the resultant feature of financial illiteracy. He also suggested that it was very common in low-income families however there is no evidence to suggest that these low-income families are financially illiterate. This financial stress could be related to many social issues such as unemployment, large families, poor economic situation, etc.

Samy et al. (2008) focused on the optimal use of the natural network as a sensitivity modelling tool for understanding the financial literacy of the Australian youth with respect to their financial knowledge. Their intention was not to explore the skill of youth in order to measure the financial literacy but to put light on the basic financial knowledge of the key product that is common to the youth of Australian society.

West (2012) observed that a financially literate person not always demonstrate sound financial behaviour. He put light on the objective of the literacy campaign that is not only restricted in creating awareness but also focused on psychological biases and limitations that as a human being they cannot easily avoid.

Bhushan & Medury (2013) said that the overall financial literacy level of respondents is not very high. Financial literacy level gets affected by employment status, nature of work, income, age, gender, educational qualification, etc. They also added that government employees are not that much financially literate in comparison to the private employees. The geographical boundary does not have a significant impact on financial literacy.

Hossein et al. (2014) stated that the discipline of education, qualification, and income has no statistically significant relationship with financial literacy whereas other demographic factors like age, gender has a relationship with financial literacy which is statically significant. They also observed that administrative employees possess a higher level of financial literacy than other employees.

Rohini et al. (2015) found that the major source of financial information to the villagers are their friend, relatives, colleagues, business correspondents, bank staff, etc. They also addressed that banks should take suitable initiative and trained

their staff so that they can play a vital role while creating awareness of financial products and services in the mind of the villagers. In village smart card banking needs to be encouraged as most of the customers are workers of MGNREGA.

Umamaheswari & Krishnan (2016) concluded that in India overall financial literacy rate is not satisfactory. For making a worthy investment they need proper training and awareness campaign. Most of them do not maintain a proper record of cash flows and they don't prefer to follow an adequate budget. They also added that they don't have sufficient knowledge regarding the usages of various financial products.

Garg & Singh (2017) concluded that financial literacy is a basic understanding of financial matters and application of these to make relevant and adequate financial decisions. He also observed that educational qualifications significantly related to each other. They also added that for a highly qualified person, gender, marital status, age, residential status does not have a significant influence in their financial decision. They also suggested the need for organizing financial literacy-related programs that may boost the financial literacy level.

Nichlavose & Sruthi (2017) Studied that the benefit of financial literacy is not only restricted to individuals but also it spread its wings in societal and macroeconomic level. They also added that national, regional, public and private initiatives

should be required to create awareness in the society which may lead to a better understanding of the financial risk associated with various financial products, adequate savings schemes, insurance programs, and financial education.

Jayanthi & Rau (2017) concluded that there is a strong association between financial literacy and the spending behaviour of the people. Those who have a low level of financial literacy spend more and vice versa. Demographic factors like age, gender, occupation, annual income, education, etc. are the factors that influence financial knowledge.

Dinesha (2018) investigated in the study that in comparison to the rest of the world, India has a poor financial literacy rate. Financial illiteracy creates a burden upon India via the higher cost of financial safety and lesser socio-economic prosperity. Unproductive investment is the result of a lack of awareness regarding financial instruments. He observed that financial knowledge enrich common people's ability that ensure a healthy economic situation of their family.

Lusardi (2019) stated that not only in developing countries but also in so many developed countries, having well developed financial market lack of financial awareness is the acute concern and need to take immediate action. It also suggested in this study that in modern world financial literacy should be treated as important as basic literacy.

3. Objectives of the Study

This study has undertaken to observe the growing popularity of financial literacy and its impact on personal money management. The general objective is to analyse the impact of financial education upon understanding financial information, taking financial decision making, planning for a financially secure future. In specific terms some of the objectives may be enumerated as follows:

- To see the demographic profile of the respondents and their perception of financial literacy

- To assess the financial literacy level of the employees in the education sector using different literacy related variables

- To examine the effect of various demographic factors on financial literacy level

4. Research Methodology

The present study is exploratory and empirical in nature. Data has been collected exclusively from the employees of the education sector of Kolkata. This study considered 72 teaching staff, 30 administrative officers, 22 accountants 41 management staff of education sector belonging in three different streams viz., science, commerce and arts. This study is based on information available through a structured questionnaire put across the selected sector of Kolkata. For collecting primary data questionnaire was formed with the help of a various expert and after several rounds of a pilot survey it was finalized. The total time taken for the whole process of data collection was nearly six months from July to December 2019.

Most of the respondents were contacted either personally or through a mailed questionnaire. A stratified sampling technique was adopted with each discipline of education being treated as a stratum. Further quota sampling was applied in each stratum for data collection through the structured questionnaire.

The collected data has been analysed through the SPSS package by using different statistical tools (viz., descriptive statistics, testing of hypothesis, analysis of variance, etc.). Some other qualitative data analysis techniques (scaling techniques) have also been adopted to extract the relevant information from raw data and that are interpreted properly for conclusions of the study.

For measuring financial literacy among the respondents, eight variables related to financial literacy have been considered. They are as follows:

General Financial Literacy: It depicts basic financial management i.e., day to day money management knowledge and skill. This is the most important and starting point of this study where information regarding spending habits, purchasing power of money, time value of money, per capita income, gross national income, net national income, APL, BPL,

budget, financial goal of the respondents have been examined.

Saving & Borrowing Related Literacy: This literacy variable provides sufficient financial knowledge in saving and borrowing region. It assessed spending, borrowing and saving behaviour of the respondents. It consists of ideas about the formal and informal financial systems, financial institutions, bank rates, interest rates of the various financial institutions, offers documents, EMI, etc.

Banking Related Literacy: This financial literacy variable focused upon the banking habit of the individual. For this purpose this segment consists of various questions which are based on awareness of different types of banks, different interest rates, regulatory body i.e., RBI, basic function say accepting deposit and granting loans, advances functions like discounting, remittance, credit instrument facilities, consultancy service, playing the role of the grantor, etc.

Postal Savings Literacy: Post office is the oldest pillar of financial inclusion, that's why it is considered as an important determinant of financial literacy of the respondents. In this section knowledge of the respondents regarding post office savings account, Post Office Monthly Income Scheme (POMIS), Kishan Vikas Patra (KVP) and investment through it in Post Office, e-payments, Money Order facility, ATM and cheque book facility, Postal Life Insurance policy,

International money transfer facility, etc. have been tasted.

Insurance Related Literacy: Insurance-related knowledge of the respondents are assessed in this part through various question such as basic idea about insurance, the purpose of buying an insurance policy, whether purchase insurance is to protect them from sustaining a future loss, different types of insurance like Life Insurance, General Insurance, and Medical Insurance, Micro Insurance, Agricultural Insurance, etc.

Investment Related Literacy: Investment-related knowledge of the respondents was examined here. It consists of several questions regarding knowledge of money market, capital market, mutual fund, FDI, FPI, SIP, gold bond, types of investors like risk seeker, risk-averse, etc.

Stock Market Related Literacy: It provides knowledge to understand the stock market and its different components. The stock market, IPO, FPO, book building process, blue cheap company, SENSEX, NIFTY, etc. have been focused on stock market literacy variables. It tries to assess the stock market-related knowledge of the respondents.

Taxation Related Literacy: Taxation relating knowledge of the respondents like their knowledge regarding the taxation system of India, present tax slab, exemption, deduction, relief, GST, etc. have been focused under this financial literacy variable.

5. Data Analysis and Findings

In this section data have been analysed from the responses received through a questionnaire of 165 of the education sector in Kolkata. The section contains the general profile of respondents, the literacy level of the respondents among different financial literacy-related variables, different variables measuring financial literacy, and their dependence on various demographic factors.

5.1 General Profile of Respondents and their Perception of Financial Literacy

165 respondents (55 from each stream) belonging in three different streams of education i.e., science, commerce, and arts are chosen for the study. This study considers graduation as minimum educational qualification.

Table 1: Demographic Profile of the Respondents

Demographic Characteristics	Class	Frequency	Percentage
Age (Years)	21-30	33	20.00
	31-40	50	30.30
	41-50	35	21.21
	Above 50	47	28.49
	Total	**165**	**100**
Gender	Male	93	56.36
	Female	72	43.64
	Total	**165**	**100**
Educational Qualification	Graduate	97	58.78
	Post Graduate	43	26.06
	M.Phil./Ph.D.	25	15.16
	Total	**165**	**100**
Discipline of Education	Science	55	33.33
	Commerce	55	33.33
	Arts	55	33.34
	Total	**165**	**100**
Monthly Income (Rupees)	Up to 10,000	37	22.42
	10,001-25,000	57	34.55
	25,001-50,000	40	24.24
	50,001-75,000	20	12.12
	75,001-1,00,000	11	6.67
	Total	**165**	**100**

The demographic profile depicts that 56.36% respondents are male and 43.64% of the total respondents are female. 30.30% of the total respondents belong to 31-40 age bracket followed by 28.49% of respondents of the above 50 age group. It is also cleared that 58.78% of the respondents are graduate followed by 26.06% postgraduate and 15.16% of respondents who are having M.Phil./Ph.D. It also observed that 34.55% respondents are falling under that Rs.10,001-Rs.25,000 monthly income group, whereas only 6.67% respondents belong to 75,001 to 1,00,000 monthly income slab.

Table 2: Financial Literacy and Age of Respondents

Age (Years)	21-30	31-40	41-50	51 & above
No of Respondents	**33**	**50**	**35**	**47**
Literacy Variable	**Mean Score**			
General	3.4264	3.3029	3.4714	3.4863
Saving & Borrowing	3.1347	3.1222	3.3968	3.0946
Banking	3.5510	3.5964	3.5870	3.6596
Postal Savings	3.1650	3.3378	3.2508	3.3168
Insurance	2.9182	2.7160	3.1086	2.9383
Investment	3.2182	3.1640	3.1514	3.1064
Stock Market	2.5405	2.7667	2.7762	2.6312
Taxation	3.0110	3.2200	3.0675	3.1238

The above table shows the mean values of all Literacy Variables varies strongly with age. Irrespective of age, people possess basic knowledge in banking and postal savings, on the other hand, they possess less knowledge in stock market and insurance-related literacy variables.

Table 3: Financial Literacy and Gender of Respondents

Gender	Male	Female
No of Respondents	**93**	**72**
Literacy Variable	**Mean Score**	
General	3.3833	3.4573
Saving & Borrowing	3.1935	3.1512
Banking	3.6217	3.5795
Postal Savings	3.3202	3.2253

Insurance	2.8677	2.9486
Investment	3.1204	3.2014
Stock Market	2.6219	2.7662
Taxation	3.1232	3.1124

The above table reveals that financial literacy varies strongly with gender. It can be observed that females are more financially literate in insurance, investment and stock market segment. It reveals that women empowerment and independent financial decision making power of women in the twenty-first century. On the contrary banking and saving borrowing segments male respondents are having more financial knowledge.

Table 4: Financial Literacy and Education Qualification of Respondents

Educational Qualification	Graduate	Post graduate	M.Phil./Ph. D.
No of Respondents	**97**	**43**	**25**
Literacy Variable	**Mean Score**		
General	3.3549	3.5465	3.4257
Saving & Borrowing	3.1317	3.2972	3.1333
Banking	3.5455	3.7125	3.6400
Postal Savings	3.2543	3.3307	3.2844
Insurance	2.8299	3.0884	2.8680
Investment	3.1732	3.1884	3.0320
Stock Market	2.6856	2.7907	2.5000
Taxation	3.1246	3.1205	3.0909

From the above it is observed financial literacy varies with educational qualification. It has been observed that post-graduates are in better position with respect to their financial knowledge and literacy level followed by M.Phil./Ph.D.

Table 5: Financial Literacy and Discipline of education of Respondents

Discipline of Education	Science	Commerce	Arts
No of Respondents	**55**	**55**	**55**
Literacy Variable	**Mean Score**		
General	3.7416	3.4883	3.0169
Saving & Borrowing	3.4990	3.3293	2.6970
Banking	3.7554	3.7851	3.2694

Postal Savings	3.2222	3.4929	3.1212
Insurance	2.4073	2.8836	2.4182
Investment	3.0982	3.0655	3.3036
Stock Market	2.6152	3.1000	2.3394
Taxation	2.0281	3.3587	2.9686

From the above it has been observed that irrespective of the stream of education people are having basic knowledge in general financial literacy, banking literacy and postal saving literacy that reveals their basic financial awareness. In saving borrowing segment lack of awareness found among arts backgrounders. The respondents from commerce have strong knowledge in the stock market and taxation segments.

Table 6: Financial Literacy and Monthly Income of Respondents

Monthly Income (in Rupees)	Up to 10,000	10,001-25,000	25,001-50,000	50,001-75,000	75,001-1,00,000
No of Respondents	37	57	40	20	11
Literacy Variable	Mean Score				
General	3.3243	3.4073	3.3768	3.5393	3.6818
Saving & Borrowing	3.0271	3.2593	3.1167	3.2278	3.2020
Banking	3.4226	3.6156	3.6455	3.7591	3.7107
Postal Savings	3.1321	3.3450	3.2167	3.4333	3.3737
Insurance	2.7784	2.9123	2.8675	3.0000	3.2273
Investment	3.2054	3.1246	3.2325	3.0500	3.0636
Stock Market	2.5045	2.7485	2.6167	2.8667	2.8788
Taxation	3.0246	3.1786	3.1023	3.1727	3.0826

It has been found that irrespective of monthly income there is a little awareness regarding stock market literacy. In most of the cases insurance and investment literacy varies directly with monthly income of the respondents.

5.2 Financial Literacy Level of the Respondents

In this study financial literacy-related variables and corresponding attributes have been measured with the help of a bipolar scale (1-2-3-4-5). Two extreme ends of scale 1 signify extremely low financial literacy level and the other end of the bipolar scale 5 signifies extremely high financial literacy level. To measure

the financial literacy level of the respondents it considers eight financial literacy-related variables which are

discussed in detail in the research methodology portion.

Table 7: Reliability Statistics

	General Financial Literacy	Savings & Borrowing related Literacy	Banking related Literacy	Postal saving related Literacy	Insurance related Literacy	Investment related Literacy	Stock market related Literacy	Taxation related Literacy
Cronbach's Alpha	0.862	0.786	0.853	0.609	0.857	0.551	0.905	0.583

Cronbach's alpha coefficient confirms the internal consistency of the set of items of a given scale. In general, any value greater than 0.50 is desirable under the Cronbach's alpha. The above value of Cronbach alpha ensure that the internal consistency of the dataset is satisfactory.

literacy levels. It can be concluded that a major part of the selected respondents are literate with respect to general financial literacy. They have a basic idea about Risk and return, per capita income, the purchasing power of money, time value of money, healthy spending habits, etc.

Table 8: General Financial Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	00	00
Medium	35	21.2
High	118	71.5
Very high	12	7.3
Total	**165**	**100**

To measure general financial literacy 14 attributes have been considered. It is clear from the above table that 71.5% respondents are having a high level of general financial literacy followed by 35 and 12 respondents who are having medium and very high general financial

Table 9: Savings & Borrowing Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	00	00
Medium	62	37.6
High	100	60.6
Very high	3	1.8
Total	**165**	**100**

In this section 9 attributes have been framed for assessing saving & borrowing related literacy. Savings & borrowing related literacy level is satisfactory of the respondents. 60.6% of them having a high literacy level while 37.6% possess a medium level of saving &borrowing literacy. It is observed that respondents are

conscious as well as rational while taking decisions and they have been considered a lot of factors while investing and borrowing funds in their personal as well as professional life. They have the basic idea of interest rate prevails in different financial institutions. They also know the simple and compound interest rates. Before investing they prefer to compare not only risk and return but also time value of money.

Table 10: Banking Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	00	00
Medium	13	7.9
High	150	90.9
Very high	2	1.2
Total	**165**	**100**

In this segment 12 attributes have been taken for measuring the banking literacy level. Majority of the respondents having a satisfactory level of banking literacy. A bank is one of the important pillars in the arena of financial inclusion, so without banking literacy financial literacy cannot be completed. As per the above-mentioned result it is satisfactory that most of the respondents having proper knowledge of banking, they have clear-cut ideas regarding the primary banking activities (i.e., accepting saving and granting loans) and other services like discounting, remittance, collection, and

payment of credit instruments facilities, etc.

Table 11: Postal Saving Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	00	00
Medium	35	21.2
High	130	78.8
Very high	00	00
Total	**165**	**100**

Here 9 attributes have been selected for examining postal saving literacy. One of the oldest financial institutions is the post office and in financial inclusion it plays an important role in serving people who are deprived of the formal financial systems. So this study considers postal saving related literacy as one of the important components of financial literacy. 78.8% respondents in spite of having various financial institutions they are aware of different investment schemes. They have ideas regarding Post Office Monthly Income Scheme (POMIS), Kishan Vikas Patra (KVP), recently launched e-payment, International money transfer facility, etc.

Table 12: Insurance Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	00	00

Medium	108	51.7
High	97	46.4
Very high	4	1.9
Total	**165**	**100**

In this segment 10 attributes have been considered. Being augmented product people have less knowledge regarding insurance, which also reflects in our result, majority of the respondents i.e. 51.7% possess a medium level of financial literacy in this segment. Some of them treat it as mare investment tool. A general idea of buying a life insurance policy is to reduce tax liability and protect any future loss. 1.9% respondents' have vivid knowledge regarding all types of insurance and the pros and cons of these.

Table 13: Investment Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	1	0.5
Medium	70	33.5
High	137	65.6
Very high	1	0.5
Total	**165**	**100**

For measuring investment related literacy, 10 attributes have been considered. 65.6% respondents are having a high degree of financial literacy in this segment, it reflects that they are aware regarding various investment opportunities, risk, and returns associated with the investment,

FDI, FPI, credit rating score. 33.5% respondents have a medium level of literacy in this segment, they have the basic ideas, they prefer to invest their hard earn money in the capital market through a mutual fund.

Table 14: Stock Market Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	1	0.5
Medium	126	76.4
High	32	19.4
Very high	6	3.6
Total	**165**	**100**

Here 6 attributes have been selected for assessing the stock market-related literacy. The majority of the respondents are having medium stock market literacy levels. They have the basic idea but they are not that much sound in this segment. Commerce people followed by science and arts have comparatively high literacy in this segment. As they do not possess sound knowledge they prefer to keep their money in financial institutions like banks, post offices, etc. 19.4% respondents have high literacy level, among them it has been found that some respondents from commerce background have sound knowledge of the capital market, they prefer to invest their money in the capital market.

Table 15: Taxation Related Literacy of the Respondents

Literacy level	Frequency	Percentage (%)
Low	00	00
Medium	66	40
High	99	60
Very high	00	00
Total	**165**	**100**

In this segment 11 attributes have been considered while examining the taxation related literacy. It has been observed that 60% respondents have sound knowledge in the taxation system of the country. They are fully aware of the pros and cons of newly introduced indirect tax i.e. GST. They often check their shopping bills to know how much they are paying as SGST and CGST. They have sufficient ideas regarding professional tax, service tax, and entertainment tax. Commerce people compare to other steam know the distinction of exemption, deduction, and relief. More or less all of the respondents are aware of the current tax slab and various tax rates.

5.3 Variation of Financial Literacy Variables with respect to Demographic Factors

In this subsection the dependency of the financial literacy variables on age, gender, educational qualification, the stream of education, and monthly income have been studied.

Table 16: Variation of Financial Literacy Variables with Age, Gender and Educational Qualification

Literacy Variables	Age		Gender		Educational Qualification	
	F-value	P- value	F- value	P- value	F- value	P- value
General	2.195	.091*	1.463	.228	3.710	.027*
Saving & Borrowing	3.455	.018*	.323	.570	1.959	.144
Banking	.751	.523	.649	.422	4.074	.019*
Postal Savings	3.120	.028*	4.835	.029*	1.134	.324
Insurance	3.714	.013*	.855	.357	3.360	.037*
Investment	.713	.546	2.331	.129	2.016	.137
Stock Market	1.204	.310	2.112	.148	1.671	.191
Taxation	6.153	.001*	.080	.777	.193	.824

*Indicates significant at 0.05 level

From the above table it is clear that there is a significant association which is statistically significant between age and general financial literacy, saving &

borrowing related literacy, postal saving related literacy, insurance, and taxation related literacy. It can be concluded that financial literacy varies significantly with the age group of the respondents at a 5% level of significance.

It is also observed that there is a significant association between gender and postal saving related literacy. So it can be concluded that postal saving literacy which is one of the important components of financial literacy varies

significantly between males and females at a 5% level of significance.

From the above table it can be said that there is a significant association which is statistically significant between educational qualifications, general financial literacy, banking, and insurance-related literacy at a 5% level of significance. Therefore it is clear that graduate, postgraduate, and M.Phil./Ph.D. having significant variation with financial literacy.

Table 17: Variation of Financial Literacy Variables with the Discipline of Education and Monthly Income

Literacy variables	Discipline of Education		Monthly Income	
	F- value	P- value	F- value	P- value
General	8.670	.000*	2.474	.047*
Saving & Borrowing	9.388	.001*	1.117	.351
Banking	5.344	.001*	4.668	.001*
Postal Savings	8.194	.000*	6.519	.000*
Insurance	9.077	.001*	1.615	.173
Investment	8.719	.001*	1.540	.193
Stock Market	6.567	.000*	1.700	.153
Taxation	8.805	.001*	2.740	.031*

*Indicates significant at 0.05 level

From the above table it has been observed that there is a significant association which is statistically significant between discipline of education and financial literacy. Commerce backgrounder people are more financially literate followed by the respondents having science and arts background. Financial literacy varies

significantly with the stream of education at a 5% level of significance.

It is also observed that the monthly income of the respondents varies significantly with banking-related literacy, general financial literacy, postal savings, and taxation related literacy at a 5% level of significance.

6. Concluding Observations

Broadly this study has highlighted financial literacy as an important tool for financial empowerment. Financial empowerment refers to basic knowledge that may require financial planning and decision making. Without financial literacy financial empowerment is just impossible. Specifically this study focused upon the influence of various demographic factors on financial literacy and it also assessed the financial literacy level of the respondents among eight different financial literacy-related variables.

It can be said that financial literacy varies strongly with various demographic factors such as age, the discipline of education, and gender. Financial literacy does not vary directly with the educational qualification and monthly income of the respondents. It can be observed that irrespective of age and discipline of education respondents possess basic financial knowledge in the banking and postal saving section, on the other hand due to lack of awareness they possess less financial knowledge in the stock market and insurance-related literacy variables. In saving borrowing segment lack of awareness found among arts backgrounders. Whereas commerce background people have strong knowledge of the stock market and taxation literacy-related variables. It is also found that female respondents have adequate financial knowledge in investment and stock market rather than male respondents. Most of the respondents consider lots of factors before making financial decisions. It can be said that people having basic financial knowledge that may reveal their financial awareness.

It can be concluded that the overall financial literacy level of the academic sector of Kolkata is satisfactory. The level of financial literacy gets affected by age, gender, and the discipline of education. The results depict that the financial literacy level varies significantly among the respondents based on various socio-economic and demographic factors. It also shows that respondents are still not having sufficient financial knowledge regarding insurance and investment in the stock market.

It is also noted that financial knowledge solely depends upon financial awareness which ultimately boosts financial empowerment. Financial empowerment is the process through which an individual can control the economic resources and ability to make a rational financial decision. Financial awareness is only possible with proper financial education programs and awareness campaigns as a result financial empowerment may be achieved. It can be concluded that financial literacy and financial empowerment moves in the same direction. Various demographic factors say age, gender, educational qualification, discipline of education broadly influence financial literacy as well as financial empowerment. On the contrary more awareness campaign is required on insurance, stock market, and investment

so that proper financial empowerment is achieved through the channelization of ideal savings into adequate investment.

However during last few years digitalisation has affected individuals as well as each sector of our economy. In recent time with the digitalisation of financial market, Digital Financial Literacy has become a burning issue that need to be taken care off. Digital Financial Literacy is the combination of financial literacy and digital platform. Digitalisation of financial market ensures broad-based financial inclusion by offering easily accessible digital financial alternatives such as mobile banking, e-banking, payment bank, digital wallet etc. By offering customised financial products and services digitalisation pave the way to enhance the proficiency of money management skills that helps to reduce financial fraud. In recent time it can be observed that COVID 19 pandemic is giving rise to worldwide economic crisis. According to International Monetary Fund (IMF) "the global economy is expected to shrink by over 3% in 2020 – the steepest slowdown since the Great Depression of the 1930's". In this hard time financial literacy and financial empowerment may be used as one of the weapon to cope up with this financial distress.

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A STUDY ON ROLE OF INDIAN RAILWAYS TO COMBAT COVID -19 PANDEMIC

Abstract

The nation was forced to go under lockdown to control the spread of coronavirus from 22nd March, 2020. The entire world is the witness of the miserable impact of the COVID-19 pandemic. The travelling industry was no exception of this. Indian Railways being one of the most important medium of travelling and transporting have supported the nation to combat COVID-19 in every

suspended the passenger trains and long distance trains to ensure the health and safety of the nations, but continued the services of goods train to transport essentials commodities including medical equipment to various corners of the nation. This paper focuses on the role of Indian Railways to combat COVID-19 pandemic with the help of secondary data collected from various sources.

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1. Introduction:

The unprecedented threat from COVID-19 pandemic caused by SARC-CoV-2 virus which was for the first time identified in Wuhan, a Chinese city in December 2019, and the exponential growth of this disease observed throughout the world. World Health Organisation has declared COVID-19 disease as a pandemic on March 2020. This pandemic has created a world-wide public health emergency situation and to protect the human being WHO recommended use of mask, sanitizers, take the necessary personal hygiene measures, to maintain the social distancing norms strictly.This pandemic has greatly affected social and economic activities, so many rigid rules and restrictions have been implemented in the new normal era to curb the exponential growth of this pandemic. On 22nd March 2020, India has declared a nation-wide lockdown. Except essential services, other socio-economic activities has been stopped in this lockdown. As a result many organisation specially travel and tourism sectors were on the moratorium. This global pandemic immensely changed the socio-economic conditions, healthcare system, demographic condition, physiological resilience of the people.

At this pandemic situation nation lifeline i.e. Indian railways came forward and for the first time since its existence suspended passenger transportation services to evade the spread of virus. Keeping in the view of mass welfare Indian Railways suspended the service of all passengers, express and premium trains till 3rd May, 2020.However it continues the operation of cargo trains to ensure the supply of essential commodities, food grains and medical equipment etc. which are required by

household and industries on daily basis. Indian Railways utilised the lockdown period to train their staff so that they can handle the pandemic safety. For all their stakeholders Indian Railways organised several awareness campaign. The Indian Railways used its manufacturing facilities and successfully prepared and distributed PPE kits, sanitizers, masks etc. among their staff and general public to protect them from the outbreak of pandemic. The coaches of the trains and railways hospitals were converted in isolation centre to accommodate the rising number of COVID cases. During the critical situation Indian railways support the supply chain of the country, successfully transported medical equipment, life savings drugs, food items, other essential commodities etc. in different parts of the country. Indian Railways feed over 1,70,000 poor and helpless people till April 20 as a part of social service commitment. During this global health crisis when there was shortage of accommodation in hospitals, Indian Railways converted its' sleeper class coaches into the isolation centres with all the necessary facilities like oxygen, space for medicines, sanitized surface, dustbins, bathroom etc. to handle the contingency.

2. Review of literature:

Mishra (2020) focused on impact of banning of passenger trains and travel on the internal revenue of Indian Railways. He also added that during pandemic Indian railways forced to ban their passenger train service for restricting the spread of corona disease which affect the revenue but helps in improving the operating ratios. During lockdown Indian Railways was operating special parcel trains to carry essential goods, medical equipment, e-commerce items etc. that ultimately contribute in freight revenue. It also observed that the downward trend in revenue growth adversely affect the infrastructural investment ability of Indian Railways.

Rao & V.T (2020) stated that Indian Railways have taken all possible measures to combat against the ongoing pandemic in the country. At the initial phase of lockdown to prevent the nation from corona virus and its ill effects Indian Railways for the first time

This global pandemic immensely changed the socio-economic conditions, healthcare system, demographic condition, physiological resilience of the people

compels to halt the passengers' trains but continues the operation of various special trains to transport the essential commodities and medical equipment in the various part of the country.

Sharma (2020) examined the significant impact of COVID-19 on Indian economy. During lockdown due to strict restrictions connectivity supply chain was highly affected. At this global pandemic Indian Railways operated time table parcel trains, special trains to transport the essential commodities like food grains, milk, vegetables, medical equipment across the country, so that the common people can get all the necessary items and maintain their livelihood. This paper also added that Indian Railways feed people at starvation during the COVID-19 pandemic.

Srivastava et al. (2020) observed a long term impact of COVID-19, it does not restrict only in healthcare but also spread its wings in various socio-economic aspect across the globe. This pandemic situation has caused various physiological disorder such as stress, tension, anxiety, depression, anger among people. Lockdown magnifies the physiological issues because of constant fear of affecting by the corona virus, isolation, discrimination and social stigma, rumours about this illness, disruption of social lives, economic uncertainty etc.

Velmurugan et al. (2020) found that common people looking for sustainable mobility solution with limited exposures in the pandemic. They throw light on the consequences of travelling behaviour of the people during lockdown and unlocking phases and also concluded regarding the safety measures taken by railways, air-transport etc.

3. Objectives of the study:

Primarily this study put stress on the contribution of Indian Railways to combat COVID-19 pandemic. Different initiative of Indian Railways are analysed to draw the conclusion of the study. The aim of this study is three-fold:

1. To assess the social contribution of Indian railways during COVID-19 pandemic

2. To explore the precautionary measures taken by Indian railways during pandemic

3. To summarise the operation of Indian Railways in the different phase of lockdown and unlock during pandemic.

4. Research methodology:

The present study is exploratory in nature. Data is collected from annual report of Indian Railways, various publications of Ministry of Indian Railways. Moreover, available information on this context published in different journals, books, magazines, dailies and websites has also been taken into consideration for the study as secondary source.

5. Descriptive study:

5.1 Social contribution of Indian Railways during COVID-19 pandemic:

Swift and Efficient Transport of Utilities: During lockdown when movement were restricted to protect the nation from the spread of corona virus Indian Railways came forward with Swift and Efficient Transport of Utilities (SETU) to ensure nationwide circulation of essential commodities other than goods through time-table parcel trains and ensured the parity in demand and supply of commodities in the market

RO-RO facilities: To combat with this COVID-19 pandemic and improve the unstable economic condition of the country Indian railways has upgraded its transportation and carried loaded trucks by RO-RO (Roll on-Roll off) facilities which ultimately ensures faster and effective supply of essential commodities in the various corner of our country.Form 24.03.2020 to 22.05.2020 Indian railways operated

more than 23.2 lakhs of wagons, out of which 13.5 lakhs of wagons carried essential commodities like food grains, milk, edible oil etc.

Transportation of food grains, distribution of free meals and water bottle: To ensure prompt transportation of food grains and essential goods to the different part of the country, Indian Railways is operating zone basis "Annapoorna trains" which is a combination of two food-grains loaded trains. With the cooperation of railways staff and other government departments and NGO's IRCTC has distributed food packets from its kitchen to the needy people who resides in the surrounding areas of the various stations across the country. Over 4.7 million free meals served till 22.05.2020 to feed people at starvation during the pandemic. IRCTC also distributed Rail Neer water bottles to the policeman who are posted in road nakkas to combat against COVID.

Parcel trains: During lockdown through Parcel trains a company or a person can easily transport various items such as e-commerce consignments, fruits, vegetables, medicines, medical equipment, seeds, eggs, milk, dairy products, packaged food items, stationary etc. to meet the supply of these items across the country. From March to May 2020 for transporting essential commodities, medical equipment Indian Railways run 3,255 parcel trains over 89 routes, out of which 3,160 were time-table trains.

Sharamik special trains: 3840 Shramik Special trains have been operationalized by Indian Railways for Migrant labour to bring back them to their home from various states across the country. Through these trains more than 52 lakhs migrant labour moved across the country. Indian Railways distributed free meals to 85 lakhs and free drinking water to 1.25 crore passengers who were travelling in these trains.

Production of PPE kits, masks, sanitizers and various equipment: To combat the pandemic situation Ministry of Railways utilised the manufacturing facilities of its various production units such as Rail Wheel factory, Rail Coach factory, Integral Coach factory etc. to produce the essential items such as PPE kit, masks, sanitizers, simple hospital

During lockdown when movement were restricted to protect the nation from the spread of corona virus Indian Railways came forward with Swift and Efficient Transport of Utilities (SETU) to ensure nationwide circulation of essential commodities other than goods through time-table parcel trains and ensured the parity in demand and supply of commodities in the market

beds, washbasins, ventilators etc. which can be utilised for the treatment of COVID patients. Approximately 1.2 lakh of PPE kit, 1.4 lakh litres of sanitizer and more than 20 lakhs of face covers produced by Indian Railways in last year.

Converting the coaches into isolation centres: When beds were not available in the hospital across the country due to increasing number of COVID cases, at that tough time Indian Railways came forward. Coaches were furnished with medical equipment, oxygen cylinder, ventilators etc. seats are used as bed and by this way the coach have been converted into isolation centres for COVID affected patients. In fact many zonal hospitals of Indian Railways have been converted into COVID hospitals to fight against the pandemic situation. In the month of April 2020 Indian railways has moved around 1150 tonnes medical items in the various part of India.

Awareness campaign: Indian railways also arranged COVID-19 awareness campaign for passengers, employees and society as a whole through posters, video clippings, announcements, and social media, traditional media, station displays, brochures etc. This initiative

ultimately helped to educate the mass about the precautionary measures and reduced the panic a lot. Indian Railways also joined a public movement towards COVID accepted behaviour such as wearing mask, washing hand frequently, use hand sanitizers, do not touch the common surface, maintain social distancing, avoiding mass gathering etc. To break the chain Indian railways also took some measures like no blankets and curtains in transit, compulsion wearing of mask, maintain physical distancing norms etc.

Safety measures: During the pandemic situation Indian Railways had geared up its entire team to take the safety measures like sanitisation of coaches and railways stations, disinfected the seats, wash bins, toilets, doorknobs etc. and ensuring a safe travelling experience of its passengers.

5.2 The precautionary measures taken by Indian railways during pandemic:

For passengers: While entering in the railways platform thermal screening is compulsory for all passengers and only asymptomatic passengers are allowed to board. Passengers must enter the platform at least 90 minutes prior to their schedule time of journey and they are allowed the station only with the confirmed tickets. Indian Railways put compulsion on wearing of masks and maintaining physical distancing both at the station and at the train's compartments, and using Aarogya Setu App for the passengers. To combat with this pandemic Indian Railways put restrictions on travelling of Waiting list passengers, they also cancelled the unreserved coaches, provided only ready to eat food, stop providing the blankets, bed sheets during travelling. Further to discourage nonessential travel and to protect the vulnerable category from the infection of corona virus concessional booking of railways' ticket were banned barring differently abled category, students and patients since 20th March, 2020.

For employees: Since freight operation were continuing by Indian Railways during lockdown to meet the transportation of essential commodities, food grains, milk, vegetables, medical equipment to the different parts of the

country and try to maintain a parity in supply chain, so maintenance staff were working round the clock. Indian Railways took several precautionary measures to ensure the safety of their employees in the workplace, such as availability of mask, sanitizers, hand wash at the workplace for all the employees. They also maintain proper physical distancing norms at their workstations. Indian Railways also sanitized the commonly touched surface repeatedly. The overall safety measures helps in boosting the morale of the employees during the pandemic situation.

For the society: During the lockdown period Railways Emergency Cell for COVID addressed almost 13,000 queries, requested and suggestions on regular basis from five communication and feedback platform such as email (railmadad rb.railnet.gov.), social media, help lines 138 and 139, and CPGRAMS. Indian Railways responded positively almost 90% of the queries on one-to-one basis in the local language so that the caller understand it properly. Over 2,30,000 queries were answered by RailMadad helpline number 139 in the initial phase of lockdown and in the same period helpline number 138 received more than 1,10,000 phone calls.

5. Summary of Indian Railways operations during lockdown and unlock phases:

Lockdown 1: Due to the outbreak of corona virus, Indian Railways on 21st March, 2020 for the first time in its history banned its operation. Till 30th June, 2020 no passenger trains, long distance trains etc. were allowed to operate.

Lockdown 2: In order to maintain the undisrupted flow of essential goods in country's supply chain, Indian Railways continued the operation of parcel trains.

Lockdown 3: in this phase the restriction on passengers train service

of Indian Railways extended till 17th May, 2020. Shramik Special trains were introduced to ferry stranded migrant workers, students, tourist, pilgrims and others from different parts of the country to their native state.

Lockdown 4: From 21st May 2020 Indian Railways after few months of restrictions in their operation again commenced the reservations booking activities for passengers.

Unlock 1, 2: During these phase only Shramik Special trains, time table parcel trains and few long distance trains were in operation. The service of regular express trains, mail trains and other suburban trains' remains suspended.

Unlock 3: Indian Railways resumed its passenger train services from 12 September 2020 barring the service of express trains and other sub urban trains.

6. Concluding remark:

In the month of March 2020, when India was in lockdown mode to protect the nation from the outbreak of pandemic, all economic activities were shut down, restrictions were imposed upon movement of goods and passengers, social distancing norms were strictly applied, this scenario adversely affects the supply chain management of the country. Being one of the important pillar of the country Indian Railways always stood up with the country to handle the medical and socio-economic contingency. During the period of lockdown being one of the important transporting medium Indian Railways transferred essential commodities in every corner of the country. This activities ultimately supplied the much needed support in the supply chain. Besides that Railways manufacturing unit produced PPE kits, hand sanitizers, masks, ventilators, medical trolleys etc. to combat the pandemic. Railways coaches were converted into isolation centres to treat

the infected people. Indian Railways trained their officers, staffs, guards, and casual labours etc. as per the guidelines issued by Ministry of Family Welfare and Health so that they can handle the pandemic situation. It can be concluded that despite all the adverse scenario, Indian Railways have always stood with the country and set a good example by playing a significant role in the country's continuing grapple against COVID-19 pandemic. MA

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MARKETING STRATEGIES AMID COVID-19 PANDEMIC - A STUDY

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Abstract

The pandemic "COVID- 19" the acronym for coronavirus disease of 2019 brought about severe repercussions to human health and economic activity globally. It posed threat to life, people's jobs and livelihood. The social distancing measure and complete lockdown of economic activities, necessary to combat COVID-19 caused dramatic changes in businesses environment and major shifts in behavioral pattern of human being. It is important for marketing leaders to understand the impact of business interruption due to COVID and shift in consumer behavior during COVID crisis.

In this paper the behavioral pattern of consumer during the COVID-19 pandemic and impact of pandemic on marketing environment is studied. Here attempt is made to analyze how the marketers manage 4Ps –product, price, place and promotion strategically to ensure sustainability and survival during and post COVID-19 crisis.

Introduction

A strange and new type of pneumonia of unknown causebroke out in Wuhan, China in late 2019 and soon spread across the globe and was named "novel" Coronavirus.The World Health Organization declared the novel Coronavirus-19, a pandemicon 11 March 2020.The pandemic "COVID- 19" the acronym for **co**rona**vi**rus **d**isease of 20**19**, became a global threat and brought about severe repercussions to human health,life and living of people and global economic activity. The measures like social distancing and complete lockdown of economy, necessarily undertaken to control the spread of virus and to prevent loss of life due to COVID-19; hindered economic activities. Pandemic led to slow down of trade and commerce, forced closure of many businesses,unprecedented disruption of commercial activities in several sectors like hospitality, transportation,tourism, entertainment, automobile, white goods, clothing, personal services like gym, salon as demand for these ceased to exist.Several well known brands in many industries experienced enormous financial pressure. Although internet based businesses like online entertainment, online shopping, food delivery experienced unprecedented growth in this pandemic. The COVID-19 pandemic outbreak had severe economic consequences across the globe and led to dramatic changes in businesses environment, business operation and behavior of consumers. During the pandemic, retailers and brands faced challenges, like reduced consumer demand, low sales and profitability, uncertain cash flow, staggered supply chain and so on. All business enterprises no matter how established they are need to reassess their business plan to manage and operate their business prudently in the time of crisis, so as to keep their business moving during the lockdown period and post COVID period. In this paper attempt is made to analyse the changing behavioral pattern of consumerin COVID-19crisis and the strategies adopted by the marketer to ensure sustainability in the COVID-19 crisis.

Objective of Study

The main objectives of the study are:

1. To study behavioral pattern of consumer during the COVID-19 pandemic and impact of pandemic on marketing environment.

2. To analyze the marketing strategies adopted by the marketer to ensure sustainability and survival during and post COVID-19 crisis.

Methodology

This paper is an explanatory and commentary type, based on information collected from various secondary sources like journals, websites and newspapers.

In this paper the nature of marketing environment during pandemic is studied inthree phases and how the marketers manage 4Ps –product, price, place and promotion strategically to overcome COVID crisis.

Pandemic and Marketing Strategies – A Study

Pandemic Phase

The marketing environment during pandemic is studied in three phases-pre-lockdown, lockdown and unlock phase.

1. Pre-lockdown Phase

This is the period prior to lockdown; when many people across the globe got infected by an unknown disease that caused death. Pandemic was suspected and lockdown was apprehended. This created panic among the people. People were uncertain regarding the continuous availability of staple foods, beverages, medicines, household products and necessities ,started stockpiling everything while the brands of consumer products and the retailers, drug stores, were struggling to keep up with demand during lockdown.

2. Lockdown Phase

The increased number of COVID cases and uncontrolled number of death due to COVID prompted Government all over the world to initiate complete lockdown of all economic and business activities excepting the production and distribution of food, medicine and essentials to control the spread of disease. Such unforeseen lockdown caused stress and panic amongst people. People all over the world are exposed to mental stress, loss of job and financial distress due to the pandemic. Locked indoors the only priority of life was to secure life against pandemic; browsing shopping sites, comparing goods and services and shopping lost the priority. The businesses other than essentials were financially threatened, lost sales and profitability.

3. Unlock Phase

As COVID cases declined and spread of disease were under control, lockdown was lifted in phased manner. Consumers resumed normal life with several restrictions. Brands experienced slow growth of sales and profitability. Despite unlock, as the fear of contagion remained, several service sectors like transport, tourism, restaurants & hotels, entertainment continued to suffer.

Different phases of pandemic do not reveal distinct difference in consumer behavior or change of market situation.

Consumer Behaviour

Coronavirus posed threat not only to life but also to people's jobs and livelihood. A sense of insecurity, anxiety, worry, fear for loved ones falling ill and several repercussions of the pandemic became increasingly common among people. The call for social distancing led to people spending more time at home with families, instead of social interaction with friends and colleagues. Pandemic caused major shifts in behavioral trends; some of these behavior changes may be temporary, while many may be permanent; like post COVID, it is unlikely that people's digital adoption will reverse. Consumer behavior took a new shape, influencing brand choice and purchases.The consumer spending declined drastically especially discretionary types of spending in sectors like clothing, hotel, tourism, entertainment although demand for essential goods did not undergo any kind of reductions. Studies conducted by the OECD indicate that consumer expenditure declined by one third (OECD, 14 April 2020).

Marketers need to understand the new behavior of the consumers, and the circumstances that influence their behavior and brand choice; whether brand choices are made from a narrow set of preferred brands, or choices are driven by either a strong emotional relationship with brands or by short-term in-market tactics (price cuts, promotions, new range/formats, renovations, etc).

In the light of COVID crisis marketers need to re-categorise customers into relevant segments using key drivers like profitability, loyalty, sales potential, risk profile and region so as to focus their efforts towards the customers who adds value to the business. During COVID phase, it is expected that consumer's preference for brand will remain same unless competitors come up with radical innovations or grabs attention with creative marketing campaigns. Marketers should focus on strengthening the customer's loyalty by increasing payment flexibility, enhancing service delivery, ensuring clear communication and provide uninterrupted availability. During the current uncertainty, fear and worry, building emotional closeness and identifying with the personal goals, values and circumstances of consumers, demonstrating empathy towards customers, recognizing hardship of customers will play a prominent role in influencing brand choice and will help brands to be successful at the time of crisis and post crisis.Marketers need to frequently track human behavioral trends by maintaining close relationship with customers across social-media platforms, community sites, and e-commerce product pages to gain better insights of consumer's sentiment and consumption trends, look for opportunities and identify looming crisis more quickly so as to initiate right decision making and adopt better marketing strategies.

Product Strategies

During COVID crisis customers' needs have changed significantly with a surge in demand for basic necessities, hand sanitizer and mask and healthcare product and services.Hence marketers need to re-evaluate their current product and service portfolio and repurpose their capacity to fight the COVID crisis. Several companies dealing in non essential brands have shifted to delivering essential products and services like Ford, GE, and 3M partnered to repurpose manufacturing capacity and put people back to work to make respirators and ventilators to fight coronavirus; Diageo, AB InBev, repurposed their alcohol-manufacturing capabilities to make hand sanitizer. As said, necessity is the mother of invention, innovation and improved margin can emerge out of current discomfort and crisis, if marketers redefine and revamp its brand in the hour of crisis. During pandemic consumers faced the problem of shortage of supply of several products ranging from household stock, FMCGs, food essentials to medicine. Long queues at store or online product ordering with considerable long lead time for deliveries created panic among the customers, that they may not be able replenish their supply. This scarcity of product of the marketer's brand posed risk for the marketer that counterfeit products might besold as increase in the demand for essential products remains high and supplies remainlow. Hence brands need to respond to these risks by monitoring the sale and availability of their products through advertising platform by informing customers' regarding availability or non availability. Marketers of consumer goods should have the ability to meet growing demand for bulk packaging and longer-life items.

Pricing Strategies

Lockdown of economies created a range of economic problems like job loss which led to tighter budget constraints for consumers.Therefore during pandemic, price has become an important criterion of brand choice and consumers are more inclined to buy lower priced alternatives. There are several instances of price rise of essential items and complaints of price gouging during pandemic as supply chain took a hit due to panic buying, stockpiling of essentials; leading to shortages; although marketers cite the reason of increased cost of labour employment, increased cost for providing protective equipment to staff, restriction on labour movement and high transportation cost for price increase. While some brands that speciallydeal in non essentials and severely affected by pandemic like travel, retail store, transport, automobile, clothing, hospitality sector, are reported to have taken a profiteering approach by raising the prices above competitive level,cancelling discounts or offers and extracting high profit from those who need the most. The Government has taken several steps to stop price gouging to protect the interest of customers although economists pose objection against anti-price gouging laws as such laws prevent price signalling. It is also difficult to establish which price increase is illegal and which are legitimate responses to the economic disruption and market changes caused by the pandemic. As a result of price increase, buyers who value the good most, the rich and less price sensitive would be willing to pay a higher price than those who do not value the good, thus raising the prices of all similar products beyond the reach of those with less disposable income. However brushing aside the view of economist and perceived value pricing approach, it can be said that price gouging exploits the economically vulnerable section. Marketer should be able to justify that price increase is essential to maintain the increased cost due to pandemic; so as to maintain sales. Marketers should be socially responsible in setting prices and their pricing strategy should be transparent reflecting the temporary nature of the market and careful documentation of increases in cost of making and supplying products, the wholesale prices charged.Many companies on the other hand have used pricing as a key driver for demand by proactively lowering the prices of their products and services in the hour of crisis. Although in some cases price-reduction can definitely help a company to achieve its goals, but brands should consider the possible adverse impact on overall brand equity and perceived value upon short term benefit of temporary price reductions. Marketers can offer cheaper substitutes, offer unbundled product and services, can provide discounts in kind (e.g. buy 2 get 1 free, free samples, additional advice, etc.), can go low for the initial bid and then try to upsell, or introduce more advanced pricing models (e.g. pay-for-performance, subscription-based pricing, etc.), may offer flexible payment terms; so that customers are relievedand brand's are able to recover the financial crisis during pandemic.

Distribution Strategies

During pandemic marketers and retailers are facing the challenges of lockdown of shops, retail outlets and shortened trading hours. As social distancing is most important to minimize the spread of COVID-19, marketers must adopt direct-to-consumer (DTC) strategies and invest in a variety of sales channels specially e-commerce platform, online shopping virtual showrooms, conversational commerce through chatbots, video call to enable easy access for customers to order goods or services, enable interaction with customers to address customers' issuesand ensure to provide affordable goods or services along with quick delivery to customers' homes.

Promotion Strategies

Although people's priorities have shifted drastically during the pandemic and may be consumer's behavior can least be influenced by advertisement and promotion during pandemic, 'above-the-line' communication does not become irrelevant and brands cannot remain silent even in the hour of crisis. In the time of crisis too, brands must review how they can retain their prominence and attract people's attention. Marketer's promotional strategies should aim not only to drive demand and building emotional closeness but also to deliver a mix of sound short term promotional

activities that can maximize brand selection during the current market circumstances, characterized by panic and uncertainty.In this alarming environment, marketersneed to maintain a balance between responding to the current health crisis and managing their business. Therefore apart from highlighting product's and service's utility, safety and value, it is important for the marketers to disseminate brands' corporate social responsibility efforts towards COVID crisis, their effort towards spreading COVID awareness; which will be remembered by the consumers in future and will help to add brand value. Brands response towards consumers in the COVID situation, provision of goods through home delivery, liberalization of return policies, discounts, or simply the exchange of ideas initiates positivity among consumers in building brand loyalty. Brands initiative of donating to food banks, providing free products for medical personnel, or continuing to pay employees while the company's doors are closed enhances the brand's image and it is likely that consumers will appreciate and remember brands for their acts of good in a time of crisis.

Marketers should avoid opportunistic marketing tactics; and messages should truly reflect the brand's unique values, identity and positioning, or else relationships with consumers will deteriorate, and along with it, the brand's ability to succeed post-crisis. The society is striving for authenticity, support and assurance and hence marketers are expected to provide useful content in advertising and refrain from misleading advertisement and delivering forbidden or harmful content in advertisement, making inaccurate claims about their products' ability to prevent or cure COVID-19, false and fake campaigns regarding COVID- 19.

Channel planning is also crucial to successfully create, refresh and reinforce a consistent customer's mental associations with brands.As peopleare spending more time these days across multiple internetmedia, specially on social media platforms,marketers must integrate versatile digital platforms like online social media platforms and its owned digital media channels along with traditional media like TV or radioto maintain presence across multiple channel and make an impression of their brand on their audiences.

In times of crisis, public relations have become a vital communications tool for brands. Brands can maintain connection with customers through emails or posts about products or service,may participate in conversations, campaigns on pandemic. Brands public relation messages should be in consistent with their actions likebrand's message to consumers regarding extra precautionary measures to sanitize store spaces, makinghand sanitizers readily available throughout the store, taking care of their employees – but actually not following the same may adversely affect the brand's image. Brandsresponsibility towards its employees during the time of crisis along with helping customers adds goodwill to the brand.

A Snapshot of Pandemic Phases and Marketing Objectives and Strategies adopted by the marketer are presented in Table 1.

Table 1 Snapshot of Pandemic Phase and Marketing Objectives and Strategies

Characteristics	Prelockdown (apprehensive of pandemic)	Lockdown	Unlock phase
Sales	Normal	Low sales	Gradually rising sales
Profits	Normal	Declining profits	Slow growth of Profits
Consumer Behaviour	Panic buying	Optimized spending, Stockpiling essentials	Adapting new normal Stockpiling essentials
Marketing Objectives	Maintaining market share and profit.	Maintaining market share and profit, and the trust of consumers	Regaining the market share and profit.
Strategies			
Product	Healthcare, medicine, cleaning products have high demand.	Essential products have high demand. Repurposing capacity.	Demand for all kind of product resumes. Innovation of products.
Price	Cost plus pricing approach	Cost plus pricing approach and Reduced pricing approach	Discounted Pricing
Distribution	Intensive distribution	Intensive distribution Emphasis on Online distribution channel and home delivery	Intensive distribution Emphasis on Online distribution channel and home delivery
Promotion	Intensive promotion	Intensive promotion Short term sales promotion tactics.	Intensive promotion
Advertising objective	Maintaining market share and profit	Retain consumer's loyalty, maintaining market share and profit	Attract new customers and retain hard core loyal consumers

Conclusion

The unprecedented disruption of life and livelihood caused by the novel Corona virus posed several challenges for marketers. The consequences of lockdown of business activities to contain the disease are incomprehensible and complex. Marketing leaders have to understand the impact of business interruption due to COVID and shift in consumer behavior during COVID crisis. Re-evaluation of marketing strategies with respect to product, price, promotion and distribution is essential for survival and growth of businesses amid pandemic. Hence strong data and information technology based analytical capabilities, predictive models, frequently updated information can help to forecast different scenarios and in decision making. Once the world gets through this pandemic, a new and different world and business environment will emerge compared to the one before the outbreak. It is important how innovatively marketer navigates the situation and uses conventional marketing levers to align with consumer changing desire and stand out from competitors. MA

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CONVERGING ARTIFICIAL INTELLIGENCE IN INDIAN BANKING BUSINESS – AN OVERVIEW

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Abstract

The endeavour of scientists to infuse human intelligence into machine, created artificial intelligence, that enables machine to think and act like human. This technology of artificial intelligence which primarily works on machine learning and deep learning is an extension to the computer science technology and is widely adopted in various avenues and banking sector is no exception. In this paper attempt is made to analyze the extent of artificial intelligence adopted in the Indian banking sector. The study is based on content analysis of disclosure made in annual report regarding application of artificial intelligence by the 29 public and private sector commercial banks in their different business activities. The study reveals virtual interaction with customers and detection and prevention of fraud and cyber security threats are the areas where artificial intelligence is largely adopted by the banking sector.

Introduction

The scientists marked the advancement of computer science technology by creatingan intelligent machine that would replicate human brains; think, reactand work like human beings and named it artificial intelligence (AI). Artificial intelligence has spread its wings in every sphere and banking sector is no exception. This paper presents the nature and extent of adoption of artificial intelligence in the Indian banking business.

Artificial Intelligence: Concept

Intelligence is the ability to read, write and speak, learn and acquire knowledge and skill by studying, observing and by experiencing sequence of events; ability of reasoning; perception; ability to store and retrieve information from memory;comprehending complex issues and application of

skill and knowledge to solve problems.Scientists wanted to infuse the intelligence-connatural in human beings, into machine by developing computer programme that can function like human being.John McCarthy;father of Artificial Intelligence coined the termat the Dartmouth Conference in 1956 and defined it as "the science and engineering of making intelligent machines, especially intelligent computer programs".

Artificial intelligence involves developing computer programme that are capable of performing multiple tasks with greater accuracy and speed than human;and that possessvisual perception, capacity of understanding andreasoning, analyzing,decision-making, communication and speech recognition capability, and capable of performing any intelligent taskwithout human intervention on the basis of abundant information fed in the machine and by algorithm.

Artificial intelligence is a combination of many different technologies -machine learning, deep learning, natural language processing, neural networks, computer vision , intelligent automation and many others that embraces varied capabilities to the machine to think and act like human.

Artificial intelligence accomplishes task primarily through machine learning and deep learning, where the system accesses thelarge amount of data fed in the system;learn and improve from experience by sifting through data sets, by recognizing pattern which are fed in the system;and based on certain algorithm identifies multiple patterns in data, draws, assimilates and augments the patterns on its own without any set guidelines or direction.

The domain of artificial intelligence is wide and some of these are discussed here.

1. Expert System - This resembles decision making ability of human beings.It is designed to solve complex problems, decision making and advising users, by, using knowledge based ruleand data based facts fed inthe system.

2. Neural network - It is designed to enable recognition of face, character, lettersand handwritingby the computer system.

3. Natural language processing - This enables interaction between the computer system andhuman. It is based on speech recognition that aims at understanding and comprehendingwhat has been spoken by human being in natural languageand voice recognition that identifies the person who is speaking by analyzing person's tone, voice pitch and accent. It also has automatic voice output capability.

4. Computer vision - This systemenables identification, understanding, interpretation and comprehension of visual input and images on the computer such as photographs, written documents.

5. Intelligent Robots - Robots are programmable machines,capable of performing tasks given by human. All robots are not artificially intelligent like the industrial robots that arelimited to their functionalityand programmed to carry out a repetitive series of movements. If robots are required for

performing complex tasks, then that are to be made artificially intelligent to enable it to think, learn and work without human intervention, by putting in artificial intelligence algorithm into it.

Artificial Intelligence in Banking Business

Computer science technology is extensively adopted in banking business in the form of computerization of bank branches, internet banking facility, real time money transfer and core banking solution. Theevolution of artificial intelligence technology and its ample benefits have set the stage for banks to redefine their business operation by infusion of artificial intelligence technology in banking business.The areas where artificial intelligence may be applied are discussed here.

1. Customer Interface - The technology of artificial intelligence (speech, voice and video processing, text, natural language processing)is used to provide virtual customer assistance, byemploying Chatbots which are digital assistants for processing queries, addressing customer's requests ,connecting users to appropriate services and suggesting relevant information via text and voice.

2. Customised Financial Services - Banks appoint AI enabledchatbot and Robo-advisors to assist customers in personalized financial planning, by analyzing market temperament against the customer's financial goals and personal portfolio like customer's income, spendingpattern, risk appetite, expected returns on investment, and offers recommendation regarding stocks and bonds.

3. Business Strategy Insights - AI enables distinct understanding of enormous amountof unstructured and unexploited data,maintained by and available to banks and in the business environment, to set up prediction models that help in analyzing the customer's behavior, nature of market on the basis of which business plans and strategies can be framed.

4. Voice Aided Banking - Natural language processing technique of artificial intelligence can be employed to enable interaction with customer, to provide real time assistance to customer by processing queriesand can assist customers with vision problem. Speech recognition and voice recognition system employed in ATM and point of payment terminals can help to reduce fraud by distinguishing between the actual voice and voice of the fraud.

5. Lending Decisions - Artificial intelligence algorithmmay be employed to accurately assess the credit worthiness of potential borrowerand calculate credit scoresbased on complex and sophisticated rules,by performing calculation and prediction of capabilities and credibility of clients so as to ensure better financial return to the banks and thus reducing risk of default by client.AI helps in analysing loan application to evaluate loan eligibility and provide personalized optionsto the clients and help the bank to develop customized financial plans and strategies like

personalised loans, rates, etcand track the progress.

6. Digitalisation of Branches - Artificial intelligence can bring about complete digitization ofbranches and banking services leading to automation of functions likeaccount opening, fulfillment of necessary documentation, KYC norms, deposit and withdrawal of money, money transfer, update of bank statement etc. thus relieving the banks and customers from lengthy and sluggish functional processes.

7. Computer vision - The computer visiontechnology ofAIcan be used by banks for verification of signatures, face recognition using real time camera images that can help to prevent fraud at ATM and cash withdrawal terminal;for detection of fake notes.

8. Facilitating Backend Processes **-** AI is used to support backend office operationsthat involve high volume, rules based and highly organized and systematic work.

9. Detection of fraud - AI is used to monitor and preventvarious instances of fraud, cyber crime andmoney laundering.AI algorithms can identify the identity of user of credit, debit and ATM cards, draws on individual's spending patterns, checks the plausibility of client's credit card transactions in real time, and compare new transactions with previous amounts and locations and blocks the transactions if it perceives risk, thus identifying genuine transactions versus fraudulent transactions in real time, with greater accuracy.

10. Data management - The diversified form of banking activities and digitalization has made data and information essential elements of business operation. Hence automatic data management is essential for banks to achievesustenance and efficiency.

11. Client identification - AI is used in KYC processes to verify the identity of clients by scanning the client's documents and evaluating the reliability of the information provided, by comparing it with information from the internet and red flag is raisedif any inconsistency is identified,anda more detailedKYC check by bank employees is performed.

12. Biometrics - Biometrics can be used to authenticate a mobile payment, cash withdrawal, biometric safe vault using a fingerprint or replacement of passcode with voice recognition.

Benefits and Challenges of Artificial Intelligence in Banking Business

Artificialintelligencebringsinamplebenefitstothebanking business like enhanced customer satisfaction,improved productivity of the work force, reduction in the cost of banking services, prediction of future scenarios, recognising and controlling security threat, cyber frauds andmoney laundering.

The huge cost of adoption and upgradation of artificial intelligence and bank's ability to keep pace with changing technology is a challenging task. It is also criticized due to

the fact that automated operation may lead to loss of jobs. However, in practice, artificial intelligence frees skilled and highly efficient workers to do more strategic and creative thinking.

Banking sector in India face challenges associatedwith the implementation and usability of artificial intelligence as a substantial portion of population although tech savvy, prefer traditional mode of banking services and human interaction when dealing with financial matters and hence reluctant to utilise AI based banking services. This detersthe adoption of AI services in banking industry.

In India, the diversity of languages, accent, pronunciation is anotherhurdle that AI needs to overcome,by development of AI in Indian local languages so as to purposefully integrate speech recognition technology into banking business. User's incapacity to articulate their queries in a manner that is comprehensible to artificial intelligence based programmes and levels of digital literacy limits the effectiveness of AI based bankingservice. In such a case transaction-oriented, rule-basedsystems can be developed.High level awareness campaigns can raiseawarenessamongst consumersregarding use of AI solutions in thebanking services. Artificial intelligence is based on data hence data access and data privacy is the prime concern of any AI work that bank does.

In India, the government has taken several initiatives regarding adoption of artificial intelligence. The Reserve Bank of India has taken several initiatives for research, development and adoption of AI and related technologies in banking and finance.

Objectives of Study

The main objectives of the paper are:

1. To study the areas of application of artificial intelligence in banking business.

2. To study the extent of artificial intelligence adopted in Indian banking sector.

Scope of Study

The study is based on content analysis of disclosure made in annual report regarding application of artificial intelligence by the banks in their different business activities. The sample study includes29 public and private sector commercial banks inIndia. The study uses secondary data collected from the annual report of banks for the year 2018-19.

Research Design

In this study a Disclosure Index (DI) of artificial intelligence applied is formed for each artificial intelligence based business operation,for each sample banks. The banks are credited with score of 1 for eachartificial intelligence based business operation parameter applied and zero for non application. For example a bank may obtain 10points Disclosure Index out of 12points (normalized score is 0.833 i.e. 0.83) in the total artificial intelligence parameters selected. Therefore the said bank is said to have applied 83% of artificial intelligence in their business operation.

For the purpose of analyzing the extent of artificial intelligence applied by each bank under study, 12 artificial intelligence based business operation parameters are identified and being used for content analysis (Table1). Table2reveals the scores obtained by the selected banks, row wise individual score of a particular bank is calculated and column wise the score of artificial intelligence based business operation parameter is calculated.

Table 1 Artificial intelligence based business operation parameter

Artificial intelligence based business operation parameter	No.
Customer Interface	I
Customised Financial Services	II
Business and Strategy Insights	III
Voice Aided Banking	IV
Lending Decisions Management	V
Digitalisation of Branches	VI
Computer vision	VII
Backend Processes	VIII
Detection of Fraud	IX
Data management	X
Client Identification	XI
Biometrics	XII

Analysis and Findings of Study

Table 2 Artificial intelligence score

Sl. No.	AI based business operation / Banks	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	TOTAL	Normalised score
1	Allahabad Bank	1	1	1	0	1	1	0	1	1	1	1	1	10	83.33
2	Andhra Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
3	Bank of Baroda	1	1	1	0	1	1	0	1	1	1	1	0	9	75
4	Bank of India	1	1	1	0	1	1	0	1	1	1	1	0	9	75
5	Bank of Maharashtra	1	1	1	0	1	1	0	1	1	1	1	0	9	75
6	Canara Bank	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
7	Central Bank of India	1	1	1	0	1	1	0	1	1	1	1	0	9	75
8	Corporation Bank	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
9	IDBI Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
10	Indian Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
11	Indian Overseas Bank	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
12	Oriental Bank of Commerce	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
13	Punjab & Sind Bank	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
14	Punjab National Bank	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
15	State Bank of India	1	1	1	1	1	1	1	1	1	1	1	1	12	100
16	Syndicate Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
17	UCO Bank	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
18	Union Bank of India	1	1	1	0	0	1	0	1	1	1	1	0	8	66.67
19	United Bank of India	1	1	1	1	1	1	0	1	1	1	1	1	11	91.67
20	Axis Bank	1	1	1	1	1	1	1	1	1	1	1	1	12	100
21	Federal Bank	1	1	1	0	1	1	1	1	1	1	1	0	10	83.3

22	HDFC Bank	1	1	1	0	1	1	1	1	1	1	1	0	10	83.3
23	ICICI Bank	1	1	1	0	1	1	1	1	1	1	1	0	10	83.3
24	Karnataka Bank	1	1	1	0	1	1	1	1	1	1	1	0	10	83.33
25	IndusInd Bank	1	1	1	0	1	1	1	1	1	1	1	0	10	83.3
26	Kotak Mahindra Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
27	RBL Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
28	South Indian Bank	1	1	1	0	1	1	0	1	1	1	1	0	9	75
29	Yes bank	1	1	1	1	1	1	0	1	1	1	1	0	10	83.33
		29	29	29	4	21	29	7	29	29	29	29	4		

The study reveals that out of the total 29 banks 2 have applied all the 12 AI based business operation ,one bank has applied 91.67% ,7 banks have applied 83.33% , 11 banks have applied 75% and 8 banks have applied 66.67% AI based business operation[Table2].

The study presents customer interface, customised financial services,business and strategy insights,digitalisation of branches,backend processes, detection of fraud,data management and client identificationare the areas where artificial intelligence is applied by all the banks under study. Voice aided banking and biometric application is applied by 4 banks out of the 29 banks under study.7 banks have applied computer vision technology and 21 banks have employed AI in lending decision [Table 2]. The 12 AI applied business operation parameters identified in the study is not an exhaustive area of application of AI in banking business. There are several other banking operations where AI may be applied. Although AI is applied in various banking services, the optimal and in depth utilization of AI is yet to be achieved.

Conclusion

Artificial intelligence is innovating continuously and banking sector is continuously trying to weave artificial intelligence into their business operation to harness the benefits of operational efficiency, customer's satisfaction and to deal with cyber security threats and vulnerabilities intelligently to reduce cost, boost revenue and profit. Artificial intelligence in Indian banking business although applied in few domain, has gained momentum due to extensive government initiative towards digitalization and with increasing number of internet and smart phone users who are searching for seamless banking services. MA

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Corporate Social Responsibility versus Financial Performance: an Indian Banking Perspective

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Abstract
Corporate Social Responsibility (CSR) creates an obligation on the firm to be aware of social values and well being of the society while discharging its core business functions. Socially responsible business practices leads to use of additional financial and non financial resources by the firms. Different experts and researchers have responded to the controversy regarding the impact of CSR performance of the firms on its financial performance and whether resources spent on CSR activities is an investment for reaping future profit or its is an added expenditure on the firm pushing it towards an economically disadvantaged position. In this paper attempt is made to provide a fresh perspective of relationship between Corporate Social Responsibility (CSR) and corporate financial performance (CFP) in Indian banking sector. In this paper unbalanced panel data regression analysis is used to study the bilateral relationship between corporate social responsibility of commercial banks in India and their financial performance. The study reveal a mixed result .CSR has a positive impact on market related performance measure and market related performance measures also have a positive impact on CSR, although the results are not that significant. The total business of banks significantly influences the CSR and is also influenced by CSR activities of banks. But CSR has a negative relationship with accounting based measures of financial performance, the ROA and RONW.

Keywords: *Corporate Social Responsibility (CSR), Corporate Financial Performance (CFP), Commercial Banks, Bilateral relationship, Unbalanced Panel data.*

INTRODUCTION

Corporate social responsibility stems out of morality and ethics. It is based on the ideology that focuses on connection between the firms and the society. The firms being a part of the society are expected to contribute towards the benefit and well being of the society. Banking industry plays an important role in mobilizing funds and forms an important building block of an economy and hence needs to be socially responsible in their behavior and practices. Corporate social responsibility initially was more of a voluntary and philanthropic approach. Increasing global environmental awareness, need for ecological environmental protection and conservation and different social problems initiated by the firms gave rise to the need for socially responsible behavior by the firms. Different business social responsibility guidelines have been issued worldwide that mandates adoption of socially responsible practices by the firms. Socially responsible business practices leads to use of additional financial and non financial resources by

the firms which may put the firm in economically and financially disadvantageous position and would drift away from its core "profit and wealth maximization objective for its shareholders" **Vance (1975).**According to **(Aupperle et al., 1985),** socially responsible firms have a competitive disadvantage because they incur costs that fall directly upon the bottom line and reduce profits.Different experts and researcher have expressed their opinion regarding the adoption of corporate social responsibility. Some experts are of view that the ultimate responsibility of the firm is to maximize profit and if this objective is achieved firm will be able to actualize its social responsibility objective. The other view is that socially responsible behavior of firms will put them in a highly advantageous position to achieve its bottom-line. This controversial issue has attracted a large number of researchers to understand the linkage between corporate social responsibility and financial performance .This paper attempts to add on to the issue in regard to the Indian banking industry.

CORPORATE SOCIAL RESPONSIBILITY (CSR)

Firm's socially responsible behavior establishes a link between the corporate and the society. CSR initiatives undertaken by the firms helps to build and strengthen their relationship with multiple stakeholders and different interest groups that extend even beyond customers, suppliers, and competitors to include investors, employees, and members of the board of directors, local communities, regulators, media, and financial markets. **Wood (1991)** stated that 'the basic idea of corporate social responsibility is that business and society are interwoven rather than distinct entities'. **Bowen's (1953)** publication "Social Responsibilities of the Businessman" is considered to be the first book in the modern era to define social responsibility. He recognized the need of the firms to be responsible to the society for its action and decision and defined CSR as "the obligations of business men to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" **Bowen (1953, p. 6)**.In **1960, Keith Davis** viewed that social responsibility refers to businessman's decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest" **(Pp70)** . **McGuire (1963)** viewed that social responsibility of business is not limited to discharging the legal and economic obligation. **Manne & Wallich (1972)** emphasized upon the voluntary approach by the firms towards corporate social responsibility. The **Committee for Economic Development (CED) in 1971** introduced the "three concentric circle approach" of social responsibilities incorporating both economic and non economic aspects into defining CSR, where the firms are expected to be aware of social values and priorities in delivering the core economic functions and help in resolving major social problems. **Carroll (1979)** opined that social responsibilities of business are the integration of economic, legal, ethical and discretionary activities that a society expects of an organization. According to **McWilliams and Siegel (2001)**, when the firm goes beyond compliance and engages in actions for some social good that is beyond the interests of the firm and required by law is referred to as CSR. The concept of CSR is ever-changing and dynamic and ongoing studies on CSR are opening up new dimensions relating to CSR.

Corporate Social Responsibility in India

Corporate social responsibility in India started in the form of corporate philanthropy. The businessmen established a link with the society by way donation for some social causes, building

temples, educational institutions, providing relief in times of crisis such as famine or epidemics. Later on the firms recognized their responsibility towards their owners, managers and employees by providing them medical and housing facilities. Thereafter with the increasing awareness for environmental protection, consumerism and protection of rights of all stakeholders' worldwide and subsequent issue of legislative norms, social responsibility of the corporate gained significance. CSR was formally introduced in India in 2009 with the issue of set of voluntary guidelines on CSR by the Ministry of Corporate Affairs ,that put emphasize on inclusiveness, care for all stakeholders, ethical functioning, respect for workers' rights, sustainability, environment protection and welfare improvement of quality of life of people and all round development of the economy. The transition from voluntary approach of CSR to mandatory approach took place in August 13, 2012 when the Securities Exchange Board of India (SEBI) made it mandatory for the top listed 100 companies, as part of Clause 55 of the Listing Agreement, to disclose their CSR activities in the Business Responsibility Reports as a part of the Annual Reports. Subsequently with the enactment of Section 135 of the Companies Act 2013 CSR spending as well as CSR disclosure was made mandatory for specific types of companies.

Corporate Social Responsibility in India Banking Industry

Banking industry is an important pillar of the financial system that plays a significant role in the development of the economy. Any decisions and actions in the banking industry have an impact on the economy.

Financial inclusion introduced in India in 2005 was the first step of social responsible practices by the   banking   sector. In December 2007 ,a notice circulated by   RBI to all Scheduled Commercial banks in India entitled "Corporate Social Responsibility ,Sustainable Development   and   Non Financial Reporting –Role of Banks" ,explained the concept of Corporate social responsibility, sustainable development and non-financial reporting and highlighted its   growing   importance and global initiatives in   this   regard and suggested integration of economic ,social and environmental concerns in their business operations to achieve sustainable development.

The social issues addressed by banks in India include child welfare, community welfare, education, environment protection, healthcare provision, poverty eradication, rural development, vocational training for youth and women, women empowerment, reducing unemployment problem, girl child protection. Different studies on social responsibility practices by the banks highlighted the core areas of CSR practices by banks and revealed inadequacy of CSR reporting by the banks in India **Chaudhury et al. (2011), Choudhary and Tandon(2013), Sharma(2011)** , **Dastidar (2016)** , **Moharana (2013).**

A comparative analysis of the social performance of selected 12 public and private Indian Banks listed on CNX Bank Index of NSE , revealed no significant difference between the public and private sector banks with regard to corporate social performance though private banks scored more as compared to public banks(**Chadha,et.al 2013).**

Banerjee, et.al. (2014) in their study, observed a positive impact of societal expenditure on the profit of the top–performers and that societal expenditure of banks increased although not significantly post the issue of RBI notice in Dec, 2007 titled "Corporate Social Responsibility, sustainable Development and Non-Financial reporting".

Literature Review

The study on the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP) has gained immense interest of the researcher. A rigorous study would minimize the controversy regarding the impact of CSR performance of the firms on its financial performance and whether resources spent on CSR activities is an investment for reaping future profit or its is an added expenditure on the firm pushing it towards an economically disadvantaged position. A positive impact of socially responsible business practices on the financial performance will encourage a firm to adopt more socially responsible practices while a negative impact on financial performance will dissuade the firm to adopt socially responsible activities. Empirical evidences reveal unilateral as well as bilateral relationship between CSR and CFP, while some studies question the adoption of CSR activities advocating that CSR expenditure puts the firm in economically disadvantaged position.

Unilateral relationship reveal positive impact of CSR activities on CFP **(Belkaoui 1976, Graves & Waddock 2000, McGuire, Sundgren & Schneeweis 1988, Waddock & Graves 1997)** or negative impact of CSR activities on CFP **(Wright & Ferris 1997, Friedman (1970),Cerdeiro & Sarkis(1997)**. On the other hand improved CFP may lead to increased adoption of CSR activities by the firms **(McGuire, Sundgren & Schneeweis 1988, Waddock & Graves 1997),** or fall in CFP will have a negative impact on CSR activities.

Bilateral Relationship provides that increased CSR activities contribute positively towards CFP resulting in more CSR activities thus forming a virtuous cycle. Conversely increased CSR activities may have a negative impact on CFP which results in reduced CSR activities forming a vicious cycle of CSR.

Moskowitz (1972) identified a positive impact of CSR on the rate of return of the common stock of socially responsible firms and viewed that socially responsible firms contribute towards increased rate of return to the shareholders on their stock.

The study by **McWilliams and Siegel (2001)** reveal a neutral result that, in equilibrium, firms that engage in CSR will earn the same rate of profit as firms that do not engage in CSR i.e. CSR has no impact on profitability of firm.

A questionnaire based study on 300 Indian stakeholders by **Singh and Pachar (2012)** to identify the relationship between CSR and financial performance ,revealed positive impact of social responsibility on firms performance and they were of view that socially responsible organization can easily attract , retain investors and business partners and can reduce financial risk.

A multiple regression analysis conducted by **Mwangi, et. al .(2013)** on 14 companies listed in the manufacturing, construction and allied sector of the Nairobi Securities Exchange reveals an insignificant positive relationship between corporate social responsibility practice and financial performance.

An empirical analysis of relationship between CSR and CFP in case of Greek listed companies by **Karagiorgos (2010)** reveal that there is a positive correlation among stock returns and CSR performance in Greek companies.

Govindarajan and Dr.Amilan (2013) in an empirical study on 12 companies selected from Oil and Gas industry listed in the BSE 200 Index and ranked by Karmayog (an NGO, which

measures the CSR activities of the Indian companies in India) revealed a positive significant impact of CSR initiatives on financial performance and stock market performances.

The multiple regression analysis on impact of CSR on corporate financial performance in case of Jordanian banking companies, by **Weshah.et.al (2012)** reveal significant relationship between the levels of bank CSR and the bank's (CFP).

The relationship study between CSR and corporate financial performance on 101 companies listed on the New York Securities Exchange (NYSE) by **Fauzi (2009)**, using regression analysis reveal that corporate social responsibility/performance (CSP) has no effect on financial performance (CFP). Conversely in a study, **Flammer (2013)** pointed out that adopting a CSR-related proposal leads to superior financial performance.

Sarkar.et.al. (2015) in their study on CSR behavior of top 500 listed Indian corporates over a period of nine years, 2003-2011 revealed positive influence of CSR activities on price to book (PB) and price to earnings (PE) ratio and opined that CSR activities may lead to temporary reduction in short term accounting profit, but may create market value in the long run.

Research Gap

A number of studies revealed the status of CSR implementation in Indian corporate sector and in different parts of the world. But only a few studies were made in respect of CSR implementation in the Indian Banking sector. While a lot of research has already been done to understand the relationship between CSR and corporate financial performance in western world, it remains relatively under researched area in India. This paper intends to fill this gap in literature and provide a fresh perspective of relationship between CSR and corporate financial performance in Indian banking sector.

Objectives of Study

This paper seeks to understand the relationship between corporate social responsibility and financial performance of the public sector and private sector commercial banks in India.

This is a bilateral relationship study of CSR activities and financial performance of the public sector and private sector commercial banks in India.

Hypothesis 1: CSR activities of public and private sector commercial banks significantly influence its financial performance.

Hypothesis 2: Financial performance of public and private sector commercial banks significantly contribute towards corporate social responsibility.

In the first instance CSR performance is treated as an independent variable and factors determining financial performance are treated as dependent variables.

In the second instance financial performance is treated as an independent variable, corporate social performance is treated as dependent variables.

Data Collection

The study is based on secondary data .Data is mostly collected from concerned Banks Annual Report, websites and data provided by Reserve Bank of India in its reports.

Methodology

Initially the dataset included all 39 commercial banks in India, 21 public and 18 private sector commercial banks (excluding their Associates and subsidiaries).Subsequently the banks that are not listed on stock exchange before April 2016 were excluded from the sample. Hence the final sample consists of 36 commercial banks in India. This is an annual study covering a period of 15years; starting from 2002-03 to 2016-17.The study uses unbalanced panel data (As some banks under study came into operation post 2002-03 and also were enlisted in stock exchange post 2002-03).

In this study both the historical accounting and market based measures are used as a proxy of financial performance. The historical accounting based measures used are return on asset (ROA), return on net worth (RONW) and log of total business(LGBUS)-where total business is the summation of total advances and total deposits, and market based measure used are price earnings ratio (PER) and price to book value (PBKV).

Table 1 Description of variables

Variables	Definition and computational formula	Symbols
Accounting Based Measure		
Return on assets ratio	Computed by dividing net income by total assets.	**ROA**
Return on equity ratio	Computed by dividing net income by shareholder's equity.	**ROE**
Log of Total Business	Log of Total Business (Total business computed by adding total Deposits and total Advances)	**LGBUS**
Market Based Measure		
Price/earnings ratio	Computed by dividing the market price per share by the earnings per share.	**PER**
Price/book value ratio	Computed by dividing the market value of equity by the book value of equity.	**PBKV**
CSR	Computed CSR score	**CSR**

The Corporate social responsibility (CSR) is measured by CSR scores. CSR score is obtained by content analysis of CSR activities undertaken by banks as reported in its annual report. A score of "1" is assigned for each CSR activities undertaken by banks. The total score is obtained by adding the scores .In this study an activity is considered as a socially responsible activity if it conforms the CSR activities as per recommendation of Schedule VII Section 135 of Companies Act 2013, amended vide notification dated 27th February 2014 and amended vide notification dated 6th August 2014 and 24th October 2014. (Table 2)

Table 2. CSR practices recommended by Companies Act 2013

Recommended areas of CSR practices by the Companies Act 2013
1.Eradicating hunger, poverty and malnutrition, promoting preventive health care and sanitation including contribution to the Swach Bharat Kosh set-up by the Central Government for the promotion of sanitation and making available safe drinking water:
2. Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly, and the differently abled and livelihood enhancement projects;
3.Promoting gender equality, empowering women, setting up homes and hostels for women and orphans; setting up old age homes, day care centres and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups;
4.Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water"including contribution to the Clean Ganga Fund setup by the Central Government for rejuvenation of river Ganga;
5. Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art; setting up public libraries; promotion and development of traditional arts and handicrafts:
6. Measures for the benefit of armed forces veterans, war widows and their dependents;
7. Training to promote rural sports, nationally recognised sports, paralympic sports and Olympic sports;
8. Contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government for socio-economic development and relief and welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women;
9. Contributions or funds provided to technology incubators located within academic institutions which are approved by the Central Government
10. Rural development projects.
11. Slum area development

Panel Data Analysis

The panel data regression model is used to analyze the impact of corporate social responsibility (CSR) on financial performance.

Simple panel data regression model of the following form is used.

$$Y_{it} = \alpha + \beta' X_{it} + u_{it}, \quad i = 1, 2, ..., N ; t = 1, 2, ..., T , \quad\quad\quad (1)$$

Where i denote the 36 banks included in the study and t denotes the time series dimension, which is from 2003 to 2017.

Y_{it} is a dependent variable, α is a scalable, β is a [Kx1] vector of the regression coefficient, X_{it} is an observation on the ith individual in tth time period on K explanatory variables, u_{it} is an error component of the model, which is usually either a one-way form or a two-way form. Most of the panel data applications utilise a one-way error component models for the disturbances. It is of the form:

$u_{it} = \mu_i + \nu_{it}$, where μ_i denotes the unobservable individual-specific, time-invariant effect and ν_{it} denotes the remaining disturbances (Baltagi, 2005).

The above model (1) can be divided as either fixed effects model or random effects model based on the terms of error component of the model that can be assumed as a fixed constant or as having random variation.

With regard to **Hypothesis 1:** CSR activities of public and private sector commercial banks significantly influence its financial performance;there are five models; every model contains CSR as an independent variable and financial performance as dependent variable. The five models are as follows:

Model 1: ROA= $\beta_0 + \beta_1$CSR +e_{it}

Model 2: ROE= $\beta_0 + \beta_1$CSR+ e_{it}

Model 3: PER= $\beta_0 + \beta_1$CSR+ e_{it}

Model 4: PBKV= $\beta_0 + \beta_1$CSR+ e_{it}

Model 5: LGBUS= $\beta_0 + \beta_1$CSR+ e_{it}

We hypothesise the following:

$H1_0$: CSR has a significant impact on Financial Performance.

$H1_1$: CSR has a no significant impact on Financial Performance.

With regard to **Hypothesis 2:** Financial performance of public and private sector commercial banks significantly contributes towards corporate social responsibility; we hypothesise the following:

$H2_0$: Financial Performance significantly influences CSR.

$H2_1$: Financial Performance does not influence CSR.

The model contains financial performance indicator as independent variable and corporate social responsibility as dependent variable.

Model 6: CSR= $\beta_0 + \beta_1$ROA+ β_2 ROE + β_3PER + β_4 PBKV+ ß_5 LGBUS+ e_{it}

The analysis is executed using statistical software package EVIEWS 7 version.

Analysis and Findings

Descriptive Statistics

Table 1. Descriptive Statistics

	ROA	RONW	PER	PBKV	LGBUS	CSR
Mean	1.108153	13.40401	10.56899	1.805129	11.53897	26.81970
Median	0.965000	14.66000	7.490000	1.050000	11.62715	13.50000
Maximum	73.76000	45.53000	197.9000	211.0000	15.11625	2670.000
Minimum	-2.040000	-66.51000	-19.00000	-0.070000	4.362621	0.000000

Std. Dev.	3.574058	11.73143	13.62565	9.436958	1.394448	119.4669
Skewness	17.11836	-1.915427	6.641807	21.73033	-0.458557	20.32840
Kurtosis	330.6091	10.63045	79.68781	482.0003	3.746298	447.4099
Jarque-Bera	2423164.	1628.082	126954.6	4848295.	31.28160	4464350.
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	593.9700	7184.550	5316.200	907.9800	6196.426	14429.00
Sum Sq. Dev.	6834.031	73630.20	93200.53	44706.20	1042.244	7664242.
Observations	536	536	503	503	537	538

Table 3 shows the descriptive statistics of all the variables used in the study. The mean value of corporate social responsibility (CSR) is 28.29622 with a very high standard deviation of 123.4154.The mean values of ROA, RONW, PER, PBKV,LGBUS is 1.108153, 13.40401, 10.56899, 1.805129 and 11.53897 respectively and their standard deviation are 3.574058, 11.73143, 13.62565, 9.436958 and 1.394448 respectively .

Correlation Analysis

Table 2 Correlation matrix

	ROA	RONW	PER	PBKV	LGBUS	CSR
ROA	1.000000					
RONW	0.840672	1.000000				
PER	0.106382	-0.011438	1.000000			
PBKV	0.041085	0.001332	0.141365	1.000000		
LGBUS	-0.153616	-0.117218	-0.121211	0.050434	1.000000	
CSR	-0.026590	-0.019411	0.035558	0.030763	0.233692	1.000000

Table 4, the correlation matrix presents the association among all the variables in the study. The corporate social responsibility has a positive correlation with the variables – PER, PBKV and LGBUS. While CSR has a negative correlation with ROA and RONW.CSR has a high correlation with LGBUS (23.3%).

Panel Data Regression Analysis

In this study fixed effect model and random effect model is used.

Table 3. Panel least Square Analysis (Hypothesis 1)

	Dependent variables				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	ROA	**RONW**	**PER**	**PBKV**	**LGBUS**
Constant	1.115918	13.52422	10.46115	1.729365	11.51519
t-stat **(P-value)**	7.319208 (0.0000)	27.92872 (0.0000)	18.61273 (0.0000)	4.013785 (0.0001)	293.2679 (0.0000)
CSR	-0.000288	-0.004465	0.003811	0.002678	0.000885
t- stat **(P-value)**	-0.207122 0.8360	-1.009548 0.3132	0.766879 0.4435	0.702817 0.4825	2.465457 0.0140
R^2	0.145250	0.199713	0.255270	0.087619	0.626776
Adj R^2	0.083585	0.141977	0.197737	0.017134	0.599904
F-stat **(P- value)**	2.355462 (0.000026)	3.459065 (0.000000)	4.436946 (0.000000)	1.243093 (0.162149)	23.32441 (0.000000)
Durbin Watson stat	1.432225	0.754950	2.209828	1.161196	0.222198

Table 5 presents the panel least squares analysis for hypothesis 1. The table presents the coefficient value of the constant and the independent variable CSR with corresponding value of t-statistic and p-value. In the table the R^2 value represents variation in the dependent variables ROA, ROE, PER, PBKV and LGBUS caused by independent variable CSR. The F value with corresponding significant probability value at 5 % level of significance; indicate that the value of R^2 is statistically significant for all models except for model 4 and that the independent variable is good predictors of the dependent variable. The result of the analysis is as follows:

Model 1: ROA= 1.115918-0.000288 CSR

Model 2: RONW=13.52422-0.004465 CSR

Model 3: PER= 10.46115+ 0.003811 CSR

Model 4: PBKV= 1.729365+ 0.002678 CSR

Model 5: LGBUS=11.51519+0.000885 CSR

Table 4 Panel EGLS Cross Section Random Effect Analysis(Hypothesis 1)

	Dependent variables				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	ROA	**RONW**	**PER**	**PBKV**	**LGBUS**

Constant	1.119359	13.51890	10.40768	1.727601	11.50946
t-stat (P-value)	4.752351 0.0000	15.05163 0.0000	8.757182 0.0000	3.548017 0.0004	69.72783 0.0000
CSR	-0.000422	-0.003550	0.003840	0.002423	0.001010
t- stat (P-value)	-0.318835 0.7500	-0.831880 0.4058	0.793289 0.4280	0.697430 0.4859	2.832013 0.0048
R^2	0.000191	0.001295	0.001260	0.000973	0.014573
Adj R^2	-0.001682	-0.000575	-0.000734	-0.001021	0.012731
F-stat (P- value)	0.101856 0.749738	0.692613 0.405649	0.631944 0.427019	0.487874 0.485201	7.911686 0.005092
Durbin Watson stat	1.341146	0.704840	2.064072	1.082993	0.211904

Table 6 presents the panel EGLS cross section random effect analysis for hypothesis 1. The table presents the coefficient value of the constant and the independent variable CSR with corresponding value of t-statistic and p-value. In this study F statistic greater than 1 and significant at $p <= 0.01$ which indicates significance of the model in predicting the outcome variable. The result of the analysis is as follows:

Model 1: ROA= 1.119359 -0.000422 CSR

Model 2: RONW=13.51890-0.003550 CSR

Model3: PER= 10.40768+0.003840 CSR

Model 4: PBKV= 1.727601 +0.002423 CSR

Model 5: LGBUS= 11.50946 +0.001010 CSR

Analysing appropriateness model

Table 5 Hausman Test Summary (Hypothesis 1)

	Chi-Sq. Statistic	Chi-Sq. d.f	Prob.
Model 1	0.093923	1	0.7592
Model 2	0.618234	1	0.4317
Model 3	0.000638	1	0.9798
Model 4	0.026509	1	0.8707
Model 5	8.504700	1	0.0035

Hausman test is used to ensure selection of appropriate panel data technique. **Table 7** presents the result of Hausman test; the chi-square statistic and corresponding probability value for each model. In the study the p-value of 0.7592, 0.4317, 0.9798 and0.8707 for model 1, model 2 and model 3 and 4 respectively suggest appropriateness of random effect model , while p-value of 0.0035 in case of model 5 suggest fixed effect model is appropriate.

Hypothesis 2: When corporate social responsibility is the dependent variable:

Model 6: $CSR_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 ROE_{it} + \beta_3 PER_{it} + \beta_4 PBKV_{it} + ß_5 LGBUS_{it} + e_{it}$

Table 6 Panel least square analysis(CSR dependent variable)

Variable	Coefficient	t- statistic	p- value
C	-128.1538	-1.619659	0.1060
ROA	3.043978	0.138046	0.8903
RONW	-0.238076	-0.195363	0.8452
PER	0.296207	0.683738	0.4945
PBKV	0.270417	0.478144	0.6328
LGBUS	13.21442	2.008820	0.0451
R-squared			0.221767
Adjusted R-squared			0.154387
F-statistic			3.291310
Prob(F-statistic)			0.000000
Durbin-Watson stat			2.196516

Table 8 presents the panel least squares analysis for hypothesis 2. The table presents the coefficient value of the constant and the independent variables with corresponding value of t-statistic and p-value. In the table the R^2 value represents variation in the dependent variable CSR caused by independent variables ROA, ROE, PER, PBKV and LGBUS. The F value with corresponding significant probability value at 5 % level of significance; indicate that the value of R^2 is statistically significant and that the independent variables are good predictors of the dependent variable. The result of the analysis is as follows:

 Model6:

CSR=-128.1538 +3.043978 ROA-0.238076 RONW+0.296207 PER +0.270417PBKV+13.21442LGBUS

Table 7 Panel EGLS Cross Section Random Effect Analysis (CSR dependent variable)

Variable	Coefficient	t- statistic	p- value
C	-184.9259	-3.061836	0.0023

ROA	-0.567518	-0.031693	0.9747
RONW	0.089452	0.087527	0.9303
PER	0.384712	0.934183	0.3507
PBKV	0.220492	0.395584	0.6926
LGBUS	17.88369	3.624281	0.0003
R-squared			0.029138
Adjusted R-squared			0.019371
F-statistic			2.983254
Prob(F-statistic)			0.011528
Durbin-Watson stat			2.053792

Table 9 presents the panel EGLS cross section random effect analysis for hypothesis 2. The table presents the coefficient value of the constant and the independent variables ROA, ROE, PER, PBKV and LGBUS with corresponding value of t-statistic and p-value. In this study F statistic greater than 1 and significant at $p \leq 0.01$ which indicates significance of the model in predicting the outcome variable. The result of the analysis is as follows:

Model6:

CSR=-184.9259-0.567518ROA+0.089452RONW+0.384712PER +0.220492PBKV+17.88369LGBUS

Analysing appropriateness model

Table 10 Hausman Test Summary for hypothesis2

	Chi-Sq. Statistic	**Chi-Sq. d.f**	**Prob.**
Cross-section random	3.767139	5	0.5834

Hausman test is used to ensure selection of appropriate panel data technique. **Table 10** presents the result of Hausman test; the chi-square statistic and corresponding probability value. In the study the p-value of 0.5834 suggest appropriateness of random affect model.

Overall Analysis

The overall empirical results reveal positive coefficient of CSR for PER, PBKV and LGBUS, thus indicating a positive relationship between corporate social responsibility and corporate financial performance. But the result is statistically significant only in case of Model 5. However CSR has a negative impact on ROA and RONW although the result is not statistically significant. This suggests that CSR has a positive impact on market related performance measure and total business of the banks. On the other hand financial performance measured by RONW,

PER, PBKV and LGBUS have a positive impact on CSR, while ROA has a negative impact on CSR, although the results are not statistically significant.

Conclusion

The study reveal a mixed result .CSR has a positive impact on market related performance measure and market related performance measures also have a positive impact on CSR, although the results are not that significant. The total business of banks measured by the log of total deposit and total advances significantly influences the CSR and is also influenced by CSR activities of banks. Corporate social responsibility in Indian banking industry is in embryonic stage. There is an inadequacy with regard to socially responsible practices by the banks and its reporting of such practices. Lack of reliable measure of CSR for evaluating the social responsibility practices for banks in India acts as a constraint. In this study CSR measure is defined in terms of number of CSR activities which is inadequate because the amount of expenditure on CSR is also very important the data regarding which is unfortunately scantily available.

Limitation

The present study is not free from certain undesirable factors. The panel data analysis was conducted on a relatively small number of sample -36 commercial banks of India and period of study was 15 years. This is a small data set to establish a clear cut relation between CSR and CFP.

Suggestion for future research

This study reveals mixed result on the relationship between CSR and financial performance in Indian banking industry. Hence more empirical works are required to add further to the existing perception on the impact of corporate social responsibility. The researchers are required to explore more extensively other measures of CSR to analyse its relation to financial performance.

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An Online Shopping Factors –Conceptual Model for Understanding Consumer's Actual Usage Behaviour

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ABSTRACT :- Online shopping has expanded tremendously in India, courtesy easy internet access by millions of Indians and "Digital India'' initiatives of the Government of India. As organisations are attempting to globalize their sales, internet becomes the primary vehicle of selling their products or services worldwide. Many businesses have their dedicated web pages in addition to their retail brick and mortar stores, and some started their businesses online alone. Online store is the preferred choice of urban consumers now. There are many factors that contribute towards customers' preference in favour of shopping online.

The purpose of our research work is to study online shopping behaviour of consumers; viz. their risk perception, attitudes, intentions and actual usage behaviour which are identified as major constructs. There is a fair amount of literature available about online consumer behaviour internationally, but significant Indian studies are still lacking. Behavioural studies based on technology adoption involves too many socio-economic- technical aspects which interlinks consumer psychology, social group behaviour and cultural anthropology, hence such studies involves several layers of causal relationship which need to be explored through structural equation modelling (SEM). The population of interest for research is an Indian urban city of Kolkata and a reasonable sample size of 450 respondents is utilised to run Exploratory Factor Analysis (EFA) for identifying major influencing factors which drives these respondents towards online shopping. Accordingly, we have framed our research objectives and proposed hypothesis to establish relationship among perceived risk, attitude, and intention towards actual usage behaviour, based on the time- tested popular technology adoption model of UTAUT2 (Venkatesh,et.al,2012).

Based upon the structured questionnaire, confirmatory factor analysis (CFA), as a part of SEM is conducted which has yielded satisfactory results .We are able to explain 79.334 % of the total variance through Exploratory Factor Analysis (EFA).

Our findings revealed that Effort Expectancy (EE), Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Price / Value (P), Habit (H), Perceived Risk (PR), Trust(T) are the major contributing factors which have a significant positive effect on users' intention to shop online.

Keywords :- Internet, online shopping, web pages, UTAUT2 Model, factors affecting on online shopping behaviour, use of technology

1.   INTRODUCTION :- Internet has made a significant contribution to our lifestyles on account of its abundance and diversity of information. Its penetration is rising markedly in India which has fuelled the growth of e-commerce in the economy. The term e-commerce or electronic commerce refers to shopping on the web (Nayyar & S.L.Gupta, 2011). Electronic commerce can be defined as conducting, transacting and facilitating business activities over computer networks. It is usually abbreviated as E-commerce. Online Shopping or e-shopping is a part of e-commerce where the customers or consumers buy goods / products / and other services directly from the merchants over the internet. Today E-commerce is a buzzword in Indian society and it has become an integral part of our daily life (Poonam Chahal, 2015).

Although marketing theories well describe traditional consumer behaviour, overwhelming evidence suggests that information systems-related factors are at least as important

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as traditional marketing-related factors in predicting online consumer behaviour (Gefen, Karahanna, and Straub 2003; Niculescu, Shin, and Wang 2012). Straub and Watson (2001) posit that there is a need to understand and measure online consumer behaviour, and that much of that burden falls on the information systems field. Koufaris (2002) explains that the online consumer performs all the functions of a traditional consumer on a computer while interacting with a system (e.g., e-commerce website).

3. RESEARCH OBJECTIVES :- Accordingly, based on UTAUT 2, we have identified the following objectives of our research work:-

• To determine the intention of consumers' towards online shopping ;

• To identify the major factors that influences consumers' intention towards online shopping

4. PROPOSED RESEARCH MODEL :- Our proposed model is based on **modified UTAUT 2 (Venkatesh et al.)** as documented and published in the year **2012.** During the literature review phase, we noticed that several researchers have pointed out that Behavioural Intention (BI) at tines does not drive consumers towards Actual Usage Behaviour (AUB). This gave us an impetus to look at a depth what possibly can influence consumers having positive BI to actually shop online. In this regard, we conducted content analysis to introduce a construct named "Perceived Promotional Benefits" (PPB) which may act as a catalyst for positively BI consumers towards actual usage behaviour.

Figure : 1

Proposed Model

5. RESEARCH METHODOLOGY:-

5.1 Data Collection :- We have used primary data. Data that has been collected from Kolkata district. Thus, we prepared an adapted questionnaire in order to conduct our on-field research.

5.2 Sampling Techniques/Sample Frame :- The targeted respondents of this study is in kolkata. Since we could not get a list of all the elements of

the population, the research utilised a non-probability sampling technique to identify respondents.

5.3 Research Instrument :- My research instrument i.e. Questionnaire is adapted questionnaire We have obtained 7 point Likert scale . Responses from 450 individuals who have participated in this survey.

We are using reflective scale not a formative

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scale. Our research primarily focuses on the popularity of online shopping platform like flipkart , Amazon , snapdeal etc.

6. DATA ANALYSIS & RESULTS :- In this chapter, the results of data analysis and its interpretation are presented. First of all the demographics of the respondents participating in the study have been discussed. To analyze the data computer-based statistical tools; a statistical package for social sciences (SPSS 20) analysis of moment structure (AMOS 23) were used. Tables and figures are presented data descriptions and summaries. It provides a discussion on the recommended fit indices for confirmatory factor model, and the measurement models are estimated. Structural Equation Modelling (SEM) is used to carried out Model Development and testing of research hypotheses.

6.1 RESULTS OF HYPOTHESES TESTING BASED ON SEM :

Table 2

Hypothesis	Hypothesis relationship	Standard estimates(β)	t value	p value	Decision
H1	EE ⟶ ISO	0.780	12.952	.000	Significant
H2	PE ⟶ ISO	0.773	3.516	.000	Significant
H3	SI ⟶ ISO	0.760	3.558	.001	Significant
H4	FC ⟶ ISO	0.724	2.440	.039	Significant
H5	P ⟶ ISO	0.753	2.977	.003	Significant
H6	HM ⟶ ISO	0.672	-.594	.553	Insignificant
H7	H ⟶ ISO	0.609	2.590	.010	Significant
H8	PPB ⟶ AUB	0.755	10.597	.001	Significant
H9	T ⟶ AOS	0.715	7.621	.001	Significant
H10	PR ⟶ AOS	0.626	9.035	.001	Significant
H11	AOS ⟶ ISO	0.711	6.197	.031	Significant
H12	ISO ⟶ AUB	0.792	12.832	.020	Significant

Where , p value < 0.05 (well supported / significant) P value > 0.05 (Rejected / insignificant) Critical Ratio (CR) / t value < 1.96 insignificant , t value >1.96 Significant

Significant at : **p <0.01 ***p<0.001

TABLE : 3

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869
Bartlett's Test of Sphericity	Approx. Chi-Square	23320.184
	df	1035
	Sig.	0.000

Source : Output of EFA Results from IBM SPSS Statisticsv.20

Table : 4

Total Variance Explained

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.225	28.749	28.749	13.225	28.749	28.749	6.375	13.858	13.858
2	7.459	16.215	44.964	7.459	16.215	44.964	4.824	10.486	24.344
3	4.747	10.320	55.285	4.747	10.320	55.285	4.703	10.225	34.568
4	3.094	6.726	62.011	3.094	6.726	62.011	4.159	9.042	43.611
5	2.226	4.838	66.849	2.226	4.838	66.849	3.956	8.600	52.210

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6	1.708	3.713	70.562	1.708	3.713	70.562	3.635	7.901	60.112
7	1.440	3.130	73.692	1.440	3.130	73.692	3.226	7.013	67.124
8	1.386	3.013	76.705	1.386	3.013	76.705	3.216	6.992	74.116
9	1.209	2.629	79.334	1.209	2.629	79.334	2.400	5.217	79.334
10	.934	2.031	81.365						
11	.699	1.520	82.885						
12	.644	1.401	84.286						
13	.575	1.250	85.535						
14	.501	1.088	86.624						
15	.469	1.020	87.643						
16	.426	.925	88.569						
17	.376	.818	89.387						
18	.364	.790	90.177						
19	.353	.767	90.944						
20	.317	.688	91.632						
21	.292	.635	92.267						
22	.288	.626	92.893						
23	.283	.616	93.510						
24	.246	.534	94.044						
25	.232	.504	94.548						
26	.226	.491	95.039						
27	.210	.456	95.495						
28	.186	.404	95.899						
29	.178	.387	96.286						
30	.171	.371	96.657						
31	.159	.345	97.002						
32	.151	.328	97.330						
33	.143	.311	97.641						
34	.137	.298	97.939						
35	.135	.293	98.232						
36	.122	.266	98.499						
37	.113	.246	98.744						
38	.106	.230	98.974						
39	.096	.208	99.182						
40	.085	.185	99.367						
41	.076	.165	99.532						
42	.070	.153	99.685						
43	.053	.114	99.799						
44	.051	.112	99.911						
45	.035	.076	99.987						
46	.006	.013	100.000						

Source : Output of EFA Results from IBM SPSS Statisticsv.20

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Table : 5
Extraction Method: Principal Component Analysis.
Rotated Component Matrix[a]

	Component								
	1	2	3	4	5	6	7	8	9
EE1	0.595	0.023	-0.088	0.019	-0.258	0.059	0.295	0.067	0.143
EE2	0.768	-0.010	-0.115	0.070	-0.257	0.099	0.099	0.175	0.096
EE3	0.758	0.102	-0.144	0.031	-0.190	0.125	0.086	0.138	0.178
EE4	0.801	0.070	-0.055	0.047	-0.238	0.097	0.048	0.128	0.171
EE5	0.772	0.045	-0.110	0.007	-0.128	0.010	0.022	0.102	-0.033
PE1	0.736	-0.031	0.063	-0.279	0.062	0.036	0.133	-0.009	0.038
PE2	0.668	-0.033	-0.073	-0.316	0.066	0.143	0.233	0.096	0.082
PE3	0.786	-0.016	-0.059	-0.233	0.119	-0.049	0.106	0.012	0.111
PE4	0.676	-0.026	-0.103	-0.179	0.075	0.087	0.335	0.111	-0.008
PE5	0.728	0.046	-0.041	-0.227	0.024	0.029	0.288	0.028	0.109
SI1	0.006	-0.067	-0.053	0.031	-0.077	0.741	0.156	0.182	0.110
SI2	0.103	0.092	-0.050	0.001	-0.021	0.846	0.038	0.063	-0.004
SI3	0.153	0.083	-0.034	-0.059	-0.005	0.855	0.028	0.084	0.045
SI4	0.053	0.237	-0.016	-0.056	0.078	0.789	0.015	0.024	0.127
SI5	0.061	0.202	-0.010	-0.063	-0.008	0.814	0.120	0.051	0.099
FC1	0.009	0.958	0.041	0.062	0.074	0.092	-0.004	0.001	-0.032
FC2	0.043	0.957	0.017	0.013	-0.011	0.121	0.044	0.038	0.032
FC3	0.013	0.948	0.045	0.055	-0.003	0.112	0.055	0.019	0.006
FC4	0.029	0.963	0.028	0.016	0.048	0.089	0.002	-0.007	-0.040
FC5	0.035	0.957	0.006	0.009	0.055	0.114	0.006	0.018	0.000
P1	0.197	0.021	-0.068	-0.123	-0.017	0.112	0.012	0.049	0.872
P2	0.197	-0.052	-0.194	-0.078	-0.091	0.147	0.174	0.205	0.835
P3	0.248	-0.015	-0.145	-0.138	-0.190	0.187	0.190	0.219	0.746
HM1	0.404	0.042	-0.027	-0.128	-0.036	0.130	0.731	0.164	0.146
HM2	0.325	0.118	-0.037	0.012	-0.027	0.119	0.807	0.180	0.080
HM3	0.313	-0.035	-0.030	-0.068	-0.088	0.070	0.795	0.343	0.063
HM4	0.284	0.012	-0.065	-0.049	-0.108	0.121	0.826	0.240	0.085
H1	0.195	0.013	0.045	-0.045	0.041	0.109	0.273	0.819	0.098
H2	0.052	0.211	0.141	0.118	0.325	0.013	0.047	0.704	0.111
H3	0.176	-0.038	-0.015	0.007	-0.030	0.163	0.220	0.861	0.106
H4	0.210	-0.067	-0.016	-0.022	-0.005	0.171	0.246	0.881	0.108
SR1	-0.113	-0.011	0.322	0.293	0.774	-0.048	-0.076	0.060	-0.054
SR2	-0.116	0.038	0.355	0.331	0.730	-0.045	-0.048	0.056	-0.120
SR3	-0.120	0.078	0.366	0.269	0.762	0.059	-0.028	0.020	-0.030
SR4	-0.109	0.073	0.329	0.346	0.713	-0.007	-0.068	0.062	-0.056
SR5	-0.105	0.066	0.363	0.380	0.671	0.018	-0.076	0.145	-0.114
RC1	-0.187	0.057	0.358	0.728	0.345	0.000	-0.028	-0.027	-0.084
RC2	-0.197	0.074	0.336	0.760	0.289	-0.027	-0.045	-0.002	-0.126
RC3	-0.144	0.010	0.362	0.746	0.332	-0.088	-0.098	0.077	-0.092
RC4	-0.169	0.050	0.339	0.790	0.292	-0.055	-0.041	0.026	-0.091
RC5	-0.185	0.025	0.309	0.785	0.340	-0.041	-0.048	-0.046	-0.059

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RT1	-0.072	-0.011	0.801	0.266	0.273	-0.054	-0.016	0.050	-0.020
RT2	-0.169	0.032	0.831	0.219	0.221	-0.086	-0.021	0.039	-0.054
RT3	-0.110	-0.010	0.803	0.312	0.281	-0.085	-0.056	-0.006	-0.006
RT4	-0.073	0.061	0.856	0.190	0.215	-0.007	-0.016	-0.046	-0.128
RT5	-0.074	0.063	0.787	0.225	0.233	0.015	-0.059	0.070	-0.193

Source : Output of EFA Results from IBM SPSS Statisticsv.20
Extraction Method: Principal Component Analysis.   Rotation Method: Varimax with Kaiser Normalization.
Table 11 : Summary of Descriptive Statistics :

Descriptive Statistics

Component	N	Minimum	Maximum	Mean	Std. Deviation	Cronbach's Alpha
EE1	450	1	7	5.79	1.134	.894
EE2	450	1	7	5.99	.937	.853
EE3	450	1	7	6.07	.980	.850
EE4	450	1	7	6.10	.975	.847
EE5	450	1	7	6.14	1.079	.882
PE1	450	1	7	6.16	.840	.881
PE2	450	1	7	6.07	.939	.872
PE3	450	1	7	6.04	.838	.869
PE4	450	1	7	5.95	.997	.877
PE5	450	1	7	6.12	.886	.867
SI1	450	1	7	4.66	1.788	.887
SI2	450	1	7	5.15	1.518	.856
SI3	450	1	7	5.16	1.420	.850
SI4	450	1	7	4.71	1.648	.860
SI5	450	1	7	4.75	1.606	.849
FC1	450	1	7	4.84	1.647	.977
FC2	450	1	7	4.38	1.654	.977
FC3	450	1	7	4.63	1.666	.979
FC4	450	1	7	4.60	1.649	.977
FC5	450	1	7	4.56	1.658	.978
P1	450	1	7	5.68	1.179	.904
P2	450	1	7	5.89	1.183	.794
P3	450	1	7	5.97	1.146	.850
HM1	450	1	7	5.78	1.145	.926
HM2	450	1	7	5.70	1.347	.910
HM3	450	1	7	5.84	1.292	.904
HM4	450	1	7	5.77	1.384	.902
H1	450	1	7	3.86	2.000	.859
H2	450	1	7	2.70	1.868	.936
H3	450	1	7	4.15	1.921	.855
H4	450	1	7	4.47	1.877	.831
PPB1	450	1	7	5.92	1.242	.808
PPB2	450	1	7	6.11	1.063	.793
PPB3	450	2	7	5.91	1.058	.798
PPB4	450	1	7	6.14	.943	.793
PPB5	450	1	7	5.01	1.978	.849
PPB6	450	1	7	5.41	1.520	.832
PPB7	450	1	7	5.96	1.240	.794
PPB8	450	1	7	5.85	1.072	.829
T1	450	1	7	5.12	1.316	.820
T2	450	1	7	5.25	1.331	.785

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T3	450	1	7	5.32	1.332	.785
T4	450	1	7	5.04	1.449	.878
T5	450	1	7	4.88	1.473	.829
PR1	450	1	7	2.99	1.595	.940
PR2	450	1	7	2.65	1.606	.942
PR3	450	1	7	2.74	1.618	.942
PR4	450	1	7	2.73	1.600	.938
RC1	450	1	7	2.56	1.400	.957
RC2	450	1	6	2.48	1.422	.956
RC3	450	1	7	2.30	1.360	.957
RC4	450	1	7	2.43	1.397	.952
RC5	450	1	7	2.46	1.415	.953
SR1	450	1	7	2.50	1.404	.929
SR2	450	1	7	2.43	1.422	.931
SR3	450	1	7	2.46	1.308	.931
SR4	450	1	7	2.31	1.316	.934
SR5	450	1	7	2.17	1.264	.933
RT1	450	1	7	2.51	1.419	.927
RT2	450	1	7	2.43	1.350	.924
RT3	450	1	7	2.50	1.440	.922
RT4	450	1	7	2.52	1.379	.923
RT5	450	1	7	2.39	1.402	.933
AOS1	450	1	7	5.86	.967	.926
AOS2	450	1	7	5.71	1.440	.900
AOS3	450	1	7	5.66	1.345	.891
AOS4	450	1	7	5.88	1.241	.885
AOS5	450	1	7	5.82	1.290	.882
ISO1	450	1	7	5.85	1.068	.883
ISO2	450	1	7	5.15	1.562	.706
ISO3	450	1	7	5.39	1.383	.618
AUB1	450	1	7	5.65	1.137	.758
AUB2	450	1	7	5.61	1.108	.730
AUB3	450	1	7	5.83	.941	.762
Valid N (listwise)	450					

Table :12 Results Summary for the Measurement Model :

Components / validity	Items	Main loading	AVE	CR	Cronbach's Alpha
Effort Expectancy	EE1	1.000	0.668	0.909	.889
	EE2	1.020			
	EE3	1.101			
	EE4	1.101			
	EE5	1.009			
Performance Expectancy	PE1	1.000	0.669	0.910	.896
	PE2	1.173			
	PE3	1.084			
	PE4	1.261			
	PE5	1.176			
Social Influence	SI1	1.000	0.689	0.916	.885
	SI2	1.010			
	SI3	1.000			
	SI4	1.116			
	SI5	1.130			

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Facilitating Conditions	FC1	1.000	0.698	0.917	.982
	FC2	1.003			
	FC3	1.001			
	FC4	1.006			
	FC5	1.000			
Price /Value	P1	.893	0.755	0.902	.896
	P2	1.096			
	P3	1.000			
Hedonic Motivation	HM1	.763	0.805	0.943	.932
	HM2	.938			
	HM3	.935			
	HM4	1.000			
Habit	H1	.878	0.726	0.888	.902
	H2	.523			
	H3	.936			
	H4	1.000			
Trust	T1	1.000	0.642	0.898	.852
	T2	1.183			
	T3	1.134			
	T4	.646			
	T5	.976			
Perceived Risk	PR1	1.000	0.839	0.940	.955
	PR2	1.006			
	PR3	1.021			
	PR4	1.030			
Attitude towards Online Shopping	AOS1	1.000	0.773	0.931	.917
	AOS2	1.846			
	AOS3	1.859			
	AOS4	1.724			
	AOS5	1.863			
Intention to Shop Online	ISO1	.511	0.717	0.883	.824
	ISO2	1.047			
	ISO3	1.000			
Actual Usage Behaviour	AUB1	1.000	0.558	0.790	.819
	AUB2	.999			
	AUB3	.766			

9. CONCLUSION :- The UTAUT2 model has served as the theoretical background in our study. It was established that effort expectancy has a significant positive effect on intention to shop online. It implies that users are likely to value ease of use, minimum effort when choosing Internet Services.

Performance Expectancy has the greatest impact on intention to shop online. Social Influence, Price, Habit was found to be the strongest determinant of Intention to shop online.

We had hypothesized that Hedonic motivation would also affect Intention to shop Online Positively, but the results did not support this hypothesis.

Our research also contributes to the precise exploration of how trust and perceived risk act on the core constructs of the UTAUT.

In prior literature researchers have focussed on designing a conceptual framework or validating certain aspects of the relationship among trust, perceived risk, and attitude.

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Positive attitude of the users' towards online shopping (AOS) too has a significant positive effect on their intention to shop online. We found that users' with a positive intention does have a significant positive effect on their actual usage behaviour.

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Exploring the Significant Influence of Computer Phobia on Social Intelligence in Undergraduate Educators at Ranchi University

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Abstract :- The study was conducted to explore the significant influence of Computer Phobia on Social Intelligence in Undergraduate Educators at Ranchi University. The sample of the present study consisted of 320 Under-Graduate college educators of Ranchi University selected by stratified random sampling from different departments of Arts and Science steam. Computer Phobia Scale given by Rajasekarand & Vaiyapuri Raja and Social Intelligence Scale developed by Mathur were used. The researcher found that the level of computer phobia and social intelligence were different among different streams of educators, gender and place of residence. Similarly, the researcher also found that there were significant impact of stream, gender and place of residence on computer phobia and social intelligence among under-graduate educators.

Keywords :- Computer Phobia, Social intelligence, College educators.

Introduction :- We belong to the 21st century, the century of science, research, discovery, investigation and high-tech society. The inventions and discoveries like computer, mobiles and high-speed internet connectivity have brought drastic changes in personal and social life. In this digital or information technology age, the development and invention by humans have gone beyond expectation, belief and imagination. Every day there are some new gadgets and software that make our life easier and improves on the existing technologies. In the present days the intensive use of technology in every field of life has changed priorities, lifestyles, way of thinking and learning needs. Technology is being used by children and adults on a daily basis by way of web surfing, texting, social networking, interactive games, and in more ways. As a result, these developments have differentiated the student profile and the educational systems have been affected and the uses of technologies in education have become widespread. College educators should more focus on the use of technological applications for instructions i.e., computers, projects, power-point presentations, etc., and less focus on administrative and communications tasks. The computer as an integral part of educational technology plays an important role in the teaching-learning process these days. The technology has facilitated the course contents and educators have been provided with the opportunity to reach the information independently. Therefore, by use of such facilities the educators shall be updated in accordance with the technological developments and they can use the acquired knowledge in the classroom which will affect student's interest, participation and the achievement level. Now a day Technology has simplified the way educators teach their students and it has also helped students to learn from unlimited resources.

Computer Phobia :- In the progressive era, computer operating knowledge became an essential skill and needs of all fields. However still there are many people around us who have feared or anxiety to operate the computer system, this fear or anxiety is known as 'Computer Phobia'. A greater degree of phobia is associated with panic attacks, in which an individual becomes too aggressive or hostile to others. Although, the computer phobia is a false fear of operating computer which does not give any threat or danger. Thoughts and worries of operating computer, an irrational fear and false belief can generate severe anxiety. In general people with this computer phobia may have fearful feeling of using or learning basic computers. Any kinds of Phobias are anxiety disorders. They cause people to have extreme, unrealistic fears. People with this

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condition may also feel anxious or worried about using the internet. These disorders cause people to have a reaction to a specific situation or object. Today computer has become a popular and powerful means of education, information and entertainment. It has become an integral part of life. Nowadays, a person who does not essential knowledge of operating computers is considered to be illiterate. Therefore, practical computer knowledge is becoming essential for every educated person and become a fashion trend. The role of present-day teacher has become very challenging, complex and multifaceted, which requires preparation on the part of teachers in both ways-before entering in profession and after entering into job. In this era of globalization when knowledge driven economy and ICT are strongly emphasized, there is need for paradigm shift in the teaching learning process and that can be done if the curriculum allows us to do so (Gupta and Mittal, 2011). The fear of technology can make educators less adaptable to changing educational environments. In today's digital age, technology is integrated into education, and educators are expected to adapt to new tools and platforms. Computer phobia may lead to resistance to change and hinder their ability to keep up with technological advancements. Educators who struggle with computer phobia may find it challenging to engage with students using digital tools, impacting their ability to connect with and support their students effectively. In summary, the statement highlights that computer phobia can hinder the ability of college educators to engage effectively in the digital age, which, in turn, can impact their social intelligence by limiting their communication, adaptability, collaboration, and interaction with students and colleagues. Overcoming computer phobia and improving digital literacy can be crucial for educators to thrive in modern educational settings.

Howard (1986) defined computer phobia as "fear of impending interaction with a computer that is disproportionate to the actual threat presented by the computer".

Rosen and Weil (1997) technophobia can be defined as fear/dislike of advanced technology or complex devices especially computers. It is the negative global attitude about computers and their operation or their societal impact. In this study, technophobia is used interchangeably with computer phobia.

Morreale, Osborn and Pearson (2000) described computer phobia as technophobia and is often based on unfamiliarity with a medium.

Doyle, Stamouli, and Huggard (2005), Computer Phobia is "a real phenomenon" and is a psychological response definition of the term computer anxiety.

McIlroy, Sadler and Boojawan (2007) Computer Phobia is also referred to as technophobia about being present or future interactions with computers or computer related technology.

Social Intelligence :- Intelligence of an individual can be access by his ability to use his mental energy to handle his problems and leading a happy and well contended life. The idea of Social Intelligence goes back to Thorndike (1920). He defined the term Social Intelligence as the person's ability to understand and manage other people. Social Intelligence plays an important role in one's life. The success of an individual mainly depends on this key factor. Social Intelligence reflects the inter-personal relations of an individual at work place. It includes an awareness of situations and the social dynamics that govern them. It is the knowledge of interaction styles and strategies that can help a person achieve his or her objectives in dealing others. The socially intelligent persons have the talent or knack of getting along with people.

Mathur (1996) Social Intelligence is the ability to adopt with people. It is the capacity to behave effectively with anyone who has a facility of manners to get along with others.

Martinez, (1997) summed Social Intelligence as the individual's capacity to develop and manage relationships between individualized

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autobiographic agents which by means of communication help to integrate and manage the individuals' basic relationships to the interests of social system the next higher level.

Bhatnagar and Saxena (2000) Social Intelligence is that part of individual's mental ability which generates in the capacity to adopt himself in the society.

Karl (2005) defined Social Intelligence as the ability to get along with others, by winning to the needs and interests of others sometimes called social radar, and attitude of generosity and consideration and a set of practical skill for interacting successfully with people in any setting.

In social context, educators often need to use technology for communication with students, colleagues, and society. If they are anxious about using computers, they may struggle with email, or online collaboration, impacting their ability to communicate efficiently. Effective collaboration often requires the use of technology, especially when working with social people from diverse backgrounds or in online settings. Computer phobia can limit educators' participation in collaborative efforts, affecting their social intelligence by reducing their ability to work effectively in teams. Computer phobia can have a notable impact on an individual's social intelligence, which encompasses the ability to navigate social situations, understand and manage emotions, and effectively interact with others. In today's technology-driven world, being able to adapt to new digital tools and platforms is crucial. Computer phobia may lead to resistance towards learning and using new technologies, which can impede an individual's ability to adapt to evolving work and social environments. Now a day social intelligence also involves the ability to engage in online communities, networks, and social platforms. Computer phobia may lead to isolation from these spaces, which can limit opportunities for networking, professional development, and social interaction. Overall, computer phobia can impact social intelligence by limiting an individual's ability to effectively engage in the digital aspects of contemporary social, professional, and educational environments.

Methodology :- The present study is "Exploring the significant influence of Computer Phobia on Social Intelligence in Undergraduate Educators at Ranchi University". Moreover, researcher examined the impact of Computer Phobia, on social intelligence among educators on stream (Science & Arts), gender (Male and Female) and place of residence (Urban and Rural).

Objectives of the Study :-

1) To study the level of computer phobia and social intelligence among under-graduate college teachers of different stream, gender and place of residence.
2) To study the significant impact of stream, gender and place of residence on computer phobia and social intelligence of the sample.

Hypotheses :-

1. The level of computer phobia and social intelligence may differ among under-graduate educators of different stream, gender and place of residence.
2. There may be significant impact of stream, gender and place of residence on computer phobia and social intelligence among under-graduate educators.

Sample :- The sample of the present study consisted of 320 Under-Graduate college educators of Ranchi University selected by stratified random sampling from different departments of Arts and Science steam. The sample were comprised of stream (Science & Arts), gender (Male and Female) and Place of residence (Urban and Rural).

Analysis :- The scored data was classified keeping in view the objectives of the research and the statistical analysis was carried out to examine the hypotheses framed for the study.

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Hypothesis 1: The level of computer phobia and social intelligence may differ among under- graduate educators of different stream, gender and place of residence.

Table 1
Percentage distribution of level of computer phobia and social intelligence of Arts and Science undergraduate college educators

Dependent Variables	System Range	N	Arts educators (N=160)		Science educators (N=160)	
			N	%	N	%
Computer Phobia	Low	62	28	17.50	34	21.25
	Average	187	105	65.63	82	51.25
	High	71	27	16.88	44	27.50
Social intelligence	Low	43	17	10.63	26	16.25
	Average	192	106	66.25	86	53.75
	High	85	37	23.13	48	30.00

The table 1 revealed that

➢ It was evident that 65.63% of Arts undergraduate college teachers having average computer phobia
➢ It was evident that 51.25% of science undergraduate college teachers having average computer phobia
➢ It was evident that 66.25% of Arts undergraduate college teachers having average social intelligence
➢ It was evident that 53.75% of science undergraduate college teachers having average social intelligence

It is apparent from the table 1 that the level of computer phobia and social intelligence are different among under-graduate educators of arts and science stream.

Table 2
Percentage distribution of level of computer phobia and social intelligence of male and female under-graduate college educators

Dependent Variables	System Range	N	Male educators (N=160)		Female educators(N=160)	
			N	%	N	%
Computer Phobia	Low	62	35	21.88	27	16.88
	Average	187	78	48.75	109	68.13
	High	71	47	29.38	24	15.00
Social intelligence	Low	43	31	19.38	12	7.50
	Average	192	90	56.25	102	63.75
	High	85	39	24.38	46	28.75

The table 2 revealed that

➢ It was evident that 48.75% of Male undergraduate college educators having average computer phobia
➢ It was evident that 68.13% of Female undergraduate college educators having average computer phobia
➢ It was evident that 56.25% of Male undergraduate college educators having average social intelligence
➢ It was evident that 63.75% of Female undergraduate college educators having average social intelligence

It is apparent from the table 4.4 that the level of computer phobia, self-concept and social intelligence are different among Male and Female under-graduate educators.

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Table 3

Percentage distribution of level of computer phobia and social intelligence of Urban and Rural under-graduate college educators

Dependent Variables	System Range	N	Urban Educators (N=160)		Rural Educators (N=160)	
			N	%	N	%
Computer Phobia	Low	62	46	28.75	16	10.00
	Average	187	73	45.63	114	71.25
	High	71	41	25.63	30	18.75
Social intelligence	Low	43	29	18.13	14	8.75
	Average	192	89	55.63	103	64.38
	High	85	42	26.25	43	26.88

The table 3 revealed that

➤ It was evident that 45.63% of Younger undergraduate college educators having average computer phobia
➤ It was evident that 71.25% of older undergraduate college educators having average computer phobia
➤ It was evident that 55.63% of Younger undergraduate college educators having average social intelligence
➤ It was evident that 64.38% of older undergraduate college educators having average social intelligence

It is apparent from the table 4.4 that the level of computer phobia, self-concept and social intelligence are different among younger and older under-graduate educators.

Therefore, the Hypothesis1: "The level of computer phobia and social intelligence may differ among under- graduate educators of different stream, gender and place of residence" is accepted.

Hypothesis 2: There may be significant impact of stream, gender and place of residence on computer phobia and social intelligence among under-graduate educators.

Table 4

Mean, SD and 't' value of Computer phobia in relation to different independent variables of undergraduate college educators

S. No.	Variables	Subgroup	Computer phobia				
			N	Mean	S D	t	Significance
1	Stream	Science	160	84.32	8.21	73.2	0.01 level
		Arts	160	32.28	3.67		
2	Gender	Male	160	81.29	7.51	67.68	0.01 level
		Female	160	35.56	4.08		
3	Place of Residence	Urban	160	80.08	7.84	47.11	0.01 level
		Rural	160	45.27	5.09		

0.05 = 1.97 level,   0.01 = 2.61 level

Figure 1

Graphical representation of mean score of Computer phobia in relation to different independent variables of undergraduate college educators
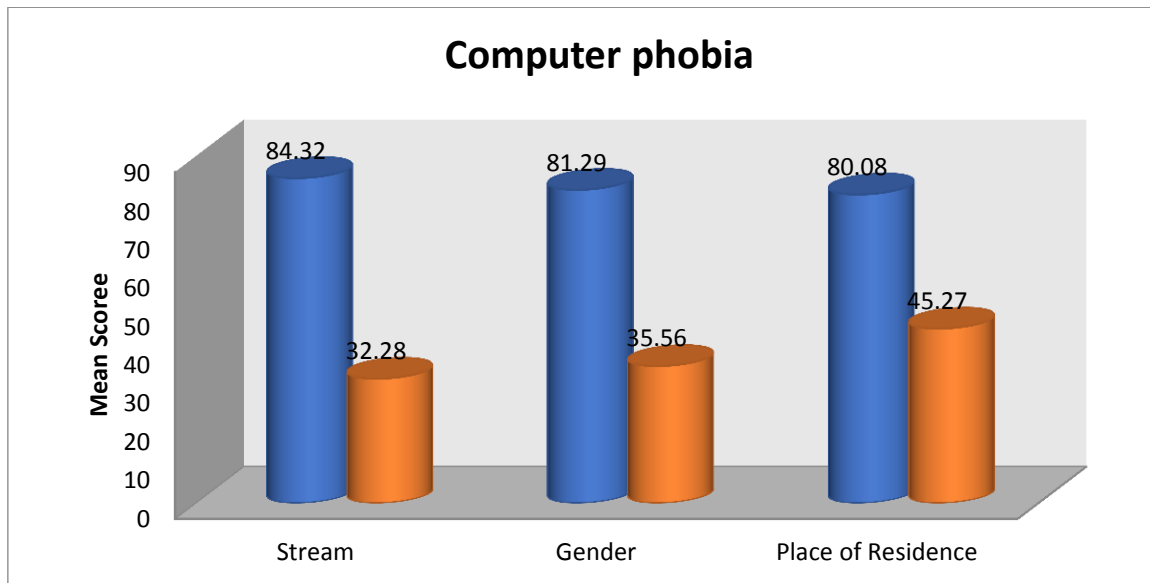
The result reveals from table 4 that

- There is difference between the means of two stream, Science (M=84.32) and Arts (M=32.28) on Computer phobia scale and the value of t is significant at 0.01 level. It means Arts undergraduate college educators have more computer phobia than Science undergraduate college educators.

- There is difference between the means of two gender, Male (M=81.29) and Female (M=56.56) on Computer phobia scale and the value of t is significant at 0.01 level. It means Female undergraduate college educators have more computer phobia than Male undergraduate college educators.

- There is difference between the means of two age, Younger (M=80.08) and Older (M=45.27) on Computer phobia scale and the value of t is significant at 0.01 level. It means Rural undergraduate college educators have more computer phobia than Urban undergraduate college educators.

It appeared that there was significant different between stream, gender and age level on computer phobia.

Discussion :- Educational Technology and Computer play an important role in education. Information and Communication Technology (ICT) can be an extremely powerful to bring positive and sustainable development to college educators to teach their students. This is really tremendous challenge for college educators to learn the use of computer in their own interest and in the interest of students. Computer education is necessary and important for the development of educators as well as students.

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Table 5

Mean, SD and 't' value of social intelligence in relation to different independent variables of undergraduate college educators

S. No.	Variables	Subgroup	Computer phobia				
			N	Mean	S D	t	Significance
1	Stream	Science	160	74.32	5.81	4.83	0.01 level
		Arts	160	77.64	6.47		
2	Gender	Male	160	73.84	7.23	3.04	0.01 level
		Female	160	76.23	6.84		
3	Place of Residence	Younger	160	80.17	7.86	3.85	0.01 level
		Older	160	83.59	8.02		

0.05 = 1.97 level, 0.01 = 2.61 level

Figure 2

Graphical representation of mean score of Social intelligence in relation to different independent variables of undergraduate college educators
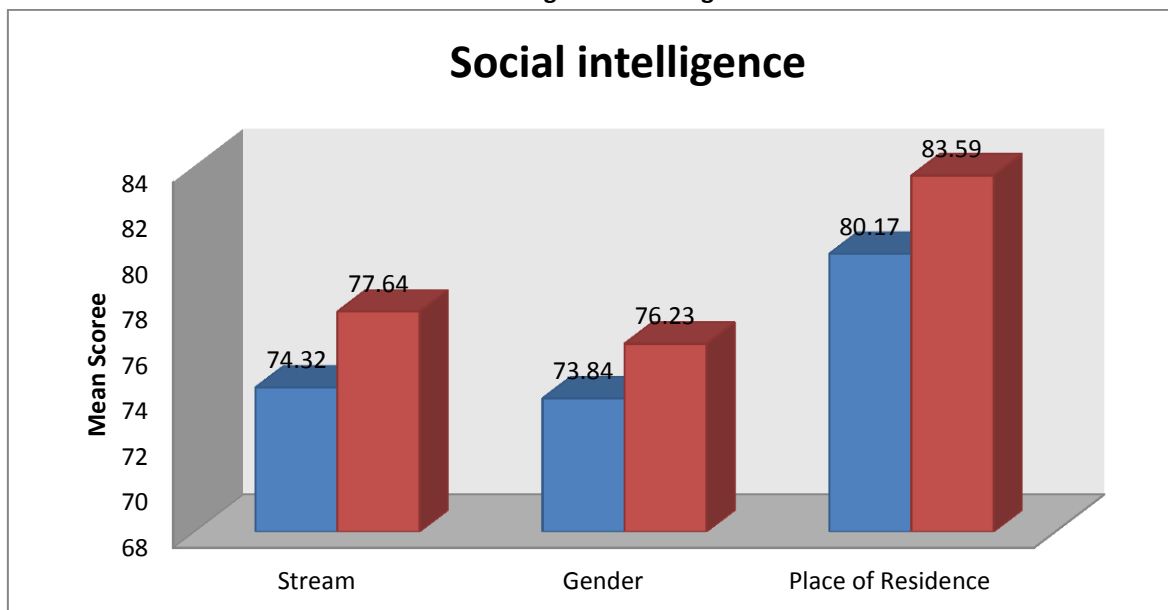
The result reveals from table 4.14that

➤ There is difference between the means of two stream, Science (M=74.32) and Arts (M=77.64) on social intelligence scale and the value of t is significant at 0.01 level. It means Arts undergraduate college educators have more social intelligence than science undergraduate college educators.

➤ There is difference between the means of two gender, Male (M=73.84) and Female (M=76.23) on social intelligence scale and the value of t is significant at 0.01 level. It means Female undergraduate college educators have more social intelligence than Male

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undergraduate college educators.

➢ There is difference between the means of two age, Younger (M=80.17) and Older (M=83.59) on social intelligence scale and the value of t is significant at 0.01 level. It means Urban undergraduate college educators have more social intelligence than Rural undergraduate college educators.

It appeared that there was significant different between stream, gender and place of residence level on social intelligence.

Therefore, the Hypothesis 2: "**There may be significant impact of stream, gender and place of residence on computer phobia and social intelligence among under-graduate educators**" is accepted.

Discussion :- In the age of globalization there is need of social skills. Teacher education plays an important role in shaping and molding the habits, manners and all the characteristics of pupils to become effective citizen. Human being is basically a social animal. Educators are also human being and they are born in the society, develop, work and progress in the society. They have to do social adjustment by their social inelegancy and such develops during their infancy period. Social intelligence is the adoptability to new problem and condition of life. Social intelligence is used to achieve social goals, resulting from any behavioral system. Social intelligence appears to be an important one of psychological abilities that relate to success in life. The main aim of education is the all-round holistic development of the students. In the pursuit of this goal, educators play a significant role. Socially Intelligent educators help students with improved motivation, enhanced innovation, increased performance, effective use of time and resources, improved leadership qualities and improved team work. Social intelligence help sone knows of social, identifying the social and self-awareness. Social intelligence helps in understanding and analyzing of others social intelligence. Hence, it is essential to develop the social intelligence of educators.

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Sport Activities and Outcomes for School Children : A Study

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Abstract :- This paper focus on the scientific view that has been gathered on the contributions and advantages of sports activities in schools for each adolescent or school going children. Different sports activities are good for children of any age either it are any form of Sports activities in group or individual. any form of physical activities helps in strengthen the body and improve bone density. There are so many reasons to do sports activities. Daily based physical activities in early age make child sound and healthy with strong bones and good body coordination. Different types of physical activities are helpful for body and mind and helpful in alertness of mind. Sports activities were the part of our culture from last many decades in old ages sadhu mahatmas use yoga to maintain their body system and Raja Maharaja were used to play different games and sports to maintain their life healthy and strong. Sports activities provide over all benefits to every individual. Research shows that sports activities provide holistic development to school going children and Number of research proves children's development in a number of domains .In overall growth of mind and body sports activities should be focused .

Keywords :- Sports activity, Physical Activity, Sports Training, Healthy behavior.

Introduction :- Sports activities are the activities in which all body muscles work together for better and healthy body. Sports activities provide over all benefits to every individual. Sports activities are very much important in present scenario. Daily base sports activities are helpful in life skills, helpful in coordinating with other students which is helpful in maintaining social and mental health. Sports activities support develop values and right utilization of leisure time. Activities like yoga on daily basis helpful in realxation of stress and sharpen the concentration power and helpful in elimination of anxiety and stress which is very common now in these days. Daily base sports and yoga activities protect children from dangerous diseases like sugar, obesity, heart attack and problem like hypertension which is very common now in these days. Research shows that sports activities provide holistic development to school going children. Children with sports activities have more flexible, well-coordinated body and Number of research proves children's development in a number of domains :-

Physical Behaviour :-

1. Social Behaviour
2. Cognitive Behaviour
3. Healthy Lifestyle
4. Psychological Behaviour

The overview suggests that Physical activities and sport activities have the potential to make wide spread and a kind contribution to improvements in each of these domains. It is suggested that Physical activities have the potential to make distinct contributions to the improvements of children's vital movement abilities and physical competences, which are indispensable precursors of participation in later life-style and sporting bodily activities. They also, when appropriately presented, can aid the development of social abilities and social behaviors, vanity and pre-school attitudes, and, in certain circumstances, academic and cognitive development. The assessment additionally stresses that many of these benefits will not always result from participation, the outcomes are likely to be mediated through the nature of the interactions between students and their teachers, parents, and coaches who work with them. Contexts that emphasize fine experiences, characterized through enjoyment, diversity, and the engagement of all, and that are managed by using dedicated and trained instructors and coaches, and supportive and informed parents, significantly have an effect on the persona of these physical activities and extend the probability of realizing the doable benefits of participation. Especially in teenage student's stucked with hectic workloads and pressure of work, in these times students with sports activities

or sports background are stronger and stable and ready for challenges in spite of non-players.

Sports activities and games have listed numerous advantages associated with participation in these activities. Sports activities promote feeling of togetherness. For example, Gopal(2011) claims that physical schooling helps teens to strengthen respect for the body—their own and others', contributes towards the integrated improvement of mind and body, develops an understanding of the function of aerobic and anaerobic physical activity in health, positively enhances self-confidence and self-esteem, and enhances social and cognitive development and academic achievement. Writing specifically about sport, a Council of Europe file suggests that it provides possibilities to meet and communicate with other people, to take specific social roles, to learn particular social capabilities (such as tolerance and respect for others), and to regulate to team/collective objectives (such as cooperation and cohesion), and that it offers experience of emotions that are now not reachable in the rest of life. This report goes on to stress the vital contribution of recreation to strategies of personality development and psychological well-being, stating that there is, ''strong evidence. On the high-quality effects of bodily things to do on self-concept, self-esteem, anxiety, depression, anxiety and stress, self-confidence, energy, mood, efficiency and well-being.'' Such claims have regularly been criticized for lacking empirical foundations and for difficult policy rhetoric with scientific evidence. This paper seeks to explore some of the scientific proof that has been gathered on the contributions and advantages of Physical Education Programmes for both youth and for educational systems. In doing so, it will be the usage of a framework and some of the facts derived from a recent international lookup project, which drew evidence from over 50 countries, which includes a meta-analysis of statements of aims and standards, and country wide curriculam. Findings suggest that the effects of sports activities and physical education programmes can be understood in terms of children's improvement in many domains :-

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1. Physical Mental
2. Social Congnitive Lifeskill/Lifestyle.

As this article is titled with ' sport activities and outcomes.' Since the relationship between the principles ''physical activity'' and ''sport activities''continues to be a reason of debate, it is rewarding clarifying the use of the terms in this review. In many countries, the term ''physical activity'' is used to refer to that location of the faculty curriculum worried with creating students' bodily competence and confidence, and their potential to use these to perform in a range of activities. ''Sport activities'' is a collective noun and generally refers to a range of activities, processes, social relationships, and presumed physical, psychological, and sociological outcomes. In this presentation, there appears to be a distinctly clear conceptual difference between these two terms. However, cross-cultural research have revealed considerable differences in the use of terminology in this area, and many instructional systems use the phrases synonymously, or certainly use ''sport'' as a conventional descriptor. For this reason, and in line with international agencies like the United Nations Educational, Scientific and Cultural enterprise (UNESCO), the inclusive time period ''physical education and sport activities'' will be used to refer to those structured, supervised bodily things to do that take place at school and for the duration of the college day.

Physical & Mental Development :- Physical Activities and Sports activities are essential part for the development of physical competencies and the provision of physical activity in kids and young people. For many children, school is the essential environment for being bodily active, through either sports activities packages or after-school hours. Subhra Basak and Supriya dutta (2016). Concluded in his study to determine the comparative analysis of physical fitness components and the result of the study shows that in training college students were better in six physical fitness variables than the general college students. The study reveals that training college students were significantly more fit than other students.

School-based Physical activities offers a regulated possibility for usually qualified, responsible instructors to introduce bodily activities and lifestyle competencies and know-how in a structured way to all children, within a secure and supportive environment. The physical fitness advantages of everyday bodily activity are properly established. Regular participation in such activities is associated with a longer and higher pleasant of life, reduced risk of a variety of diseases, and many psychological and emotional benefits.Study shows that routine based physical activities helps in improving of thinking process and enhance problem solving skills. Sports activities prepare young kids with life skills. Routine base activities develop lots of personality traits like leadership quality, sense of responsibility, cooperation and feeling of coordination with others. One of the most important benefits of sports activities for school going student is that youth become stronger with the participation in sports which means nation will be stronger day by day. There is additionally a giant body of literature showing that inactiveness is one of the most significant motives of death, disability, and decreased high-quality of life across the developed world. Evidence is starting to appear suggesting a favorable relationship between bodily activity and a host of factors affecting children's bodily health, including diabetes, blood pressure, bone health, and obesity. Basic motion skills, like those developed by physical activities and sports activities, form the foundation of almost all later carrying and physical activities. There is evidence that these who have developed a sturdy basis in critical movement skills are more possibly to be active, both during

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childhood and later in life. There is also a often cited, but under researched, hypothesis that the improvement of a broad range of these basic movement skills through sports programs is a crucial circumstance for excellence in sport. Conversely teenagers who have now not been capable to collect an adequate base of movement competences are extra likely to be excluded from participation in prepared sports and play experiences with their friends because of a lack of basic physical skills. So, as one of the most notably valued aspects of many children's and young people's lives, such omission from the activities that make up Physical education and sports is possibly to have far-reaching and hazardous penalties to the development and education of many children.

Lifestyle Development :- Physical inactivity has been recognized as a principal risk factor for coronary heart disease, as well as being associated with untimely mortality and obesity. It is now not surprising, then, that physical activities and sports programs some of the few opportunities to promote bodily things to do amongst all children have been proposed as a reasonable way to influence the next generation of adults to lead physically active lives. The mechanisms by using which lively young humans become active adults are unclear. However, research suggests that a quantity of factors make contributions to the establishment of physical pastime as section of a healthful lifestyle. There is some proof that health-related behaviors discovered in childhood are regularly maintained into adulthood. The extent to which bodily endeavor patterns are maintained over time is less clear. A overview of retrospective and longitudinal studies reported that physical activity and sports participation in childhood and youth represents a great predictor of later activity. Interestingly, studies also exhibit how strongly inaction in youth tracks to adulthood, so exclusion from Physical education and sports can be associated with a legacy of inactivity and related ill-health in the years to come. There have been ordinary claims that faculty Physical education and sports create important contexts in which physical

exercise levels are influenced.36 Studies have determined that school-based programs can make contributions to physical pastime levels, each during youth and later in life.The potency of Physical education and sports' influence on physical endeavor looks to be biggest when packages combine lecture room study with activity, when they enable students' experiences of self-determination and feelings of competence in their very own abilities and when they emphasized enjoyment and fine experiences.

Development Of Life Skills :- There is now pretty consistent proof that regular activity can have a fine effect upon the psychological well-being of youngsters and young people, although the underlying mechanisms for explaining these consequences are still unclear. The evidence is especially sturdy with regards to children's self-esteem. Other associations with regular activity that have been stated encompass reduced stress, anxiety, and depression. All of these lend support to the declare that well-planned and Physical education programme can contribute to the improvement of psychological health in young people. One mainly relevant set of findings, in this regard, relates to the development of perceived physical competence. It has been suggested that shallowness is influenced by an individual's perceptions of competence or adequacy to achieve and that It is also really worth considering the growing interest in the relationship between Physical & sports activities and students' general attitudes towards school. Primarily based on small-scale However, some studies report usually fine results in terms of student attendance following the introduction of Physical and Sports activites schemes, and there is evidence from research of scholars at hazard of exclusion from school that an increase in the availability of Physical and Sports activities programs would make the college trip extra attractive. On the theme of the relationship between sports activities and attitudes to school, it ought to be stated that now not all pupils enjoy such activities, at least when in certain ways. For example, many girls collect a progressive disillusionment with positive components of sports

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activities and totally disengage from participation as they move through secondary schooling. So it would be misleading to suggest that sports activities will always make a contribution towards nice attitudes to faculty in all scholars as inappropriate provision might in reality expand disaffection and truancy. Positively, though, there is a fantastic deal of lookup showing that when sports and physical activities are presented in appealing and relevant methods to girls, they can enjoy participation as much as boys.

Social Development :- The thought that sports activity positively have an effect on young people's social development and prosocial behavior goes back many years. Physical and sports settings are regarded an appealing context due to the fact both naturally taking place and contrived social interactions frequently emerge and due to the fact the public nature of participation typically makes each socially appropriate and inappropriate behaviors evident. The lookup literature on the relationship between Physical and social improvement is equivocal. It does not seem to be the case that prosocial behavior necessarily improves as a end result of engagement and there is evidence that in some occasions behavior simply worsens. However, numerous studies have verified that appropriately structured and introduced activities can make a contribution to the improvement of prosocial behavior and can even combat delinquent and criminal behaviors in youth. The most encouraging findings come from school-based studies, Especially those focusing on sports activities programs. While a broad vary of physical activities seem capable to provide treasured environments for social development, school-based packages have a number of advantages, such as access to nearly all children, fewer external pressures to emphasize effect and competition, and the ability to integrate social education with the comparable teaching throughout the school curriculum. Intervention studies have produced generally tremendous results, which include improvements in ethical reasoning, truthful play and sportsperson ship and personal responsibility. It also looks that the most

promising contexts for developing social skills and values are these mediated by means of suitably trained teachers and coaches who center of attention on conditions that occur naturally through activities, by means of asking questions of students and by modeling suitable responses though their own behavior of associated challenge is the difficulty of social inclusion and exclusion. Sports activity plays a healthy experiences to contribute to the method of inclusion by using bringing persons from a variety of social and financial backgrounds collectively in a shared interest, supplying a feel of belonging to a team or a sports club, yoga centers providing opportunities for the improvement of valued competencies and developing social networks, neighborhood cohesion, and national pride.

Helpful In Academic Achievement :- A healthy body will lead to a healthful mind,'' Which means Healthy mind lives in a Healthy body. That means physical activity can support intellectual improvement in children. However there is also an increasing concern by some people that, while sports activities has its place, it need to now not intervene with the real business of schooling, which many trust to be academic achievement and examination results. Researchers have cautioned that sports activities can beautify academic achievement and overall performance with the aid of increasing the float of blood to the brain, enhancing mood, increasing mental alertness, and improving self-esteem. The proof base of such claims is varied and greater research is nonetheless required. However, existing research do endorse a wonderful relationship between intellectual functioning and normal bodily activity, both for adults and children. The study find out about of the impact of Physical activities with academic performance was carried out in which Researchers reduced ''academic'' curriculum time and changing it with Physical activities yet, academic results did not worsen, and there have been fewer discipline problems, increased attentiveness, and less absenteeism. More recent studies have found improvements for many children in their academic performance when time

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for sports is increased in their college day. A evaluate of three large-scale studies found that educational overall performance is maintained or even enhanced through an enlarge in a student's levels of sports and physical activities, despite a reduction in the time for the find out about of academic material. Overall, the accessible research suggests that increased levels of physical activity in school such as through growing the quantity of time devoted to sports activities does now not intrude with pupils' success in other subjects (although the time reachable for these topics in consequently reduced) and in many cases is associated with accelerated educational performance.

Out comes :-
- Development of social skill
- Development of Leadership skill
- Development of Decision-making skill
- Development of sense of discipline.
- Development of Healthy Youth
- Development of body and Mind alertness & many more.

Conclusion :- Physical and sports activities have the achievable to make significant contributions to the Academic achievement and even in all round improvement of children in many ways, sports activities contributes in overall development of personality. Nevertheless, in every of the domains discussed physical, lifestyle, affective, social, and cognitive. It is helpful in all round development. It is shown that sports activities can have a positive and profound effect. In some respects, such an effect is unique, owing to the one of a kind context in which sports take place. There should be a provision of enough time, however also to stress the importance of the high-quality of the program and share information on the benefits of Physical activities amongst administrators, parents, and policy makers. There is no motive to believe that simply assisting participation in Physical activities and sports will necessarily bring about superb changes to youth or to their communities. The movements and interactions of teachers and coaches and parents should decide whether or not or no longer teens and young people experience

these Physical activities and whether or no longer they recognize its tremendous importance & potential that are managed by dedicated and trained instructors and coaches, and supportive and knowledgeable parents, are fundamental.

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Emerging Potential Challenges & Perplexities for Female Labourers in India's Informal Workforce

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Abstract :- In India, 93% of all workers are employed in the informal sector, and one-third of them are women. Thus, taken together, they constitute ninety-six per cent of the total women labour force in the nation. Clearly, the informal sector supports a substantial number of Indian women workers. Women's weak negotiating powers, their willingness to work for cheaper salaries, limited knowledge and the absence of trade unions are the key causes of such a large number of women in the unorganised sector. Most of them are engaged in various trades in the informal sector such as handicrafts, farming, cotton and tea picking, pottery, building and construction, handlooms, housekeeping and home-based work. Typically, these informal workers work as occasional labourers in casual jobs at very meagre remuneration. The workers suffer from a severe insecurity of employment and lack of social security net. They are subject to intense exploitation with long working hours, substandard working conditions and exposure to hazardous health risks. They face further disparities based on gender as women in a vulnerable sector. Discriminatory practices such as rampant and widespread sexual discrimination, wage inequality, lack of adequate maternity protection, inadequate nutrition and poor health are widespread. Although the government has enacted a few laws to protect women's employment, these laws have not helped these disadvantaged women workers in many essential domains such as maternity, social protection and healthcare. It is against this scenario that this paper unveils the hardships experienced by the working women in the non-organised sector, the endeavours made by the Governments to address their woes and the underlying factors for the inability to secure the hoped-for outcomes. What can be the prospective remedy is also investigated in my paper. The methodology of research adopted in this paper is a purely academic one.

Key Words :- Informal Sector, Women Workers, Discriminatory Practices.

Introduction :- This study was conducted among women building/domestic labourers employed in the informal sector in Patna, Bihar. The paper endeavours to comprehend the socio-economic state of women workers, their nature of jobs, work environment, wage structure, discrimination in wages and other hardships they encounter at their worksites. Data was obtained from 51 women workers by adopting stratified multi-level random sampling technique. The results revealed that the large number of immigrant women employed in the field of construction were engaged in non-skilled and poorly remunerated jobs as coolies, operatives and helpers.

Women were more vulnerable to exploitation as they were underpaid in comparison to men for similar types of work and working hours. Working standards in the non-organised sector were substandard and the difficulties they experienced were severe. They were also compelled to accept inferior wages and work under inequitable conditions due to their uneducated status, economic illiteracy, poverty and debt-ridden lives.

What Motivates Women to Engage in Employment? :- Women predominantly engage in work for a variety of reasons, primarily driven by economic independence and necessity. Some women possess the qualifications and ambition to pursue their careers, while others work to

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contribute to society. However, a significant portion of women enters the workforce out of economic necessity, particularly in economically disadvantaged communities. This factor explains the high participation rates of women in these circumstances.

Typically, women from upper-class backgrounds are confined to their homes, whereas the labour force participation rate is notably higher among rural women, standing at 35%, compared to urban women, who register at 17%.

One prevailing trend is that women often opt for standby or temporary positions due to the prevailing reluctance to hire women for permanent roles and provide them with favourable working conditions. Consequently, a substantial number of women find employment in agricultural activities and within the unorganized sector. This includes roles such as laborers in construction, part-time household helpers, and involvement in industries like tanneries (in processes like parting, setting, and drying), as well as beedi and matchstick production.

The Unorganized Sector :- Regular employment with precisely defined working conditions, distinct rights and commitments, and relatively extensive coverage by social security are characteristic of the workers in the organised sector. In contrast, the informal sector operates without clearly defined employer-employee arrangements and is devoid of most social safeguards. These laborers lack a fixed employer and encompass a diverse range of individuals, including those engaged in temporary, contractual, migratory, home-based, and self-employed occupations, striving to make a livelihood with limited assets and skills at their disposal. The National Commission on Labour (1966-69) characterizes unorganized labour as individuals who have been unable to unite for common goals due to various constraints such as the temporary nature of their employment, lack of education, ignorance, small and dispersed business operations, and the dominance of employers in their respective industries. The informal sector is marked by several factors,

including gender-based wage disparities, extended working hours, absence of minimum wage regulations, absence of job security, inadequate workplace amenities, mistreatment, vulnerability to sexual exploitation, and strenuous physical labour, among others.

Women who toil in the unorganized sector typically find themselves beyond the protective umbrella of labour laws and trade unions. They do not receive equitable pay or favourable working conditions. Opportunities for income enhancement are scarce in this realm because women in this sector often engage in traditional domestic roles or unskilled labour. The forces of export-driven industrialization, globalization and the relocation of industries from developed to developing nations have also contributed to a surge in female laborers in the unorganized sector.

The scope of women's work spans various categories, encompassing wage employment, family labour, self-employment and piecework. Notably, urban areas witness a significant presence of women in the unorganized sector, where they participate in tasks such as construction labour, domestic chores, and small-scale endeavours like coir and basket weaving, brick production as well as household industries. Conversely, in rural settings, women are engaged in agricultural pursuits, dairy farming, fisheries, animal husbandry and similar endeavours.

This paper delves into an empirical examination of the status of women working as agricultural workers, domestic help, and construction laborers.

The majority of domestic workers and construction labourers consist mainly of women who have relocated from rural regions in pursuit of economic betterment. The surge of female labour migration to urban centres for non-agricultural work has inundated the existing employment sectors and represents a primary factor behind their severe exploitation. The challenges of urban living, the absence of fundamental amenities, and

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the exploiteation perpetrated by employers have compounded their distress.

The situation for women engaged in agricultural labour in rural areas is equally bleak. Many of them lack consistent year-round employment opportunities, facing significant disadvantages in comparison to their male counterparts, including heightened job uncertainties, lower actual wages, and irregular work patterns. While legal safeguards exist to protect their rights, these working conditions act as a significant impediment to their holistic development, hindering their ability to improve their productivity within their chosen profession.

Literature Review :- Ali (1997), classifies the informal sector into three distinct categories: wage workers, household workers, and self-employed workers. Ali stated that these workers lacked basic protections in terms of maternity benefits, wages, job security, provident funds, working conditions, health care and retirement benefits. Ali carried out an analysis of the various labour laws relating to women's labour, child labour, contract labour and migrant labour in these sectors. However, his findings were that these laws had not been effective in improving the overall situation of workers in the informal sector.

Banerjee (1982), conducted a study on women workers in the unorganized sector of Calcutta. The findings revealed that these women workers experienced challenging working conditions and were subjected to a significant level of exploitation, especially when compared to those working in the organized sector. The majority of the women in this sector were employed as domestic servants, while others were engaged in unskilled and semi-skilled occupations. Approximately 25% of these women worked as piece-rate workers, and many of them were willing to work in areas considered socially tabooed.

Chakravarty (1985) and Sisodia (1985), conducted separate studies exploring the involvement of women in agricultural activities in India. They observed that women actively participated in various tasks such as harvesting, threshing, weeding, and other related activities. Additionally, women played crucial roles in supportive tasks such as cattle rearing, cake making, ghee production, milking, and animal feeding. However, despite their significant contributions to the production process, these women often went unrecognized and unappreciated. The studies emphasized the importance of recognizing and valuing the role of women workers in agriculture, urging for their contributions to be acknowledged and given the appropriate appreciation they deserve.

Das (2015), conducted a study focusing on the socio-economic status of women employed in brick kiln units in the Medinipur district of West Bengal. The brick industry in the region experienced substantial growth due to the progression of the real estate sector, resulting in the employment of a large number of workers, a considerable proportion of whom were women. Within the workplace, these women workers faced exploitation, deprivation, and lack of privileges enjoyed by their male counterparts. Not only this, they also encountered various problems that affected their well-being and the study found that poverty was a prevalent condition among these women workers, which drove them to seek employment in the brick kiln units. Most of the women were migrants and had very small plots of land. Both the women workers and their children faced high levels of illiteracy. Their annual income was meagre, and they were not provided opportunities to engage in skilled work. Furthermore, the women frequently voiced their discontent with their working environments.

Dassanayake (1999), has stressed the need for the provision of social protection to women working in the unorganised sector and described the situation of women in the unorganised sector as highly distressing. She outlined a number of constraints faced by these women, including the limited participation in decision-making processes, continuation of traditional gender roles, insufficient access to health care and education, lack of reliable access

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to formal credit systems and marginalisation from resource ownership. In dealing with these issues, the key areas for their social protection included ensuring access to education, health care, and resources; micro-insurance; ensuring access to legal literacy and facilitating access to credit systems.

Ghosh's (2004), study aimed to examine the work processes and labour relations within the brick kilns of Gautam Buddha Nagar district in Uttar Pradesh. The study analysed both the supply and demand side factors that contribute to the exploitation of workers and their vulnerability. The seasonal migrant workers in these brick kilns primarily hailed from economically disadvantaged areas, lacking sufficient agricultural or other means of production. Many were small, landless farmers with limited sources of income and employment opportunities in their home towns and this precarious situation of these labourers often pushed them into debt, forcing them to seek employment elsewhere. During the brick-making season, the kiln owners sent contractors called jamadars to recruit workers and lure them with advance wages to secure a dependable workforce for their kilns and the already impoverished and jobless status of these labourers forces them to find these offers appealing and they commit themselves to work for the upcoming brick-making season. However, due to the extremely low wages offered in the brick kilns, it often became arduous for the workers to repay the advanced money and consequently, they would involve their family members, including children in the labour process, thus falling into a vicious cycle where they felt trapped and were compelled to return to the same kilns in the later years. A significant concern regarding the brick kiln workers revolved around the fixation of wage rates. The wage rates for various tasks within the brick kilns had not been revised for an extended period and were even lower than the prevailing rates as a result of which, the workers found themselves struggling tirelessly, along with their family members, including children, in order to earn enough to repay their loans.

Hazarika, et al (2002), highlighted the crucial role of Indian women, who account for roughly 50% of the total population, who contribute either directly or indirectly to the economy. However, their economic stature, particularly in the non-organised sector, remains quite marginal. The study concentrated on a key group within the informal sector: women household workers. Fifty respondents were interviewed in a survey conducted in Mumbai. Most of those interviewed were found to earn very low wages and expressed dissatisfaction with what they earned. Not being paid for overtime and lack of paid leave were common complaints. Many of the women interviewed were the main breadwinners for their families. About half of the women's husbands had drug dependency problems. In addition, they lacked the most basic amenities at home, such as access to hygienic drinking water and decent defecation facilities. They struggled to support their children's education due to illiteracy.

Jagori (2004), studied migrant women workers and their challenges in the informal sector in Delhi. Exploring the various hurdles and hardships faced by these women during the processes of migration, settling in a new city and finding employment was the main thrust of the study. Women working in a variety of occupations including domestic work, self-employment, factory work and construction are interviewed. The majority of the interviewees were migrants from Bihar, Uttar Pradesh and West Bengal and they were first generation migrants. Illiteracy was found to be rampant among those interviewed and their monthly family incomes were exceptionally low, often amounting to Rs 3,000 or even less. It highlighted that most migrants moved for occupational opportunities. It also underlined that migrant women workers contribute immensely to the overall economic and social development of the city and the country as a whole, but that their contributions often go unnoticed and unacknowledged.

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Objective of Study :- The study aimed to achieve the following goals:

1. To gain insights into the social and economic backgrounds of female workers in the construction and domestic labour sectors.

2. To identify and understand the primary challenges encountered by female laborers in their respective roles.

3. To uncover the characteristics of the work they perform and assess the conditions under which they work.

4. To evaluate the availability of facilities and examine the living conditions provided to female laborers.

5. To investigate the patterns of wages they receive and analyse the factors contributing to wage disparities among female laborers.

Methodology :- In order to conduct the study, a deliberate selection was made of a group comprising 51 women. Among these, 25 were engaged in supporting construction work, while the remaining 26 were employed as domestic assistants in Patna and the surrounding areas. These women live in modest, hut-like dwellings known locally as "jhuggis."

Structured interviews were conducted with these women as part of the study. Additionally, to provide further depth and detail to the research, four specific cases were closely examined and analysed.

Findings of the Study :- The construction industry relies heavily on manual labour and operates under a system of contracting and subcontracting. It stands as a unique sector where the product remains stationary while the workers move dynamically. Women are engaged in virtually every aspect of the construction process, ranging from foundational work to roofing and beyond. Their roles encompass tasks such as clearing excavated materials, transporting water, sand, and cement mixtures for laying foundations and pouring concrete. They carry stones, bricks, and necessary

tools to the construction site. Women also contribute to the assembly of scaffolding by transporting materials and preparing surfaces using locally available materials before the pouring of concrete for roof slabs. After the structural framework is established, they participate in curing operations and other essential tasks.

Despite their substantial contributions, women consistently receive lower pay compared to their male counterparts performing identical work. Their earnings typically fall Rs. 50 to 70 below that of males. According to reports from construction workers, this wage disparity is attributed to two main factors: the belief that women are incapable of handling physically demanding tasks that require more exertion, and the classification of their labour as unskilled, which results in lower pay rates.

As an increasing number of women venture outside their homes to contribute to their family's finances, the demand for domestic assistance is on the upswing. These domestic helpers are enlisted to perform a wide range of household tasks, encompassing house cleaning, dishwashing, laundry, meal preparation, childcare, and various small errands. The core essence of their work can be characterized as physically demanding, monotonous, repetitive, and tiresome.

Domestic labourers are typically engaged within the confines of private households, and their work is often regarded as subordinate in nature. They commonly endure irregular work hours and face a multitude of indignities and abuses, including the constant spectre of job termination hanging over them. These workers are susceptible to a range of challenges, including a lack of job stability, inadequate living conditions, wages that fall below the minimum threshold, pay rates determined solely at the discretion of individual employers, issues related to sanitation and health, and the absence of benefits such as maternity support or sick leave. Their vulnerability stems from their lack of education and economic

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hardship, making them susceptible to exploitation.

Remarkably, domestic workers find themselves among the most underpaid laborers. The findings indicate that a majority of these workers earn a meagre sum of Rs. 60-70 per day. It's crucial to recognize that these shockingly low wages do not reflect the productivity of domestic workers but are instead a reflection of their limited bargaining power. In this context, domestic workers are treated as commodifiable assets. Employers wield authority over decisions regarding hiring, duration of employment, wages, terms and conditions, and even the timing of a domestic worker's dismissal. In such a scenario, domestic employees, lacking significant bargaining power, become vulnerable to exploitation.

The research uncovered that a considerable majority of the labour force, accounting for 77%, were from tribal communities, scheduled castes and other marginalized castes in the construction sector. These groups have traditionally been marginalized and assigned subordinate roles within the Indian societal framework. Their limited exposure to the complexities of competitive urban life, coupled with a lack of skills, often compels them to seek employment in the unorganized sector.

Remarkably, a significant proportion, specifically 86%, of the construction workers had migrated from regions like Madhya Pradesh, Chhattisgarh, Jharkhand and Bihar. The construction industry serves as a vital source of direct employment for these migrant workers, who possess varying degrees of experience and skill. It represents a lifeline through which a substantial portion of the impoverished population can secure an income.

This migration from rural to urban areas, particularly to metropolitan cities, can be attributed to several factors. These include insufficient growth in agricultural production to sustain the population, the dearth of employment opportunities for marginalized and rural communities, inadequate housing and civic amenities, natural disasters, and a lack of essential infrastructure facilities. These combined factors force people to migrate to urban centres in search of better prospects.

Conclusion :- Multiple factors contribute to the current dire situation of women working in the unorganized sector. Primarily, a portion of the labour market operates against women's interests in this sector. Additionally, the adverse effects of technological advancements on female labour, the absence of organized efforts such as the formation of female worker trade unions, the lack of a purposeful human resource development policy to enhance women's employability through training, the ineffective enforcement of safeguards to protect female workers, especially regarding their working conditions, insufficient legislation, all play key roles in the unfortunate predicament of female labourers.

Given these circumstances, it is pertinent to assert that the government should seriously take measures and steps to enhance and upgrade the working conditions of women in terms of working hours, occupational safety, and the provision of fair wages. Such initiatives are essential to ensure that women employed in the unorganized sector can access dignified and decent work as a matter of course.

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Agricultural Labour in Bihar in Scoio–Economic Perspectives

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Introdudtion :- Mahatma Gadnhi once said "The hungry see God in the form of bread." Millions of people including agricultural labour are not yet vouchsafed this grace. Dispute the prime role played in the growth of production in agricultural sector, they are deprived of basic needs of life. They are destined to lead degraded and obnoxious life. Now the question is who are agricultural labours ? Are they living in villages with bitterness of hunger and ignorance, disease and helplessness, victims of indifference for generation and intricated into morass of indebtedness ? The Census of India 1981, puts agricultural labour as "A person who worked in another persons land for wages in cash, kind of share of crop was regarded as an agricultural labour. Such a person had no risk in cultivation but merely worked in another person's land for wages. An agricultural labour had no right to lease or contract on land on which he worked."

Agricultural labours mostly belong to socially and economically backward and poor sections swelling the rank of tribes and thus may be divided into four types : (a) Landless labourers who are attached to the landlords, (b) Landless labours who are personally independent and free to work where over he likes, (c) Petty partners with tiny bits of land who devote most of their time working for other, and; (d) Farmers who have economic holdings but who have one or more of their children and independents working for other persons farms.

The first group of the agricultural workers has been in the position of serf or slave. They are popularly known as 'bonded labour.' They are not paid wages in cash but in kind. Sometimes they have to offer cash but in kind. Sometimes they have to offer cash and supply fowls and goats to their masters. Rest group of workers are important but first one is subject of serious consideration.

There is no gain saying that once Bihar was one of the developed states of India but now unfortunately it presents a gloomy picture as the most undeveloped and backward state of the country. It is facing severe socio–economic problems, the low literacy rate, high incidence of poverty, low urbanization, low industrial infrastructure facilities, which bring out state in tragic situation of the most backward region in the country. According to one of the recent observations of 'India Today,' Bihar stands as the poorest province of India. It is far behind even Odisha now. The political system has cracked down and cohesiveness among the people perished. The irony of its development is substantiated by the fact that the Planning Commission of India has identified 100 most backward districts in the country, of which 38 districts belong to the state of Bihar. "This reveals a paradoxical situation as the poor socio–economic development is in sharp contrast to its endowment of natural resources and manpower. At the time of independence, Bihar's socio–politico–economic situation was not so depressing as it has reached today.

In Bihar the agricultural labourer are completely unorganised and this is why there are sharp variations in wages from district to district. Since the last decade there have been the deplorable conditions of the agricultural labourers resulting in rapid migration from Bihar to other states. The state is faced with precarious and pugnant socio–economic situation.

FEATURES OF AGRICULTURAL LABOURERS IN BIHAR :- The socio–economic structure of agricultural labourers has been changing continuously in Bihar. These changes are in the field of agricultural production and institutions where agricultural labourers are involved and other workforce associated with agriculture sector, agricultural technology etc. Such changes have relative impact. It has promoted graciously the living standard of the people standing on the

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upper strata of the social ladder whereas it has seized off the privileges of the poor peasantry. This is simultaneously unsetting the impact of the change. According to one analysis, the overall rural workforce increased by 103 percent during the period from 1951 to 2011, cultivators increased only by 58 percent, whereas agricultural labours increased by 173 percent. This implies that marginal farmers have slided downward from its place and swelling the rank of landless labourers.

Of late it has been observed that there has been a fast mobility in the agricultural labourers. They are migrating to other states in search of job mostly to Punjab and Delhi where they have good earnings. Actually they are sharing prime role to strengthen the state economy of Punjab and Delhi by overcoming the dearth of workforce. On the contrary there have now been shortages of labors in Bihar. Now landowners of Bihar have to depend on some few casual laborers only.

Another important change which has taken place recently, is that the labourers earning in other status posses handsome money and they buy land from their past landowner. This has completely change socio–economic structure of the society. Now landowners are becoming landless and landless labourers are becoming landowners. Thus the socio–economic pattern of the society is changing very fast.

In Bihar out of the total population 10,38 crore, 28,080,004 persons are workers, out of which 21,063,153 are main workers and 7,026,851 are marginal workers. Thus of the state's total population the percentage shares of total workers, main workers and marginal workers are 33.88 percent, 25.40 percent and 8.48 percent respectively. The corresponding figure for 2011 census were 30.58 percent (total workers), 29.13 percent (main workers) and 1.46 percent (marginal workers). There has been an increase of more than 7 percent. So far as the proportion of cultivators are concerned, it has decreased from 43.58 percent 2001 to 29.17 percent in 2011 and share of agricultural labours increased from 37.13 percent in 2001 to 48.18 percent in 2011. The above statement indicates that such a surprising growth in agricultural labourers is due to the marginal farmers swelling the rank of agricultural labourers. Owing to the increasing economic compulsion in terms of past debts, they are compelled to sell their lands to repay the loan taken from the landlords of moneylenders. In fact, millions of rupees invested in irrigation, tube wells, institutions, roads have gone to the big farmers, contractors and brokers. Even the benefits of co–operatives or nationalized banks accrued to big farmers were not to the workers.

According to the Second Agricultural Labour Enquiry Committee, 1960, agricultural labour families constituted 25 percent of rural families. According to the report, more than 85 percent were casual labourers serving farmers who were willing to engage them and only 5 percent were attached to some specific landlords, and even rest of them own very little bits of land. Agricultural labour predominantly belongs to scheduled castes, scheduled tribes and other backward classes. According to one of the estimates 75 to 80 percent of agricultural labours belongs to scheduled caste.

The socio–economic conditions of agricultural labourers in Bihar are most miserable which have cornpelled them to live a destitute life. Same of these problems have been identified as hereunder :

1. Erratic and Irregular Working Days :- The availability of works for the agricultural workers are most erratic and irregular. It has been observed that the average working days of agricultural labour household were found to be 230 days and 184 days respectively during 1977–78 (NCRL, 1991) whereas the corresponding figures for 1983 were 159 days and 136 days respectively. Thus there has been a decline in the days of employment which has affected the economic conditions of agricultural labour households most adversely.

2. Uneven Distribution of Land :- Official data about land distribution indicate that 61 percent of the rural (household either own no land or small fragments of land or marginal uneconomic holdings of less than 1 hectare taken together, 61 percent of households own merely 8 percent of cultivated area. Out of them 22 percent

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households own no land at all, another 25 percent own less than half a hectare (1.2 crore). Thus these marginal families are recruited in army of landless labourers since they subsist at the poverty line and have been gradually sliding below poverty line.

3. Disparity in Wages and Earnings :- It has been observed that even the minimum wages are not being paid to the agricultural labour. There are also regional disparities in wage structure. In some states they are receiving good remuneration against their work like, Kerala, Haryana, Punjab and West UP. But on the contrary in Bihar these workers are not paid even the notified wages. In Bihar, agricultural labourers are unorganised and so they don't have any bargaining capacity. They are facing physical and mental torture by their landlords which have compelled them to the become extremists.

4. Illiteracy :- Although, illiteracy is a national problem but it is grim among the agricultural labourers of Bihar. According to the census report of India the percentage of illiteracy to the total population is more than 61 percent. On the basis of available figures, it would be proper to mention that majority of agricultural workers are either illiterate or have got nominal education. Particularly when the labourers are expected to be skilled, the illiteracy stands as a barrier. Not only to get due with the cultivators or, producers but also to raise their rate of earnings, the education is considered to be more sensitive. Hence the poor rate of literacy or neglected efforts on the front of improving their efficiency has basically been responsible for the whole affairs.

5. Immobility of Agricultural Labourers :- Agricultural labourers in Bihar still traditional. They are not ready to shift their occupation even during the period of scarcity of works in agriculture. On account of lack of information about the availability of job in other states they are confined to their own region. Dearth of attributes restricts the mobility of the agricultural labourers.

6. Indebtedness :- Agricultural labourers are heavily indebted. Normally the farm labourers borrow from the landowners under whom they work. As they have nothing to keep security, they pledge themselves to the moneylenders and rich

landlords and becomes bonded labourers in many areas. Naturally, they are forced to accept lower wages. Apart from the above facts, inherent bargaining capacity and the infringement of laws by producers and cultivators are responsible for their disgusted and disconcerted life.

POLICY PRESCRIPTIONS :- The following suggestions are being made ameliorate the social and economic conditions of agricultural labourers :

1. Abolition of Bonded Labour :- This is historical fact that the serfdom of the past is still in existence with changing shapes and sizes. Although the Constitution of India prohibits the practice of slavery in any form, but agrarian serfdom is stilly in practice. The main region for such a situation is the illiteracy and ignorance of agricultural labours. The abolition of the bonded labour and control of activities of moneylenders must be stopped. Hence programmes like mass literacy programme must be launched vigorously.

2. Implementation of Minimum Wages :- The agricultural workers have been getting very low wages. Measures should be taken to raise the wages otherwise it is impossible to improve their conditions. Legislation has been already erected towards this direction but it has been proved to be indifferent. The need is to enforce it with iron hand.

3. Rehabilitation Landless Agricultural Workers :- To provide with land is one of the best prescription to raise their conditions. To proclaim on paper is not enough. Government agencies must be pragmatic. The redistribution of land should be made immediately out of the land gifted under Bhoodan and land snatched from the landlords by government under Ceiling Act.

4. Change in Agrarian Structure :- The structure of agriculture is needed to be changed. Mono cropping system is not capable to provide job round the year. So the irrigation system should be made extensively to have double/multiple cropping and thus guarantee of employment throughout the year. There is very much scope of setting up of agro–processing industries. There is also possibility of establishing small size industries

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employing modern techniques.

5. Formation of Union for Agricultural Labour :- Unfortunately, there is absence of union of agricultural labour in most of regions of India. It is incumbent and indispensable nowadays with a view to restrict exploitation from the landlords and moneylenders. The Government should also encourage forming such unions as this would emerge a strength of the poor unorganized mass.

6. Expansion of Public Works Programme :- This programme may provide employment to the rural during the season off time. After accomplishing the agricultural work they have no job for 3–4 months. In the meanwhile if the Government launched some rural project in the rural area such as road construction, digging of some canals, some building work, etc. the workers will be absorbed simultaneously. There would be access in rural areas. The strict implementation of Government programmes like Minimum Wage Act, Tenancy Act, 20 Point Programme, Labour Co–operative, Employment Guarantee Scheme, Insurance Scheme in unorganised sector etc. must be ensured to ameliorate the condition of agriculture labours.

CONCLUSION :- To sum up it may be observed that despite various measures adopted, there is no significant change in the socio–economic conditions of agricultural labour. In this regard the recommendations of National Commission on Rural Labour are worth mentioning :

(i) The strategy capable of making poor agricultural labourers viable has necessarily to be multi–dimensional. The first thing is to create and strengthen infrastructure of irrigation, drainage and flood control and rural electric supply as well as introduction of dry framing technology which will result in increasing agricultural productivity and employment.

(ii) It would be necessary to undertake employment generation programme which should aim at absorbing the excess supply of labour for agricultural operations and these in turn raise the income of agricultural labourers.

(iii) Agricultural labour should be provided with house sites and homes not only to meet their basic needs but also to enable households to take up supplementary land based activities like poultry, dairy etc.

Legislation to cover agricultural labour. This legislation should provide for security of employment for agricultural labourers; prescribed ours of work, payment of prescribed wages and machinery for the settlement of disputes. The legislation should also make provisions to prepare scheme for welfare and social security measures. The commission recommends a separate department of Rural Labour at the central and state levels with functionaries below the state as well.

Keeping in view the above recommendations of NCRL it may be concluded that if these recommendations are implemented the deplorable conditions of agricultural labours in Bihar will certainly improve.

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A Study of Human Rights and Challenges of Women's Rights

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Abstract :- The conception of Human Rights is as old as human enlightenment. Since human begins started to lead an organized life the issue of human rights caught the fancy of those at the helm of affairs. All social systems and cultures have developed some conception of rights and duties for their members. The struggle for recognition of some basic rights of the individual against political, social, economic, and cultural oppression, injustice, and inequalities has been an integral part of the history of all human Societies. The recognition that every individual is entitled to enjoy certain basic rights merely by the worth of a human being born into the human species has evolved through this struggle. Women and men refer to equal rights, responsibilities, and opportunities. The Human Rights Council regularly holds special panels relating to women's rights and the integration of a gender perspective. Human rights are fundamental rights everyone has under being human. They are inherent and inalienable in every person regardless of their status in any society. Human rights cannot be accorded or withdrawn or taken away. This paper is an attempt to understand the Human Rights and Challenges of Women's Rights in India.

Keywords :- Gender, Equality, Human Rights, Women, Social, Justice, etc.

Introduction :- The Universal Declaration of Human Rights (UDHR) on 10th December 1948 containing 1 to 30 Articles on the political, economic, social, and cultural rights of human beings may be considered a milestone epitomizing the age-old aspiration of the human race to assert their dignity and freedom.[1] The United Nations has a long history of addressing women's human rights and much progress has been made in protecting women's rights across the world in covering decades. The 1948 Universal Declaration of Human Rights states that all humans 'born free and equal in dignity along with rights'. All people are therefore authorizing to liberty, dignity, and equal rights, regardless of their gender. Yet every day all around the world, women and girls still experience discrimination and severe violations of these human rights.[2] Women's rights have been at the centre of a series of international conferences that have constructed notable political commitments to women's human rights and equality. Starting in 1975, which was also International Women's Year declare, Mexico City hosted the World Conference on the International Women's Year, which resulted in the World Plan of Action and the choice of 1975–1985 as the United Nations Decade for Women. In 1980, one more international conference on women was held in Copenhagen and the Convention on the Elimination of all Forms of Discrimination against Women was unlocked for signature. The third World Conference on Women was held in Nairobi, with the committee on the elimination of discrimination against women has begun its work in 1982.[3] Three world conferences observe extraordinary participation on the part of women from around the world and laid the groundwork for the world conferences in the 1990s to mark women's rights, the counting Fourth women World Convention held on Beijing in 1995.

Objectives of the study :-
1. To know the need for Women's rights and analyze the various women's rights in India.
2. To understand the government enactment

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this ensures women's rights.

3. To identify the issues and challenges of women's rights.

Declaration of the Rights of Man :- In the free world, the concept of human rights has emerged as a live and energetic issue. The thought of Human Rights is accepted as an ideology. Various development connected therewith are, indeed, milestones on the path of human progress. The process of Human Rights took a definite shape gradually in the past and some important resolutions and decisions such as the Magna Carta, in England, the Petition of Rights, and the US Declaration of Independence 1776, followed by the Bill of Rights embodied in the U.S Constitution in 1791, as also the French Declaration of the Rights of Man were the remarkable achievements.[4] After two world wars the representatives of the assembled nations, at San Francisco on June 26, 1945, adopted the United Nations Charter which inter alia is the declaration of faith. It looks through in fundamental human rights, in the dignity and value of the human being, in the equal rights of men and women. UN formation on October 1945 the world at large witnessed the establishment of the United Nations organization which on December 10, 1948, adopted the Universal Declaration of the Rights of Man.[5] This Universal Declaration was the first positive manifestation of the internationalization of human rights values.

Constitutional Rights for Women :-

1. The state shall not discriminate in favor of any citizen of India on the ground of sex [Article 15(1)].
2. The state is empowered to provide any special provision for women. (affirmative discrimination favoring women) [Article 15(3)].
3. No citizen shall be discriminated against and be ineligible for any employment or office under the state on the ground of sex [Article 16(2)].
4. Traffic in human beings and mandatory labor are prohibited [Article 23(1)].

5. The state should besecuring for men and women equally the right to an adequate means of livelihood [Article 39(a)].
6. The state assured equal pay for equal work for both Indian men and women [Article 39(d)].
7. The state is required to ensure that alltypes of health and strength of women workers are not abused and that they are not forced by economic necessity to enter avocations unsuited to their strength [Article 39(e)].
8. It shall be the duty of every citizen of India to renounce practices derogatory to the maintain dignity of all women [Article 51-A(e)][6].
9. One-third of the seats for Women/SC/ST reserved in 73rd Amendment PRIs and 74th Amendment in Municipalities.

Legal Rights for Women :-

1. The Protection of Women from domestic violence Act (2005) is legislation protecting women in India from all forms of domestic violence of any kind physical, sexual, mental, verbal, or emotional.
2. The Commission of Sati PreventionAct (1987) dispenses for the more effective prevention of the commission of sati and its glorification of women.
3. Dowry Prohibition Act (1961) prohibits the giving or taking of dowry at or before or any time after marriage from women.
4. The Maternity Benefit Act (1961) governs women's employment in the periods before and after childbirth and provides for maternity benefits or certain other benefits.
5. The Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act (1994) prohibits sex selection before or after conception and prevents the misuse of pre-natal diagnostic techniques for sex determination.
6. The Equal Remuneration Act (1976) was issued for payment of equal remuneration to both men and women workers for the same work
7. The Dissolution of Muslim Marriages Act (1939) provides Muslim wives the right to

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seek the dissolution of their marriage.

8. The Muslim Women Protection of Rights on DivorceAct (1986) protects the rights of Muslim women who have been divorced by or have obtained a divorce from their husbands.

9. Family Courts Act (1984) provides for establishing Family Courts for the speedy settlement of family disputes.

10. The Code of Criminal Procedure (1973) has certain safeguards for women such as an obligation of a person to maintain his wife, arrest of the woman by female police, and so on.

11. The Indian Christian Marriage Act (1872) contains issues relating to marriage and divorce in the Christian community.

12. The Legal Services Authorities Act (1987) providesfree legal services to Indian women.

13. The Hindu Marriage Act (1955) introducedmonogamy and allowed divorce on certain specified grounds.[7]

14. The Hindu Succession Act (1956) recognizes the different rights of women to inherit parental property equally with men.

Women's Rights in Public and Political Life :- The historical aspect of women has been excluded from political life and decision-making processes. Women's move for participation in the public and political arena in nineteenth and twentieth century's and still continue today. The time period of the First World War, few parliamentary democracies recognized women's right to vote. In the year 1945, when the United Nations was established more than half of the 51 nations that ratified the Charter still did not allow women to vote or gave them only restricted voting rights. One of the first tasks of the Commission on the Status of Women was to write the 1952 Convention on the Political Rights of Women.[8] In Indian women do not take full benefits of their constitutional rights because they are not properly aware of them. Women also have poor utilization of voting rights because they possess low levels of political awareness and a sense of political efficacy. Women are not informed about the issue, nor are they encouraged to become informed. The different political parties do not invest much time in women candidates because they don't see much potential or promise in them, and see them as a wasted investment. Political under-representation of women in positions of power in politics and violence against women is not considered serious political issues. Notions of the family being private, beyond state intervention in these circumstances, empowerment through compulsory reservation is posing a threat to the traditional societal framework of India. This is one of the reasons that even after more than fifteen years of implementation of the reservation policy; desired results could not be meted out. But women's rights are a much talked about subject these days. It involves many things – economic opportunities, political representation, social equality, educational benefits, and so on.[9] In fact, the process of women's rights is taking place at so many levels that it is quite difficult to gauge the actual nature and extent of women's rights in improving the status of women. Every society 'women's rights' carries different meanings for different people, depending upon their ideological position and their pre-conceived notions about women's role and place in society.

Right to Decent Work and Social Security :- The right to work and social safety is closely linked to an adequate standard of living in the conditions for oneself and one's family. The explain of International Labour Organization (ILO), women experience systemic barriers in almost every aspect of work, ranging from whether they have paid work at all, to the type of work they obtain either are excluded from, the availability of support such as childcare centers, the level of their pay, their working conditions, their access to higher paying 'male' profession the insecurity of their jobs, the absence of pension entitlements or benefits, and the lack of time, resources or information necessary to enforce their rights.[10] Women make up the majority of the poor in two developed and developing nations, and they face multiple barriers to retrieving social security too, owing to their roles as mothers, informal workers, migrants, and part-time workers.

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Food, Water, and Sanitation :- The rights to food, water, and sanitation are equal challenges for women's well-being, dignity, and enjoyment of other human rights. It is important to investing in women's nutrition improves the overall development capacity of a country, considering the role women have in the household concerning food production, food preparation, and childcare. Women's and girls' drawback of health status and their traditional role in water collection and sanitation management seen in many societies harm and it has been recognized that a lack of water and sanitation also disproportionately affects the society. Women and girls have a greater need for privacy when using toilets and when bathing, especially when menstruating, and in addition not having easy access to toilets and bathrooms makes them other vulnerable to rape and other forms of gender-based violence. The International Congregation on Economic, Social, and Cultural Rights acknowledge the righteous to food to be needed to ensure everyone's fundamental right to freedom from hunger and malnutrition.[11]

Violence Against Women :- The declaration on the elimination of violence against women defines violence against women as any act of gender-based violence seen in society is like physical, sexual, or psychological harm or suffering to women in society. Although, it took a long and persistent struggle by the women's rights movement to persuade the international community to discuss violence against women as a human rights concern and recognize that gender-based violence is a serious violation of human rights given at global importance which poses a threat to human development as well as international peace and security. The main agenda for the 1993 World Conference on Human Rights held in Vienna did not originally mention women or any gender aspects of human rights. It was the women's rights movement that brought attention to the different issues of violence against women during the conference, leading inter alia to the recognition, in the Vienna Declaration, of the elimination of violence against women in public

and private life as a human rights obligation.Subsequently, General Assembly adoptedthe Declaration on the Elimination of Violence against Women in December 1993. This was the first international instrument to specifically address this issue.[12]It recognizes that violence against women constitutes a violation of the rights and fundamental freedoms of women.

Right to Equal Pay :- We now have gender-neutral laws. All males and a female are entitled to the important of same pay for the same work. The Equal Remuneration Act provides for the equality of men and women. It ensures payment of equal remuneration to both men and women workers for the same work or work of a similar nature.[13] In the circumstances of recruitment or service conditions, there will be no discrimination based on gender basic.

Right Against Domestic Violence :- Every woman is entitled to the right against domestic violence with her under the enactment of the Protection of Women from Domestic Violence Act in 2005. The domestic violence includes not only physical abuse but it's also included in mental, sexual, and economic abuse. So, if you are a daughter or a wife or a live-in partner and are subjected to any of such abuses by your partner or husband or his relatives or by a person related to you by blood or adoption who lives or has lived with you in a shared household, then you are well covered under the provisions of domestic violence act. Every woman contacts the women's helpline no. '1091' and register your complaint. They will inform the police about the women's complaint case. Women also approach the women's cell of your area which women can find with help of Google. They provide special services to such women and help them lodge their cases before the Magistrate after properly drafting their complaints.[14] The Indian Penal Code also protects such women who are subjected to domestic violence, under Sec. 498A by punishing the husband or his relatives with imprisonment which may extend to 3 years and a fine.

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Right Against Dowry and Free Legal Aid :- The dowry system means giving and taking of dowry by a bride or bridegroom or by their parents, before and after the marriage is discipline by the Dowry Prohibition Act, of 1961. If any person give or take dowry that circumstances person shall be punished with a minimum imprisonment of 5 years and a minimum fine of Rs. 15,000 rupees. If you are an indignant woman, you are entitled to claim free legal aid from the legal services authorities consider under the Legal Services Authorities Act, 1987 irrespective of whether you can afford legal services on your own.[15] There are District, State, and National Legal Services Authorities constituted at District, State, and National levels respectively. The Legal services include assisting in the conduct of any case and other legal proceedings before any Court in turn tribunal or authority and advising on legal matters.

Educational Rights :- Education is one of the most important areas of Human Rights. Although the right to education has made it mandatory for the government to provide free education to everyone under Fundamental Rights in Article 21A and Fundamental Duties 51A eleventh duties added in the Indian Constitution 6 to 14 year's children for compulsory education, the high rate of education for women is still a distant dream. Even though the Sarva Shiksha Abhiyan has been successful in bringing girls back to school to an extent, they still have a lower retention rate in school than their male counterparts. It has been found that there is a gradual decline in female students as they move up to higher classes. It is especially true in rural areas in India. The main reasons for this are that the parents expect the girls to take care of the siblings during work, to work with the parents in seasonal time as seasonal labor, and to manage the household chores.[16] While parents are at work, parents take more interest in boys' education as opposed to girls. They feel that girls are getting married and the rising cost of higher education. Therefore the globalization of primary education in India is a distant dream for women.

Sexual Harassment at the Workplace and Rape :- The initiatives on a communication on sexual harassment of women at their workplace in India start in 1997 with the Vishaka Guidelines of the Supreme Court. The case of Vishakha guidelines was laid down by the Supreme Court in a Judgement come in 1997. This was a case of public interest litigations over the alleged gang rape of Bhanwari Devi, a social worker from Rajasthan in 1992 she had prevented the marriage of a one-year-old girl leading to the alleged gang rape in an act of revenge.[17] Whenever it was passed the sexual harassment of Women at the Workplace (Prevention and Prohibition) Bill 2013 helps to turn these guidelines into concrete rules which are to be implemented. But even today the issue of sexual harassment has been swept under the carpet mainly in India. Women in India are discriminated against in terms of payment of remuneration for their jobs. Women entrepreneurs often have to contend with more complexities in obtaining credit to start their independent businesses. Another significant increase in the number of rape cases in India in the last 10 years. According to the National Crime Records Bureau, in 2012, 25000 rape cases were registered.[18] In rural areas in India, especially in northern India; upper-caste people use gang rape as a strategy to gain power over members of lower-caste groups. The brutal gang rape case Nirbyaa in Delhi had passed a strict law i.e. the Criminal Law (Amendment) Act 2013 to deal with rape cases in India.The number of cases of crime against women in 2020 stood at 3,71,503 and in 2019 at 4,05,326.[19] In India registered 31,677 cases of rape in 2021 an average of 86 daily while nearly 49 cases of crime against women were lodged every single hour, according to the latest government report on crime in the country.

Conclusion :- Human Rights are not only rights rather they are the epitome based on the demand of humanity regarding dignity, respect, justice, freedom, and protection. Thus they should be enjoyed by every member of human society without discrimination of caste, creed, race, gender, religion, nationality, or another status. When women moved forward the family then moves family, then after the village moves, and

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then the nation moved. Proper awareness of Human Rights can ensure the safety and protection of women along with its enforcement. The term women's rights imply the ability of the woman to take all the important judgments freely related to her throughout her life span that will ensure her success in all aspects of life. The 21st century's growing global interdependence signals a new era. Human rights to provide better opportunity to development of common purpose- to secure the freedom, dignity of all people everywhere. Today in every part of the world, the attempt to arouse the consciousness of the people toward human rights is being carried on with great enthusiasm. There has also been an increase in the awareness of human rights among the masses, but what is surprising is the fact that the violation of human rights is continuing.

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Feminism and India's Tribal Women

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Introduction :- Research says that until the mid of eighteen hundreds the term 'feminism' was interpreted and used to mean and describe "the qualities of females". However, both its usage and interpretation changed after the First International Women's Conference in Paris in 1892. The French term 'féministe', started being used regularly in English to describe a belief in the theory and the advocacy of equal rights for women. The term 'feminism' was largely based on the idea of the equality of sexes, particularly to do with the equality of males and females. Ever since, in essence the meaning of this term has stayed the same- that women and men are entitled to equal rights and respect; and that women are denied equal rights and respect at present. However, most literature and conversation around the ideals and principles attached to feminism today seem to be divergent from the original thinking. Feminism makes an effort to understand the nature of existing gender inequality and examines social/economic gender roles. It is time to revisit the historical frameworks and meanings attached to the term feminism and dig deep into the evolution of feminism and attached nuances in India, particularly in the tribal context to be able to identify where the current activism and politics has gone wrong.

Evolution of feminism in India :- Despite the fact that patriarchy and gender-based discrimination is deeply entrenched in Indian traditions, beliefs, customs and practices, we also have a history full of stories of women's rebellion against both political and social oppression. The stories of Indian feminists and their unique journeys range across Indian cultures and states and have transcended the bounds of time and generations

India's Vedic period exhibits accounts of female scholars such as Lopamudra, Maitreyi and Gargi, out of whom Gargi Vachaknavi is believed to be one of the forerunners of the era. According to the Brihadaranyaka Upanishad, Gargi was responsible for drawing forth some of the most profound questions of Vedanta, including the nature of the Soul and the very origin of the universe – during a public debate with Vedic philosopher Yajnavalkya. Her intelligence and intrigue are not just worth a mention but pave the way for a much deeper understanding of the gender that has always been at par with its counterpart in terms of knowledge and potential. As the famous fable goes, she stood alone in a court filled with male philosophers, she unabashedly fired questions at the sage, who found himself speechless at a point and was forced to intimidate and threaten her as a response to her boldness and grit. Brian Black writes in his book, "The Character of the Self in Ancient India, Gargi, was in fact Yajnavalkya's strongest opponent, stronger than even her male counterparts."

Another famous story is that of Queen Didda, who ruled Kashmir with an iron hand for more than four decades during the 10th century and has been remembered for her marvelous politics, courage and stable reign. May it be Bibi Dalair Kaur, a Sikh woman, who formed an all-woman army to fight Mughal forces in the 17th century; or Rani Velu Nachiyar of Sivaganga, who ruled her kingdom for over a decade, and even formed a special women's army named 'Udaiyaal' after her daughter; or may it be Rani Chenamma of Kittur in Karnataka, who was the first Indian female ruler to lead an armed rebellion against the British East India Company; or Tarabai of Kolhapur, Anubai of Ichalkaranji and Rani Lakshmibai of Jhansi, Indian women and their leadership, efficiency, diplomacy, and bravery is known and applauded by the world. To name a few other Indian women who went on to become feminist ideals for generations to come, there are

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Anandibai Joshi, Kamini Roy, Kadambini Ganguly, Muthulakshmi Reddy, Pandita Ramabai, Rukmabai, Cornelia Sorabjee, Savitribai Phule and many other tremendously driven women with their path-breaking achievements.

However, many feminist researchers say that India entered modernity and capitalism through colonialism and began understanding and interpreting feminism as part of the modern democratic project post colonialism**. The incorporation of ideals of feminism was also not fair in the Indian society.** Generations, including ours, have studied the nineteenth century reform movements as efforts to do away with social evils like sati and child marriage and it is only in the last couple of decades that experts have begun to explore the social character of feminist movements in India as belonging largely to the upper castes. Most feminist reforms in India have been led by men predominantly and mostly restricted by region and caste in terms of their penetration in an average Indian's life. Thus, even today gender practices in India were intimately tied to caste, community and region thereby affecting the tribal women of our country the most much like the other marginalized sections of our society.

Feminism and tribal women :- Tribal feminism in India has been united by ideology and still aims to attain equality in opportunities in public spheres and equal acknowledgment in personal spaces. This journey of Indian tribal feminists began centuries ago, long before the Republic of India came into being. One of the most popular pioneers of women leadership in Indian tribal history is Rani Durgavati. Durgavati was a fierce ruler of the kingdom of Gondwana who fought heroically against the Mughal armies and was martyred in the war. Another woman leader worth mentioning is Rani Gaidinliu who led the movement to exorcise the colonial rulers from Nagaland and Manipur. Indian tribes were also home to Rani Chennamma, the Queen of Kittur, who was the first female ruler to fight against the British Rule. We fondly remember and are inspired by tribal and adivasi women activists like Dayani Barla, Kuni

Sikala, Jamuna Tudu, Neidonuo Angami, Soni Sori and several other accomplished tribal women like Dutee Chand, Mary Kom and Dangmei Grac who have gained feats in the field of sports across the globe.

However, it is unfortunate to see a decline in the status of tribal women in independent India despite the coming in of more forward-looking policies at the central level. Rising impact of caste values in the daily lives of the tribal population and disintegration of the earlier communitarian systems of forceful management and benefit/support sharing can be some of the reasons for this decline.

If we are to even make an effort to understand the status of Indian tribal women, it is indispensable to take their history into account. We live in a society that still "otherizes" the tribal communities as being primitive and savage. A clear demarcation still exists between urban and tribal in many of our perceptions and judgements. The Santhal Rebellion during 1855- 1856 paved the way for a separate 'Santhal regime' and this is when an alteration was created between the tribal and the urban society. The tribal population has been given a sense of incompetence and unworthiness because of differences in their culture, traditions and customary practices. The most oppressed, exploited and deprived sects of the Indian tribal community believe that the urban population would never consider them as equal and there still exists hesitance to mix up with the so-called mainstream. Many tribal communities are on the verge of losing their culture and their very identities in the near future. A large share of tribal population lost their land and property simply because they did not have papers to prove ownership and had to suffer infiltration by non-natives. Crimes against tribal women are not difficult to find in every morning newspaper or on every news portals, especially those of sexual nature. Tribal women are particularly prone to sexual harassment in their own communities and in the urban areas where they venture for work or looking for opportunities to get educated and financially independent. Tribal women face

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mockery and ridicule, and left feeling embarrassed of their immediate identity. The lack of security in their own homes as well and in towns and cities where they move, not just deprives them of their fundamental rights to life and well-being but also of any socio-economic opportunities that they are entitled to as Indian citizens.

Exceptions exist and the argument will be incomplete without mentioning at least one such exception. In several regions of West Bengal, the tribal women are sharing equal economic status as that of their male counterparts. They are equally involved in jhum farming, permanent agriculture, cattle rearing, handcrafts and gathering forest resources, alongside running the household with absolute expertise and independence. However, the influence of patriarchy can be identified even here. These women, despite working professionally, are expected to take care of the household including the children, pets and daily chores, a role traditionally considered to be a woman's. Equal rights in a marriage, possession of property, equal inheritance and participation in decision-making are still not a reality to thousands of tribal women and if we are to objectively imagine the flow of reform, this is not even a reality in the most urban cities of India. We cannot deny the possibility of a patriarchal set-up being majorly responsible in these circumstances. A tribal woman is still burnt alive in India for being convicted of being a witch, a similar case came up in Assam as recent as in 2012, over six decades after India's independence.

Way forward :- According to the census of 2011, the Indian tribal population accounts of 104 million Indian citizens. Despite the large number, our tribal population has remained marginalized, socially and economically vulnerable and devoid of human resources or opportunities to move up the ladder and be empowered. The constitution of India recognizes a special status for India's tribal population and several legislations and policies have been brought in place to uplift our tribal communities. But today as we stand in the 75th year of India's independence, with a president who herself is a tribal woman with a spectacular

journey full of pathbreaking milestones, it becomes all the more significant for us to reflect on where we have gone wrong as a unified nation. To accelerate achieving the Sustainable Development Goals that we have set for ourselves we must bring about transformation adopting a more equal bottom-up approach. While our country continues to make rapid progress on many fronts, it will be helpful to particularly encourage tribal women to contribute in the sectors that they most relate to and feel connected with. Comprising 47% of India's tribal population, women are not just connected to their communities but also exhibit profound understanding of their ecosystem and natural traditions. They have the potential to bring about behavioural change on-ground and become powerful community influencers. Tribal women of India are the culture keepers and archivists of ancient tribal practices and traditional knowledge that our country takes most pride in. They possess valuable insights on larger issues such as the climate crisis, forests, and sustainability. There have been instances of individual as well groups of women from within tribal communities who came forward and helped to lower maternal mortality rates in Araku valley, Andhra Pradesh, with no maternal deaths reported for three consecutive years prior to the pandemic. Another account of a young woman from the Wangcho tribe in a remote village in Arunachal Pradesh independently took charge to form an informal group and went on to mobilise local women to act collectively against the opium use prevalent amongst the youth in the community, and became a pioneer in ensuring the overall well-being of her community.

These instances are still much lower considering the population density and potential of these women. For tribal women to be empowered with skills, opportunities and economic independence it is imperative for local governing bodies to aggressively implement all schemes intended for the welfare of the tribal population and especially of that of women. If we mean our commitment to 'leave no one behind' we shall have to reconsider the implementation

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and execution aspects of governance. If global academia, expert analysis of the many achievements and failings of Indian feminism and last mile delivery of government services in ensured, we are sure to have many tribal women treading the path of the Indian President, Ms. Droupadi Murmu, and even exceeding our expectations.

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The Role of Buddhist Ethics in Safeguarding the Environment

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Abstract :- Buddhism is a substantial and diverse group of traditions that have evolved through more than two thousand years in a variety of environments. However, there have been some practises that have been shared among various Buddhist cultures that have helped establish local Buddhist environments. Life is interconnected and depends on life. Our natural environment, or nature, is alive and at least somewhat conscious. It is neither holy and ideal nor bad and subject to conquest. Our fully awakened nature is not apart from the fundamental reality of nature (Buddha-nature). Buddhists view the term "Nature" as merely a helpful conventional term, devoid of any special, inherent reality that would unmistakably set it apart from everything that is "not Nature." In a less scientific sense, it refers to the world as it was before extreme human distortion of the patterns of interdependence between humans and the rest of the planet's living creatures. It can also be thought as the interdependent living web that connects different beings, both sentient and non-sentient. All living things are thought to possess the Buddha-nature, or the capacity to achieve complete enlightenment. Buddhists reject the idea of using other sentient beings as food or other objects. Buddhists see nature as wilderness because it offers a setting where quick advancement in Buddhist practice, or self-cultivation, can be made.

Keyword :- Buddhism, Environment, Dharma, Ecology, Buddha- Nature, Interdependence, Environment Friendly, Bodhisattava, Monastic Communities.

Introduction :- The environmental problem is global not only because it endangers humanity, but also because its resolution necessitates significant global effort. In general, humanity, and each individual person in particular innate sense of unity between man and nature takes on profound moral significance. It is becoming increasingly important to instill in people a sense of responsibility for the lives of other living beings, as well as a sense of involvement in everything that occurs on Earth. Most environmental problems are not caused by villains who want to destroy the planet. The situation is far more complex. The division of labour and subsequent alienation of man caused a schism between actions. Today's technology increases the possibilities of our activities in time and space, and even highly specialized science cannot calculate all of them, the consequences of people's activities. "Until evil does not ripen, the fool considers it sweet like honey," the Dhammapada says. When the evil matures, the fool succumbs to grief."[1]. As one of the religions that incarnates, Buddhism is always regarded as one of the leading religions in proposing ideas about environmental protection and sustainable development in its teaching system. These ideas can be found not only in Buddhist teachings, but also in the religion's rituals and methods of daily practise. Studying Buddhist philosophical ideas about environmental protection and sustainable development is critical not only in theory but also in practise, particularly in enhancing the role of Buddhism.

Buddhism and ecology :- "Like the Buddha, we too should look around us and be observant, because everything in the world is ready to teach us. With even a little intuitive wisdom we will be able to see clearly through the ways of the world. We will come to understand that everything in the world is a teacher. Trees and vines, for example, can all reveal the true nature of reality. With wisdom there is no need to question anyone, no need to study. We can learn from Nature enough to be

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[1] Dhammapada, Riga: Uguns, 1991, p. 15.

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enlightened, because everything follows the way of Truth. It does not diverge from Truth." [2]

Many Buddhist monks such as His Holiness the Dalai Lama, Venerable Thich Nhat Hanh, Venerable Kim Teng, and Venerable Phra Phrachak emphasize the natural relationship between deep ecology and Buddhism. According to the Vietnamese monk Venerable Thich Nhat Hanh:

"Buddhists believe that the reality of the interconnectedness of human beings, society and Nature will reveal itself more and more to us as we gradually recover—as we gradually cease to be possessed by anxiety, fear, and the dispersion of the mind. Among the three—human beings, society, and Nature—it is us who begin to effect change. But in order to effect change we must recover ourselves, one must be whole. Since this requires the kind of environment favorable to one's healing, one must seek the kind of lifestyle that is free from the destruction of one's humanness. Efforts to change the environment and to change oneself are both necessary. But we know how difficult it is to change the environment if individuals themselves are not in a state of equilibrium."

We must protect ourselves in order to protect the environment. We protect ourselves by opposing selfishness with generosity, ignorance with wisdom, and hatred with loving kindness. The essence of Buddhism is selflessness, mindfulness, compassion, and wisdom. We practice Buddhist meditation, which teaches us to be aware of the consequences of our actions, including those that are harmful to the environment. Buddhist meditation is centred on mindfulness and clear comprehension. When we are mindful of each and every step, we can achieve peace.

Buddhist thought as a form of religious ecology or ecological religion :- There are three scenarios in which the connection between Buddhist values and the natural world might be examined:
1. Nature as a teacher

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2. The spiritual power of nature
3. Using nature as a way of life

- **Nature as a teacher -** Buddha emphasised the need of respecting all living things and the environment. Living simply enables one to recognise the interdependence of all life and live in harmony with all beings. In order to live simply, we must learn to be open to our surroundings and relate to the world with awareness and receptive perception. It permits us to take pleasure without possessing and to profit from one another without coercion. The Buddha, however, was not a romantic idealist. He also observed and understood that all living things experience pain. He observed creatures battling for survival in a dangerous environment. As one lone figure ploughed the earth to reap the harvest, he witnessed death and dread, strong people taking advantage of the weak, and the destruction of countless of living things. As Ajahn Chah has written:

"Take trees for example … first they come into being, then they grow and mature, constantly changing, until they finally die as every tree must. In the same way, people and animals are born, grow and change during their lifetimes until they eventually die. The multitudinous changes which occur during this transition from birth to death show the Way of Dharma. That is to say, all things are impermanent, having decay and dissolution as their natural condition". (Buddha-Nature)

Nature, like us, is not self-contained and unchanging. Nature's very essence is change. In the words of Stephen Batchelor:

"We each believe we are a solid and lasting self rather than a short-term bundle of thoughts, feelings and impulses". (The Sands of the Ganges)

Buddha instilled in us the values of simplicity, calm, and respect for the flow of life as it occurs naturally. Everything has an impact on everything else in this realm of energies. Trees have an impact on the climate, the soil, and the creatures in nature, and similarly, the climate has an impact on the trees, the soil, the animals, and so on. Since water and air are both essential to life, the ocean,

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[2] Chah , Ajahn .Forest Sanga News letter (FSN), Amaravati Monastery, UK , January 2010, Vol. No.89

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sky, and air are all connected and dependent upon one another.

Buddhism causes one to lose the sense that their existence is so much more significant than everyone else's. As "progress" and consumerism increase, the ideas of sticking to one's ego, the value of the individual and the emphasis on self are becoming more prevalent in the East. We frequently label and compartmentalize things instead of viewing them as a continuous, unbroken whole. We waste resources, do not replenish them, and forget that Buddha gained his "knowledge from nature" instead of viewing nature as our great teacher. We can understand the need to shift from an attitude of dominating nature to an attitude of working with nature if we begin to see nature as our friend and cherish it. At that point, we will begin to realise that we are an integral part of all existence rather than viewing ourselves as in charge of it.

- **The spiritual power of nature -** Acarya Shantiveda in eighth-century India, dwelling in nature was obviously preferable to living in a monastery or town:

"When shall I come to dwell in forests
 Amongst the deer, the birds and the trees,
That say nothing unpleasant
And are delightful to associate with."
(A Guide to the Bodhisattva's Way of Life)

Patrul Rinpoche, one of the greatest Tibetan Buddhist teachers of the nineteenth century, writes:
"Base your mind on the Dharma,
Base your Dharma on a humble life,
Base your humble life on the thought of death,
Base your death on a lonely cave." (The Words of My Perfect Teacher)

The Buddha advocated using the functions of the forest to maintain the harmony of nature. The continuation of natural harmony, balance, morality, and ecology depends on the survival of the forest. Buddhist teachers and gurus have often emphasised the value of living in harmony with nature, respecting all living things, scheduling time to meditate, leading a simple life, and using nature

as a spiritual force. Buddha emphasised the importance of the four unbounded virtues of loving-kindness, compassion, sympathetic joy, and equanimity (impartiality). Our true nature is often dulled by the massive sensory impact unavoidable in modern urbanised living in the fast and furious pace of the twentieth century. Having few activities and distractions while living close to nature is a very healing experience. Learning to trust oneself and to be more of a friend than a judge cultivates a lightness of being and a light confidence. The sound of animals, the texture of trees, the subtle changes in the forest and land, the subtle changes in your own mind all point to the truth of the concept of impermanence. A retreat, or simply spending time in the woods with nature,

- **Using nature as a way of life -** The Buddha praised frugality as a virtue in and of itself. Skillful living reduces waste, and we should recycle as much as possible. Buddhism promotes a simple, gentle, and non-aggressive attitude towards nature—reverence for all forms of nature must be developed. The teachings of the Buddha were illustrated by natural phenomena. The plant and animal kingdoms are treated in his stories as a part of our heritage, even as a part of ourselves. As Krishnamurti said, "We are the world, the world is us."

We might realise that the actual solution to the environmental catastrophe starts with us if we begin to examine ourselves and the lives we are leading. Only unhappiness comes from craving and greed; serenity and happiness come from simplicity, moderation, and the middle path, which leads to liberation. There is never enough in the universe to really please us and give us complete satisfaction and contentment, and no government can meet all of our aspirations for security. As a result, we will constantly seek to acquire more material belongings. But Buddhism frees us from the individualist mentality and its shackles to materialism and consumerism. We can start to experience inner peace and peace with people around us when we work to overcome greed and desire. The Buddha's teachings and Dharma

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reflections speak to life as it is in practise. In particular, to be attentive means to be open, receptive, sensitive, and not attached to anything in particular, but rather to be able to fix on things depending on what is required at the moment and location.

We might be able to start coexisting with nature without upsetting its balance or disrupting the cycle of life if we learn to behave morally and refrain from murdering, stealing, or engaging in immoral sexual behaviour. We can feel closer to nature by choosing jobs that don't damage other creatures and refraining from using or trafficking in guns, breathing apparatus, meat, alcohol, and poisons. Our minds can be so busy and active that we rarely give ourselves a chance to slow down and become conscious of our thoughts, sensations, and emotions and to completely experience the present. We need to live in peace and harmony with nature, as the Buddha instructed us to do, but we must begin with ourselves. If we want to save the earth, we must look for a new ecological order, consider how we live, and then cooperate for the common good. Without cooperation, there will be no answer. We may reduce much of the suffering in the world by letting go of self-centeredness, sharing money more, taking responsibility for ourselves, and committing to a simpler way of life. As the Indian philosopher Nagarjuna said, "Things derive their being and nature by mutual dependence and are nothing in themselves."

Breathing in, I know I'm breathing in.

Breathing out, I know

as the in-breath grows deep,

the out-breath grows slow.

Breathing in makes me calm.

Breathing out makes me ease.

With the in-breath, I smile.

With the out-breath, I release.

Breathing in, there is only the present moment

Breathing out is a wonderful moment.

(From a poem by the Venerable Thich Nhat Hanh)

Conclusion :- We can find solace and stability in nature. Buddhism is best practiced in unspoiled natural settings, typically remote areas where the natural energies are calm. Karma serves as the foundation for comprehending almost everything within Buddhism. The basis of Buddhist ethical understanding is karma, which is the causal web of intentional mental and physical deeds. Ahimsa, the values of non-harming and reverence for life, is the cornerstone of Buddhist karma-based ethics. This refers to respect for all forms of life on the planet, especially sentient life, not just for human people. As one's thinking is cleaned, so are their deeds. As a result, one's new mental states directly result in more enlightened acts with regard to Nature and more enlightened influence on others about Nature. Mental attitudes that are discordant or detrimental to Nature also dissolve as a result. Additionally, action has an impact on thought. Our activities will purify and enlighten our brains as we behave more responsibly toward life in or as Nature. We shall act in a more ethical and environmentally friendly manner if we take into consideration the effects of our actions. Buddhist nuns and monks swear to uphold moral rules that forbid causing environmental harm. There are pledges to preserve the purity of the water, refrain from murdering any living thing on the planet, including insects, birds, and animals, to avoid starting forest fires, and to respect all trees, especially old ones. Buddhist monastic communities are creating fresh methods for adapting the tenets of the Buddha's early teachings to the modern world. For instance, in the Dharma Realm Buddhist Association, monks, nuns, and laypeople are getting active in recycling, educating temple patrons and residents about the dangers of pollution, and reforesting the grounds of temples.

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RBI Intervention towards Peer to Peer Lending in India

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Abstract :- The two terms risk and return in business field are playing vital role. Slogan like 'higher the risk gives higher the profit' must know to each entrepreneur, here risk may be existing in the borrowed fund in the form of cost of debt. But on the other side cost of debt is a tax beneficiaryto the borrower. In this lending and borrowing area P2P lending is newly developing online platform. This research paper represents the overview of peer to peer lending and its regulations by RBI in India from 2008 to till 2022 in the context of digital finance. USA, UK and china has largest market of P2P lending. UK was the 1st country to start a P2P lending online platform by the name ZOPA in 2005. However, in India it begun taking shape in the year 2012. This paper also analyses and reveals the concept of determinants and performance of P2P lending platforms in emerging and developing markets, regulatory differences, the effects of behavioural characteristics, innovation quotient on P2P funding attributes, and its statutory obligations by RBI.

1. **Introduction :-** Finance is the blood of every business. Money needs in each business to make more money. That the money in business can be either owned or borrowed one. Borrowed fund in business sector plays a dominant role with the tittle as LOAN. As a conventional way, many of the financial institutions lending a loan to the businessmen or entrepreneurto establish and conduct their business operations. But recently, as a new and technical way of lending has been emerged in the financial field called as PEER TO PEER lending and online peer to peer lending.

   Peer to peer lending is a form of direct lending of money to individuals or businesses without an official financial institution participating as an intermediary in the deal. P2P lending is generally done through online platforms that match lenders with potential borrowers. P2P lending offers both secured and unsecured loans with having some unique characteristics. Hence, it is considered as an alternative source of financing. Online P2P lending platforms provide individuals and small businesses alternative credit options. P2P lending offers better rates of return to lenders and greater access to credit at affordable costs to borrowers who may have limited access to banks; therefore, this type of lending can outperform the conventional lending in the retail sector. P2P lending also acts as an alternative to traditional lending organisations, which are comparatively disadvantaged in terms of technological expertise and rigid financial system.

   Financial technologies(fintech) are playing a much prominent role as innovations in peer to peer lending. And they can lower borrowings costs by using fully automated algorithms to price and underwrite loans via appropriate systems. Along with this Blockchain technology and Bitcoin are a couple of new innovations in finance industry. therefore, the P2P lending is considering as an emerging concept in both developed countries like USA, UK and Chain and in developing countries like India. P2P technology is emerged as fastest growing lending in India. However, the decision to regulate P2P lending had been in the works since a long time when RBI announced P2P as a NBFC.

2. **An overview of P2P lending :-** Birth of P2P lending has been taken in 2005 with the launch of ZOPA in the UK. Later soon, prosper and LendingClub started in the USA. This lendingClub is limited scope towards only to institutional investors. After years, some of the most words like 'shady', 'ephemeral', or 'niche', are used to describe the financial sector in world. As the years followed, people around the world started to invest and borrow billions of dollars on hundreds of P2P platforms across the globe. Now-a-days the

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word "innovative" and "disrupting" are used to represent such lending concept.

Anyhow, this online P2P lending process did not come as a surprise until or before 2005. Indeed, the 20th century was witnessed as largely a blind spot for a more "structured" P2P lending the expansion of banking services led to banks effective monopoly in financial intermediation. From German credit cooperatives to Irish loan funds, 1st initiated by Jonathan swift-the author of Gulliver's travels, early industrial Europe was crowed with peer-based finance and crowdfunding schemes.

Side by side, with the expansion of the internet, Indians got access to P2P loans that were devoid of physical documentation hassles, and the loan processing time intervals. P2P loans can also be availed by borrowers who are looking for short-term loans with a shorter turnaround time. The P2P market is filling this gap by earing the process by both availing and funding a loan. Many businesses in India are asset-light, the country is primarily a services-driven economy. Even many businesses today with having heavy asset could not easily getting loans for their operations from banks. Therefore, P2P loans are quite popular among businessmen today with 30% of all loans being sanctioned and accessed at reputed P2P lending websites like LenDenClub, for business purposes. P2P borrowing is always good at rescuing individuals out of their financial dilemmas.

3. **Review of literature :-** Borrowing and lending are the primary functions which takes place in the financial management. Under which financial intermediaries and financial institutions performs the predominant characteristics. This borrowing and lending process in modern era has been fully digitalised and performs through online itself. This process simply named as online peer to peer lending. So, the information and the data relating to this study is entirely based on both secondary sources like many of the previous researcher's study, experts' opinions, newspapers, articles, industry journals, recent

RBI notifications, etc, As well as primary sources like direct contact of some experienced respondents.

Some of the research scholars in their research work revealed their opinions and concluded the concept of P2P lending as…. Michael klaff in 2008 has conducted the study to know the borrower's information and profitability data to the lenders of a US P2P lending platform. He analysed data and concluded that there is no profit to the lenders under the concept of p2p lending because of large numbers of loan defaults. And also, he suggested some simple rules for the lenders while choosing the potential borrowers to make their investment a profitable venture. In 2012, Sebastian Christoph moenninghoff, presented his study towards the P2P lending and he suggested that, there is a greater need for introduction of risk management, innovation and increased internet penetration as the major drivers for the emergence and growth of P2P finance. Gordon Burtch in 2013 revealed that, there is a need for understanding the role of cultural and geographical distances on the selection of transaction partner by individual lenders pattern of country-to-country lending volumes in P2P lending. In 2014, Traci L. Mach presented his study regarding the patterns of P2P borrowings by small businesses on lending Club, and the study suggested that, the policy makers are to closely observe levels and terms of lending to small business owners as they are now increasingly opting P2P platforms due to easy procedures as compared to traditional banks. Rainer Lenz in 2016, analyses the opportunities and risks of P2P lending for borrowers and lenders and also, he presented the differences between a number of national regulatory approaches. Caroline stern in 2017, conducted a descriptive study to analyse the determinants of P2P lending in different areas of china. The study establishes that P2P lending is more extensive in areas with more mobile phone subscription, lower fixed assets investments and smaller size of the traditional banking sector. In 2018 Caimei Lu conducts a detailed study and suggested that, identification of risk factors over P2P platforms is

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important to reduce investors loss and promote healthy development.

4. Scope of the study :- Even though P2P lending is newly emerging concept, it has created a more importance in the eyes of businessmen and individuals in the financial industry. As we know that there is nothing intervention of financial institutions in the work of P2P lending, by this factor it has become some what risky but very easy concept of borrowing of funds, with the guidelines of RBI under the regulation of NBFC in India.

This study highlights and focus on the detailed control of P2P lending by a regulatory authority as RBI, reasons for introduction of P2P lending, guidelines towards the work of P2P lending in Indian lending industry.

5. Why Peer to peer lending taken birth? :- In the financial management, borrowing and lending are the vital functions that takes place in regular intervals of period for businessmen to carry out their day-ta-day and long-term investment operations. Under the context of lending industry in India the new concept called P2P lending takes birth with a many reason. Now it has widely accepted by borrowers in India because of wide range of benefits it provides. Aside, by increasing the number of benefits this system of P2P has decreasing the numerous regional restrictions and aids to bypass the limitations of the conventional financial system viz, high bank rates, limit margins, complicated procedures, collateral requirements, and lengthy documentation. P2P lending enables quick loan approvals and it also allows lower cost to both borrowers and lenders. P2P lending is accessible to each and every individual without much formalities by providing a service through online platforms. This system of lending under P2P lending welcomes the businessmen who has lack access to bank loans and many of the SMEs firms to get the chance to access credit facility through online platform itself only. This online P2P lending also allows a transparency and openness to

investors to decide about their investments. P2P online finance model also allows benefits of lower minimum investment options like faircent.com allows investors to offer even Rs.750 per loan. This online model attracts the investors and businessmen by avoiding tight regulations and supervisions under funding circle. Increase in mobile and internent penetration along with a rise in fintech innovations also contributing factor to the emergence as well as the growth of P2P finance. In the initial days of introduction of P2P lending it seems like very risky environment, but in 2017, when RBI intervenes in the concept of P2P lending by issuing a regulation, the overall P2P system environment has become safer and more reliable, validating in nature. As per the research study, transparency market research, the global P2P market is expected to be worth $898 to $ 900 billion and compound annual rate of 48.2% by 2024.

So, by looking at the concept of P2P lending, it is providing a numerous advantage and eliminating many restrictions in the funding sector. Therefore, for all these reasons the term P2P has took birth and grow like a important aspect in the view of individuals and businessmen.

6. RBIs interference in P2P lending in India :- The benefits offered by P2P lending are sweeping its way through in winning over the traditional investments. P2P loans apart from being accessed by millions of borrowers and lenders, for fast personal loans, festival loans and other category of loans in India are also quite popular among businessmen today with almost near to 30% of loans are accessed from online platforms or websites like LenDenClub for their respective business purposes. Hence, P2P lending is considered as good at solving investors or businessmen or individuals working capital dilemmas.

Even though the popularity of these platforms has increased tremendously in the recent past, they remained unregulated until recently. The Reserve Bank of India (RBI) released a consultation

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paper on regulating P2P platforms in 2016, proposing to bring those under its purview by defining them as NBFCs. After getting and considering the public and stakeholders' feedback and comments, the RBI released it master direction-NBFC-P2P lending platform (Reserve Bank) directions, 2017- to officially regulate and monitor such platforms. Some of the guidelines released by RBI as follows:

A. Prudential requirements :- Only an NBFC can register as a P2P lender with the permission of RBI. Every P2P lender should obtain a certificate of registration (CoR) from RBI. Every existing and non-banking NBFC-P2P should register with the department of non-banking regulation, Mumbai.

As per the directions, only corporate entities registered as 'company' can operate and engage in P2P lending. However, P2p platforms which are operate by individuals, proprietorship, partnership or LLP are not fall under the scope of RBI. Every company have to obtain a certificate of registration from RBI within 3 months from the date of requirement. For all NBFCs as per the section 45-IA of the RBI act, 1934 is INR 20000000.

Conditions for registering as P2P :-
*   The company should be incorporated in India and have necessary technical, entrepreneurial and managerial resources to offer P2P services to the participants.
*   The company should have an adequate capital structure and management to undertake the business of P2P lending.
*   The company has submitted a business plan for conducting the business of peer to peer lending platform.
*   Any other condition as may be mentioned by the bank for the purpose of commencement of business or for carrying on the business in India.
*   Finally, the company must submit all the relevant legal documents to the RBI within 12 months from the date of approval for setting up of NBFC-P2P lending platform.

B. Scope of the services :-
*   NBFC-P2P acts as an intermediary, marketplace or an aggregator to bring forward the meeting of borrowers and lenders.
*   It allows customers with little or no security to avail loans.
*   The lenders signing up with the platforms do so at their own risk as they do not provide any guarantee of return.
*   A P2P lender cannot lend on its own, cannot provide or arrange any credit enhancement or a credit guarantee.
*   A P2P lender shall not raise deposits under the section 45I(bb) of the RBI act, 1934 or the company act, 2013.
*   Until and unless without having a banking account in India foreign lenders are excluded from participating directly in P2P lending platforms.

C. Borrowing and Lending limits :- On P2P lending the minimum amount can be lent of Rs. 500-750 and the maximum per lender is capped on an average across all P2P platforms at Rs. 5000000. However, if a single lender lends above Rs. 1000000, then a certificate from a practicing CA is necessary by certifying minimum net worth of Rs. 5000000.

On the past, in a one on one lending, the amount lent by a single lender to a particular borrower should not exceed Rs.50000. the P2P should obtain a certificate from the borrower and lender stating in that the borrowings and lending limits are adhered to.

D. Tenure of lending:- The maximum tenure for the amounts lent under P2P lending is fixed for 3 years.

E. Compliance with credit information companies (CIC):- A P2P should become a member of all CICs. The P2P obligations include submitting data, keeping and maintaining credit information, updating the information on a monthly basis to the CICs. The P2P is also required to file certain quarterly statements with the RBI such as the

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statement of loans disbursed, outstanding and closed during the quarter. Also, a statement of funds held in the escrow account.

F. Usage of P2P model:- The lenders and the borrowers have to register on the website of the P2P lending platforms. The platform conducts a screening of the potential borrowers and lenders before allowing them to participate in their business. The P2P carries out a KYC process for verification of the borrowers.

G. Cancellation of registration:- The RBI may, cancel the registration of NBFC-P2P lending in the following cases: -

*   P2P NBFC ceases to carryout a business as a P2P lending platform in India.
*   Fail to comply with conditions subject to which COR is issued.
*   P2P is no longer eligible to hold the certificate of registration.
*   Failure to comply with any directions issued by RBI.
*   Failure to maintain accounts, publish and disclose financial position as required under any law or order or direction issued by the RBI.
*   Failure to submit books of accounts or any other relevant data as when amended by the RBI.

7. RBI guidelines for P2P participants :- P2P lending is much better than traditional financing system by offering flexibility in accessing of funds, reliability, validity and trustworthy in lending process and also fixed rate of returns. But on the other side in the eagerness of earning a profit many of the hackers and other persons will enter into a P2P lending process by creating duplicate links. So, this will create and puts a borrower and lender in risk. However, in order to protect the borrower and lender in a digitalized P2P lending RBI instructing the following guidelines which will help to them not to fall under the white-collars evasion.

A P2P lender should carryout due diligence of its participants, do a credit assessment and risk profiling of the borrowers on its platform and disclose the details to prospective lenders on the platform. A P2P lender should obtain prior and explicit consent from the participant to access their credit information and have documentation of loan agreements and related documents. A P2P lender should also assist in the disbursement, repayments and recovery of the loans.

The transfer of funds in the P2P platform will be through the mechanism of escrow account operated by a bank promoted trustee. The P2P should maintain two escrow accounts, one for receiving the funds from lenders and another for collections from borrowers. P2P shall not deal in cash transactions.

8. Conclusion :- Peer to peer lending is an innovative and supplement method to traditional financial loan being followed from such a long time. It attracts many users by offering more transparent and frequent manner of procedures, letting the users in choosing the lending manner and lending objects, uses different credit auction methods, and the entire process is based and carried through digital platforms only which will help to user to perform their activities online itself only. By the year 2020, India will have more than 1 billion internet users each of them having round the clock access to the online loaning facility. But one of the drawbacks is that loan management is not good at P2P lending. So, to control this system of lending during 2017 RBI intervened as a statutory and regulatory body by issuing many directions and guidelines towards P2P lending. However, the directions are silent regarding the penalty and repercussions in the event of failure to adhere to the guidelines. So by considering all these, a researcher here concluding that, P2P lending is best way in financial industry as it offering benefits to the lenders and borrowers, but the entire management is need to change regarding the procedure of such platforms by introducing many regulations by RBI as time to time.

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Beyond the Classroom : A Multidisciplinary Education Journey

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Abstract :- "Beyond the Classroom: A Multidisciplinary Education Journey" explores the transformative potential of multidisciplinary, holistic, and flexible education in an ever-evolving learning landscape. This roadmap illuminates the significance of breaking free from traditional silos and embracing a new paradigm of education that nurtures well-rounded, adaptable, and lifelong learners. By establishing the context and relevance of multidisciplinary education, emphasizing its crucial role in preparing individuals for the complexities of the modern world. It highlights the holistic aspect of learning, which encompasses emotional, social, intellectual, and physical dimensions, fostering a comprehensive understanding of knowledge. The importance of flexibility in education, given the diverse needs and preferences of learners. It explores how flexibility in curriculum design, delivery modes, and assessment methods can enhance the educational experience. The roadmap outlines key building blocks, from curriculum design to assessment strategies, and provides case studies showcasing successful implementations. It delves into practical steps for embarking on the multidisciplinary education journey, addressing common challenges along the way. The role of technology as an enabler of this educational transformation and underscores the significance of continuous evaluation to measure success and drive improvement. This roadmap offers a comprehensive guide for educators and institutions seeking to embrace multidisciplinary, holistic, and flexible education, thereby equipping learners with the skills and knowledge needed to thrive in a dynamic and interconnected world.

Key Words :- Classroom, Multidisciplinary, Education.

1.0 **Introduction :-** In a rapidly changing world marked by technological advancements, globalization, and evolving societal needs, the landscape of education is undergoing a profound transformation. "Beyond the Classroom: A Multidisciplinary Education Journey" embarks on a quest to redefine the contours of education, advocating for a holistic and flexible approach that transcends traditional boundaries. This roadmap is a testament to the recognition that the acquisition of knowledge and skills no longer resides solely within the confines of classroom walls. Instead, it calls for a multidisciplinary and multifaceted approach that equips learners with the agility, adaptability, and comprehensive understanding required to navigate the complexities of the 21st century. Multidisciplinary education, as we shall explore, breaks free from the constraints of isolated subject domains, fostering cross-disciplinary connections and encouraging learners to embrace the richness of diverse knowledge areas. Holistic learning, encompassing emotional, social, intellectual, and physical dimensions, is recognized as fundamental in nurturing well-rounded individuals capable of contributing meaningfully to society. Moreover, the call for flexibility in education acknowledges the unique needs and aspirations of each learner, emphasizing the importance of customized learning experiences that cater to individual strengths and interests. This roadmap unfolds a comprehensive journey, offering insights, strategies, and practical guidance for educators and institutions seeking to embark on this transformative path. Through case studies, best practices, and a focus on technology's role, we will navigate the multifaceted terrain of multidisciplinary, holistic, and flexible education. By the journey's end, we hope to inspire and equip education stakeholders to pioneer a new era of learning, one that transcends conventional boundaries and empowers learners to thrive in an interconnected and dynamic world.

1.1 Understanding Multidisciplinary Education :- Multidisciplinary education represents a paradigm shift in the way knowledge is acquired and applied. At its core, it entails a departure from the traditional silos of specialized disciplines toward a more holistic and integrated approach. In multidisciplinary education, learners engage with diverse subject areas, forging connections between seemingly disparate fields of study. This approach acknowledges that real-world challenges rarely fit neatly within the confines of a single discipline; rather, they often demand creative solutions that draw upon insights from multiple domains. Multidisciplinary education transcends the boundaries of conventional academic departments, fostering an environment where students explore topics and issues from a variety of perspectives. This approach not only broadens learners' intellectual horizons but also encourages critical thinking, problem-solving, and innovation. It promotes an appreciation for the interconnectedness of knowledge and the ability to apply insights from one discipline to address challenges in another. Multidisciplinary education prepares individuals to excel in an increasingly complex and dynamic world. It equips them with the skills and adaptability needed to navigate diverse career paths and contribute meaningfully to society. By fostering a holistic understanding of the world, multidisciplinary education empowers learners to engage with a sense of curiosity and intellectual curiosity that extends far beyond the confines of a single discipline, ultimately nurturing well-rounded and versatile individuals prepared to tackle the challenges of the future.

1.2 Holistic Learning: A Comprehensive Approach :- Holistic learning represents an all-encompassing educational philosophy that transcends the narrow confines of traditional subject-based instruction. At its core, holistic learning recognizes that individuals are multifaceted beings, and education should nurture not only their intellectual growth but also their emotional, social, physical, and moral development. This comprehensive approach to learning views students as whole persons rather than mere receptacles of information. In holistic learning, the curriculum extends beyond the transfer of facts and figures to embrace the cultivation of critical life skills, emotional intelligence, and a sense of purpose. It acknowledges the interconnectedness of knowledge, encouraging learners to explore topics from multiple angles and appreciate the complex web of relationships that underpin our world. Holistic learning places a premium on the development of soft skills such as empathy, communication, creativity, and adaptability. It recognizes that these skills are as vital as academic knowledge in preparing individuals for success in a rapidly changing society. Holistic learning fosters a sense of well-being and self-awareness, emphasizing the importance of mental and physical health. It encourages mindfulness, stress management, and a balanced lifestyle, recognizing that a healthy body and mind are essential prerequisites for effective learning. Holistic learning is a comprehensive approach that goes beyond the traditional boundaries of education, striving to develop well-rounded individuals who are not only knowledgeable but also emotionally intelligent, socially adept, physically healthy, and morally conscious. This approach equips learners with the tools they need to thrive in a complex and interconnected world, making it a vital pillar of modern education.

1.3 Flexibility in education :- Flexibility in education represents a fundamental departure from the rigid, one-size-fits-all model of traditional schooling. It recognizes that learners have unique needs, aspirations, and circumstances, and that education should adapt to accommodate these individual differences. At its core, flexibility in education empowers students to take ownership of their learning journey and provides a range of options for how, when, and where learning occurs. One key aspect of flexible education is personalized learning. This approach tailors instruction to individual strengths, interests, and learning styles, allowing students to progress at their own pace. Whether through competency-based programs, project-based learning, or adaptive digital platforms, personalized learning

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recognizes that each student's educational trajectory is unique. Flexible education acknowledges the importance of multiple pathways to success. It provides diverse opportunities for learners to engage with content, including online and blended learning, experiential learning, apprenticeships, and more. This variety allows students to choose the methods that best align with their goals and circumstances. Flexibility in education also extends beyond the classroom to support lifelong learning. It recognizes that learning doesn't stop at graduation and encourages a culture of continuous skill development and upskilling. This adaptability is crucial in a rapidly evolving job market where new skills and knowledge are constantly in demand. Flexibility in education is a learner-centric approach that prioritizes customization, accessibility, and adaptability. It empowers students to shape their educational experiences and equips them with the skills needed to thrive in a dynamic and ever-changing world. This flexibility is not a departure from rigorous education but a transformation that ensures education remains relevant, engaging, and effective for all.

1.4 Building Blocks of a Multidisciplinary Education Journey :- The building blocks of a multidisciplinary education journey are the essential components that underpin a holistic and interconnected approach to learning. At its core, this journey requires a well-structured curriculum that transcends traditional subject boundaries, integrating diverse fields of knowledge to provide students with a comprehensive understanding of the world. Collaborative learning environments play a pivotal role, fostering interaction among students, educators, and experts from various disciplines, thus encouraging the exploration of interdisciplinary connections and the exchange of ideas. To effectively assess and evaluate students' progress, assessment methods should align with the integrated curriculum, emphasizing critical thinking, problem-solving, and practical application across domains. In this multidisciplinary setting, teachers become facilitators, guiding students in their exploration of

diverse subjects and helping them make meaningful connections, while students assume active roles as self-directed learners, driving their educational pursuits based on their unique interests and goals. These building blocks collectively form the foundation of a multidisciplinary education journey, enabling educators and institutions to cultivate well-rounded, adaptable individuals capable of navigating the complexities of our interconnected world with confidence and competence.

1.5 Overcoming Challenges :- The pursuit of multidisciplinary education, while rich in benefits, is not without its challenges. Recognizing and addressing these hurdles is crucial to successfully implementing this transformative approach to learning. One significant challenge lies in curriculum design and coordination, as integrating multiple disciplines requires meticulous planning, alignment of learning objectives, and collaboration among educators from various backgrounds. Overcoming this challenge involves the development of frameworks that facilitate interdisciplinary connections, ensuring a cohesive and meaningful educational experience. Another obstacle involves assessment and evaluation. Traditional assessment methods may not effectively measure the depth and breadth of multidisciplinary knowledge. Adaptations are necessary to include assessments that focus on critical thinking, problem-solving, and the application of knowledge across domains. Resistance to change within educational institutions can impede the adoption of multidisciplinary approaches. Educators and administrators may be accustomed to traditional teaching methods, necessitating comprehensive professional development and a shift in institutional culture to embrace innovation. Both in terms of funding and access to diverse learning materials, poses another challenge. To overcome this, institutions must allocate resources strategically, invest in technology and library resources, and ensure equitable access for all students. Communication and collaboration between educators, students, and stakeholders

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are crucial to overcoming these challenges. Open channels of communication, shared goals, and a commitment to the multidisciplinary vision can create a supportive environment where obstacles can be addressed effectively. While challenges exist in implementing multidisciplinary education, proactive efforts in curriculum design, assessment, professional development, resource allocation, and fostering a collaborative culture can pave the way for success. Overcoming these challenges is essential to harness the full potential of multidisciplinary education and prepare students for the complexities of the modern world.

1.6 The Role of Technology :- Technology plays a pivotal role in facilitating and enhancing multidisciplinary education in several ways. First and foremost, it provides a powerful platform for interdisciplinary exploration by offering access to a vast array of digital resources, research materials, and educational tools from various fields. Learners can delve into diverse subjects, access up-to-date information, and engage in virtual experiments or simulations that bridge disciplinary gaps. Technology supports collaborative learning across geographical boundaries, enabling students and educators to connect and collaborate in real-time. Online forums, video conferencing, and virtual teamwork tools foster cross-disciplinary discussions and knowledge exchange. Adaptive learning technologies tailor educational experiences to individual needs and learning styles, helping students navigate diverse subject matter more effectively. Additionally, digital assessment tools can measure multidisciplinary skills and competencies, providing a more accurate reflection of students' holistic understanding. Technology serves as an enabler of multidisciplinary education, breaking down traditional barriers and providing the means for students to explore, collaborate, and excel in a world where interdisciplinary knowledge and skills are increasingly valued and essential.

1.7 Conclusion :- Multidisciplinary education is a transformative approach that empowers learners to navigate the complexities of our interconnected world. It emphasizes the integration of diverse disciplines, fostering holistic understanding and equipping individuals with the skills and knowledge needed to tackle real-world challenges effectively. Throughout this exploration, we've uncovered the critical building blocks of multidisciplinary education, including curriculum design, collaborative learning environments, innovative assessment methods, and the evolving roles of educators and students. These elements collectively form a robust foundation for a well-rounded and adaptable educational journey. While challenges exist, such as curriculum coordination and resistance to change, proactive efforts in curriculum development, assessment reform, professional development, and resource allocation can help institutions overcome these obstacles and embrace multidisciplinary education. Technology emerges as a key facilitator, providing access to a wealth of resources, fostering collaboration, and enabling adaptive learning experiences. It enhances the multidisciplinary approach, making it more accessible and effective. In an era defined by complexity, multidisciplinary education emerges as a beacon of adaptability and relevance, equipping learners with the versatility needed to thrive in a dynamic and interconnected world. By embracing the principles and practices outlined in this exploration, educators and institutions can pave the way for a brighter future where multidisciplinary, holistic, and flexible education becomes the cornerstone of our educational landscape.

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Inflation and Economic Growth

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ABSTRACT :- The existence and nature of a link between inflation and economic growth has been subject of considerable interest. An economy must choose path of sustainable economic growth. Inflation is good for an economy but high inflation is harmful.

KEYWORDS :- Inflation, economic growth, classical, Keynesian, Monetarism, Endogenous.

INTRODUCTION :- The relationship between inflation and economic growth is of great interest in macroeconomics and monetary policy modelling. Inflation is generally termed as continuous rise in general price level. It was first defined by neo-classical economist. According to them inflation is a pure monetary phenomenon. And economic growth refers to an increase in real national income or product.

The word growth has quantitative significant.

LITERATURE REVIEW :- The existence and nature of the link between inflation and economic growth have extensively been investigated in economic literature.

Keynesian Model explains that there is a short run trade-off between output and the change in inflation, but no permanent trade-off between output and inflation. The concept of Philips' curve also hypotheses that high inflation is positively affect economic growth by contributing creation of a low unemployment rate. the Tobin effect suggests the inflation causes individuals to substitute out of money into interest earning assets, which lead to greater capital increasing and promote economic growth.

In effect inflation exhibits a positive relationship to economic growth. But validity was questioned in 1970, i.e., stagflation. Because this is a Situation when there is high rate of inflation as well as high rate of unemployment This has adverse consequence.

This paper aims to review the existing literature on the nexus between inflation and economic growth.

THE RELATIONSHIP BETWEEN INFLATION AND ECONOMIC GROWTH :-

1. **THEORETICAL FRAMEWORK :-** Inflation can be defined as the continuous increase in the general level of prices of goods and services over time, or more simply, as too much money, chasing too few goods. studies on inflation and growth can be traced as far back as the classical economic theories and up to modern theories.

2. **CLASSICAL GROWTH THEORY :-** Classical theorists laid the foundation for a number of growth theories. the foundation of growth model was laid by Adam Smith who posited a supply side driven model of growth and his production function is as follows: -

   $y = f (L, K , T)$

   where y is output, L is Labour, K is capital and T is land, so output was related to labour, capital and land inputs. Output Growth(g_y) was driven by population growth(g_L), investment(g_K) and Land growth(g_r) and increases overall productivity.

   therefore, $g_y = \Phi (g_f, g_K, g_L, g_r)$.

   The link between change in price level (inflation) and effect on profit level were not specifically articulated in classical growth theories.

3. **KEYNESIAN THEORY :-** The traditional model comprises of the Aggregate demand (AD) and Aggregate Supply (AS), which aptly illustrates the inflation growth relationship. According to this model, in short run AS is upward sloping rather than vertical, which is its critical feature. If the AS curve is. vertical than change on the demand side of the economy affect onto prices.

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In moving from the short-run to the hypothetical long run, its 'shock' and 'steady state' of the economy are assumed to balanced out. In this 'steady state' situation, nothing is changing as the name suggests 'dynamic adjustment' of short run. AD and AS curves yields an 'adjustment path' which exhibits an initial positive relationship between inflation and growth.

4. **MONEY AND MONETARISM :-** Monetarism focus an long-run supply side. Milton Friedman who coined the term 'Monetarism' by including Quantity Theory of money and neutrality of Money.

   The Quantity theory of money, linked inflation and economic growth by simply equating the total amount of spending in the economy to the total amount of money in existence.

5. **NEO- CLASSICAL THEORY :-** One of the earliest neo-classical models was postulated by solow and swan (1956). The model exhibited diminishing returns to labour and capital separately and constant returns to both factors jointly. Technical change replaced investment as primary factors explaining long Term growth. this emphasis on desired wealth people saves more by switching assets, increase their price, by driving down real assets. Greater saving means greater Capital accumulation and thus faster economic growth.

6. **NEO – KEYNESIAN :-** Neo-Keynesian initially emerged from the ideas of the Keynesians. In this Friedman argued that in the long-run there is always some rate of unemployment, whatever the rate of inflation, this is termed as NAIRU (Non- accelerating inflation rate of Unemployment). In this the long-run Philips curve is vertical, where GDP is equal to NAIRU.

7. **ENDOGENOUS GROWTH THEORY :-** Endogenous growth theories describe economic growth which is generated by factors within the production process. Endogenous

Models explain growth with human capital, develop growth theory by implying that the growth rate also depends on the rate of return to human capital as well as physical capital.

CONCLUSION :- The objective of this topic was to determine whether a significant connection between inflation and economic growth exists. According to theory, it provided some useful insights into the effects of inflation on growth, including magnitude.

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Emerging Trends in Cyber Culture and Cyber Crimes :
Reflections on Cyber-Crimes in India

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Keywords :- Cyber culture, ICT, e-world, Cyber World, Cyber Delinquency.

Introduction :- Change is universal constant which bring transformation in our society. Process of change is multidimensional and with the emergence of new technological shift based on information and communication technologies, that emerged in 20th century and get more advanced in 21st century with a rapid pace along with the high-speed industrial revolution across the globe. Information and Communication Technology (ICT), deals with digital information that passes between the various devices across the world. Gutmann (2001, p.1) states, 'Information technology is the Science and activity of moving data digitally' Castells and Gustavo (2005, p.4) calls, "The emerging society has been characterized as information society or knowledge society"

Hamelink (1997, p.3) "Information and Communication Technologies (ICTs) encompass all those technologies that enable the handling of information and facilitate different forms of communication among human actors, between human beings and electronic systems, and among electronic systems." Information and Communication Technology (ICT) is synonymous with IT and sometimes used in preference to Information Technology (IT). The term 'ICT' defines the application of computer-based technology and the Internet, to make information and communication services available to a wide range of users. They include capturing technologies (e.g., camcorders), storage technologies (like CD-ROMs, RAM), processing technologies (like application and utility software), communication technologies (like Local Area Network, Wi-Fi etc.) and display technologies (like computer monitors) etc.

'Information Technology (IT) and Information and Communication Technology (ICT) are very often interchangeably used in the context of modern technology infrastructure. ICT is a broad and comprehensive term, which comprises information technology and communication technology. Information technology includes radio, television, computer and Internet, teleconferencing and mobile.' (Understanding ICT, 2018, p.13). It is worth mentioning that in the past few years we have witnessed an immense development in Science and Technology. Computer, mobile phones and Internet, are some of the most significant and revolutionary inventions had brought a drastic change in human life. Technology can't govern and control the society but plays an important role in and giving the direction to the society. Society shapes the technology according to the needs, values and interests of the people. 'From Etiquettes to Netiquettes, from school bullying to cyber bullying, society is confronting many new changes, issues and problems and is becoming a risk society.'

By the widespread use of Internet, information and communication systems, there are many extraordinary changes occurring in human society. It is rapidly changing the human society and bringing new dimensions to them. The Internet and technology have created a virtual world through social media and Internet networking, which has developed a cyber-world or cyber society. This internet and technology are breaking the boundaries and boundaries of the nation and creating a cyber space, where the users of the internet can do many activities and different behaviors.

Cyber Culture :- Culture is a complex whole which includes both materialistic and non-materialistic aspects of human life. Internet is now becoming an

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important of human lives, either directly or indirectly.

Silver (2017, p. 1) states, "Cyber Culture is a collection of cultures and cultural products that exist on and/or are made possible by the Internet, along with the stories told about these cultures and cultural products". As per Merriam-Webster Dictionary, 'A set of shared attitudes, practices, and goals associated with the world of computers and the Internet,' refers to Cyber Culture. Cyber culture can also be understood as the cultural production that uses Internet and multimedia tools to develop creative works of art, literature, music, etc. Cyber culture is associated with electronic production of new ideas and behavior patterns related to new technological innovations. In other words, it is the set of social expectations, etiquettes, practices, behavior and languages used by the collection of people active on the World Wide Web or on any of digital platform powered by Internet.

Cyber Culture is something which is evolved from the use to technology, social media and internet. As the Internet widened its reach to people also broadened the cyber culture also gets expanded and now enveloped the whole of social media and internet. This cyber culture which is an integral part of many lives, creates its own sort of virtual group or society whose members may belongs to different sections of society. Internet along with social media has created a virtual world where many of the people are associated with different communities as according to their tastes, choices and need. This Cyber society or group is divided into multiple social statuses groups, where one's ability to communicate online in a good manner, elevates your cyber status, however, these social groups, are also highly influenced by both, physical and virtual lives. Social media and internet are not only a medium of communication but also a medium of entertainment and advertisement.

People belonging to any of cyber group are in actual resembles or shares same statuses or position along with relatable ideologies. Over the years, cyber culture and internet world has been changing rapidly. It is because the browsers and websites are capable of delivering so much more rich content and media than in the past and because the internet is becoming ubiquitous in mainstream society. Everyone in the real world has a connection to the cyber- world either directly or indirectly, which we have constructed by the use of internet and technological devices. Now a days, Internet, smartphones, and computers are becoming an important part of human life, either directly or indirectly. The presence and dominance of internet culture can't be ignored in 21st century. This cyber culture many times misleads our children and youth, as their minds are not properly developed, nurtured and socialized in order to understand the dark and grey shades of this cyber culture. This cyber culture is making our children and youth addicted to Internet and smartphones. As we know, every coin has two sides, this cyber culture is also leading crime and un-acceptable behavior in the human society of which both victim and culprits. Anything, when used or practiced in excess becomes an integral part of human society, many times which leads to addiction and when it not gets completed then it results in crime or deviant behavior. Like, every human society has its own behavior patterns, in a same way the virtual world or we can say e-world/cyber world has its own behavioral patterns and cultural practices including surfing and netiquettes etc. Internet world can also be termed as e-world, this e-world comprises of all the things and aspects of internet. In every society or culture humans commits some unacceptable behaviors or crime in order to achieve or get certain things or to fulfill their wishes. In cyber-world/ cyber space, the nature of deviant behavior and crime also varies.

Cyber Bullying: Path for Cyber-Crimes :- Crime is inevitable from human society. Either he/she is an adult or minor, an educated or uneducated, rich or poor, crime can be perceived by anyone in anytime, in any capacity for any of the reason. The worse is when a minor or children commits a crime then a whole generation is negatively affected. The word cyber represents, devices/tools having internet, whereas crime represents an

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unlawful act/behavior which is in against of law. The crime committed by using digital/internet/computer platforms can be classified as cyber-crime.

In cyber-crime, it is not necessary that both culprit and victim are online at the same time. In schools, playground and peers many time children bully each other sometimes physically or verbally. As the Internet widened its reach to people, also broadened the cyber culture and enveloped the whole of social media and internet. Social media applications are key contributors to the cyber-culture and internet world. India is having a vast market for internet and smartphones and also a great population who can use and utilize internet in multiple ways.

Cyber bullying refers the use of internet/cyber devices to bully/harass a person or group with the intention to hurt them socially, psychologically or even sometimes physically. Cyber bullying occurs in many ways, like abusive text and emails, vulgar messages, morphed image or videos, snubbing others online, humiliating others online, nasty online gossip and chats. Many times this, cyber bullying results in cyber- crime which may cause huge loss and destruction to the culprit as well as victim too. Cyber Bullying leads towards the cyber-crime. A cyber bully if not restrained, then, he/she may become a cyber-criminal. Cyber bullying and cyber stalking are some of the beginning steps which further makes a person cyber delinquent or cyber-criminal. Many times, kids or teenager, where parenting and social coherence and family policing is not adequate the child (less than 18 years of age) may become a cyber-delinquent/juvenile delinquent. In, etymological sense, the term juvenile is widely used for minors who commit crime, while delinquency is used for crime/bad behavior committed by them.

Cyber bullying and cyber stalking are most visible and common cyber-crimes, whose victims are school kids, teenagers and women especially. A cyber bullier/cyber stalker, when not restrained or punished may move towards other cyber offences. Cyber Crime by juveniles is a harsh reality in India which begins with cyber stalking/bullying. We can't deny the fact that exploitation, oppression and suppression of women is still a big issue in every society across the world. And when it comes to cyber-crime or delinquency, women and girls are highly prone to be victimized by cyber criminals or cyber offenders. National Crime Records Bureau (NCRB) of India, in its report for year 2021 mentioned 1172 cyber-crimes of bullying/stalking of women in India, which was 887 cyber-crimes in the year 2020 and in the year 2019 which was 791 registered cyber-crimes.

Cyber Delinquency in India :- Cyber Delinquency consists of two broad aspects, the first is cyber which is related with computer/internet, then second is delinquency which refers to offence/legally unacceptable acts, related with juveniles. The word juvenile is derived from Latin word "Juvenis" which means young, while delinquency derived from Latin word "delinquentia" which refers to fault/crime. Kohli & Mittal (2015) states, "A juvenile can be defined as a child who has not attained a certain age at which he can be held liable for his criminal acts like an adult person. There is a difference between the term Juvenile and Minor. Although in general, we use both the terms interchangeably but 'juvenile' and 'minor' in legal terms are used in different context. The term juvenile is used with reference to a young criminal offender and the term minor relates to legal capacity or majority of a person. Thus, Juvenile is a child who is alleged to have committed certain acts or omissions which are in violation of any law and are declared to be an offence."

Burgess (1952) states, "A boy or a girl is not a juvenile delinquent just because he commits a delinquent act. If so all boys and all, or practically all, girls would be delinquent. A delinquent is one who has been treated as such by society. He must be considered by the people in the community to be a delinquent. In other words, he must have an official record." "Juvenile delinquents are then those children who have official records as delinquent. They have completed one or more stages of the process by which a child becomes

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delinquent. They have been arrested by the police." Juvenile delinquency is a gateway to adult crime, since a large percentage of criminal careers have their roots in childhood causing serious problems all over the world.

In India, the first legislation dealing with juvenile crimes was the Apprentices Act, 1850 which provided that children under the age of 15 years found to have committed petty offences will be bounded as apprentices. Thereafter, the Reformatory Schools Act, 1897 came into effect which provided that children up to the age of 15 years sentenced to imprisonment would be sent to reformatory cell. After the Independence, with an aim to provide care, protection, development and Rehabilitation of neglected or delinquent juveniles, Parliament of India enacted the" Juvenile Justice Act," 1986. It was an Act, which brought uniform system throughout the country. Section 2(a) of the Act defined the term 'juvenile' as a "boy who has not attained the age of 16 years and a girl who has not attained the age of 18 years". (Juvenile Justice Act, 1986, Govt. of India).

Later on, the Govt. of India enacted the Juvenile Justice (Care and Protection) Act, 2000, "Juvenile" or "child" means a person who has not completed eighteenth year of age; "juvenile in conflict with law" means a juvenile who is alleged to have committed an offence" (Juvenile Justice Act, 2000, Govt. of India). The Juvenile Justice Act (JJ Act) was later amended in year 2015 was finally published by the Government of India. "THE JUVENILE JUSTICE (CARE AND PROTECTION OF CHILDREN) ACT, 2015, NO. 2 OF 2016". In case of a heinous offence (heinous offences includes the offences for which the minimum punishment under the Indian Penal Code or any other law for the time being in force is imprisonment for seven years or more) alleged to have been committed by a child, who has completed or is above the age of sixteen years, the Board shall conduct a preliminary assessment with regard to his mental physical capacity to commit such offence, ability to understand the consequences of the offence and the circumstances in which he allegedly committed the offence." A juvenile can be defined as a child (child means a person who has not

completed eighteen years of age; as per JJ act 2015, Govt. of India) who has not attained a certain age at which he can be held liable for his criminal acts like an adult person. There is a difference between the term Juvenile and Minor. Though in common language we use both the terms interchangeably but 'juvenile' and 'minor' in legal terms are used in different context. The term juvenile is used with reference to a young criminal offender and the term minor relates to legal capacity or majority of a person.

Thus, Juvenile is a child who is alleged to have committed certain acts or omissions which are in violation of any law and are declared to be an offence. In India, anyone below or under 18 years of age is treated as Juvenile, ("juvenile" means a child below the age of eighteen years , as per JJ Act 2015, Govt. of India) however, in case of heinous (heinous offences" includes the offences for which the minimum punishment under the Indian Penal Code or any other law for the time being in force is imprisonment for seven years or more; as per JJ Act 2015, Govt. of India) offences anyone who has completed 16 years of age will not be treated as a child/juvenile(subject to assessment of his/her mental social and physical capacity, as per JJ Act 2015, Govt. of India).

One is not born as a criminal. Conditions and adverse time make him so. Socio-economic and cultural conditions, both inside and outside of home, assumes noteworthy part in shaping one's life and general identity in the human society. The general causes which are related with juvenile crimes are: Poverty; Drug Abuse Anti-social Peer Group, Abusive guardians; Single- parent kid; Nuclear Family; Family Violence; Child sexual mishandle and Role of Media. In any case, the extent that India is concerned, it is Poverty and the impact of media, particularly the social-media which make adolescents more slanted towards criminal exercises. Poverty is one of the greatest causes which force a juvenile to get associated with criminal acts. Additionally, pretended by social networking today which is having a more negative than positive engravings on youthful personalities. Delinquency has become a matter of social concern all over the world and it is found in

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all human societies. When the internet, or tools/devices having internet are used by a minor (one who is not adult) committing unlawful acts, then it refers to cyber delinquency. The dynamics of juvenile delinquency is very interesting to be considered for enquiry to understand analytically and to develop data and record about the changing pattern of behavior as well as misbehavior of children among people, which has come about with the changing social, economic, political and cultural patterns in human groups due to rapid industrialization, urbanization and wide use of internet and technology all most over the world. There are considerable variations in the socio- cultural, economic and psychological bases of causation of juvenile delinquency across the societies in the world. In developing countries, situations are different from western countries because of multiple reasons sometimes due to legal issues, sometimes due to socio economic and cultural reasons. There are no such laws pertaining to the legal age regarding the use of Internet and Internet devices in India, this is also a one of the major factors responsible for the misuse of Internet and social media in India.

As per the reports from National Crime Records Bureau of India-2021, a total of 31,170 cases have been registered against juveniles during the year 2021.An increase of 4.7% in 2020 (29,768 cases). Crime rate shows increase from 6.7 in 2020 up to 7.0 in 2021. A total of 37,444 juveniles were apprehended in 31,170 cases, out of which 32,654 juveniles were apprehended under cases of IPC (Indian Penal Code) and 4,790 juveniles were apprehended under cases of SLL (Special Acts and Local Laws) during 2021. Majority of juveniles in conflict with law apprehended under IPC & SLL crimes were in the age group of 16 years to 18 years (76.2%) (28,539 out of 37,444) during 2021, where majority of children (juveniles) were living with their parents/guardians and having educational status in between primary to matric level. Crime cannot be fully restrained from any of the society especially when we are also living in a virtual world but we can try to control or limit the delinquency among children. Children and youth are most important sections for any of

the society and especially when it comes to India, one of the largest democracies in the world having maximum population of youth. Like, culture, education and lifestyle is changing vice-versa the criminal behavior and types of crime and offences are also getting changing.

Cyber Crimes: Emerging Trends in India :- India is one of the nations in the world having cheapest Internet and as per Census-2011, 50.1% of India's population aged 24 years or below. Besides, this, India is the second nation in the world having maximum number of smartphone users (statista 2022 march report). Anything which is used by many millions of people then, there are also more chances of crimes and delinquencies being committed. Sussman and Heuston first proposed the term 'Cyber Crime' in the year 1995. Cyber-crime cannot be defined from a single definition/assertion, it is best defined as collection of acts or conducts which are regarded as illegal, unethical and are conducted through Internet or any of the digital device or digital tool/technology. In simple terms, we can say that, cyber-crimes are the offences that takes place over electronic, Internet based systems or devices, in order to harass/offend or make someone upset socially, economically or mentally. "Cybercrime is defined as crimes committed on the internet using the computer as a tool to target the victim for the execution of the desired crime. Crime can never be said static it is dynamic in nature and the phenomenon of crime gets change day by day as according to the change in human civilization Though it is difficult to determine that where the particular cyber-crime took place because it can harm its victim even sitting at a far distance. As stated above from the Year 1997 to 2008 tremendous changes took place which helps the judicial system to determine the specific kind of cyber- crime." (Cyber Laws, 2021, p.2)

Chawki et al (2015, p. 3) 'Computer-related crime or "cybercrime" or "e-crime" or "digital technology crime" is a long-established phenomenon, but the growth of global connectivity is inseparably tied to the development of contemporary cyber world. Any

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criminal activity that involves a computer either as an instrument, target or a means for perpetuating further crimes comes within the purview of cybercrime. A generalized definition of cybercrime, be, "unlawfulacts wherein the computer is either a tool or target or both."

Due to excessive use of Internet and Internet devices, cyber activities are also increasing which further leads to the increase in cyber-crimes and it is also feasible to criminals/delinquents because in cyber-crimes there is no need of physical or direct contact of victim with offender/criminal. As per data from National Crime Records Bureau (NCRB) of India, - 2021 there is a significant rise in cyber-crimes in India and even the motives behind them are also getting varying, in the year 2018, there total 27248 cases registered, in 2019, it was 44735 cyber-crime cases, then in 2020, it was 50035 cases further in 2021 it was 52974 cases of cyber-crimes in India. There are many types if cyber offences/crimes like cyber fraud, pornography, cyber bullying, cyber stalking, cyber murder, cyber suicides, cyber theft, illegal hacking, phishing, cyber piracy etc.

There is a misconception among the people that for the commitment of cyber-crimes it is necessary that people (both victim and culprit) should remain online but it is not necessarily always needed, as there are many softwares phishing websites and applications, which can easily perform the task programmed by the cyber criminals/delinquents in order to commit the crime even without being online. Like, Morris Worm, Ransomware, Pegasus, etc. Cybercrime in India has been on the rise in recent years, as education nowadays is heavily dependent on the use of the Internet and even in schools, computer education is being provided from primary classes and especially during the COVID period. Smartphones are more readily available to minors. When most things including education are done with the availability of internet through smartphones and computers/laptops. Smartphones are one of the most sophisticated innovations of 21st century but also if treated wrongly can also be a device which can support and help criminals to perform many illegal

activities which even can't be monitored or checked easily.

Besides this, the IT Act 2000(Govt. of India) also lacks the clear, strict and transparent definition and laws regarding cyber bullying, cyber teasing and Internet misuses especially by minors. Students and minors who are under 18 years of age are using smartphones more as a fashion and for joy rather than as an essential or needful commodity. Due to the lack of proper supervision and inadequate Cyber laws (especially for minors) it becomes difficult to control and check cyber bullying which many times makes the children a cyber-delinquent. Cyber Delinquency means unlawful acts within realm of the computer/internet, is either a tool or target or both. Cyber Fraud, cyber bullying, cyber stalking, Internet shaming, etc. are becoming more prevalent in our society especially among children. Unfortunately, our youth is involved in this crime. When a juvenile is found guilty of having used a computer to hack or steal an individual's identity, the possible consequences are probation, fines and incarceration. Cyber- crimes among children, like pornography, fraud, sexual exploitation, defamation, forgery, morphing, cyber bullying, cyber harassment, cyber drug trafficking and accessing unethical stored communication, fake profile etc. are some of the common offences, of which children are becoming victim as well as culprit too.

During past 10 years rapid changes in Internet and smartphone technology had taken place which also enhanced the cyber-crimes in India also. In, many of cases like, defamation, fake profile, image morphism, phishing, monetary fraud, data theft, etc., many times cases aren't got registered, due to multiple reasons viz. lack of evidence, lack of proper IT acts for juveniles and many times the delinquent or criminal are family members or friends. As per the reports from National Crime Records Bureau (NCRB) of India, published in year 2022, states that, total cyber-crimes in India (including states and UTs) in the year 2019 were 44735, in the year 2020 it was 50035 and in the year 2021 it was 52974 cases, whereas the chargesheeting rate in the year 2021

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was 33.8 only. When we look towards the nature/motives behind the cyber- crimes, then as per reports of NCRB in the year 2021, 32230 cases of fraud were registered in year 2021(total cyber-crimes registered were 52974) in the year 2020, 30142 cases of fraud were registered (total cyber-crimes registered were 50035) and in the year 2019, 26891 cases of fraud were registered (total cyber-crimes registered were 44735). Further, in this line, next is cyber sexual exploitation, whose 4555 cases were registered across India in the year 2021 (total 52974 cyber-crimes cases), in year 2020, there were 3293 cases of sexual exploitation in the entire nation (total 50035 cases of cyber-crimes) and for year 2019, 2266 cases of sexual exploitation were registered in India (total 44735 cases of cyber-crimes in India).

Indian government recently banned number of porn websites, in order to restrict the pornography and obscene content. In earlier times pornography is only restricted to the adult magazines or adult movies but with the advent of smartphones and internet now it is cyber pornography where obscene/adult/explicit content can be published or displayed on internet via websites or social media platforms. The biggest concern is that pornographic content can get easily spread and circulated on internet and also it will be very difficult for an individual to restrain those contents.

Cyber-Crimes against women which included cyber pornography/hoisting/publishing obscene sexual content, 1896 cases were registered in India which was 1655 in the year 2020 and1158 in 2019. Further, Cyber-Crimes against children, which included cyber pornography/hoisting/publishing obscene sexual content registered 969 cases in the year 2021,738 cases in 2020 and 102 cases in 2019. Further, Cyber-Crimes against children, which included cyber pornography/hoisting/publishing obscene sexual content registered 969 cases in the year 2021,738 cases in 2020 and 102 cases in 2019. Coming next to this, cyber extortion is also increasing day by day, in the year 2021, 2883 cases of extortion were registered then in the year 2020, 2440 cases of extortion were registered whereas

in the year 2019,1842 cases of extortion were registered. Besides, this, the activities conducted on dark web are still great matter of concern in order to trace and track them. The data from NCRB shows that women and children are most vulnerable for internet world and are also easy to be victimized as, the data from NCRB-2021, states that total cyber-crimes against women are also rising, which records 8379 crimes in year 2019, 10405 crimes in year 2020 and further 10730 crimes in the year 2021.For the children in year 2021 it was 1376 cyber-crimes in the year 2020 it was 1102 and in the year 2019, it was only 305 cyber-crimes against children in India. Pornography and sexual exploitation are some of the prominent cyber-crimes which creates a great destruction in the lives of children and women. Apart this, in the year 2021,1724 cyber-crimes of personal revenge were there, which was 1470 in the year 2020 and in the year 2019 it was 1207 cyber- crimes of personal revenge were there in across India. Internet is also used for other criminal motives like causing disrepute, prank, disrupt public service, inciting hate against country, spreading privacy, steal information, abetment to suicide sale-purchase of illegal drugs, political motives etc. Crimes related with Fraud, theft, piracy can be controlled by strict internet security patterns and cyber-awareness. However, sexual exploitation and pornography are some of the most critical and serious issues, whose cases are significantly increasing acrossthe India and has to be checked. Data from NCRB (for year 2021) mentions total 127330 cases for investigation across India. (includes cases pending from previous year).

It is really a matter of concern that, with the rise and advancement in technology and its accessibility, cyber-crimes are also rising. Besides this, most prominent challenge is change in structure and nature of family, now parents are either working or engaged in professional activities by which many times it would be difficult for them to look and watch activities of their children. The parenting and socialization pattern are also getting change. Social media and internet are playing a dominant role in giving insights to the children.

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Internet is becoming an integral part of human society by which it will be difficult for us to make it away from our children.

Conclusion :- Culture includes both material and non-material aspects, which collectively creates a great impact on human society. Society perceives its path from both tangible and non-tangible aspects, in which science and technology plays a dominant role. Internet technology is becoming an intrinsic part of human life in both positive and negative manner, whether for development or for deviance and crime. As technology has brought great changes in the living patterns of humans, in a same manner technology and internet is also changing the patterns of crime and deviance. From bank robbery to ransomware, many things are getting change rapidly just because of internet and cyber technology. When all the aspects of life are getting transformed, then how can be crime and deviance remain untouched or unaffected. Internet can't control the society but can mislead the society if not checked and controlled properly, especially children and youth can fall easily into the web of cyber-world which seems glamorous and beautiful from outside with its false assurance of our privacy. As fast as the cyber world is growing simultaneously cyber-crimes are also increasing. The society and government must have to make stricter laws in order to restrict the cyber-crimes. Smartphone technology is rapidly growing along with the high-end internet in laptops and computers which are becoming an essential part of our lives directly or indirectly and most prominently in education and information & communication sector internet is strengthening its roots by which, children are becoming prone to be a victim or culprit of cyber-crimes.

Children and youth are most precious assets for any of nation across the globe and for their quality education and holistic development we need science, technology and internet too. But the question is still standing tall, that how can we check, what cyber world and internet is teaching and telling to our children and youth and in what manner our generations is understanding its utility. We can't deny this fact also that Internet

and social media are also providing the income to many of the people in a positive manner and is also helping many of peoples in any of the society across the globe. When it comes to India, which is in transition phase from developing to developed economies, the role of internet is very much important and pivotal in the economy and society both. In comparison to developed societies India still has to cover many more miles especially in quality education, per capita income and sustainability of resources and quality standards of living. In India, it is really a matter of concern and also a very serious issue that cyber stalking, cyber bullying, phishing, cyber pornography, etc are rising and are also impacting our children and youth in a negative manner. Society is a web of relationships, which has multiple institutions and associations which works together in totality, many times society which is in progression of development ignores these small offences in initial level because it impacts a very handful of people but gradually it becomes a serious offence and later on may turn into a serious organized crime.

It is also a serious matter of concern that majority of juvenile delinquents are living with their parents and are belonging in the range of primary to matric educational level which is also questioning the patterns of socialization and parenting. Internet in the hands of children can also make them sufferer of depression and sometimes it can also force them to commit suicide. In an advisory by, Ministry of Electronics & Information Technology on dated 12/09/2017 advised and warned against the use of popular internet game in India, "Blue Whale Challenge", by which many of children either committed suicide or about to commit suicide. Apart this cyber stalking and most prominently cyber pornography etc. are also making our children and youth depressed and exploited because it directly impacts their brain and social circle, in both cases either they are victim/culprit of cyber-crimes.

If we want to be a developed nation then we must have to check the roots and directions of internet in our society in order to make our generations human friendly along with technology and cyber-friendly. We are having great laws when

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it comes to civil or criminal cases but we need many more miles to go in IT Acts in order to restrict the cyber-crimes on both surface web as well as on dark web. In order to restrain the cyber-crimes and cyber delinquency among children, society must have to stand in against of cyber offences along with the government and internet service providers. The companies who have social media applications or its ownership along with the internet service providers must have to work together by taking concerns from society and government in all together manner.

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The Class Struggle within a Social Structure in Arundhati Roy's The God of Small Things : A Critical study

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Abstract :- Arundhati Roy is acknowledged by her masterpiece "The God of small things" (1997) which credited her A Booker Award. And she became the first Indian woman to win a Booker award. She is a writer as well as a social activist. She mainly focused on the cast-based discrimination. In this novel Arundhati Roy speaks against the injustice done to the lower caste. She unfolds the class discrimination prevalent in Indian society. Through her novel one can easily assume that she was fully aware of the class conflict in her society. The story of this novel is the mirror of her own life. She has written what she has seen in her life. This story revolves around the woman over her love on oppressed person. The writer has shown that in this society it is very hard time for the oppressed to survive because they are treated worse than the animals. Arundhati without any hesitation speaks about the caste disputation. In the novels there are other subplots which too describes the illness of caste. In the novel "The God of small things" Arundhati Roy highlights the weakness of casteism. Through this novel one can come to the conclusion how cruel one can be to his fellow human beings. In this novel goodness is defeated by the evils. Here, The Evil wins Humanity. The writer shows the relation between small things and big things in this novel. The God of small things is also focused the theme of humanity identity and abusive of women in our Indian society.

Keywords :- Expose, Oppressed, Patriarchy, Spotless, Abusive.

Introduction :- "The God of small things" is presented in a very bold manner by Arundhati Roy. This novel openly deals with the evil of casteism prevalent in Indian society. The main themes of this novel are satire on policy of politics, interrogating of casteism, patriarchy. Arundhati Roy exposed the reality of caste and gender discrimination. The discriminatory behavior of caste system is shown by Roy when she depicts the miserable conditions of untouchable and how they were treated a sub-human entities. The novel flashes the light on the early life of the novelist. "The God of small things" is an autobiographical novel. The character of Ammu in the novel represents the author Arundhati Roy's mother is a south Indian woman.

The Caste dispute is the major theme in this novel. What a cast means is a big issue.

Caste is an age-old social institution associated with the life of Indians. It is an endogamous unit and its membership is based on birth alone. One's position in the social hierarchy is invariably decided by one's birth. It imposes on its members certain restrictions in the case of social intercourse. Its members follow a common traditional occupation and claim a common origin and form a single homogeneous community.(Blunt,5)

India is suffering from caste dispute from a long time. Before the independence the condition of the lower caste was much worse. Their condition in the society was worse than the animal. Today after the independence the situation is changed but there are still places where caste dispute is still practiced. Bailey refers to three characteristics, viz. 'rigidity, purity-pollution and ranking while analysing the caste system in India.'(Bailey, 107)

Caste plays a very important role in Indian society. It deals with the analysis of how they are dehumanized in the hands of the upper caste. The novelist has given a dreadful picture of untouchables and marginalized sections through this novel. India is known for its modest civilization where Guru is considered as God where parents

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are respected like goddesses. India has very beautiful customs and tradition. India celebrates festival of Raksha Bandhan where sister ties a thread of faith in her brother so that brother will protect his sister. We celebrate Guru Purnima where we give honour and respect to our teachers. The Wife keeps fasting of Karwa Chauth for her husband's wellbeing. There are so me many other customs and traditions which make India rich in its cultural heritage. But there is one drawback which make India behind is the Class and Caste conflicts and that is very disgraceful drawback of Indian society.

The term 'Caste Conflict' generally refers to a fight, struggle, collision or clash of opponent caste groups. Lewis Coser contends that social conflict is "a struggle over values and claims to secure status, power and resources in which the aims of the opponents are to neutralise, injure or eliminate their rivals".(Lewis,8) However, from a sociological point of view, John Rex says that conflict is not a random disorder; rather it refers to a meaningful action in pursuit of goals.Rex,104) According to Georg Simmel, 'conflict is a particular kind of socialisation.'(George, 13)

The writer has seen the society from its heart core she knows the reality of the society how harsh it is for the marginalized people. In the novel she has made the society aware of this social evil of untouchability and suffering of untouchable caste called the Paravan. She also mentions how women are also victims of the society. Women and lower caste both treated as uncongenial and subjugate objects in this social structure. They are always humiliated as they are women and untouchables. Consequently, Women have been deprived of economic, social and cultural equality. Mammachi had very bad experience by her husband in her past life. The other theme of The God of small things is the troubles of women as daughter and a wife in patriarchal culture. The higher-class people never want these lower caste people rise. Roy brings out the condition of the demoralized. "The God of small things" focuses on the most important issue of class conflict. Caste system is deeply rooted in the society. Arundhati Roy has deep sympathy with the social problem of

India. She uncovers the blazing problems of the society. The class conflict is an approach used to study literature, giving emphasis to the voice of marginalized people in the society. Marginalized people are socially, politically, economically and legally deprived of their 'rights' as human beings in every sphere of life and society. The lower caste and females are recognized as marginal entity in the society. The novel is the mirror of caste-system deeply rooted in India and so-called upper class. The writers are influenced by the life style of the society. In every society, there are various sections to which people belong. In every society there are divisions regarded as class or caste. class conflicts means people deprived of socio-economic opportunities for their nourishment and they are victims of social, cultural and political exclusion. The demoralized, the poor people are regarded as class conflicts.

The Indian society is divided into various classes such as higher class, middle class and the depressed classes. These are the main class but there are sub classes which follow numerous practices and usages; surprisingly each of them is different. The influence of higher caste is felt in the socio-religious and cultural lives of the class conflicts sections of society.

Arundhati Roy depicts the house of Velutha, the paravan in *The God of Small Things*

…Was dark and clean. It smelled of fish curry and wood smoke. Heat cleaved to things like a low fever… Velutha and Vellya Paapen's bedding was rolled up and propped against the wall… a grown man could stand up straight in the centre of the room, but not along its sides.(p 208)

The writer explains the sorrowful and pitiful condition of Vellyan Paapen, the father of Velutha was. She tells how he crawls backwards and he takes the social disabilities that are imposed on the marginalized section by wornout tradition. Arundhati Roy says,

By the time he understood his part in History's plans, it was too late. To retrace his steps he had swept his footprints away himself crawling backwards with a broom". (p 200)

Arundhati Roy describes the minute details of the pitiful conditions of the lower caste

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and how they are treated as secondary. She has a great sympathy for the weaker section of the society. There was a time when;

Paravans where expected to crawl backwards with a broom sweeping away their footprints so that Brahmins or Syrian Christmas would not defile themselves by accidently stepping into a paravan's footprints… they had to put their hands over their mouths when they spoke, to divert their polluted breath away from those whom they addressed (p 73-74)

In this novel the main character is Ammu around whome the wlole story resolves. She is the member of Ayemenem family in Kottayum in Kerala . Ammu the protagonist grew up in a family where her father Pappachi regards that investing on education is an pointless expense for a girl. But the same venture on his son's education is in advance resources. The monetary constraints peak the family's economic grade. Ammu's marriage becomes a burden to her retired father. For holiday Ammu goes to Calcutta where she meets her brochure husband working in a tea estate as agent who proposes to Ammu to marry her. She gives her permission and marries him. Marriage is the only dependable and trustworthy shelter where one can break away from own parental home with societal support and security.

Human Dignity :- The second important theme of this novel is Human Identity. The dignity of human being is destroyed by the upper class of the society. In this novel the oppressors are symbolized as a superior God who is not allowing inferior Gods to exist and occupy places of structure. The writer has earned a distinct and creditable space for her particular attention towards the plight of women on social justice under constitutional provisions.

Ammu got divorced and having two children: Estha and Rahel. Ammu's parents have 'Paradise pickle factory' where Velutha is employed. The relationship between Ammu and Velutha is portrayed as a protest against the existing laws of society. It attacks the institution of family, religion, politics, and public administration. The story reveals critical factors of life emanating

from the awareness. These are love and sex developing between Velutha and Ammu. Their love concern brings misfortune in their life because what they do not tolerable to society due to different castes and creeds which are the prevailing paradigms of Indian society. These are not new. They have come into way of life from beginning of recognized history.

Ammu had to face lots of challenges during her study time. Since she was a girl, she was underestimated and neglected. And thus, her study suffered. Chacko is her brother. Ammu's mother is Mammachi. Pappachi is her father whose behaviour is not good. He beats his wife and they suffer meekly. The character of her husband was not good. He asks Ammu to live with his English Boss, but she refuses to do so. She gets annoyed and returns to Ayemenem to her parents with her twins. She lives a miserable life. She was not respected in her own house. Her parents never cared for her needs.

"Within the first few months of her return to her parents' home, Ammu quickly learned to recognize and despise the ugly face of sympathy" (p 43)

Rahel looked into her past. She was seriously ill. when she was sick Estha never saw her. The last time Ammu came back to Ayemenem. Rahel was eleven and just expelled from school. Ammu had to loose her job because she could not for her receptionist job for being sick. The narrator remarks that it was as if Ammu thought that no time had passed.

Ammu and her children were alienated. In the family and village, they were looked down. The door of the society was closed for them. In a way they were outcaste. There was one more person who shared the same torture by the society and that was Velutha who was always isolated because of his status as an untouchable. But he is a playmate for the children of Ammu. In a very short period Ammu and Velutha came very close to each other. She began to loves him and gradually she lost herself in the world of Velutha. The Indian society has its own rules and regulation regarding love. It is based on the dignity. The society never accepts the love beyond caste or class. Because of

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this disgraceful law Ammu and Velutha died.Baby Kochamma has known about the love affair of Ammu with Velutha. She was strongly against the love affair to Comrade Pillai who is one of the members of the Communist party. The narrator also tells us that we can't really blame Comrade Pillai for his role in these events – it's not his fault that he "Lived in a society where a man's death could be more profitable than his life had ever been".

Velutha was very badly treated with extreme violence and brutality. The writer describes his skull cracking and his broken ribs puncturing his lungs. The policemen stop beating Velutha. The writer also remarks that his skull was fractured in three places. The bones in his face resmashed, leaving it featureless and mushy. Six teeth are broken. He's bleeding from his mouth because four of his ribs are puncturing his lungs. His spine has been damaged. His intestine is ruptured. Both of his kneecaps are shattered. Velutha was murdered. When she learns that her beloved is now no more she gets frustrated and commits suicide. She dies at the age of twenty seven. She dies at Bharat lodge in Alleppey while preparing for an interview. Even after her death her body was neglected. The church does not give place to bury her. Wrapped up in a dusty bed sheet, she is disposed in the electric crematorium in the presence of Chacko and Rahel. Duel tendencies are commonly found in the life of man. They find out the course of his life, always remaining in conflicts to each other.

The life of Arundhati was full of miseries which was seen in the novel at several places. These conflicting forces add up to the contrasting forces in the structure of the sequence of events. Pappachi is found torturing his wife always quit viciously. In order to escape from these tortutes, Ammachi atarts scribbling cooking tips which later provoked her to establish a pickle factory. The story ends with the ruins of the pickle factory. Ammu fell in love with a Bengali drunkard betraying and antagonizing her parents. Deserted by the drunkard, she experienced the torture of remaining husbandless. Her relationship with Velutha quences her sexual thrust which then gets

converted into a sensitive romantic affair. Ammu is a fight back struggling inside her to cross the limits that block Indian women.

Ammu's love story with Velutha, has to pass through several barriers. For a short period, her love affair survived. Ammu was the only characters in the novel, who stands unconquerable against the hegemonic forces of male oriented society, it's cruel code of belief and background. Many of Rahel's qualities mirror that of her mother, Ammu. Ammu was a freedom loving woman who did not accept the life that was given to her;rather, she went out to fulfil her dream. Since her lover had already been from an oppressed caste, Ammu chose the road he had been set upon in order to be with him, and it resulted in her termination. The strong willed mother set an example for her independent daughter, and at a young age. Rahel was able to see past the limitations of death, situation and fate. While Estha, who had live much the same life as Rahel, he moved around without a sound and lively in a closed-off-world, his twin sister dared to dream and let herself go. She imagined what she could not send for; she believed what she could not see. Rahel's willingness she imagined what she on, much like her mother, reflect this. Her actions showed her determination not to let the world around her shape her and in this, she defines the world altogether.

From the beginning of the history the two categories are found the oppressor and an the oppressed. This hierarchy of the society is generalized in terms of the big things and the small things which allies with the symbolism of the lantern and the lamp. The matter of big and small things would mean more or less, the same thing as Karl Marx's analysis of the moneyed class and the poor people. The former have become rich by virtue of the labours put up the poor. The poor have become poorer because they are not allowed to share the excess they generated.

The writer observes that there is weakness of women in organizing themselves in a unit which can stand face to face with the correlative unit. They have no post, no history, no religion of their own, and they have no such

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shared aims of work and interest as that of the working class… they live dispersed among the males, attach through residence, housework, economic condition and social standing to certain main-fathers or husbands more firmly than they are to other women.

Pappachi would not allow Paravans into the house. Nobody would. They were not allowed to touch anything that touchables touched. Caste Hindus and Caste Christians. Mammachi told Estha and Rahel that she could remember a time, in her girlhood, when paravans were expected to crawl backwards with a broom, sweeping away their footprints. (p 73-74)

"The God of small things" is an ancient drama played out against an unmistakably modern backdrop. It turns the clash of tongues and histories in Kerala. The novel has it all: the echoes, calls and the cries of the Earth. It is an uncoiling spring of human foreboding and inevitability.

Conclusion :- Thus, the *God of Small Things* presents a big gap between the world of big things and the world of small things. The gap is so vast that the big things make things more difficult for the small one to survive. There are such characters in the novel like Velutha, Vellya Paapen and Kuttappen who represent the dark world that has no comfort to offer to its residents. And beside them there are also charaters like Chacko and K.N.M. Pillai who keep a distance from the lower strata of society and show their utmost insensitivity to the plight of the subaltern. Velutha desperately struggles to move from the periphery to the centre and in this struggle he sacrifices his life. The novel thus annihilates vast areas of social experience into the multiple layers. Roy portrays her women characters as being ragged between traditional restrictions and modern free zones. No doubt, Arundhati Roy shifted the issues related to women prevailing practically in the recent times in the margin.

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Women Education and Social Change

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The eternal law of the society is chang e this can happen in both the internal and ext ernal or structural aspects of the society. If in the ideals and values of any era, if some difference or newness is seen in the ideals and values compared to the previous era, then it will be called internal change and if in any social organ like family, class, caste etc.

If changes in the forms, basis, and beh aviours of groups are reflected, then they are called structural changes. Will say. Change may either occur in the entire structure of the society or may be limited to some particular aspect of the society. Change is an all-time phenomenon. It is an always on-going process in some form or the other.

The process of social change began to be thought about in a systematic manner in the middle of the 19th century, when scholars discussed industrialization in European society and democratization in the political sphere. Tried to understand the various processes resulting from inception as described by Garden Marshall. Among social scientists, the subject was first paid attention to by the British historian Henry Sumner Maine, who in his book Enrset's Law (1861) suggested that society was a simple system. From this, it moves towards a complex system. His contemporary anthropologist L. H. Maugan's idea was also the same.

Change is a vast and difficult subject, shedding light on the basic structures of society. In this process, there is a new birth of the structure and working system of the society, under which, fundamentally, various patterns of social situation, class, level and behaviour, are formed and deteriorated. Society is dynamic and change with time is inevitable.

In the modern era, developments have taken place in every field, and various societies, in their own ways, have addressed, responded to, and reflected in social changes. Ta is. The pace of

these changes has sometimes been rapid and sometimes slow. Sometimes these changes have been very significant and sometimes completely insignificant. Some changes are sudden, under social change we mainly study three facts.

1. Change in social structure
2. Change in culture
3. Factors of change

There are many facts and factors responsible for the change, but among them there are some important facts on the basis of which the events can be explained. The researcher has tried to explain the social changes in education and women's education on the basis of decline in population growth rate and increase in education rate.

Education affects every aspect of the society, whether it is cultural or political. The format of education changes the nature of society because education is the means of change. Society has been continuously evolving and changing from ancient times to today because as education has spread, it has changed the status, outlook, and way of living of individuals in the society. Impacted on tolerance, food, customs and traditions and this.

The nature of the whole society has c hanged. Education enables the individuals of th e society to be conscious of the widespread pr oblems, wrong traditions in the society, and cri ticize them. And slowly, gradually, changes take place in the society. Education makes people aware about the society and forms the basis of progress in it. In the past, education was limited to a few people, due to which the nature of society was different or stereotypical, discrimination was high. Over time, education became mandatory for all sections of the society, due to which, after independence, social progress and improvement were clearly reflected.

Education changes the individual's attit udes and behavior by changing his/her activitie

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s, builds the group mind and thereby removes the disorder and creates a suitable social order.

While the education system is influenced by the society, it also transforms the society as after independence, education for all and equality has been our main goal. . This led to the spread of education and the old structure of society began to change. In place of spiritual values, material values became more popular. From simple living to high thoughts, now every class wants to live as per their desires.

Education has tried to remove caste and lagging inequality to a great extent. Rural societies have now started becoming more and more naive towards the behavior of urban societies.

Venkat Rayappa has written clarifying the relationship between education and society - "Education serves the society by socializing its children." It aims to prepare the youth to assimilate social values and the paradigms of society and make them worthy of participating in the actions of society. Education works for the individual and the society. The personality of a person is developed by education. The development of a person means the development of physical, character, moral and intellectual qualities along with the development of social qualities. A developed person only becomes the basis of the progress of a plural society. Is. Education becomes the basis for the transfer of culture and civilization of the society. Regarding this work of education, Otway has written that - The work of education is the cultural values and behavior of the society. To provide the role models to its young and powerful members. But in reality it is one of his simple works. On this function of education, Tylor wrote that culture is that complex whole which includes knowledge, belief, art, morals, custom and other abilities and habits.

Those which man acquires from education as a member of the society. Education is the basis of society's progress.

Education is the means by which the progress of the society is achieved by making changes in the thoughts, ideals, habits and attitudes of the individuals of the society. Ellwood made it clear that education is the means by which society can hope for all kinds of significant social progress.

Education acts as an agent to empowering an individual's attitudes, ideas, and life. When collective thoughts are changed through education, then social change takes place. The development of science and technology is an example of social change through education. People have become more aware of education. And education has, in turn, developed scientific temper among the people of the society. Education helps in transforming the population into a form of contact and power, as well as in efforts to control its growth. Even though education does not ensure high status and status of all people, it is impossible for an individual to achieve social mobility without education. Additionally, education plays a role in equality of opportunities in three ways.

(1) Individuals who are willing to be educated will enable them to take advantage of the facilities to make their work possible.

(2) To develop the subject matter of education which promotes the development of scientific and objective outlook.

(3) By creating a social environment of mutual tolerance based on religion, language, caste, class, community, gender.

Dawson and Gatiss have rightly written that "action and change are ever-present universal facts."

Man becomes bored of life. The desire for some change, whether in intimate or romantic relationships, is human nature. According to the famous psychoanalyst Freud, there are mutual antagonisms present in human beings. Where there is love, there is hatred also. The history of any country has never been the same, states have been rising and falling. New ideas, are adopted. Old conventions and traditions continue to break. This change can be seen in all positions of life in family, caste, and in all institutions social, economic, political, religion, state, education, ideals, in relationships between men and women. This process of change becomes visible only because of education.

From education comes awareness in the society, from awareness comes revolution and from revolution comes change. In other words, we can say that education is the best medium to bring change in the society.

Indian society is one of the oldest societies in the world. The people here have a deep attachment to the Indian culture and tradition, due to which they have maintained their religious purity. But, despite all this, in today's world, environment, population, industrialization, urbanization, etc. have played an important role in transforming the society. Social changes have also had an impact on these factors. Today, leaving behind the old and weak customs, we are adopting the modern and westernized culture. We are rising above casteism and moving towards humanism. Both education and culture are invaluable in this noble work of ours. Today, education has contributed in giving the right direction to the system of the society. Today, on the strength of education, changes can be made in the social level. Social change in Africa Dr. After being in jail for 20 years, Nelson Mandela gave the message of equality, brotherhood, internationalism to the world by making revolutionary changes in the society. There is an important contribution of women education in social change. It is mentioned in our ancient scriptures that –

"Nasti Vidyasam Chakshu Nasti Matru Samoguru"
:- That is, in this world there is no equal field of knowledge and there is no Guru equal to mother. This thing is completely true. The first and greatest influence on a child's development is exerted by his mother. It is the mother who teaches a lesson to her child. This initial knowledge of the child is like a rich line written on the stone, which is the permanent basis of life, but today so many anti-social elements have emerged all over India, which have created a threat to the mother. The sisters have ended their relationship and are living a life of luxury. Have started understanding useful. This is the reason why the society today is going through a period of transition. Women's education provides a new direction to the society. Just as the body requires food, in the same way education is necessary for mental development and social development. If a woman is not educated, she will neither be able to become a successful housewife nor a skilled mother. If a mother is uneducated, she will not be able to properly guide her children and improve their mental development. How will it be possible to build and develop a healthy society? It will not be possible. Therefore, it can be said that only an educated woman can, in the future, come out of the darkness of despair and exploitation and show the right path to the family. If we compare today's condition of women with the status of mythological society, then it is clear that the situation has improved some improvement, women have started working. in household expenses

Women power has special importance in the progress of any society and nation. Woman is the mother of mankind and a link connecting two generations. Woman is the source of life. The symbol of female power, wealth and knowledge has been considered. Women are considered to be the basis and source of every social organization. The organization and disintegration of the society depends on their condition. The society in which the status of women is high and respectable, that society is considered progressive. Not only this, women make a unique contribution in the development of socialization and personality. In this perspective, women's education can provide a unique contribution in making them cultured and civilized. A well-educated woman is the basis of socialization and ideal orientation of children.

Education has been adopted since ancient times as an essential tool for personality development and social change. Education is a cultured and important aspect of human life. Through this, man does his economic and social development and tries to achieve perfection in life. It is through education that there is change and refinement in the conduct, thoughts, lifestyle and tolerance and through this, social, cultural and spiritual progress takes place.

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Themajor philosophical locke says that the development of plants is through agriculture and the development of human is through education.

The contribution of women has been important in the construction of various cultures of the world, and in all yugos, the main parameter of the culture of any nation has also been the status of women. In the present time, there has been a revolutionary improvement in the status of women. The spread of education has changed the educational status and social status of women. Women have started getting elected in public elections and becoming MLAs, MPs, Ministers and Prime Ministers, and after receiving secondary and higher education, they are working on all responsible positions in the country, such as - Doctor, Engineer, Lawyer, Teacher, Clerk, Administrative Officer, Pilot, Scientists, etc., who have set a direction for social change by changing the thinking, behavior and outlook of the society.

Even after almost six decades of independence, the society is still going through a period of transition. In comparison, if we study Kaal Karal Karail, it is clear to us that the idea behavior attitude of the society has changed as a result of the growth of education and women's education. There has been a decline in conservative thinking, but even today, the incidence of harassment in rural areas is decreasing, and education and women's education has increased the self-confidence of women. At the same time, there has been success in changing social untouchability, traditional thinking etc. The world is entering the technological era and there is a need for us to move along with it for development. For this, we have to come out of the traditional system and thinking and accept the modern system and social structure. In this task, education and women's education can play an important role. And it can contribute in making the country developed. The result of our traditional thinking was the increase in the birth rate, the desire to have more children, but education and women's education have curbed this growth rate. Which confirms its relevance and researchers have made this the basis for social

change in education. And an attempt has been made to clarify the role of women's education.

It is clear from the analysis of the above facts and figures that as the decadal rate of education and female education increased, so did the decadal growth ratio of population. There has been a decrease. On this basis we can say that the early society was a traditional society where there was a severe lack of education and female education. The wishes were accomplished. Religion had a more say in the operation of the social system. Society did not accept change. But as our level of education increased, our thinking, behavior and outlook also started changing. , we started accepting the change and the social system started changing. Instead of being fatalistic, people now started taking Nirbhaya logically. Qualitatively, the difference started appearing in the society in terms of magnitude. The ideals of the people changed, the way of living changed, the importance of education increased. The status of women changed. There was a change in conservative and narrow thinking and people started accepting modern facts.

In this way, we can say that education and women's education have an important role in social change, and further work can be done in this direction, so that cleanliness and well-being can be achieved. So that a prosperous India can be built.

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Livelihood & Entrepreneurship in Nagaland : An Overview

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Abstract :- The government of Nagaland has been instrumental in encouraging young people and women to pursue entrepreneurial opportunities. Funding, access to finance, and subsidies have all been greatly facilitated by various schemes and partnerships with central government agencies, making it possible for entrepreneurial endeavors to get off the ground and grow. Skill development programs have played a critical role in providing young people and women with the tools they need to start and run successful enterprises. Agriculture, handloom and handicrafts, tourism, and information technology are just a few of the areas targeted by these initiatives. Entrepreneurship More effective utilization of human and non-human resources, as well as an improvement in the living situations of the poor masses, can only be achieved through widespread small-scale entrepreneurial activity. Nagaland is a small state, with a population of around 20 lakhs, where eight lakhs in the age group of 18- 35 years are job seekers. The methodology undertaken is descriptive analysis. The objectives are first to know women entrepreneurs in the state, and the second one is about existing schemes available in the state for the youths as a means of employment.

Keywords :- Entrepreneurship, Rural Development, Youth Empowerment, Women Entrepreneur, Livelihood.

Introduction :- Women and young people in Nagaland, a state in northeastern India, have shown a lot of interest in starting their own businesses in recent years. Several causes, including shifting social mores, improved access to education and resources, and government programs designed to inspire and support entrepreneurialism among these populations, have contributed to this transformation. The government of Nagaland has also taken a number of steps to encourage women and young people to pursue business opportunities. Financial aid through various schemes, training and education programs, company incubators, and product/service links to markets are all part of these efforts. As a result of these initiatives, budding entrepreneurs now have easier access to resources including funding, education, and potential customers.

In the present study, the researcher uses a descriptive and analytical method. Secondary data were sourced from research journals, articles, newspapers, and a thesis related to women entrepreneurship and youth employment, magazines, and government documents were also referred. The first objective is to know about the type of women entrepreneurs in the state, and the second objective is to schemes available in the state for the youths as a means of employment.

With more and more young people without work and fewer positions available in the public sector, business ownership has become an attractive alternative. There are many opportunities for business owners in Nagaland. Entrepreneurs will find a plethora of openings in Nagaland. First-time business owners are eligible for government subsidies. It is believed that almost 60% of enterprises around the world end up failing. Therefore, young people need to be educated and taught in this area before trying their hands at other things. It has also been argued that entrepreneurs might be developed rather than born. Most of them are neither clueless youngsters nor seasoned experts. As was previously mentioned, learning the fundamentals of starting a business is highly advised. You'll be able to guide your business in the right direction while taking advantage of available grants and other financial aid from the government. Most young people believe that financial backing is essential before venturing into business

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ownership. District Industry Centers (DIC), North East Industrial Development Finance Corporation (NEDFi), National Minorities Development and Finance Corporation (NMDFC), National Schedule Tribes Finance and Development Corporation (NSTFDC), and Nagaland Industrial Development Corporation Limited (NIDC) Several new initiatives, including Start-up India, have been introduced by our honorable Prime Minister.

Women Entrepreneurship :- Entrepreneurship is the capacity and willingness to create, manage, and organise a business venture while accepting all of the dangers that come with it in the hopes of making a profit. The most obvious manifestation of entrepreneurial spirit is the launch of new commercial ventures. An entrepreneur acts as a catalyst for change and paves the way for new chances for others by creating new businesses and jobs. The cultural, economic, social, religious, and psychological factors already present in a society have a significant impact on the emergence of entrepreneurs in the commercial world. Women business owners are a relatively new phenomenon. The establishment and management of a business by a woman has many positive effects on society and the economy as a whole. The role of women in business in Nagaland is relatively new, and there are many obstacles to women business owners' success, including a lack of access to capital, inadequate marketing and workplace facilities, and social restraints. Perhaps because of these factors, government agencies, NGOs, and banks have recently shown an interest in topics pertaining to women business owners. The only way to reduce the rising youth unemployment rate is to promote and support entrepreneurship. It's useful because it helps the local economy grow, which benefits lots of individuals. This is especially helpful for women because it allows them to contribute to the family income while still taking care of domestic, agricultural, and equine responsibilities. Women have a wealth of resources at their disposal. As a result, she is well-suited for processing and production-based businesses alike. However, in addition to the backing of family, financial

institutions, and government organisations, women entrepreneurs need to have a few key attributes.

Women Entrepreneurship and Micro-Finance :- Entrepreneurship and Micro-finance are inter-dependent variables to eradicate poverty. Entrepreneurship for rural women is zilch without Micro-finance whereas Micro-finance, for alleviation of poverty, is useless without entrepreneurship skills for the women. Poverty reduction through self employment has long been a high priority for the Government of Nagaland but entrepreneurship was given importance extremely late. Microfinance and development of entrepreneurship skills for rural women can be an experimental tool in its overall strategies. Most of poor women in Nagaland manage to optimize assets over a time to develop their enterprises. Financial services could enable the women to leverage their initiative, accelerating the process of generating assets, incomes and economic security through entrepreneurship. However, conventional finance institutions rarely lend down-market to serve the requirements of low-income families and womenheaded households. Therefore, fundamental approach is to create the entrepreneurship and self employment by financing the women through financial institutions.

Status of Women Entrepreneurs:- Women entrepreneurship is gaining importance in Nagaland in the wake of economic liberalization and globalization. In Nagaland, when women are given a chance they have the ability to carry out the entrepreneurial task and survive as an 19 entrepreneur in the market. Women business owners exhibit traits like dedication, self-confidence, the ability to take risks, a strong work ethic, and the will to succeed. When starting a business, it's important to have the backing of loved ones.. The reason for the women entrepreneurs in taking up the enterprise and plunging into the business world was to gain economic independence and help themselves and children to have better life style. While they have

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achieved to set up their enterprise and started earning, enabling the children to have better lifestyle, wear better clothes and go to better schools.

Commercial Cultivation of Mushroom for Additional Income:- Mushroom Cultivation in Nagaland Rice occupies 70 per cent of cultivated low land areas in Nagaland as it is major source of bread in this region. Due to predominant of rice cultivation, a large quantity of paddy straw is available and it can be used as substrate for mushroom cultivation. Commercial cultivation of edible mushroom is lead to conversion of agricultural wastes into nutritional food. More over due to the pleasant weather, mushroom can be grown throughout the year using the different species (Oyster mushroom). Therefore, the scope of mushroom cultivation in Nagaland is very high. Diversification in any farming systems imparts the sustainability. Mushrooms are one such compartment that not only impart diversification but also helps in overcome the problems of quality of food and recycling of agro-based waste management. Utilizing these wastes for growing mushrooms can enhance the farm income and livelihood. In Nagaland, since it is a belt of rice, there is a tremendous scope for the mushroom cultivation without burning the straw after harvesting of paddy to keep the field ready for 2nd year Jhum cultivation. Due to knowing this opportunity, ICAR Reserch Complex, Nagaland centre conducting training cum demonstration on scientific mushroom cultivation through the KVK's in different parts of the State. Based on the interest of the farmers, Complex is promoting the scientific mushroom cultivation with low cost mushroom production technology. Among mushroom, cultivation of oyster is simple and easily implemented by the farmers with available farm low cost resources and agro-wastes

Economic and commercial considerations Mushrooms are a healthy food that may be produced commercially from a wide variety of waste materials, including those from farms, factories, forests, and homes. Mushrooms grown indoors make excellent use of vertical space and

are widely acknowledged as the world's most efficient source of protein production per square foot and per year. The potential for this endeavor to alleviate food insufficiencies without putting undue stress on the land is encouraging. Mushrooms can be grown successfully on a small scale at home. The rising market price is a direct result of the rising market demand. The price of fresh oyster mushrooms in some areas of Nagaland is currently between $120 and $250 per kilogram. Being both lucrative and labor-intensive, it has the potential to entice young people. Mushrooms are native to the Northeast Indian hills, unlike in the rest of the country. In a nutshell, there is an established demand for mushrooms in the Northeastern hills. The mushroom industry has excellent potential in all of the neighboring states.

Rainfed agriculture relies on a livestock-based production system, which is both intricate and sometimes rooted in antiquated socioeconomic values. In order to successfully integrate livestock, one must have knowledge of the production elements (livestock, capital, feed, land, and labor) and processors (description, diagnosis, technology design, testing, and extension) that affect animal production. Increased fodder production as an intercrop with cereals, relay and alley cropping, forage production on bunds, improving the feeding value of stover through chopping, soaking with water, urea treatment, strategic supplementation of concentrate, urea molasses mineral block for enhanced utilization, and improvement in the productivity of grasses determine the effective gross productivity of livestock in farming systems in rainfed agriculture. Artificial insemination with semen-approved bulls, castration to remove low-grade animals, and the use of preventative measures such as vaccination and de-worming at health camps have all been shown to increase yields by 15–25% in areas of degraded land. Researchers at CRIDA found that milk production in the IVLP villages of the Ranga Reddy district improved by an average of 0.8 liters per hundredweight of straw after being treated with urea. This modification also resulted in a 1.1–1.2 kg/animal increase in paddy straw intake. Milk production in cows and buffaloes was increased by

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25–30% when fed a urea-molasses mineral block (UMMB). Particularly useful during droughts when feed was scarce, it helped keep livestock healthy and productive. Farmers that supplemented their grazing with minerals saw a 58% increase in milk yield and a 21% increase in net profits, from 1.8 liters per day to Rs. 816. Sheep and goats greatly benefited from adding a 1.5% rice bran supplement to their diet.

Various Schemes by the State Government of Nagaland for Entrepreneurship Development

Sl No	Entrepreneurship Development Schemes
1.	Start Up Nagaland
2.	Nagaland Rural Bank Micro Units Development and Refinance Agency (MUDRA) loan
3.	Van Dhan-Yojana of TRIFED general Tribal entrepreneurship in Nagaland
4.	Rural Self-Training for promoting Self Employment through RSETI
5.	Industrial Training Institutes (ITI)

Source: Secondary Data from Govt Website

Essential Nagaland Enterprise Ideas :-

1. Start Up Policy of Nagaland: The Start-up Policy is based on a set of measures designed to increase the availability of bank funding for new businesses, thereby stimulating the economy and providing more chances for entrepreneurs to earn a living. The primary focus is on expanding employment prospects through product and service innovation. The primary objective of Nagaland's start-up policy is to raise capital for the purpose of investing in a wide range of new businesses, and it also promotes the development of at least 500 start-ups over the course of the next five years with the aim of establishing novel "Made in Nagaland" products. To use their talents and ingenuity to foster an atmosphere where risk-taking is encouraged.

2. Nagaland Rural Bank Micro Units Development and Refinance Agency (MUDRA) Loan: Micro and small businesses with credit needs of less than Rs 10 lakh can receive funding under the MUDRA program. This program is designed to help businesses outside of the corporate and agricultural sectors generate income. (2016) In Ozukum and the Eastern Mirror. This will allow them to fund the independent small business sector and inspire entrepreneurship. Assisting and supporting partner institutions and developing an ecosystem for the expansion of microenterprise sectors are key to the MUDRA's pursuit of inclusive and sustainable development. The MUDRA plan may be used to finance the following types of endeavors: A. Acquiring transportation vehicles for the carriage of passengers and cargo B. Salons, beauty parlors, boutiques, and similar businesses that cater to the social needs of their customers and the general public (2021) Feature Films Beneficiary loans of up to ten lakh per enterprise or borrower for C. Business loans for traders and shopkeepers as well as non-farm income-generating activities (2021) Feature Films D. anything to do with farming, including fish farming, beekeeping, poultry raising, fishing, and so on.

3. Van Dhan-Yojana of TRIFED General Tribal Entrepreneurship in Nagaland: The Van Dhan Yojana is a part of the Minority Support Programme (MSP) that helps to disperse MFP. The project has done a fantastic job of encouraging tribal commerce in Nagaland. The State Departments worked with TRIFED, the Ministry of Tribal Affairs, to develop this programme. The Nagaland Beekeeping and Honey Mission (NBHM) is in charge of coordinating this project because Nagaland is India's primary honey-producing state (Tribal Co-Operative Marketing Development Federation of India Limited, Ministry of Tribal Affairs, 2020). The government is covering the cost of the entire scheme for the 300 people in the Van Dhan Kendra Cluster by providing them with Rs 15 lakh through TRIFED.

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4. Rural Self-Training for Promoting Self Employment through RSETI: The goal of the Rural Self Employment Training Institute (RSETI) is to improve access to employment in rural regions by catering to the unique educational and financial needs of people both above and below the federal poverty line. RSETI's major objective is to provide free, intensive, short-term residential education to those living in rural areas. RSETIs are useful for both men and women who own businesses. Beekeeping classes, goat husbandry lessons, organic farming lessons, and rubber trapping lessons are all instances of available education. Sericulture and sheep farming are two EDPs in the agricultural sector. Crafts made from bamboo and cane, as well as embroidered and painted fabrics, are promoted by EDPs. New business owners can take advantage of RSETIs' expansion and improvement programmes.

5. Industrial Training Institutes (ITI) (Commission, 2020): One objective of these ITIs is to provide students with opportunities to observe and participate in actual workplace activities. It also looks at dropouts from higher education and secondary education. This program

resulted in the legalization of craftsman training programs. The plan's end game is to guarantee a reliable supply of professionals across a wide range of fields. By systematically instructing factory employees, it boosts both output and quality. Youth unemployment can be reduced if students are prepared for careers in the industrial sector (Commission, 2020). There are now eight ITIs in the state.

Skills Training Centres Available In Nagaland :- Improving access to skill training and vocational education is necessary in order to turn the situation around in rural communities. By cultivating his talents and improving his skills, it will assist the employee in broadening the scope of his responsibilities and the opportunities available to him. The improvement of employees' skills will help them receive more appropriate training, which in turn will assist and lead those employees as they pursue their chosen careers. Training of this kind will enable or encourage a significant number of individuals to make the most of the training and employment options available to them and to establish successful careers for themselves.

Skills Training Centres available in Nagaland

NAME OF TRAINING CENTRE	SERVICES OFFERED	ADDRESS
Nagaland Woman Vocational Training	Embroidery and Tailoring Traditional and Modern Jewellery and Bamboo works,etc.	Super market, Bank Colony, Dimapur, Nagaland, 797112
Pinnacle Skills	Consultancy services, Entrepreneurship Development, Executive Training, etc.	DC Court Junction, West City Building, Duncan Basti, Dimapur, Nagaland, 797112.
Gyanyoti Foundation (Ministry of Rural Development, 2017)	Tourism and Hospitality etc	Sovima Village, Niathu Khel, NH29. Opp. Essar Petrol Pump, Dimapur, 797112.
Handloom Training Centre, Toluvi	Weaving by tribal traditional attires, motifs, designs and ornaments so as to prevent misuse and misinterpretation of traditional cultural expressions	WQ7GT38F, Kuhuboto, Dimapur, Nagaland, 797116
Makar Skills Development and Services	IT Consulting, and Web Design	Midland PWD Road, Dimapur, Nagaland, 797112.

Source: Secondary Data from Govt Website

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The minimum age to enroll in an ITI is 14, and applicants must have passed class VIII of schooling. Between one and two years are required for training.

Conclusion :- Entrepreneurial efforts of Nagaland's young people and women are vital to the state's progress. Women and young people, while confronting unique obstacles, have demonstrated enormous talent and tenacity to achieve in business.The number of women in Nagaland who are starting their own businesses has increased dramatically in recent years. Agriculture, handicrafts, tourism, and small-scale enterprises are just a few of the fields where women are making strides. They've managed to defy gender stereotypes and boost the country's economy. Women entrepreneurs in Nagaland have benefited from government support in the form of grants, training opportunities, and other resources.The entrepreneurial spirit among Nagaland's young people is also on the rise. The state has a large and growing young population, which bodes well for the development of new ideas and approaches. Businesses in the fields of technology, fashion, food production, and electronic commerce are attracting a large number of young entrepreneurs. The government has enacted a number of initiatives meant to inspire and support the budding entrepreneurial spirit of today's youngsters.

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Merger on Financial Operating Performance of Firms

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Introduction :- The present chapter gives detailed analyses of studies carried out on mergers and financial acquisitions in and around India majorly in the post liberalisation period. The chapter begins with the brief rational of the topic in section 2.2. Moving straight away to section 2.3 covering the literature review of past studies, it classifies the same in five themes – section 2.3.1 introducing the concept of mergers and financial acquisitions, section 2.3.2 throwing light on studies capturing trend of mergers and acquisitions in India, section 2.3.3 focusing on studies analysing the impact of mergers and acquisitions on financial performance of firms, section 2.3.4 examining the studies measuring the impact of mergers on market price performance of firms and section 2.3.5 investigating the studies that have captured macroeconomic influence on mergers and acquisitions. Section 2.4, then leads towards identifying the gaps of the previous studies in the selected areas and frames the theme for present study that can contribute to the exiting literature.

The new industrial policy in 1992, brought a change in the corporate sector in India and mergers and acquisitions have shaped up in the last two and half decades after the liberalisation. The previous chapter also gave statistics on number of mergers and acquisitions deals happening each year. Going by that, it is observed there are hundreds of deals happening in India every year. But, do these deals result into fruitful consequences for the acquiring entity or not? Does the financial performance of these firms actually increase? If they do, then in how much period of time and to what extent? And what sort of impact does it cause on the shareholders. During the twenty years post LPG, which companies gained financially from M&As, which sectors benefited the most, whose shareholders benefitted the most

are few questions which the study would focus upon. The economic factors of the country are often considered to have influenced mergers and acquisitions. However, do the macro economic factors have an influence over the post merger operating performance of firms or not? So, before stepping ahead with the methodology of research, it is important to understand to how much extent the above questions are studied in the past by scholars, academicians, industry and researchers. The next part of the chapter give a thorough report of what studies have been done in the past and what gaps or extensions are carried forward in this aspect.

Mergers and financial have been a topic of research since the last two and half decades in India. They are a part of strategic decision making of corporates whether large or small in size. Whether mergers and acquisitions work as an effective strategic tool is an interest of research for many. Do these mergers and acquisitions lead to a better corporate performance is still unanswered by many. There has been a considerable amount of research done in measuring the impact of M&A on the performance of the firm. And when we mention performance it is by and large the financial performance exhibited in the balance sheet and the impact reflected in the stock price movements of the acquiring company. Of course, financial performance is not the only yardstick to measure the impact of a merger, but in the long run what every business requires is to perform financially well and to do so at a higher growth rate than in the past. As well as the share holders would want to increase the net shareholder's wealth and this is possible only when the company performs financial well. Thus with what so ever reason a merger activity is done; in the long run it is the financial performance which will mark its success.

For simplicity and clarity, the studies referred are clubbed together in such a way that they commensurate with the **objectives** of the study, which are as under:

1. To critically analyse the impact of mergers on the operating performance of India.
2. To strategically analyse the impact on shareholders wealth post merger.
3. To critically analyse whether there is a sudden spurt in merger activities in India in the 1990s.
4. To analyse whether the deregulation i.e. Liberalization has hastened the merger activities or there are some other reasons.
5. Are there some visible trends of mergers in the different sectors of the Indian industry.
6. Has the mergers strategies resorted by Indian enterprises affected their performances.
7. Do the shareholders benefit from mergers?

Introduction to Merger and Acquisitions :- Mergers and financial acquisitions are a part of the broad purview of corporate restructuring. **Corporate restructuring** stands for partially dismantling or otherwise reorganizing a company to make it more efficient or otherwise more profitable (Arora, Shetty and Kale, 2011). This re-structuring can be internal or external to the organization. Internal restructuring involves in making changes internal to the organization like changing the organization structure, changing employee policy, changing the working conditions and systems, etc. While external re-structuring includes mergers and acquisitions, takeover, capital restructuring, creditor restructuring, hive-off/spin-off, slump sale, etc. Among the same, mergers and acquisitions have been more popular.

A **merger** means any transaction that forms one economic unit from two or more previous ones (Weston, Chung and Hoag, 2011). A merger is a strategy where two or more companies agree to combine their operations. Once the merger happens, one company survives while other loses its corporate identity. The surviving company acquires all the assets and liabilities of the merging company. It either loses its identity or is rechristened. The laws in India use the term **amalgamations** for mergers.

The Income Tax Act, 1961 [Section 2(1A)] defines amalgamations as:

Amalgamation as the merger of one or more companies with another or the merger of two or more companies to form a new company, in such a way that all assets and liabilities of the amalgamating companies become assets and liabilities of the amalgamated company and shareholders not less than nine-tenths in value of the shares in the amalgamating company or companies become shareholders of the amalgamated company or companies become shareholders of the amalgamated company.

When a merger happens between two companies that are in to same product or service, it is known as **horizontal** merger. When merger happens between companies at different points in the value chain, for e.g. manufacturer and distributer, it is known as a **vertical** merger. Thus it involves either forward integration (manufacturing firm acquiring the distributing firm) or backward integration (distributing firm acquiring the manufacturing firm). Mergers can also be **conglomerate or diagonal** where the two firms belonging to different business merge together. That is the acquiring firm goes for a diversification strategy. **Acquisition** is an attempt made by a firm to gain majority stake in another firm. Once the acquisition is complete, the acquiring firm becomes the legal owner and controller of the business of the target firm. Thus it is a purchase of one firm by the other. The acquiring firm pays for the net assets, goodwill and brand name of the company bought. This study **focuses more on mergers** because it is in mergers that the operations of two firms combine and hence chances of synergy creation are maximum.

Trend of mergers and acquisitions in India :- In spite of being an age old strategic decision making tool, mergers and financial acquisition in India were not a popular phenomenon till 1992, the year when India adopted the New Industrialization Policy in favor of Liberalisation, Privatisation and Globalization. Before 1992 also, there were incidences of M&As in India. Formation of the Life Insurance Corporation and nationalization of the

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life insurance business in 1956 resulted in the takeover of 243 insurance companies (Kar & Soni, 2008). There was a similar development in the general insurance business. The national textiles corporation (NTC) took over a large number of sick textiles units (Kar, 2004). The anti-big government policies and regulations of the 1960s and 1970s seriously deterred M&As. M&As as a strategy employed by several corporate groups like R.P. Goenka, Vijay Mallya and Manu Chhabria for growth and expansion of the empire in India in the eighties.

There have been numerous studies on mergers in India and abroad in the last few decades, and several theories have been proposed and tested for empirical validation by researchers. Researchers have studied the economic impact of Mergers on industry consolidation, returns to shareholders following Mergers, and the post-merger performance of firms. Whether or not a merged firm achieves the expected performance is the critical question that has been examined by most of the researchers, resulting in the proposal of several measures for analysing the impact and success of mergers. Such measures have included both short-run, as well as long- run impacts of merger announcements, effects on shareholders' wealth and more. A number of studies were done in the developed capital markets of Europe, Australia, China, India, and the USA on the evaluation of corporate financial performance following mergers.

Lubatkin (1983) analysed the findings of various studies that have investigated. either directly or indirectly the question, "Do mergers provide real benefits to the acquiring firms?", which resulted in the suggestion that acquiring firms might benefit from merging because of technical, monetary and diversification synergies.

Healy et al (1992) listed several reasons given by chief executive officers (CEOs) to justify a merger, which include: to obtain synergies, economies of scale, cost savings, increased products, and rationalisation of distribution channels.

Post liberalisation period opened up the Indian economy and hence this encouraged a lot of mergers and acquisitions. The MNCs over the world were now eyeing India as a huge market and hence a lot of multinationals stepped into the country to establish their businesses. They brought in the needed technology, expertise, standards, employment and development. But at the same time it increased competition for the domestic firms and forced them to better themselves. It was this period that marked the beginning of amalgamations between companies, more popularly known as Mergers and Acquisitions (M&A). For multinationals it was an easier route to enter into the country and for Indian firms it was one of the key strategies to survive and expand (Basant, 2000). Hence, mergers and acquisitions became popular and huge numbers of deals were witnessed year by year, to the extent that Indian firms happened to acquire foreign firms which were four times their size.

Since, maximum number of deals in India took place post liberalisation; the period of the study is taken as 1992 onwards. Several studies in the past have attempted to understand the trend of M&A activity in India post liberalisation and most of them have given consistent results. Following are some of the notable studies:

Stahl and Mendenhall (2005) stated that many researchers have proved that mergers fail to create additional value for the shareholders, and are for that reason are said to be unsuccessful. They also claim that waves of mergers have been seen time and again in history and researchers agree that this is a continuous process as long as it is attractive and beneficial. Hence, some firms should gain something from their decision in mergers as the popularity of the transactions would otherwise logically fall. The potential benefits of interacting in international transactions are access to new markets, new technology, successful brand names, and well-functioning distribution networks. Some firms - for example, general electric - have grown rapidly from acquisitions and seem to be able to handle them successfully (Stahl and Mendenhall, 2005) however, mergers in the USA banking sector did not show a positive impact on performance in terms of improved financial efficiency.

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Azhagaiah and Sathishkumar (2011) proved that Indian manufacturing corporate firms involved in mergers have achieved an increase in the liquidity position, operating performance, profitability, and financial and operating risk which leads to an increase in the overall efficiency of the acquiring firms. They also proved that the acquiring corporate firms in India appear to have performed well financially after the merger, as compared to that of in the pre-merger period

Pandya (2018) measured the mergers and acquisitions sector of India from 1991 to 2010 with the help of time-series data along with major recent worldwide developments. As per the study, the time series trend in mergers and acquisitions activity in India is categorized broadly in three ways, namely, the era of consolidation (1991 – 1995), the era of foreign acquisitions (1995 –2002) and the era of venturing abroad (2002 –2012). It takes a valuable note of the impact of recent changes in the economic, political and social environment of the world in different sectors and sub-sectors of the economy. The first phase i.e. before 1990 -95 may be named as era of consolidation where major players of domestic company started with multinational players who were attracted by the liberalization policy and economic reforms in India. The second phrase may be called as era of foreign acquisitions when international players started seeking Indian companies to enter in Indian market. The last phrase i.e. post year 2002 can be considered as venturing abroad as Indian companies have done major foreign acquisitions and placed India at global map of industrial growth. After the year 2002, there was a considerable number of foreign acquisitions performed by Indian companies as the market was in booming stage and significant increase in the value of shares of top companies was experienced which lead to increase their financial strength and plan for foreign acquisitions. 2016 was an encouraging year for the merger and acquisitions sector in India, due to stability of government policy and the capital market. This stability resulted in a record volume –USD 56.2 billion –the highest since 2010. As has been noted 2016 was a year when the US and Western Europe experienced a considerable set back due to government and political instability.

The most important measure of performance for any organisation is the financial performance which gets reflected in the financial statements of the firm. Hence it is important to measure the impact of merger and acquisition on financial performance of firms. Considerably large number of studies in the past has tried to measure the impact of mergers on the financial performance of the firm. Most of them focusing on acquiring firms and not target firms as usually target firms get delisted after the merger. Some studies have used conventional accounting ratios. However, considerable studies have carried employing unconventional parameters. Following is an account of studies who have tried to compare pre and post merger scenario of acquiring entities.

The studies in Indian context are mainly undertaken during the post decade of liberalisation and during the early years of twenty first century, where as studies beyond the boundaries of India, mainly in US and UK, are comparatively older as they are undertaken since many decades now.

The researches using accounting data as a measure of post merger financial performance of Indian acquiring entities have used various types of elements and ratios for the same. Vanitha and Selvam (2007) analysed financial performance of Indian manufacturing companies during the period of 2000-02 on sample of 17 merging entities. They evaluated post merger performance on three parameters – liquidity, leverage and profitability. They observed increased liquidity in terms of high net working capital in the post merger period. The growth of operating profits were found to be statistically significant in 6 companies where as remaining 11 companies saw a statistically insignificant growth in the post merger period. The net worth of companies was found to be higher in the post merger period when compared to pre merger period. Over all, most of the ratios were same or marginally improved in the post merger period. Thus, the study was inconclusive whether the post merger financial performance was better-off or not.

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An Online Shopping Factors –Conceptual Model for Understanding Consumer's Actual Usage Behaviour

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ABSTRACT :- Online shopping has expanded tremendously in India, courtesy easy internet access by millions of Indians and "Digital India'' initiatives of the Government of India. As organisations are attempting to globalize their sales, internet becomes the primary vehicle of selling their products or services worldwide. Many businesses have their dedicated web pages in addition to their retail brick and mortar stores, and some started their businesses online alone. Online store is the preferred choice of urban consumers now. There are many factors that contribute towards customers' preference in favour of shopping online.

The purpose of our research work is to study online shopping behaviour of consumers; viz. their risk perception, attitudes, intentions and actual usage behaviour which are identified as major constructs. There is a fair amount of literature available about online consumer behaviour internationally, but significant Indian studies are still lacking. Behavioural studies based on technology adoption involves too many socio-economic- technical aspects which interlinks consumer psychology, social group behaviour and cultural anthropology, hence such studies involves several layers of causal relationship which need to be explored through structural equation modelling (SEM). The population of interest for research is an Indian urban city of Kolkata and a reasonable sample size of 450 respondents is utilised to run Exploratory Factor Analysis (EFA) for identifying major influencing factors which drives these respondents towards online shopping. Accordingly, we have framed our research objectives and proposed hypothesis to establish relationship among perceived risk, attitude, and intention towards actual usage behaviour, based on the time- tested popular technology adoption model of UTAUT2 (Venkatesh,et.al,2012).

Based upon the structured questionnaire, confirmatory factor analysis (CFA), as a part of SEM is conducted which has yielded satisfactory results .We are able to explain 79.334 % of the total variance through Exploratory Factor Analysis (EFA).

Our findings revealed that Effort Expectancy (EE), Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Price / Value (P), Habit (H), Perceived Risk (PR), Trust(T) are the major contributing factors which have a significant positive effect on users' intention to shop online.

Keywords :- Internet, online shopping, web pages, UTAUT2 Model, factors affecting on online shopping behaviour, use of technology

1. INTRODUCTION :- Internet has made a significant contribution to our lifestyles on account of its abundance and diversity of information. Its penetration is rising markedly in India which has fuelled the growth of e-commerce in the economy. The term e-commerce or electronic commerce refers to shopping on the web (Nayyar & S.L.Gupta, 2011). Electronic commerce can be defined as conducting, transacting and facilitating business activities over computer networks. It is usually abbreviated as E-commerce. Online Shopping or e-shopping is a part of e-commerce where the customers or consumers buy goods / products / and other services directly from the merchants over the internet. Today E-commerce is a buzzword in Indian society and it has become an integral part of our daily life (Poonam Chahal, 2015).

Although marketing theories well describe traditional consumer behaviour, overwhelming evidence suggests that information systems-related factors are at least as important

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as traditional marketing-related factors in predicting online consumer behaviour (Gefen, Karahanna, and Straub 2003; Niculescu, Shin, and Wang 2012). Straub and Watson (2001) posit that there is a need to understand and measure online consumer behaviour, and that much of that burden falls on the information systems field. Koufaris (2002) explains that the online consumer performs all the functions of a traditional consumer on a computer while interacting with a system (e.g., e-commerce website).

3. RESEARCH OBJECTIVES :- Accordingly, based on UTAUT 2, we have identified the following objectives of our research work:-

• To determine the intention of consumers' towards online shopping ;

• To identify the major factors that influences consumers' intention towards online shopping

4. PROPOSED RESEARCH MODEL :- Our proposed model is based on **modified UTAUT 2 (Venkatesh et al.)** as documented and published in the year **2012.** During the literature review phase, we noticed that several researchers have pointed out that Behavioural Intention (BI) at tines does not drive consumers towards Actual Usage Behaviour (AUB). This gave us an impetus to look at a depth what possibly can influence consumers having positive BI to actually shop online. In this regard, we conducted content analysis to introduce a construct named "Perceived Promotional Benefits" (PPB) which may act as a catalyst for positively BI consumers towards actual usage behaviour.

Figure : 1

Proposed Model

5. RESEARCH METHODOLOGY:-

5.1 Data Collection :- We have used primary data. Data that has been collected from Kolkata district. Thus, we prepared an adapted questionnaire in order to conduct our on-field research.

5.2 Sampling Techniques/Sample Frame :- The targeted respondents of this study is in kolkata. Since we could not get a list of all the elements of

the population, the research utilised a non-probability sampling technique to identify respondents.

5.3 Research Instrument :- My research instrument i.e. Questionnaire is adapted questionnaire We have obtained 7 point Likert scale . Responses from 450 individuals who have participated in this survey.

We are using reflective scale not a formative

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scale. Our research primarily focuses on the popularity of online shopping platform like flipkart , Amazon , snapdeal etc.

6. DATA ANALYSIS & RESULTS :- In this chapter, the results of data analysis and its interpretation are presented. First of all the demographics of the respondents participating in the study have been discussed. To analyze the data computer-based statistical tools; a statistical package for social sciences (SPSS 20) analysis of moment structure (AMOS 23) were used. Tables and figures are presented data descriptions and summaries. It provides a discussion on the recommended fit indices for confirmatory factor model, and the measurement models are estimated. Structural Equation Modelling (SEM) is used to carried out Model Development and testing of research hypotheses.

6.1 RESULTS OF HYPOTHESES TESTING BASED ON SEM :

Table 2

Hypothesis	Hypothesis relationship	Standard estimates(β)	t value	p value	Decision
H1	EE → ISO	0.780	12.952	.000	Significant
H2	PE → ISO	0.773	3.516	.000	Significant
H3	SI → ISO	0.760	3.558	.001	Significant
H4	FC → ISO	0.724	2.440	.039	Significant
H5	P → ISO	0.753	2.977	.003	Significant
H6	HM → ISO	0.672	-.594	.553	Insignificant
H7	H → ISO	0.609	2.590	.010	Significant
H8	PPB → AUB	0.755	10.597	.001	Significant
H9	T → AOS	0.715	7.621	.001	Significant
H10	PR → AOS	0.626	9.035	.001	Significant
H11	AOS → ISO	0.711	6.197	.031	Significant
H12	ISO → AUB	0.792	12.832	.020	Significant

Where , p value < 0.05 (well supported / significant) P value > 0.05 (Rejected / insignificant) Critical Ratio (CR) / t value < 1.96 insignificant , t value >1.96 Significant

Significant at : **p <0.01   ***p<0.001

TABLE : 3

KMO and Bartlett's Test

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.869
Bartlett's Test of Sphericity	Approx. Chi-Square	23320.184
	df	1035
	Sig.	0.000

Source : Output of EFA Results from IBM SPSS Statisticsv.20

Table : 4

Total Variance Explained

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.225	28.749	28.749	13.225	28.749	28.749	6.375	13.858	13.858
2	7.459	16.215	44.964	7.459	16.215	44.964	4.824	10.486	24.344
3	4.747	10.320	55.285	4.747	10.320	55.285	4.703	10.225	34.568
4	3.094	6.726	62.011	3.094	6.726	62.011	4.159	9.042	43.611
5	2.226	4.838	66.849	2.226	4.838	66.849	3.956	8.600	52.210

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6	1.708	3.713	70.562	1.708	3.713	70.562	3.635	7.901	60.112
7	1.440	3.130	73.692	1.440	3.130	73.692	3.226	7.013	67.124
8	1.386	3.013	76.705	1.386	3.013	76.705	3.216	6.992	74.116
9	1.209	2.629	79.334	1.209	2.629	79.334	2.400	5.217	79.334
10	.934	2.031	81.365						
11	.699	1.520	82.885						
12	.644	1.401	84.286						
13	.575	1.250	85.535						
14	.501	1.088	86.624						
15	.469	1.020	87.643						
16	.426	.925	88.569						
17	.376	.818	89.387						
18	.364	.790	90.177						
19	.353	.767	90.944						
20	.317	.688	91.632						
21	.292	.635	92.267						
22	.288	.626	92.893						
23	.283	.616	93.510						
24	.246	.534	94.044						
25	.232	.504	94.548						
26	.226	.491	95.039						
27	.210	.456	95.495						
28	.186	.404	95.899						
29	.178	.387	96.286						
30	.171	.371	96.657						
31	.159	.345	97.002						
32	.151	.328	97.330						
33	.143	.311	97.641						
34	.137	.298	97.939						
35	.135	.293	98.232						
36	.122	.266	98.499						
37	.113	.246	98.744						
38	.106	.230	98.974						
39	.096	.208	99.182						
40	.085	.185	99.367						
41	.076	.165	99.532						
42	.070	.153	99.685						
43	.053	.114	99.799						
44	.051	.112	99.911						
45	.035	.076	99.987						
46	.006	.013	100.000						

Source : Output of EFA Results from IBM SPSS Statisticsv.20

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Table : 5
Extraction Method: Principal Component Analysis.
Rotated Component Matrix[a]

	Component								
	1	2	3	4	5	6	7	8	9
EE1	0.595	0.023	-0.088	0.019	-0.258	0.059	0.295	0.067	0.143
EE2	0.768	-0.010	-0.115	0.070	-0.257	0.099	0.099	0.175	0.096
EE3	0.758	0.102	-0.144	0.031	-0.190	0.125	0.086	0.138	0.178
EE4	0.801	0.070	-0.055	0.047	-0.238	0.097	0.048	0.128	0.171
EE5	0.772	0.045	-0.110	0.007	-0.128	0.010	0.022	0.102	-0.033
PE1	0.736	-0.031	0.063	-0.279	0.062	0.036	0.133	-0.009	0.038
PE2	0.668	-0.033	-0.073	-0.316	0.066	0.143	0.233	0.096	0.082
PE3	0.786	-0.016	-0.059	-0.233	0.119	-0.049	0.106	0.012	0.111
PE4	0.676	-0.026	-0.103	-0.179	0.075	0.087	0.335	0.111	-0.008
PE5	0.728	0.046	-0.041	-0.227	0.024	0.029	0.288	0.028	0.109
SI1	0.006	-0.067	-0.053	0.031	-0.077	0.741	0.156	0.182	0.110
SI2	0.103	0.092	-0.050	0.001	-0.021	0.846	0.038	0.063	-0.004
SI3	0.153	0.083	-0.034	-0.059	-0.005	0.855	0.028	0.084	0.045
SI4	0.053	0.237	-0.016	-0.056	0.078	0.789	0.015	0.024	0.127
SI5	0.061	0.202	-0.010	-0.063	-0.008	0.814	0.120	0.051	0.099
FC1	0.009	0.958	0.041	0.062	0.074	0.092	-0.004	0.001	-0.032
FC2	0.043	0.957	0.017	0.013	-0.011	0.121	0.044	0.038	0.032
FC3	0.013	0.948	0.045	0.055	-0.003	0.112	0.055	0.019	0.006
FC4	0.029	0.963	0.028	0.016	0.048	0.089	0.002	-0.007	-0.040
FC5	0.035	0.957	0.006	0.009	0.055	0.114	0.006	0.018	0.000
P1	0.197	0.021	-0.068	-0.123	-0.017	0.112	0.012	0.049	0.872
P2	0.197	-0.052	-0.194	-0.078	-0.091	0.147	0.174	0.205	0.835
P3	0.248	-0.015	-0.145	-0.138	-0.190	0.187	0.190	0.219	0.746
HM1	0.404	0.042	-0.027	-0.128	-0.036	0.130	0.731	0.164	0.146
HM2	0.325	0.118	-0.037	0.012	-0.027	0.119	0.807	0.180	0.080
HM3	0.313	-0.035	-0.030	-0.068	-0.088	0.070	0.795	0.343	0.063
HM4	0.284	0.012	-0.065	-0.049	-0.108	0.121	0.826	0.240	0.085
H1	0.195	0.013	0.045	-0.045	0.041	0.109	0.273	0.819	0.098
H2	0.052	0.211	0.141	0.118	0.325	0.013	0.047	0.704	0.111
H3	0.176	-0.038	-0.015	0.007	-0.030	0.163	0.220	0.861	0.106
H4	0.210	-0.067	-0.016	-0.022	-0.005	0.171	0.246	0.881	0.108
SR1	-0.113	-0.011	0.322	0.293	0.774	-0.048	-0.076	0.060	-0.054
SR2	-0.116	0.038	0.355	0.331	0.730	-0.045	-0.048	0.056	-0.120
SR3	-0.120	0.078	0.366	0.269	0.762	0.059	-0.028	0.020	-0.030
SR4	-0.109	0.073	0.329	0.346	0.713	-0.007	-0.068	0.062	-0.056
SR5	-0.105	0.066	0.363	0.380	0.671	0.018	-0.076	0.145	-0.114
RC1	-0.187	0.057	0.358	0.728	0.345	0.000	-0.028	-0.027	-0.084
RC2	-0.197	0.074	0.336	0.760	0.289	-0.027	-0.045	-0.002	-0.126
RC3	-0.144	0.010	0.362	0.746	0.332	-0.088	-0.098	0.077	-0.092
RC4	-0.169	0.050	0.339	0.790	0.292	-0.055	-0.041	0.026	-0.091
RC5	-0.185	0.025	0.309	0.785	0.340	-0.041	-0.048	-0.046	-0.059

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RT1	-0.072	-0.011	0.801	0.266	0.273	-0.054	-0.016	0.050	-0.020
RT2	-0.169	0.032	0.831	0.219	0.221	-0.086	-0.021	0.039	-0.054
RT3	-0.110	-0.010	0.803	0.312	0.281	-0.085	-0.056	-0.006	-0.006
RT4	-0.073	0.061	0.856	0.190	0.215	-0.007	-0.016	-0.046	-0.128
RT5	-0.074	0.063	0.787	0.225	0.233	0.015	-0.059	0.070	-0.193

Source : Output of EFA Results from IBM SPSS Statisticsv.20
Extraction Method: Principal Component Analysis.   Rotation Method: Varimax with Kaiser Normalization.
Table 11 : Summary of Descriptive Statistics :

Descriptive Statistics

Component	N	Minimum	Maximum	Mean	Std. Deviation	Cronbach's Alpha
EE1	450	1	7	5.79	1.134	.894
EE2	450	1	7	5.99	.937	.853
EE3	450	1	7	6.07	.980	.850
EE4	450	1	7	6.10	.975	.847
EE5	450	1	7	6.14	1.079	.882
PE1	450	1	7	6.16	.840	.881
PE2	450	1	7	6.07	.939	.872
PE3	450	1	7	6.04	.838	.869
PE4	450	1	7	5.95	.997	.877
PE5	450	1	7	6.12	.886	.867
SI1	450	1	7	4.66	1.788	.887
SI2	450	1	7	5.15	1.518	.856
SI3	450	1	7	5.16	1.420	.850
SI4	450	1	7	4.71	1.648	.860
SI5	450	1	7	4.75	1.606	.849
FC1	450	1	7	4.84	1.647	.977
FC2	450	1	7	4.38	1.654	.977
FC3	450	1	7	4.63	1.666	.979
FC4	450	1	7	4.60	1.649	.977
FC5	450	1	7	4.56	1.658	.978
P1	450	1	7	5.68	1.179	.904
P2	450	1	7	5.89	1.183	.794
P3	450	1	7	5.97	1.146	.850
HM1	450	1	7	5.78	1.145	.926
HM2	450	1	7	5.70	1.347	.910
HM3	450	1	7	5.84	1.292	.904
HM4	450	1	7	5.77	1.384	.902
H1	450	1	7	3.86	2.000	.859
H2	450	1	7	2.70	1.868	.936
H3	450	1	7	4.15	1.921	.855
H4	450	1	7	4.47	1.877	.831
PPB1	450	1	7	5.92	1.242	.808
PPB2	450	1	7	6.11	1.063	.793
PPB3	450	2	7	5.91	1.058	.798
PPB4	450	1	7	6.14	.943	.793
PPB5	450	1	7	5.01	1.978	.849
PPB6	450	1	7	5.41	1.520	.832
PPB7	450	1	7	5.96	1.240	.794
PPB8	450	1	7	5.85	1.072	.829
T1	450	1	7	5.12	1.316	.820
T2	450	1	7	5.25	1.331	.785

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T3	450	1	7	5.32	1.332	.785
T4	450	1	7	5.04	1.449	.878
T5	450	1	7	4.88	1.473	.829
PR1	450	1	7	2.99	1.595	.940
PR2	450	1	7	2.65	1.606	.942
PR3	450	1	7	2.74	1.618	.942
PR4	450	1	7	2.73	1.600	.938
RC1	450	1	7	2.56	1.400	.957
RC2	450	1	6	2.48	1.422	.956
RC3	450	1	7	2.30	1.360	.957
RC4	450	1	7	2.43	1.397	.952
RC5	450	1	7	2.46	1.415	.953
SR1	450	1	7	2.50	1.404	.929
SR2	450	1	7	2.43	1.422	.931
SR3	450	1	7	2.46	1.308	.931
SR4	450	1	7	2.31	1.316	.934
SR5	450	1	7	2.17	1.264	.933
RT1	450	1	7	2.51	1.419	.927
RT2	450	1	7	2.43	1.350	.924
RT3	450	1	7	2.50	1.440	.922
RT4	450	1	7	2.52	1.379	.923
RT5	450	1	7	2.39	1.402	.933
AOS1	450	1	7	5.86	.967	.926
AOS2	450	1	7	5.71	1.440	.900
AOS3	450	1	7	5.66	1.345	.891
AOS4	450	1	7	5.88	1.241	.885
AOS5	450	1	7	5.82	1.290	.882
ISO1	450	1	7	5.85	1.068	.883
ISO2	450	1	7	5.15	1.562	.706
ISO3	450	1	7	5.39	1.383	.618
AUB1	450	1	7	5.65	1.137	.758
AUB2	450	1	7	5.61	1.108	.730
AUB3	450	1	7	5.83	.941	.762
Valid N (listwise)	450					

Table :12 Results Summary for the Measurement Model :

Components / validity	Items	Main loading	AVE	CR	Cronbach's Alpha
Effort Expectancy	EE1	1.000	0.668	0.909	.889
	EE2	1.020			
	EE3	1.101			
	EE4	1.101			
	EE5	1.009			
Performance Expectancy	PE1	1.000	0.669	0.910	.896
	PE2	1.173			
	PE3	1.084			
	PE4	1.261			
	PE5	1.176			
Social Influence	SI1	1.000	0.689	0.916	.885
	SI2	1.010			
	SI3	1.000			
	SI4	1.116			
	SI5	1.130			

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Facilitating Conditions	FC1	1.000	0.698	0.917	.982
	FC2	1.003			
	FC3	1.001			
	FC4	1.006			
	FC5	1.000			
Price /Value	P1	.893	0.755	0.902	.896
	P2	1.096			
	P3	1.000			
Hedonic Motivation	HM1	.763	0.805	0.943	.932
	HM2	.938			
	HM3	.935			
	HM4	1.000			
Habit	H1	.878	0.726	0.888	.902
	H2	.523			
	H3	.936			
	H4	1.000			
Trust	T1	1.000	0.642	0.898	.852
	T2	1.183			
	T3	1.134			
	T4	.646			
	T5	.976			
Perceived Risk	PR1	1.000	0.839	0.940	.955
	PR2	1.006			
	PR3	1.021			
	PR4	1.030			
Attitude towards Online Shopping	AOS1	1.000	0.773	0.931	.917
	AOS2	1.846			
	AOS3	1.859			
	AOS4	1.724			
	AOS5	1.863			
Intention to Shop Online	ISO1	.511	0.717	0.883	.824
	ISO2	1.047			
	ISO3	1.000			
Actual Usage Behaviour	AUB1	1.000	0.558	0.790	.819
	AUB2	.999			
	AUB3	.766			

9. CONCLUSION :- The UTAUT2 model has served as the theoretical background in our study. It was established that effort expectancy has a significant positive effect on intention to shop online. It implies that users are likely to value ease of use, minimum effort when choosing Internet Services.

Performance Expectancy has the greatest impact on intention to shop online. Social Influence, Price, Habit was found to be the strongest determinant of Intention to shop online.

We had hypothesized that Hedonic motivation would also affect Intention to shop Online Positively, but the results did not support this hypothesis.

Our research also contributes to the precise exploration of how trust and perceived risk act on the core constructs of the UTAUT.

In prior literature researchers have focussed on designing a conceptual framework or validating certain aspects of the relationship among trust, perceived risk, and attitude.

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Positive attitude of the users' towards online shopping (AOS) too has a significant positive effect on their intention to shop online. We found that users' with a positive intention does have a significant positive effect on their actual usage behaviour.

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A Case Study on Understanding Operational Constraints of Large Scale Health-Care Providers with Special Reference to Apollo Gleneagles Hospital, Kolkata

Puja Dey and Sukanta Kundu

Abstract

This case study is directed towards understanding the operational constraints for large scale health-care providers in densely populated cities. One of key performance metrics for quality of care in cardiac treatment, especially for patients with STEMI undergoing primary PTCA, is the door-to-balloon time. It has been observed that reduced door-to-balloon time in primary Percutaneous Coronary Intervention for the treatment of ST-Elevation Myocardial Infarction has been associated with lower cardiac mortality rates. Herein, we focus on quality improvement procedures initiated at a medical center to decrease door-to-balloon times. We study this metric for the organization over a period of 6 months and compare the performance with international industry standards.

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Introduction

Primary Percutaneous Coronary Intervention (PCI) is the preferred method of treatment for ST-Elevation Myocardial Infarction (STEMI) if it can be performed in a timely manner. The American College of Cardiology/American Heart Association guidelines for the treatment of STEMI state that PCI is the favored approach if an institution can achieve a door-to-balloon time (DTB) of no longer than 90 minutes. This benchmark time is derived from multiple studies that show that shorter DBTs are associated with improved clinical outcomes.

Door-to-balloon is a time measurement in emergency cardiac care (ECC), specifically in the treatment of ST segment elevation myocardial infarction (or STEMI). The interval starts with the patient's arrival in the emergency department, and ends when a catheter guide wire crosses the culprit lesion in the cardiac Cath-lab. Because of the adage that "time is muscle", meaning that delays in treating a myocardial infarction increase the likelihood and amount of cardiac muscle damage due to localized hypoxia, ACC/ American Heart Association (AHA) guidelines recommend a door-to-balloon interval of no more than 90 minutes .Currently fewer than half of STEMI patients receive reperfusion with primary Percutaneous Coronary Intervention within the guideline-recommended timeframe. It has become a core quality measure

for the Joint Commission on Accreditation of Healthcare Organizations (TJC).

Timely identification of STEMI and opening of blocked coronary arteries (Door to Balloon) improves patient outcomes. Quality measure guidelines define effective door-to-balloon time as less than 90 minutes from arrival at hospital until the balloon is up. Historically, from October 2008 through December 2009, an average of 54% STEMI patients achieved a door-to-balloon time of less than 90 minutes. The goal of this project is to identify door-to-balloon time in the hospital and understand the underlying reasons in cases where it doesn't meet the industry wide thresholds.

A patient's treatment and survival of an ST-Elevation Myocardial Infarction (STEMI) is dependent upon the healthcare team's proficiency in emergent delivery of Percutaneous Coronary Intervention. Apollo Gleneagles Hospitals, Kolkata is the only hospital in Eastern India to offer a dedicated unit entirely for Daycare Services, where overnight admissions are not necessary. It includes a wide range of surgeries, consultation with Specialists, preventive health checkups and lifestyle counseling. The Daycare Centre at Apollo Gleneagles Hospitals, Kolkata offers all these and much more.

The ambience plays an important role in speeding up the recovery of the patients. Thus the Daycare Centre takes every care to provide a patient-friendly, functional and cheerful environment. The 5-storied building facing the main hospital building is spread over an area of 90,000 sq feet. Well-appointed escalators and lifts ensure that patients can move with ease. The spacious lounge with soothing pastel shaded walls, bright frescos and paintings and comfortable furniture is meant to lift up the mood of the visitors. There are surgical procedures where patients do not need overnight admission and can go home the same day. The advance in surgical techniques, anesthesiology and pain relief are important contributing factors in increasing the popularity of day care surgeries. Fully-equipped Operation Theatres, latest gadgets and trained personnel ensure optimum patient safety and satisfaction.

Objectives of the Study

The goal of this paper is to assess the quality of treatment and service provided to patients in different departments through statistical analysis of data available. A comparison with industry standards needs to be done to see if those are being done. There are two main objectives:

• To identify door to balloon time for PTCA in the hospital and understand the underlying reasons for its threshold cross and accordingly, suggest possible actions for the management.

• To focus only on the quality improvement procedures that can be taken in the emergency and catheterization lab to decrease door-to-balloon time. This is to be done using data collected from the emergency lab for STEMI patients for roughly 6 months.

• To identify time taken for individual steps and to institute measures to reduce the door-to-balloon time.

• To evaluate prospectively the causes of delay for patients with acute myocardial infarction requiring primary angioplasty upon arrival at the emergency department (ED)

• To institute recommendations to reduce delays and analyze the impact of recommendations to reduce the door-to-balloon time.

Literature Review

Murat M Günal, Michael Pidd (Journal of Simulation 4 (1), 42-51, 2010), the article "Discrete event simulation for performance modeling in health-care: a review of the literature", describes a multi-dimensional approach to the classification of the research literature on stimulation and modeling in healthcare. The aim of the study was to analysis the relative frequency of use of a range of operational research modeling approaches the healthcare, along with the specific domains of application and the level of implementation. Discrete Event Simulation (DES) has been widely used in modeling health-care systems for many years and a simple citation analysis shows that the number of papers published has increased markedly since 2004. Over the last 30 years several significant reviews of DES papers have been published and we build on these to focus on the most recent era, with an interest in performance modeling within hospitals. As there are few papers that purpose or illustrate general approaches, we classify papers according to the areas of application evident in the literature, discussing the apparent lack of generosity. There is considerable diversity in the objectives of reported studies and in the consequent level of detail: We discuss why specificity dominates and why more generic approaches are rare.

Sanjay L Ahire, R Landeros, Damodar Y Golhar (Production and Operations Management 4(3), 277-306, 1995), article "Total quality management: A literature review and an agenda for future research"- after studying the research paper it has been examined that the article describes a revolutionary approach of total quality management (TQM) is a effective management. Total of 226 TQM-related articles are identified from 44 refereed management journals published from 1970-1993. In this research TQM has emerged from practical needs of organizations embracing this philosophy, and the literature is conceptual and practical oriented. This is a lack of sound theoretical frame-work classifying past efforts and guiding future research. The lack of theoretical framework classifying past efforts and guiding future research. The analysis of this research presented pertinent developments in each of the seven criteria. So, it provides future research directions as well as ready reference of the TQM literature. The suggestions for research should guide future developments in the TQM field and help transform it into a formal discipline.

Abdur Rais Ana Viana (First published: 19 August 2010), article "Operations Research in Healthcare: a survey" this paper surveys selected research work in operational research applied exclusively to the problems in Healthcare. This paper surveys several applications of Operations Research in the domain of Health-care. In particular, the paper reviews key contributions addressing contemporary optimization issues in this area. Optimization problems in Health-care have received considerable attention for more than three decades. More recently, however, with decreasing birth rates in nearly all of the developed countries and increasing average longevity globally, optimization issues in Health-care have become noticeably important and attract keen interest from the Operations Research community. OR is being utilized much more now to address day-to-day hospital management , resource- constrained operations or treatment planning aspects in healthcare. Over the years, attention has gradually expanded from resource allocation and strategic planning to include operational issues such as resource scheduling and treatment planning.

It highlights current research activities, focusing on a variety of optimization problems as well as solution techniques used for solving the optimization problems.

Breen, Anne M. MD; Burton-Houle, Tracey MS; Aron, David C. MD (April 2002 - Volume 10 -

Issue 3 - p 40-46), article "Applying the Theory of Constraints in Health-Care: Part 1-The Philosophy", after studying the research paper it has been examined that the imperative to improve both technical and service quality while simultaneously reducing costs is quite clear. The Theory of Constraints (TOC) is an emerging philosophy that rests on two assumptions: (1) systems thinking and (2) if a constraint is anything that limits a system from achieving higher performance versus its goal. Every system must have at least one constraints or limiting factors. A constraint is neither good nor bad in itself. Rather, it just is.

In fact, recognition of the existence of constraints represents an excellent opportunity for improvement because it allows one to focus ones efforts in the most productive area-identifying and managing the constraints. This is accomplished by using the five focusing steps of TOC: (1) identify the system's constraint; (2) how to exploit it; (3) subordinate/synchronize everything else to the above decisions; (4) elevate the system's constraint; and (5) if the constraint has shifted in the above steps. Do not allow inertia to become the system's constraint. Theory of Constraints also refers to a series of tools termed thinking processes and the sequence in which they are used.

Research Methodology

Door to balloon time analysis

Formulation/Conceptualization

A 510-bedded multispecialty tertiary care hospital - Apollo Gleneagles Hospitals, Kolkata is a perfect blend of technological excellence, complete infrastructure, competent care and heartfelt hospitality. This study was undertaken in the coronary care unit (CCU) of the Apollo Gleneagles Hospitals, Kolkata , a 258- bedded tertiary cardiac centre which has a 24 * 7 availability of PCI capable team and cardiac surgery back-up. The hospital has 2 state of the heart cardiac catheterization performed at total of 84 PCIs from November 2017 to April 2018.

We analyzed a study population of 84 consecutive STEMI patients who presented at our emergency department from November 2017 through April 2018 in whom primary PCI was performed. We have included prospective observational studies that have investigated the relationship of D2B time and clinical outcomes in an adult (older than 18) STEMI population.

We employed statistical and regression analysis to observe the ongoing trend of door-to-balloon time and the factors affecting it. Data was collected from the hospital which they maintain and the current data was collected by us through observation.
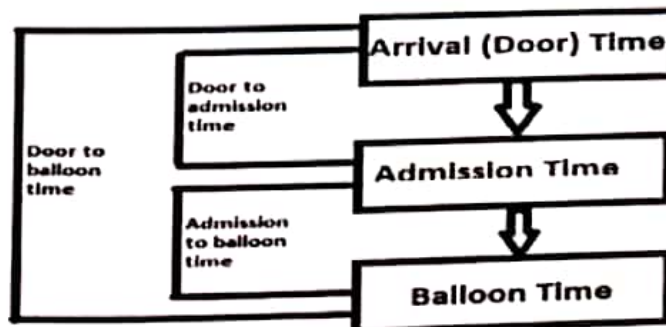
Figure.1: Schematic representation of door-to-balloon time

Hypothesis

The door-to-balloon time is comprised of several components, for example, in Apollo Gleneagles, they maintain door to admission time i.e., the time the patient arrives at the emergency door till his admission process and the other one is admission to balloon time i.e., time from admission till the patient is brought to the catheterization lab. The total door-to-balloon time is calculated by the addition of these two times.

	November	December	January	February	March	April
Column1						
Mean	88	104.6875	98.125	102.5	91.81818182	114.5
Standard Error	5.296000288	6883990334	7.386290792	6.876893679	8.874701718	6.808899405
Median	90	100	102.5	105	85	120
Mode	90	85	125	60	65	95
Standard Deviation	20.51132092	27.53596134	29.54516317	27.50757471	29.43405572	21.53163048
Sample Variance	420.7142857	758.2291667	872.9166667	756.6666667	866.3636364	463.6111111
Kurtosis	-0.2416877	0.330968849	0.321007087	0.701957758	1.336672873	0.424537207
Skewness	-0.083951383	0.826687146	-0.858913766	0.168841874	0.426222963	1.072940435
Range	75	90	105	85	80	65
Minimum	50	70	30	60	55	70
Maximum	125	160	135	145	135	135
Sum	1320	1675	1570	1640	1010	1145
Count	15	16	16	16	11	10
Confidence Level(95.0%)	11.35879092	14.67287807	15.74350615	14.65775191	19.7740677	15.40280056

	Tests of Normality	
	Kolmogorov-Smirnov	Shapiro-Wilk
PTCA surgery time	p Value	p Value
	0.200	0.463

The Variable Follows a Normal Distribution

95% of the values lie within 93 and 105

Descriptive statistics of the monthly Door-to-balloon time from November 2017 till April 2018.

The patients were included from November 2017 to April 2018 presenting with STEMI in our hospital. The median DTBT of all patients was observed to be 97.5 (93-105) minutes.

In 2017-18, Apollo Hospitals has consistently tried to maintain their lower door-to-balloon times. The averages for the five months were as follows: November 2017: 88 minutes, December 2017: 104 minutes, January 2018: 98 minutes, February 2018: 102 minutes, March 2018: 91 minutes and April 2018: 114 minutes. The team at Apollo continues to strive for improvement in quality patient care. Each case is concurrently reviewed while looking for opportunities for time improvement.
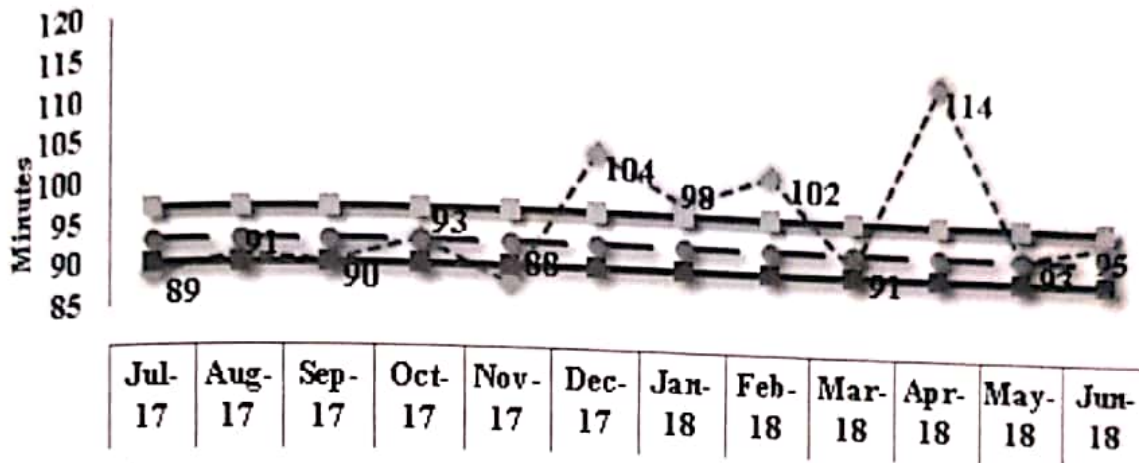
Door to Baloon Time for Primary PTCA

Analysis and Results

Proportion of cases having D2B time < 90 mins and > 90 mins
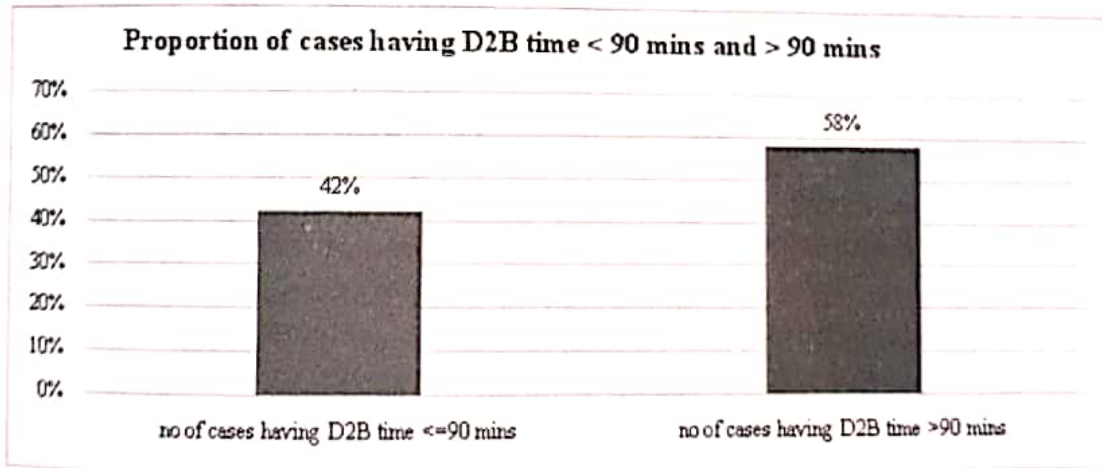
Shown are the percentages of patients for whom the door-to-balloon time was 90 minutes or less and those for whom the door-to-balloon time was longer than 90 minutes. It was observed that 42% of the cases followed standard door-to-balloon time procedure of 90 minutes, rest 58% were above 90 minutes.

Timewise distribution of number of PTCA done in last six months
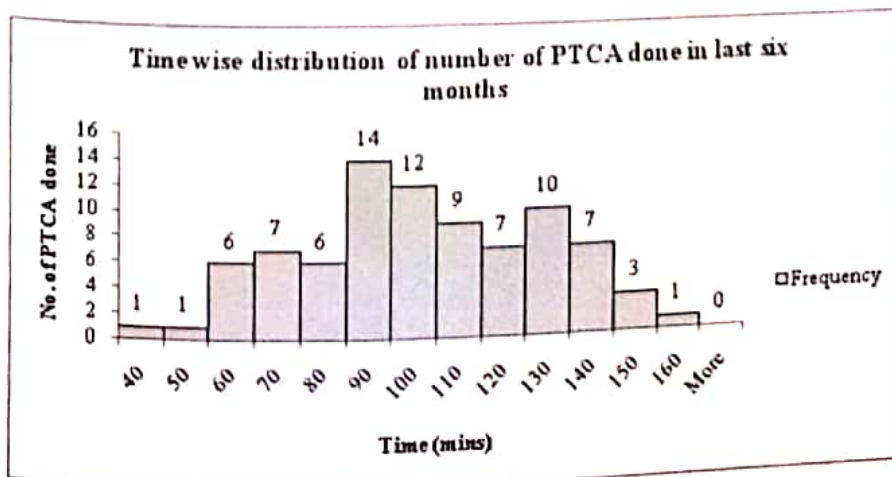
From the histogram, we can say that out of 84 PTCA performed from November 2017 till April 2018, only 35 cases (42%) were within permissible time limit of 90 mints. Remaining 58% crossed threshold exceeding 90 mins. We can see that some case took as long as 160 mints which demands attention.

Door to balloon time per month

Q1-0   ■ median-Q1   ■ Q3-median
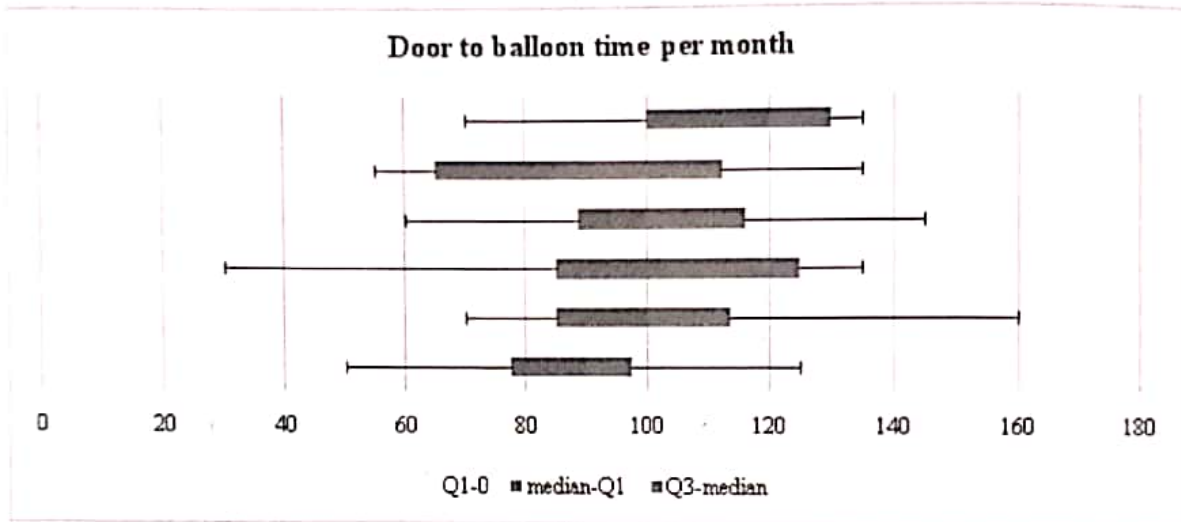
The median door-to-balloon time increased from 90 mints in November 2017 to 103 mints in January 2018. Then it decreased to 100 mints in February 2018 and furthermore to 85 mints in March 2018 and again increased to 120 mints in April 2018 crossing the threshold.

Door to balloon time for cases exceeding 90 mins per month

Q1-0   ■ Median-Q1   ■ Q3-Median
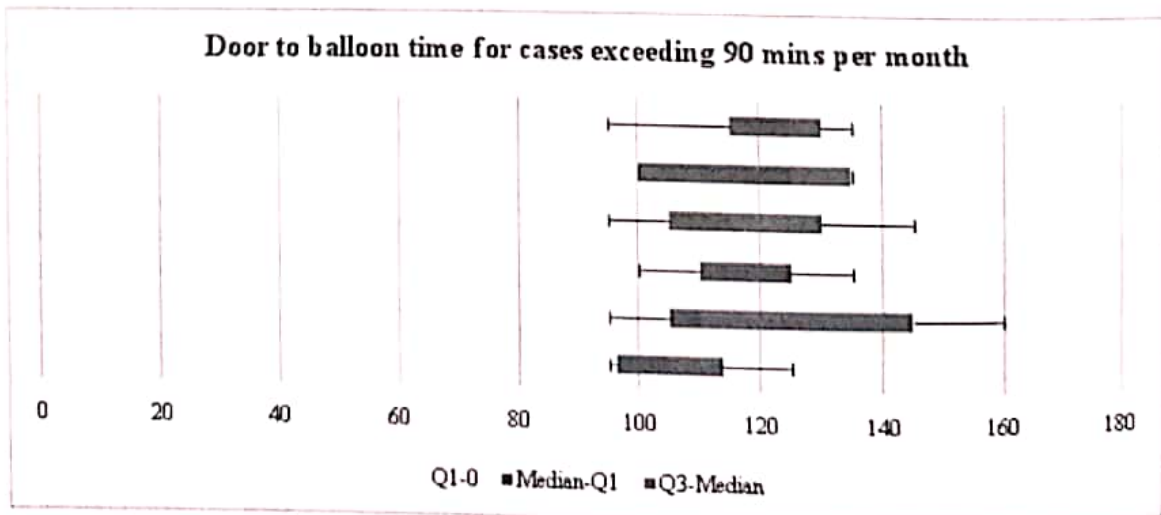
These were the 58% of cases crossing the threshold door-to-balloon time of 90 minutes which needs attention and the causes need to be analyzed.

D2B_Time(mins)

$y = 0.3429x + 84.356$

$R^2 = 0.07$

Door to Balloon time (y-axis)

Door to Admission time (x-axis)

D2B_Time(mins)

$y = 0.6555x + 62.369$

$R^2 = 0.44$

Door to Balloon time (y-axis)

Admission to Balloon time (x-axis)
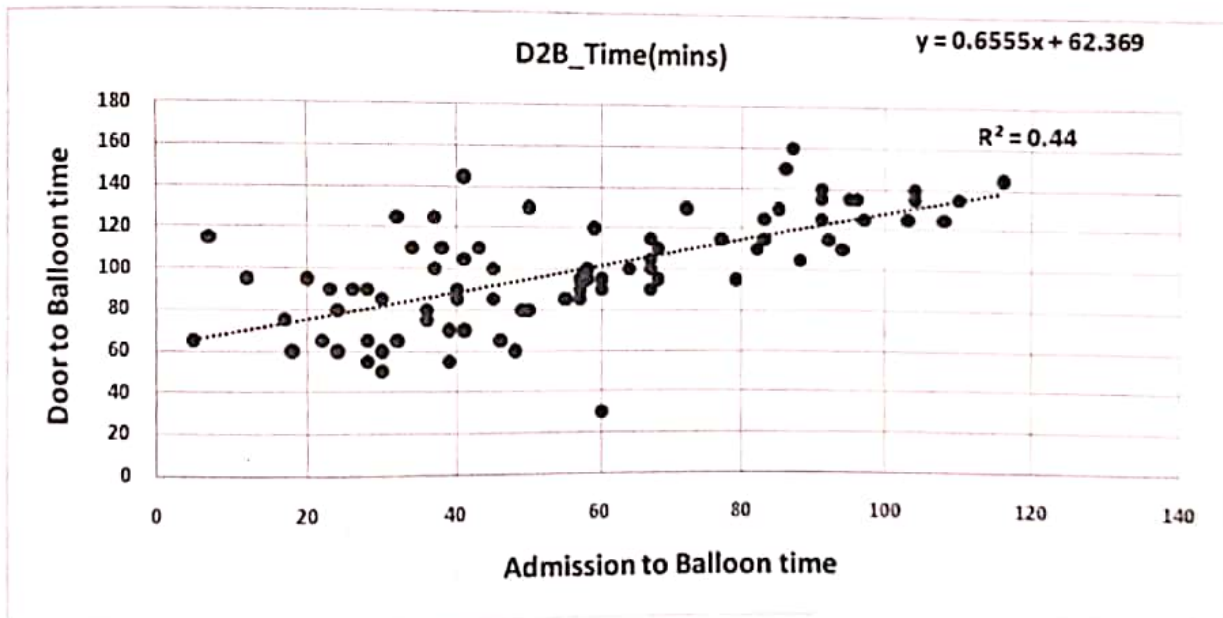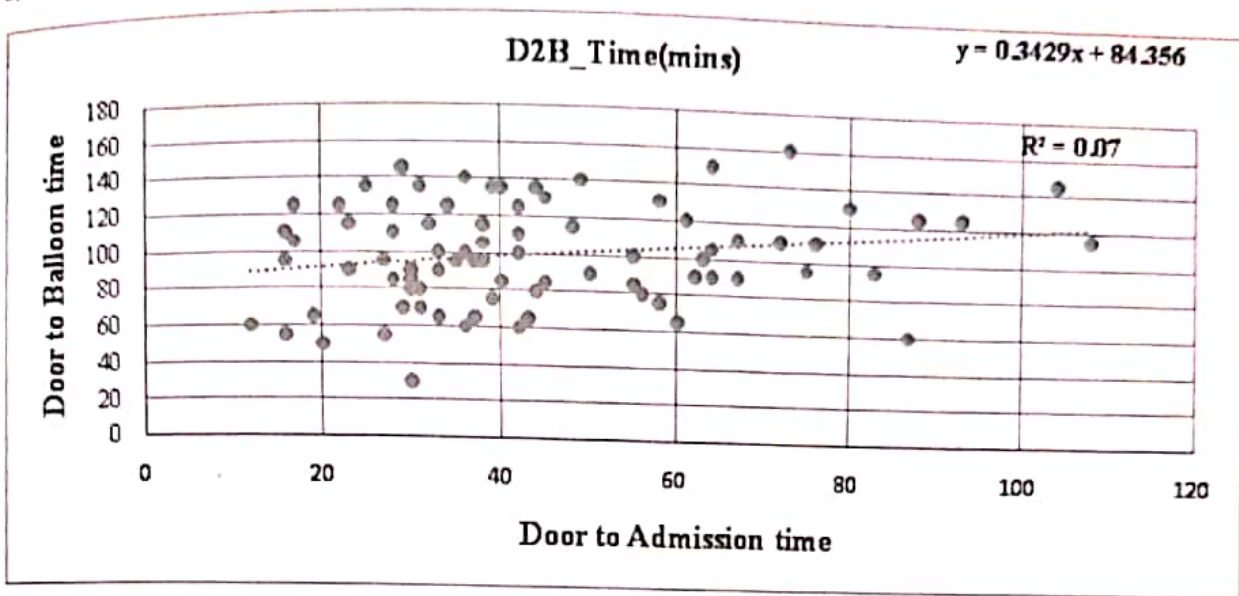
Since the slope of second graph is greater than the previous one, we can say that the effect on door-to-balloon time is higher when there is a unit increase in admission to balloon time as compared to unit increase in door to admission time.

Gender-wise distribution of PTCA

women 19%
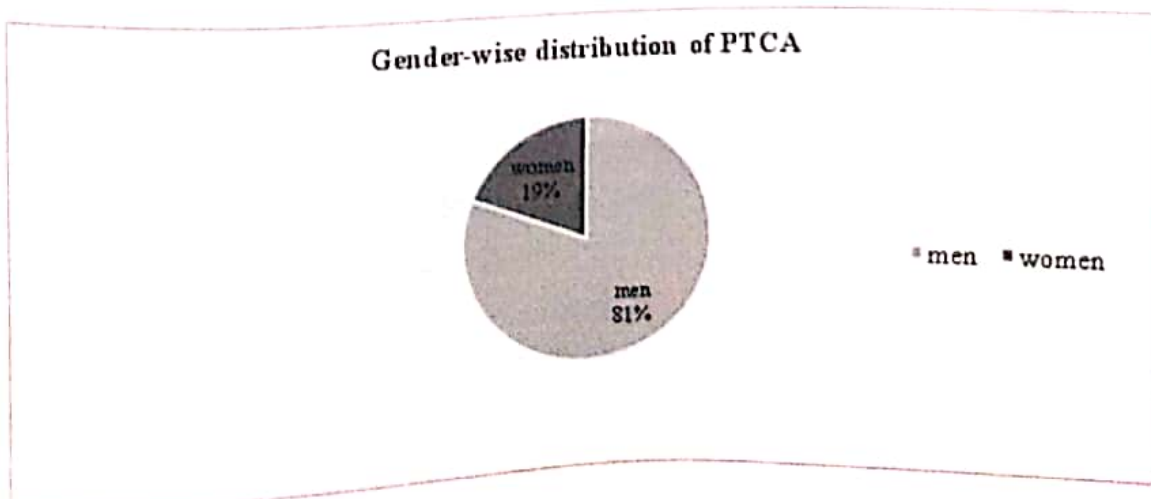
men 81%

■ men   ■ women

From the cases observed, we could see that the number of PTCA done was more in men (81%) and comparatively less in women (19%) i.e., men are more prone to STEMI than women.

Agewise distribution of number of men and women undergoing PTCA
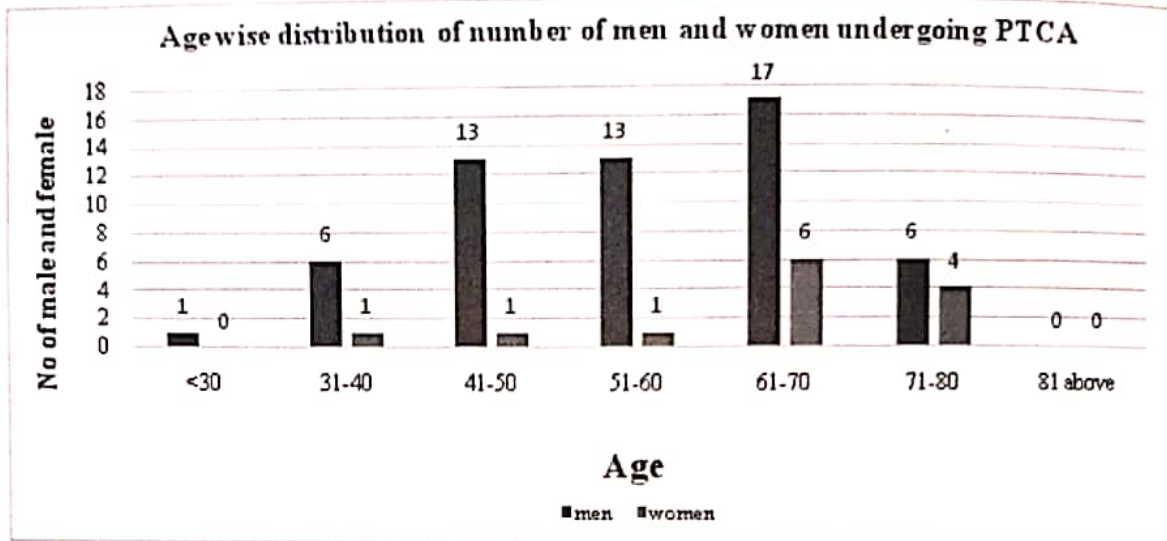
From the graph above, we can say that the STEMI problem is most pronounced at the age between 61-70 years in both men and women.

Agewise distribution of men undergoing PTCA

Agewise distribution of women undergoing PTCA
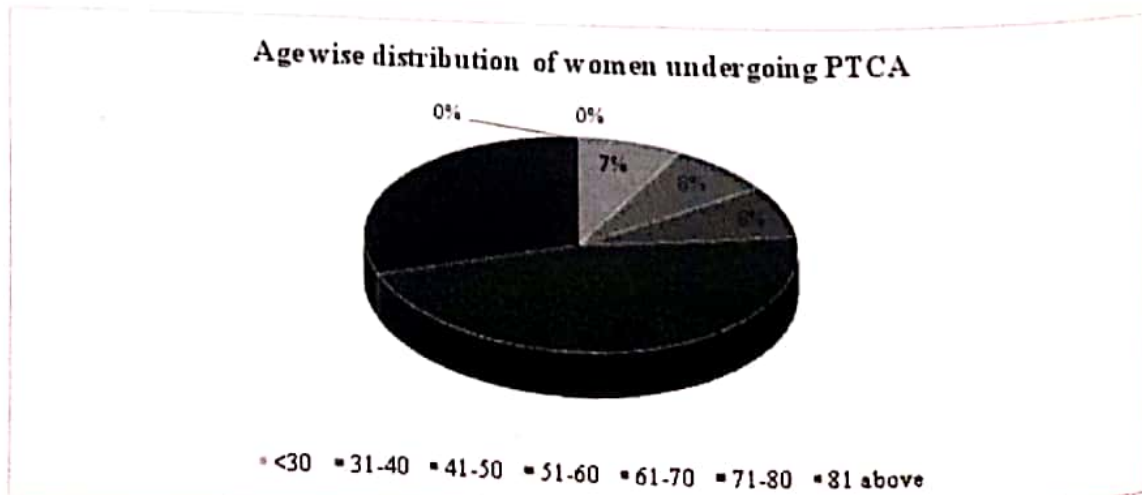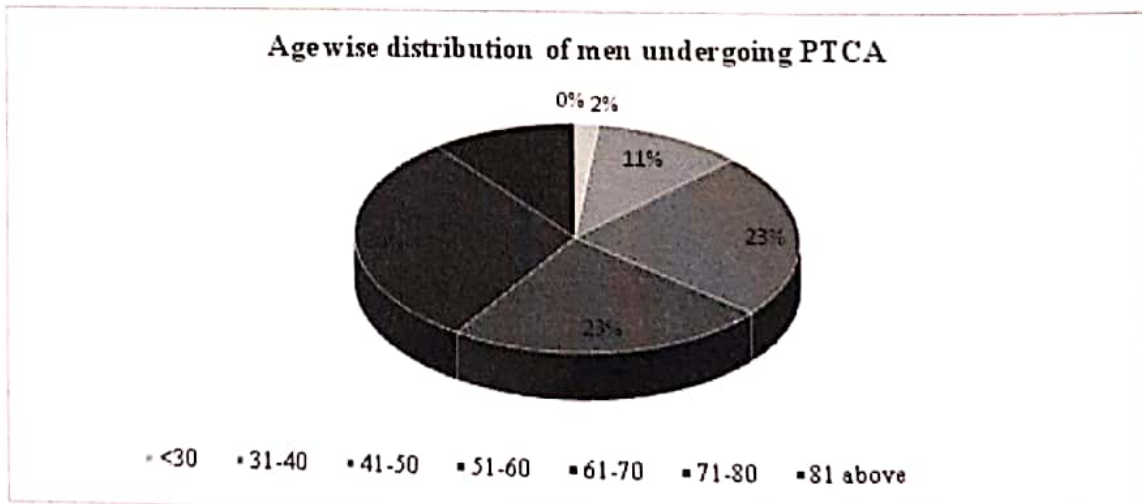
In both men and women, the PTCA was done maximum at the age between 61-70 years.

Findings

Factors that have been found to be associated with delays in door-to-balloon time include gender, age > 60 years, atypical symptoms or absence of chest pain at presentation, and additional "environmental" challenges represented by providing timely care on weekends, holidays, and off-hours.

In 2017-18, Apollo Hospitals has consistently maintained their lower door-to-balloon times. The averages for the five months were as follows: November 2017: 88 minutes, December 2017: 104 minutes, January2018: 98 minutes, February 2018: 102 minutes, March 2018: 91 minutes and April 2018: 114 minutes. The team at Apollo continues to strive for improvement in quality patient care. Each case is concurrently reviewed while looking for opportunities for time improvement. The third principle of Juran's Trilogy involves striving for exceptional levels of performance yet to be attained. Continuous improvement of protocols is always a priority for the cath-lab. Consistently achieving the national standard of ? 90 minutes door-to-balloon time is an ongoing quality goal.

General Understanding

Below Factors are Associated with Delays in Dtb Time

- **Equipment**
    - HIS system hanged
    - Printer not working
    - Server going down / No LAN
    - Network problem /Heavy work load
    - Wheel chair / Stretcher-Trolley not available
    - Occupied by other patient in rush hours
    - Wheel/Stretcher occupied with patient went for investigation from ER

- **Process/Policy**
    - Delay in Admission Process
    - Both staff not doing admission
    - Decision taking / Person not available
    - Too much Paper work
    - Decision Time High
    - Financial Reason

- **People**
    - Staff not available
    - Lateness
    - Sickness
    - Busy with other patients

- **Environment**
    - Not enough treatment beds
    - Dengue out break
    - Already occupied by other patients
    - Delay due to entry in EMR

- **Methods**
  - Takes time to enter treatment details in EMR
  - Less no of Computers
  - Transport arrives Early/Late
  - Lack of coordination
  - Poor scheduling
  - Improper Triaging

The Action Taken Grid

Probable Causes	Probable Causes	Systemic Causes	Probable Solutions	Actions Taken		
				Actions	Responsibility	Timelines
Delay in admission process	• Long queuing in the admission counter • Admission & registration were not done in same desk. • To much documentation	• Staffing pattern /Manpower distribuion/Dury • New system introduced	• Duty roster recheck • Re look into the staffing • Reg. & Admission in both desk at a go. • 2nd person helps in documentation if he/she is free. • Give all the consent/signing paper together for signing.	• Duty roster Rescheduled • Training given on admission process the 2nd person the desk. • 24 hours 2 person available in the desk • In rush hours night/day managers are assisting in documentation process.	Manager- Patient service	15 Days
Issues with affordability	• Relatives were confused whether they will go for the procedure or not because of financial matter, decision was taken after a long time.		More emphasize on financial counseling, disease process & prognosis while counseling • Ongoing/frequently follow up with relatives	In such cases relatives ask to go for 2nd opinion/management (conservative mngt, thrombolysis mngt. Etc.)	Cardiologist ER Doctors	Immediate & Ongoing
Delay in shifting process	• Nursing staff busy with other patient • Staff entering the test, medicine indent in the system • House keeping staff not available. • Non availability of adequate bed/stretchers.	• Manpower distribution not done properly. • Planning regarding the requirement of Bed/Stretcher not done adequately	• Housekeeping supervisor to look into the work distribution. • Patient service to look & improve coordination between the departments	ER- Housekeeping supervisor himself coordinates with the patient service in charge- ER regarding shifting, transferring patient & allocate the staff according to that.	Asst. Manager – Patient Service – ER & Housekeeping Supervisor -ER	Immediate & Ongoing

- Data collected was analyzed and the following corrective measures were taken to improve door-to-balloon time:

- Educated staff on importance of quick response on good clinical outcome.

- Screened patients for chest pain at ED registration counter.

- Used clipboard with digital clock for event log from time of diagnosis at ED to arrival at CCL.

- Synchronized digital clock with clock at CCL.

- Developed STEMI Pathway with timelines for each step of the process to achieve American College of Cardiology/ American Heart Association (ACC/AHA) guidelines for median door-to-balloon time of 90 minutes.

The Control Plan

- Regular intradepartmental training of newly recruited Doctors and Nursing Staff at the ER and Cardiology Department on the existing Hospital protocol of treating STEMI patient with primary PTCA.

- Round the clock staffing of ER with EMO's trained to handle a STEMI patient.

- Presence of a structured on call Rota for the Department of Cardiology.

- Attention to staffing in the Cath-lab even in odd hours at night.

Suggestion & Actions Taken

Data collected was analyzed and the following suggestive measures were taken to improve door-to-balloon time:

- Details Analysis was done to find out the reasons behind the delay. The following suggestion were discussed-

- Duty roster recheck

- Re look into the staffing

- Reg. & Admission in both desk at a go.

- 2nd person helps in documentation if he/she is free.

- Give all the consent/signing paper together for signing.

- More emphasize on financial counseling, disease process & prognosis while counseling

- Ongoing/frequently follow up with relatives

- Housekeeping supervisor to look into the work distribution.

- Patient service to look & improve coordination between the departments

- More emphasize on disease process & prognosis while counseling

- Ongoing/frequently follow up with relatives

- Ensure that Cardiologist involved in the counseling process

- Improve communication & coordination between the staffs in ER

Actions Taken for Future Correction

- Duty roster Rescheduled

- Training given on admission process the 2nd person the desk.

- 24 hours 2 person available in the desk

- In rush hours night/day managers are assisting in documentation process.
- In such cases relatives ask to go for 2nd opinion/management (conservative management, thrombolytic management. Etc.)
- ER- Housekeeping supervisor himself coordinates with the patient service in charge- ER regarding shifting, transferring patient & allocate the staff according to that.
- Thorough counseling done by Consultant, ER Doctor, Ward secretary
- It is decided that in such case ER doctor will immediately call the consultant & ensure that cardiologist participate in the counseling process
- It is decided that in such case ER doctor will immediately call the consultant & ensure that cardiologist participate in the counseling process

Conclusion

Continuous quality improvement for any policy or procedure at a medical facility is a continually evolving goal that is, by design, never reached. Each time one goal is attained, there has to be another one set a little higher to ensure the best patient care outcomes. The teamwork and efforts of several disciplines at Apollo allows it to achieve the quality improvement goals in different departments. PPCI is a life saving procedure in the management of a Acute Myocardial Infraction with effective hospital strategies the DTB time of less than 90 mints can be accomplished in majority of patients. Public awareness and promotion of health schemes are indispensable goals for reduction of DTB time Analysis showed that patients who presented with MI during off-hours had longer DBTs but similar rates of major acute cardiac events in comparison with patients who presented during weekday hours. This suggests that outcomes have more to do with overall hospital care (which should be similar whether the initial presentation is during off-hours or on a weekday) rather than with DBT itself. Using a multidisciplinary team approach, Apollo has improved door-to-balloon time exceeding the national standard in most cases

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Rade B. Vukmir : Disruptive healthcare provider behavior

John Tingle Charles Foster : Regulating healthcare quality

Critical Analysis Of Electronic Customer Relationship In Sbi And Icici Bank Of Southern Region Of Kolkata

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ABSTRACT:

It has become crucial for Public Sector banks to satisfy their customers because an increase in private sector banks has given investors a variety of options. The profitable clients must be kept around above everything else because it is generally believed that keeping an existing customer is less expensive than finding a new one. One of the newest developments in marketing thought is to be able to solve this issue is e-CRM. This paper reflects critical analysis of Electronic Customer Relationship in SBI and ICICI Bank of Southern Region of Kolkata.

Keywords: Crucial, development, banks, customer relationship, demands.

I. INTRODUCTION:

Indian banks have been essential to the development of the economy of the nation. Banks are essential in order to maintain financial stability as well as economic progress. For three reasons, banks are essential in emerging economies like India. They are crucial to the growth of other financial intermediaries and markets, first and foremost. Second, due to the absence of robust equity and bond markets, the corporate sector is heavily dependent on banks to meet its financial needs. Finally, in developing nations like India, where savers are unable to manage financial risks, banks cater to their demands by providing them with assured income, liquidity, and fund safety. With time, banking has grown and changed to meet the demands of the economy. Globalization, deregulation, and technological advancement have all helped the financial system develop. While banks have been expanding into new areas, non-banking intermediaries have started to take on many of the tasks that banks formerly handled. In addition to competing with one another, non-banking financial intermediaries are another source

of rivalry for banks, and this competition has only grown over time. As a result, banks all over the world have been forced to create new products, hunt for new revenue streams, and diversify their non-traditional operations. The functions of banks today have expanded from the conventional nature of their operations to a more technologically advanced way of operation. They are no longer restricted to only accepting deposits, withdrawing money, and issuing loans. To remain competitive, banks are increasingly providing customers with cutting-edge and enticing technology-based services and products such as "Any Time Anywhere Banking," "Tele-Banking," "Internet Banking," "Web Banking".

Instead of the early need for capacity management to handle rising volumes, the focus has shifted to transaction processing efficiency for the benefit of businesses, markets, and retail customers. The use of diverse distribution methods is growing, and businesses must take into account the newest advancements in technology and complexity to meet the rising demands of market participants. A new generation of Real Time Gross Settlement (RTGS), which can handle bigger volumes, offer improved features, and be more technologically adaptive, is already being implemented by the Reserve Bank. The path toward utilising technology to raise payment systems to par with the best in the world will continue with the right assistance from all parties concerned.

II. REVIEW OF LITERATURE

REVIEW RELATED TO CUSTOMER RELATIONSHIP MANAGEMENT

Al Karim, R., & Habiba (2020). The main goal of this study is to ascertain how different aspects of customer relationship management affect a company's loyalty. The results imply that customer focus and technology have a favourable impact on CRM in Bangladesh's banking industry. Banking officials might potentially utilise the results as a strategic tool.

Chaudhari, V.M. (2020). The goal of this essay is to investigate CRM, a new marketing strategy that focuses on identifying and luring customers through the creation of connections. The main goal of the study is to evaluate the value of CRM systems and gain a thorough understanding of the approaches and customer relationship management strategies.

Rashwan, Mansi & Hassan (2019). The study looked at how electronic banking pleasure, which acts as a mediator for good word of mouth, might connect electronic customer relationship management (E-CRM) and electronic customer loyalty. The results indicated a substantial relationship between the aspects of E- CRM and the intention to repeat electronic trading. The results also revealed that, as might be expected, security and usability in online design play an underappreciated role.

Ehsan (2017) claims that an effective relationship with the customer might be the main factor in any bank's success. Effective customer relationship management helps customers feel more satisfied with their businesses by clearing up all of their worries. As a result, banks' total performance improves, which elevates their visibility and appeal.

III. RESEARCH METHODOLOGY:

➢ **THE RESEARCH PROCESS ADOPTED FOR CONDUCTING THE STUDY**

The different tasks a researcher must complete in the research process in order to complete the study. It provides some examples of what the research process entails. A research process is essentially a succession of research effort in consecutive order.

The direction of this study endeavour is governed by the subsequent procedure.

Statement of Problem
↓
Survey of Literature
↓
Objectives Development
↓
Formulation of Hypothesis
↓
Research Design
↓
Sample Determination
↓
Pilot Testing
↓
Data Collection
↓
Data Analysis
↓
Testing of Hypothesis
↓
Results, Interpretation & Findings
↓
Suggestions & Conclusion

Fig. 1: Research Process

➢ **STATEMENT OF PROBLEM**

In the upcoming years, the level of competition in the banking sector will increase, which could make its operations more difficult and complex.

The scope and type of banking operations are reflected in a paradigm change seen in the Indian banking sector. Additionally, banks have transitioned from being merely financial middlemen to full-fledged financial organizations.

Customers have a wide range of possibilities to migrate from one bank to another with little to no restrictions in quest of better services, given that rival banks offer services and rates that are almost identical and nearly comparable. The possibility of a customer switching to a different bank forces bankers to conduct their business more effectively. Therefore, bankers need to concentrate more on making customer-focused strategic decisions in order to reduce the danger of deflection. The development of a useful CRM would offer a platform for luring new clients while keeping the ones you already have. Building relationship strategies for banks can be challenging because of the complexity of classifying items and measuring customer satisfaction with services.

➢ **JUSTIFICATION AND RELEVANCE OF THE STUDY**

The study provides data on the expansion of banks in the country, with a focus on the retail banking sector. This will help all of the consumers understand how the Indian banking business operates from both a historical and a prospective future viewpoint. Furthermore, it presents a clear picture of CRM's moral conduct in retail banking. In retail banking, customer relationship management raises a number of issues that have an impact on participation and decisions, ultimately leading to the dissolution of relationships.
The amount of a customer's value added items has a significant impact on the strength of a relationship, making it difficult to gauge in the retail banking sector.

➢ **THE GENERAL CRM MODEL**

The study model provides a comprehensive look at all aspects of customer relationship management practices and how they affect how satisfied consumers are with the establishment of long-lasting relationships with them, leading to sustained profitability and market dominance.

Developing long term relationships with customers ultimately lies upon the quality of relations between a customer and a company. The association that a customer establishes with the bank depends basically upon two mechanisms of CRM i.e. Product Quality and Service Quality. Although the quality of banking product is the foremost feature for attracting a customer, the quality of service while offering these banking products is the first concrete steps taken by a bank to establish a relation between itself

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and the customer (Baker, M.J. (1993). The concept of relationship quality is defined as power of relationship connecting the banker and the customer which is demonstrated by pointers such as trust, commitment, loyalty, recognition etc.

Building trusting relationships with customers ultimately depends on how well a firm tr eats it's clients.

Customers' relationships with banks are primarily based on two CRM components: prod uct quality and service quality.

Although the quality of the banking product is the main factor in luring a customer, the quality of the service provided in conjunction with these banking products is the first step a bank takes in order to formally build a relationship with the customer (Baker, M.J., 1993).

Relationship quality is described as the strength of the bond that exists between a banke r and a client, as shown by traits like loyalty, commitment, and trust, among others.

➢ **RESEARCH OBJECTIVES**

Research objectives are the probable results that researcher sought to achieve after analyzing all parts of the research. These are also the summarized form of the expected research steps to be adopted by the researcher. The objectives of the study are mentioned below:

• To study the practices of Electronic Customer Relationship Management in Retail Banking.

• To compare the Electronic Customer Relationship Management Practices of Public and Private Sector Banks (SBI and ICICI Bank) in Retail Banking.

• To study the perception of customers regarding the level of satisfaction of selected Public and Private Sector Banks (SBI and ICICI Bank) in Retail Banking.

• To analyze the impact of Electronic Customer Relationship Management Practices on the level of customer satisfaction.

• To find Electronic Customer Relationship strategies that can be adopted by the banks for better delivery of the services to their customers.

➢ **HYPOTHESIS OF THE STUDY**

Hypothesis 1:

• H0: There is no significant difference between Customer Relationship Management Practices of SBI and ICICI Banks in Retail Banking.

• Ha: There is a significant difference between Customer Relationship Management

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Practices of SBI and ICICI Banks in Retail Banking.

Hypothesis 2:

• H0: There is no significant difference between perceptions of customers regarding level of customer satisfaction in selected SBI and ICICI Banks in Retail Banking.

• Ha: There is a significant difference between perceptions of customers regarding level of customer satisfaction in selected SBI and ICICI Banks in Retail Banking.

Hypothesis 3:

• H0: There is no significant impact of Customer Relationship Management Practices on the level of customer satisfaction in selected SBI and ICICI Banks in Retail Banking.

• Ha: There is a significant impact of Customer Relationship Management Practices on the level of customer satisfaction in selected SBI and ICICI Banks in Retail Banking.

Hypothesis 3:

• H0: There is no significant impact of Customer Relationship Management Practices on the level of customer satisfaction in selected SBI and ICICI Banks in Retail Banking.

• Ha: There is a significant impact of Customer Relationship Management Practices on the level of customer satisfaction in selected SBI and ICICI Banks in Retail Banking.

➢ **RESEARCH DESIGN**

A research design is an arrangement of parameters for data collecting and analysis that seeks to balance procedural economy with relevance to the study goal.

It is an organised framework and approach for pursuing and acquiring the research questions' answers. It provides a thorough description of how an investigation will go. A research design essentially outlines the process of data collection, the tools used, how they are used, and data analysis.

The study has been based on the following Research Design:

Table 1: Research Design

Exploratory	Descriptive	Empirical
Review of literature has been undertaken	Presentation of data the way it has been derived.	Testing the hypothesis and validating the proposed.

➢ **METHOD OF DATA COLLECTION**

Data collection is the process of methodically gathering and evaluating the variables or data relevant to the research so that respondents can answer questions, test hypotheses, and determine the outcome.

The following sources are used to collect the data.

i) **Primary Data Sources**

Primary data is information that has been gathered for the first time by drawing a sample that accurately represents the population. It is a unique problem that the researcher has not before published or collected. After publishing, everyone's interest in the record is diminished. The data for this study was gathered while the researchers were interacting with the clients. A systematic questionnaire using a five-point Likert scale that respondents were required to complete was used to collect the data.

ii) **Secondary Data Sources**

Published data is referred to as secondary data.

In order to support the research design, secondary data for this study was gathered from a variety of websites, information from numerous studies that had already been done in this field, RBI offices in Kolkata, RBI websites, books, reports that had been published as well as unpublished, and journals.

The information gathered was used in the literature review.

It aided in comprehending the basis of the research.

➢ **QUESTIONNAIRE DESIGN**

For the purpose of this research a survey questionnaire is designed to collect the data from the customers of selected public and private sector banks of Southern Region of Kolkata. Here State Bank of India (SBI) & ICICI Banks have been selected. The questions were formed in unambiguous and straight forward manner were presented in a logical order so that customers can easily fill the questionnaire without any problem. This questionnaire is the amalgamation of the different set of questions which include close ended questions with multiple choice options for the answer, five-point Likert scale questions and ranking questions.

➢ SAMPLING DESIGN

In research, sampling plays an important role. Sample is basically a group of people, objects or items which represents the large population. In research, sample is taken for the purpose of measurement. Sample is selected to discover the features of the whole population. Since it is difficult to study the whole population, the sample is selected that

is appropriate for the study in terms of economic efficiency, convenience and time consumption.

- Universe of the Study

The universe for data collection consists of the customers who have their accounts in these two selected public and private sector banks in India. The universe is particularly concerned with those banking customers availing the services of Retail Banking Sector.

A selected sample of geographical areas is chosen for this study as the complete collection of data in the universe is not possible.

- Sample Details

Sampling is simply the course of learning about population on the basis of sample drawn out of it. The sample details for this study are as follows:

Sampling Technique	Sample Frame	Sample Size
Stratified Random Sampling	Southern Region of Kolkata	600 Respondents

Table 2 : Details of the Sample

5. DATA ANALYSIS & INTERPRETATION

5.1. INTRODUCTION

The method of utilising statistical and logical tools and procedures to define, present, and assess data is known as data analysis.

Different analytical approaches, according to Shamoo and Resnik (2003), "offer a way of drawing inductive inferences from data and differentiating the signal (the phenomenon of interest) from the noise (statistical fluctuations present in the data"

It is an important component of the study because poor data gathering and recording could produce unreliable results.

Data interpretation is the process of simplifying numerical data in order to draw conclusions that are well-informed. Thus, by identifying its importance and implications, the data interpretation interprets and gives meaning to the information that has been studied. "In a way, interpretation deals with relationships within the data that have been gathered, which somewhat overlaps analysis. The study's data as well as those from other studies, as well as theories and hypotheses, are included in the interpretation. Statistical analysis is a typical technique for data interpretation. Data is examined with the aid of several statistical tools, such as tables, pie charts, and so on,

which separate the data into sections and present the information in a clear and orderly fashion.

This particular chapter tries to evaluate the data gathered and to analyse the observations of the empirical evidence in order to provide an explanation for the study. In order to extract the factors of each variable that are similar in nature and to reduce the number of items in each variable to a more manageable number, Exploratory Factor Analysis (EFA) has been applied to each variable of the study (Independent and Dependent variables) in the first half of the chapter. The study's hypotheses are further tested in the second half of the chapter. To examine the research questions and determine specific answers to the collection of research questions, hypothesis testing is done. A study was conducted in Kolkata employing a standardised questionnaire among the untapped respondents of banks. The questionnaire was designed to gather primary data, and it asks questions about the respondent's profile, the quality of the bank's relationships, services, and products, as well as the level of customer satisfaction that results in that customers' loyalty. These were 5-point Likert scale questions. To determine the amount of significance of services in their banks, a ranking question was created.

Data collected from the survey were analyzed and interpreted using both descriptive and inferential statistical techniques which are generally employed in positivistic study. Descriptive analysis helped in representing snapshot of a sample at a specific time and in turn able to give more clarity to the observed behavior. Charts and tables were formed using IBM SPSS22 and Spread Sheet 2007 for the analysis purpose. The simple tools like reliability test, t test, Pearson correlation, regression and ANOVA were applied on the data. The entire analysis part has been divided into various parts and the following sections of the study would throw light upon that.

5.2. EMPIRICAL ANALYSIS

5.2.1 EXPLORATORY FACTOR ANALYSIS (EFA)

By establishing a relationship between the subfactors and variables of the investigation and determining the components on which the factors would load, factor analysis is a part of evaluating the reliability and validity of statistically based studies. In the current study, exploratory factor analysis (EFA) has been used to determine the dimensions of customer satisfaction and customer relationship management practices. The loading of the components aids in determining how closely the dimensions and the criteria correlate. Bartlett's test of sphericity and the Kaiser Meyer- Olkin (KMO) measure of sample adequacy is used to determine the overall significance of the correlation matrix and its factorability. Ultimately, Principal Component Analysis (PCA) with varimax rotation is used to discover correlations between study variables and to reduce the amount of data.

"However, before carrying out EFA, the overall significance of the correlation matrix and its factorability needed to be tested with the help of Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy".

6. FINDINGS OF THE STUDY:

6.1 FINDINGS

6.1.1 FINDINGS OF RETAIL BANKING CUSTOMERS

Findings of Demographic profile

- Of the 564 responses, the majority of respondents in the public and private sectors were between the ages of 25 and 35.
- Males make up the majority of responders in both SBI and ICICI Banks.
- It was also noted that the majority of SBI respondents (32.6%) were professionals, as opposed to 35.8% of respondents in private sector banks who worked in customer care.
- Primary data shows that the majority of respondents from both banks had been using those institutions for 3-5 years.
- The majority of respondents from banks in the public and private sectors report infrequent bank visits.

6.1.2 FINDINGS OF CRM:

Findings showed that clients of ICICI bank place a higher value on ATM facilities than SBI . Therefore, it is necessary to install additional SBI ATMs in accessible and convenient locations. SBI should have the most up-to-date technology available to prevent inconvenience and delays. Due of the numerous branches in handy locations and technological amenities, customers of ICICI Bank claim that their bank's varied branches are more significant to them than SBI. Customers of SBI continue to use conventional brick and mortar banking. Additionally, it is claimed that the SBI Innovative Loan Facility is more widely used because it has been proven to be more dependable and successful.

- Because ICICI often charge higher interest rates for them, respondents to the SBI survey reported being satisfied with the interest rates provided by banks.

- When choosing a bank, both SBI and ICICI respondents cite accessibility, ease of use, procedural simplicity, and computerized services as the most crucial deciding factors.

- Findings showed that clients of ICICI place a higher value on ATM facilities than those of SBI. Therefore, it is necessary to install additional SBI ATMs in accessible and convenient locations. SBI should have the most up-to-date technology available to prevent inconvenience and delays. Due of the numerous branches in handy locations and technological amenities, customers of private sector banks claim that their bank's varied branches are more significant to them than SBI. Customers of SBI continue to use conventional brick and mortar banking. Additionally, it is claimed that the SBI Innovative Loan Facility is more widely used because it has been proven to be more dependable and successful.

- When choosing a bank, both SBI and ICICI Banks respondents cite accessibility, ease of use, procedural simplicity, and computerized services as the most crucial deciding factors.

- The results showed that respondents from ICICI Bank placed more value on ambiance because that is what draws people in to the bank first when they enter.

- It is clear from this that, in today's digital age, individuals from all walks of life are becoming accustomed to using online banking since it is cost-effective, time-efficient, and simple to use. Internet banking is regarded as being of utmost importance by the majority of respondents from both SBI and ICICI Banks, with larger majorities in SBI.

- The findings show that ICICI bank do a little bit better when it comes to offering mobile banking to their consumers and are thought to solve their issues more swiftly.

- The majority of SBI respondents, according to data, do not view their bank's locker facility as a key feature. However, respondents from ICICI Bank reported feeling more at ease because lockers are considerably simpler to use.

  - The SBI foreign exchange facility is not particularly significant to the majority of respondents. This demonstrates that few people are interested in international travel and public sector exchanges. Customers favour ICICI bank more often to use this service.

  - It is clear from responses from a variety of respondents, including those from SBI and ICICI bank, that ICICI bank employees perform far better when it comes to accuracy of employees in managing accounts.

  - It does not seem particularly exciting to note that SBI makes insufficient attempts to collect ongoing consumer feedback. They risk ruining their standing and notoriety among the public in this way.

6.1.3 FINDINGS REGARDING CUSTOMER SATISFACTION

- According to evidence, SBI consumers are happier when their bank takes customer feedback seriously and reacts within the allotted time frame. This is because many PSBs have created additional channels for customers to register their complaints with the branch manager and have them resolved.

- While other ICICI bank have increased the fees for services like SMS alerts, respondents from SBI are more satisfied with the service charges taken by the bank for transactions.

- The majority of SBI and ICICI bank respondents have an unfavourable opinion of their bank's cross-selling of products and services to them.

- SBI customers express greater dissatisfaction with their banks' communication of new offers or changes to interest rates.

- For the purpose of providing more and better services, private sector banks have developed a new distribution channel.

- The respondents of both banks are happy with their websites, but those of SBI appear to be happier than those of private sector banks in terms of their bank's user-friendly layout and cutting-edge features.

- Due to the bank's dependability, stellar reputation in society, and affordable service costs, SBI clients are happier with the bank's brand image than those of the private sector.

- The majority of respondents expressed satisfaction with their banks' attention to ensuring that services and products are presented in a way that meets client needs.

- SBI respondents claim that their bank always maintains a cash balance and that this is why they are better able to handle customers' urgent requests for cash.

- Although both SBI and ICICI are working hard to conduct client meetings, the majority of respondents are still not aware of the meetings that are held periodically.

6.1.4 FINDINGS REGARDING CUSTOMER LOYALTY

- Loyal customers do possess strong repurchase intentions. It is evident from the primary data that customers of SBI are found to be more loyal in using the products and services in future.

- As per the results respondents of ICICI banks are more satisfied with the overall performance and will not switch to another bank offering attractive benefits.

- As said that satisfied customers only turn into loyal ones. It is witnessed that majority of the customers of SBI are found to be happier and enjoy banking services with their bank.

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EVALUATION OF E-CRM IN BANKING SECTOR IN INDIA

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ABSTRACT:

Customer relationship management is a trend in the banking industry that aims to build and maintain long-lasting connections with clients in order to benefit both the clients and the banks. With the use of this idea, a bank is able to recognise, categorise, interact with, and develop lasting relationships with each customer. Since the focus of banks are on the consistent expansion of profit as well as the trajectory of changing consumer demand, the operational environment of the banking sector is challenging and intensely competitive. As a result, banks are putting more of an emphasis on locating, gathering, and storing consumer demands. The method of customer relationship management gives banking companies the chance to develop and preserve lasting ties with their clients. The use of Internet based technology, including emails, websites, chat rooms, forums and other channels, to accomplish CRM goals is known as electronic customer relationship management, or E-CRM. This paper reflects evaluation of E-CRM in Banking Sector in India.

Keywords: Customer relationship management, challenging, banking, internet

I CUSTOMER RELATIONSHIP MANAGEMENT (CRM):

The liberalisation and globalisation processes have sparked the emergence of competitive services by turning "The Seller's Market into the Buyer's Market," posing a challenge to retail banks to improve customer relations. Customer relationship management is a challenging process that requires a thorough understanding of the routine customers' routines, demands, and desires. Since the bank's goal is to offer customers goods that meet their demands, constant information collection about client behaviour is necessary. Banks are increasingly more focused on the needs of their customers, and they innovate to offer new and improved customer-friendly facilities. CRM plans to concentrate on all banking actions that result in the creation of lasting relationships with their clients and, ultimately, the development of those clients into lifelong assets.

Leonard Berry, a marketing professor, developed the idea of relationship marketing (RM) in 1983. In the years that followed, businesses were increasingly having meaningful conversations with specific customers. He believed it to consist of attracting, maintaining, and enhancing customer connections within firms. In doing so, new organisational structures and technological advancements were applied, ultimately leading to the development of customer relationship management as we know it today.

The terms Relationship Marketing and Customer Relationship Management (CRM) are frequently used interchangeably in marketing literature. In the past, businesses only had tight ties with a small number of their most valuable clients, and because of this, it was impossible to get to know each and every one of them given the size of the clientele—often millions—of clients. It has now shown to be technically possible to develop a close relationship with each and every consumer thanks to the acceptance of information technology. The idea of CRM is now being more widely accepted, and it is generally seen to be a controlling tool for business expansion to obtain an advantage over rivals.

"A widely used technique for managing a company's contacts with customers, clients, and sales prospects," according to Wikipedia, is customer relationship management. It entails utilizing technology to coordinate, organize, and automate corporate processes.

New technologies have significantly impacted human life over the past 20 years and changed the way people live. Customer relationship management has undergone changes as a result of the e-business revolution (CRM). The online customer.

Applications for Relationship Management have quickly evolved from a novel concept to a strategic necessity for enterprises. Businesses are shifting toward intellectual and knowledge-based based processes and CRM is becoming more effective, thanks to information technology (IT). When an organization uses e-CRM, customer connections take less time and move more quickly. The competitive climate is becoming more intense in today's chaotic world. Customers desire to be able to access services through connecting channels including email, websites, and others.

Thus, CRM involves:

a) evaluating all functions' inputs in terms of marketing, sales, and service, cost, and results in terms of customer earnings, profits and values

b) obtaining and maintaining knowledge about the needs, drives, and behaviours of customers during the course of their relationship.

c) making use of customer knowledge to continuously improve performance by learning from successes and failures.

d) achieving a global objective by integrating marketing, sales, and service activities.

e) the purchase, exchange, and implementation of appropriate systems to support customer knowledge and CRM effectiveness.

f) consistently uphold consistency in marketing, sales, and service to meet client needs and maximize profit.

CRM focuses on maintaining client connections effectively and profitably throughout the whole life cycle.
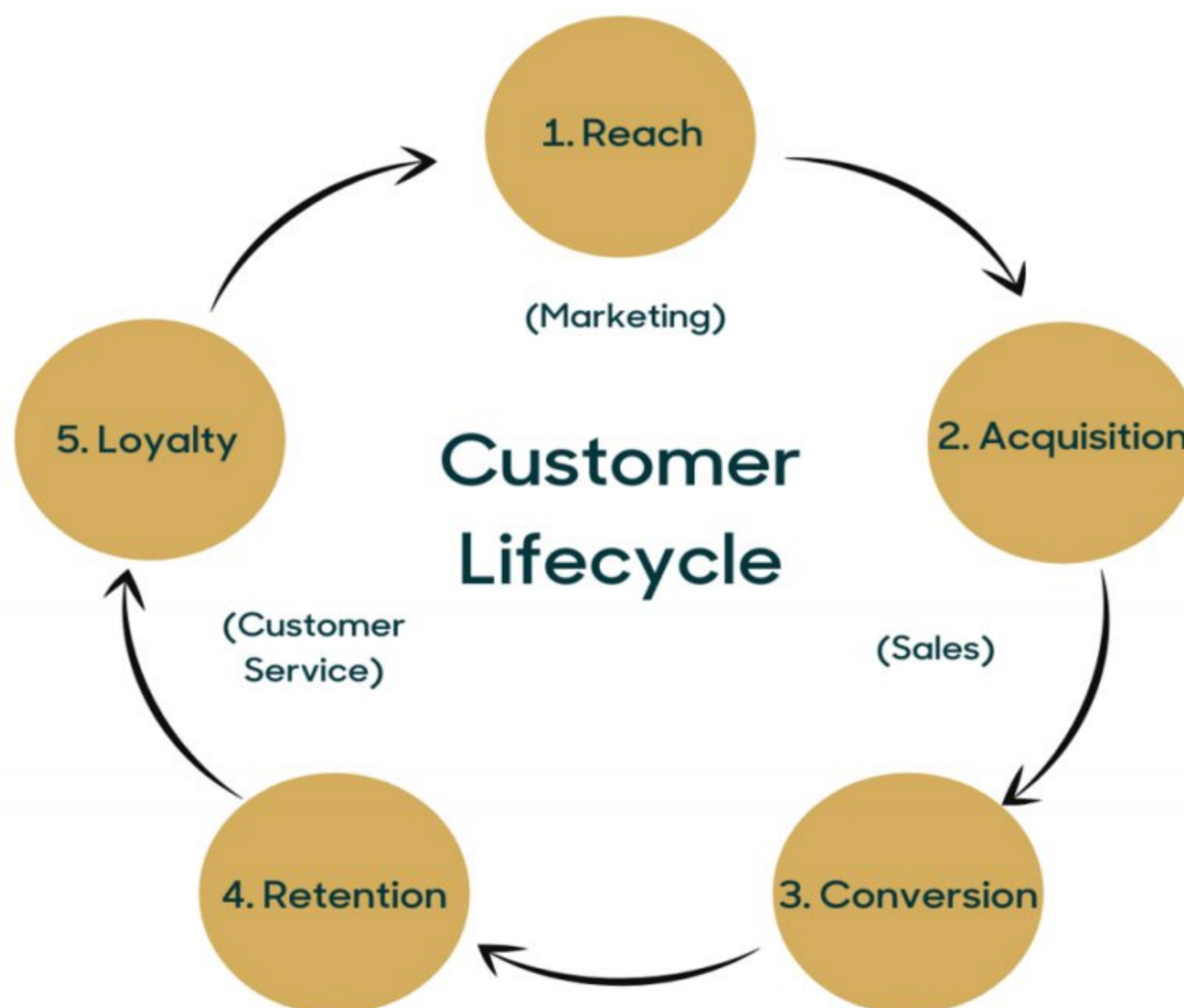
Diagram: CRM Process, Source: Secondary Data

Limitations of CRM:

• **Expensive**: The organization will have to spend a significant amount of money to implement the CRM system. CRM software is too expensive because there are several price packages available depending on the needs of the firm. It raises total business costs and might not be appropriate for small firms.

• **Training**: Trained and qualified employees are needed for CRM to operate properly. The expense and effort required to train staff members on CRM systems is considerable. For a complete understanding of CRM software, they must learn and gather information about it. The organisation must make significant efforts in terms of both time and money to complete all of this.

• **Security Concerns**: The security of data acquired and stored is another significant disadvantage of CRM. The entire collection of data is kept in one central location, where there is a risk of loss or hacking. Employees may add false information or manipulate numbers, which could result in poor planning.

Eliminates Human Element: Since CRM operates on a totally automated system, it has done away with the need for human interaction. CRM software automatically collects and processes all data. Direct communication between customers and a company's staff is the best way to manage a customer relationship. Customers may choose to shop elsewhere if there is no longer a human touch, which would lower sales and revenue.

• **Third Party Access**: Other parties may be able to access and make use of CRM data. There are numerous examples of web hosting corporations taking and selling CRM data to outside parties. Various critical client information may fall into the wrong hands and harm people.

In the current modern era, banks have moved their attention to product customization, relationship banking, and marketing strategy. The intense pressures brought on by the elimination of regulations from the Indian financial services market served as the primary drivers for strengthening marketing concepts. In essence, this forced clearing institutions and the retail banking sector to contend with increased competition brought on by a blending of traditional product markets (Durkin, 2004). For a better perspective on future customer behaviour and consumer preferences, Bank and Executives need to have a comprehensive analysis of their customers across various systems containing data. Applications and data help the bank manage its customer relationships for ongoing development and expansion .

II E-CRM:

The marketing, sales and customer service procedures are automated through a well-organized and integrated CRM process. The use of Internet based technology, including as emails, websites, chat rooms, forums and other channels, to accomplish CRM goals is known as electronic customer relationship management, or E-CRM.

Through Web-based technologies, electronic customer relationship management offers a channel for interactions between a firm, its clients, and its staff. In order to support enterprise-wide CRM business initiatives, the process integrates software, hardware, procedures, and management commitments.

Easy Internet access through a variety of platforms and devices, including laptops, mobile devices, desktop PCs, and TV sets, is what drives electronic customer relationship management. However, it is not software; rather, it is the use of web-based technologies to communicate, comprehend, and guarantee consumer happiness.

A successful E-CRM system tracks a client's history in real time across a variety of channels, builds and maintains an analytical database, and optimises a customer relationship in three areas of attraction, expansion and maintenance.

A typical E-CRM strategy includes gathering data about the customer, the transaction history, the product and the contents. The customer characteristics are then analysed to produce a transactional analysis that includes the customer's profile and transactional history, as well as an activity analysis that includes exploratory activities that display the customer's navigation, shopping cart, purchasing behaviour, and more.

The following are the benefits of E-CRM:

- Enhancing client relationships, service, and support.
- matching consumer behaviour with appropriate offers.
- boosting customer happiness and loyalty.
- increasing efficiency and cutting costs and boosting business revenue.

Businesses that plan ahead and adopt an E-CRM system can successfully integrate their business procedures with technology to provide seamless, excellent customer experiences across all channels. Through on-demand, tailored online services, customers have the ability to help themselves. Customers can purchase goods, purchase information from websites, and obtain answers utilising FAQ sections, forums, or chat rooms all on the internet, which offers a convenient and optimal medium.
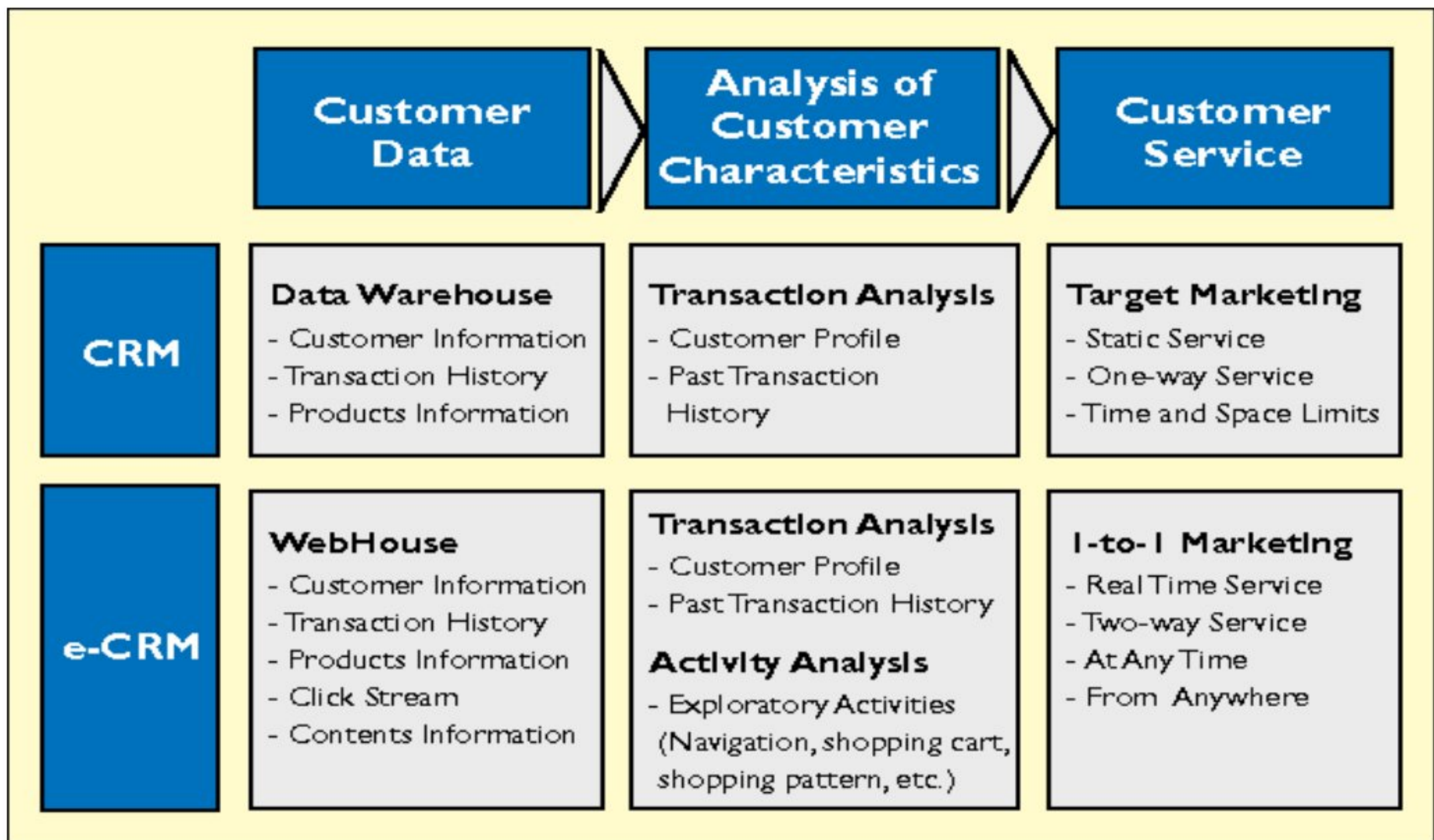
Diagram: CRM and E-CRM, Source: Secondary Data

III E-CRM IN BANKING SECTOR:

Today's contentious focus on both sides is the relationship between bankers and their clients.
It entails all the actions required to establish, develop, preserve, and keep up a successful relationship with the target clients.

Customer relationship management keeps tabs on the evolution of both new and existing services as well as the needs of the market today and in the future.

The establishment and maintenance of mutually beneficial long-term connections with the strategically significant clients" is how CRM is defined. The expansion, maintenance, and optimization of the business's long-lasting, mutually beneficial relationship with its clients. The major objective of effective customer relationship management is to comprehend the wants and wishes of the customer. This is done by putting their demands at the center of corporate operations and combining them with the organization's strategies, people, processes, and technology.

In the private sector as well as the public sector, labor-intensive commercial operations are being quickly replaced by computers, information technology, and networking. Computers, the Internet, and information technology have all converged since the early 1990s to replace labor- and paper-intensive banking procedures between and among commercial banks. The widespread use of ATMs, credit cards, debit cards, smart cards, and loans through e-CRM through the Internet are examples of this. Electronic commerce refers to this kind of

computer-based bank-to-bank, bank-to-consumer, and consumer-to-consumer transactional and informational communication.

The significance of e-CRM technology in bank-customer interactions is still unquestionable, however analysts should underline how social and human factors influence consumer perception. In the realm of banking services, interaction is given top priority. However, it is crucial for both banks and clients to participate actively in the interactions if they are to be successful. When compared to other industries, the banking sector has always placed a specific emphasis on the relationship that is maintained between the organisation and its customers. Three key aspects make up the interaction process. They are:

• Information sharing

• Commercial or financial (transactions)

• Social interaction

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INVESTIGATING FACTORS AFFECTING CONSUMER DECISION MAKING IN THE E-TOURISM MARKET: A COMPARATIVE ANALYSIS OF ONLINE TRAVEL BOOKING INTERFACES AND USER GENERATED CONTENT ON DECISION MAKING

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Abstract

Well-designed e-travel sites are required to properly use the internet's potential in the travel and tourism sector. However, the characteristics that influence customer perceptions of e-travel sites remain unclear. Aside from marketing materials offered by travel businesses and intermediaries, the increasing availability of internet image albums, personal blogs, and specialty travel blogs, as well as different user reviews of locations, hotels, and food, has transformed consumer behavior drastically. The goal of this study is to see if E-WOM influences travel purchase intent by mediating or moderating the impact of e-service quality or whether independently it has a higher or lower impact on travel purchase decisions in comparison to marketing communications by the e-travel sites. Only a few researches have been conducted to better understand online customer behavior while making online bookings, with the bulk of studies on online travel purchase behavior focusing on the quality of travel website service or the effect of travel reviews. However, no study has attempted to combine these two traits, to the best of the author's knowledge. The empirical findings of the study on Exploratory Factor Analysis are in line with several prior research findings and results of Confirmatory Factor Analysis showed that the factors are reliable, valid and distinct from each other. Also, evaluating E-Travel Site Quality as a second-order construct increased the predictability of the hypothesized model from 38.5 percent to 46.4 percent, implying that customers perceive E-Travel Site Quality overall rather than its individual dimensions in exclusion. A significant research gap was observed during the literature review stage that in spite of several benefits that hierarchical constructs provide in model building, the concept is still not widely applicable. As a result, the information and conclusions presented in this study will add to the existing literature and academic understanding in this field. Analyzing the effect of 'E-Travel Site Quality' and 'E-WOM' on Purchase Intention, it is observed that both have significant impacts on Purchase Intention, yet the effect of E-WOM is slightly higher than 'E-Travel Site Quality'. Also, E-WOM partially mediates the relationship between 'E-Travel Site Quality' and Purchase Intention. Therefore, the potential customer value user generated content more than the marketing communications from e-travel sites. In today's world, a solid destination image and high service quality are no longer adequate; e-WOM has shown to be a cost-effective strategy to advertise a tourism site. Customers' evaluation of service delivery is a critical component in the formulation of marketing strategies,

hence the study's findings are applicable to marketing managers and practitioners who build strategic plans and implement solutions to increase tourist online shopping through B2C e-commerce.

Keywords: *Tourism Sector; e-travel site quality; e-WOM; Mediation; Hierarchical Construct Modelling*

1. INTRODUCTION

Increasingly sophisticated communication and web technologies have revolutionized how people seek information, make choices, and buy products and services. According to the World travel and Tourism Council(2021), tourism contributed INR 14,181.9 BN (USD 191.3 BN) or 6.9% to India's GDP. In the e-commerce context, internet tourism accounts for 70% of transactions in India (India News – India TV, n.d.). Travelers from all over the world use the internet to research destinations, so having a strong online presence is critical. Tourism's intangible character sets it apart from other businesses. There is a lot of risk and uncertainty since buyers cannot gauge service quality before buying it. Several studies have shown the impact of website service quality on online booking. An online store's style, design, and layout may either encourage or discourage a consumer's purchase intent. Well-designed e-travel sites are required to properly use the internet's potential in the travel and tourism sector. However, the characteristics that influence customer perceptions of e-travel sites remain unclear.

Aside from marketing materials offered by travel businesses and intermediaries, user-generated content has become an essential data source in the e-travel sector. Elci et al.(2017) suggest that the modern traveller has taken control of the development and dissemination of travel-related information on the internet. Tourism goods are primarily intangible, hence information search is vital. The increasing availability of internet image albums, personal blogs, and specialty travel blogs, as well as different user reviews of locations, hotels, and food, has transformed consumer behavior drastically. According to Hanandeh et al. (2021), social media and websites are the most widely used e-marketing tools in tourism.

Therefore, the two major factors that have an influence on the online buying process for e-tourism products are website quality of online travel agents and electronic word-of-mouth or more specifically travel reviews. There have been several research papers that have tried to capture the different e-service quality dimensions related to travel sites and similarly, a number of studies have looked at the influence of E-WOM on trip buying intentions, yet there has been a severe dearth of research on simultaneous evaluation of these two dimensions. The goal of this study is to see if E-WOM influences travel purchase intent by mediating or moderating the impact of e-service quality or whether independently it has a higher or lower impact on travel purchase decisions in comparison to marketing communications by the e-travel sites.

Thus, the paper specifically aims to answer the following questions:-

- What parameters significantly influence consumer travel purchase decisions in the e-tourism marketplace?

- What are the critical travel website service quality features that significantly influence consumer purchase intentions as far as Indian consumers are concerned?

- What is the extent of influence of user-generated content (E-WOM) on travel decisions?

- Does E-WOM mediate the impact of perception of travel website quality on purchase decisions?

- Does E-WOM moderate the impact of perception of travel website quality on purchase decisions?

- Which has higher impact on online purchase intention- E-Travel Site Quality or E-WOM?

2. LITERATURE REVIEW

2.1. Concept of Service Quality in e-tourism Market

An e-service provider must always consider the customer's viewpoint while developing an online system. Few studies have specifically examined e-travel service quality. Based on the 'SERVQUAL' instrument, Kaynama and Black (2000) developed the 'E-QUAL Scale' for evaluating online travel agencies. Ho & Lee(2007) developed an original scale with five dimensions: 'Information Quality', 'Security', 'Website Functioning', 'Customer Connections', and 'Responsiveness' for measuring service quality of tourism websites. The strong correlation between the five components resulted in a second-order component, which they named as 'e-travel service quality'. Dutta et al.(2017)studied online travel agents in India. According to the study, 'customer expectations' affect perceived quality and value in the Indian online travel business sector. Elci et al.(2017) evaluated the influence of 'Website Design Quality' on 'Bookings and Reservation Intentions'. Li (2018) studied 'e-service quality' for online travel agencies and concluded that 'Information Content', 'Safety', 'Website Structure', and 'Usability' are essential qualities. Omar et al. (2020) used thematic analysis to uncover usage trends for online hotel booking systems. Customers' loyalty to Umrah-based travel brokers was studied by Othman& Harun(2021). They used a reflective-formative assessment to understand dimensions affecting 'Service quality and 'Customer Satisfaction'. However, the varied findings of many researches on the 'Perceived Service Quality' of tourist websites are perplexing, since certain factors have been determined to be more relevant than others. Measuring the quality of e-travel services may be done through the adoption or modification of several scales, but whether the scale is successful in capturing the specific dimensions is a contentious matter.

2.2. Impact of Electronic Word of Mouth

The internet is a great tool for information-driven sectors like music, film, and tourism. Technology's expansions have altered the scope and potential for word-of-mouth communication. Xiang & Gretzel(2010) emphasize that consumer comments and endorsements not only assist potential travellers to plan and research online, but also give useful insights for travel organisations. WOM influences customer awareness, perceptions, product evaluations, intents, and expectations, according to Choirisa et al. (2021). Yan et al.(2018) observed on their research that E-WOM platforms include social media platforms (like Facebook, Twitter, and Instagram), integrated tourist websites (like TripAdvisor.com), and official company websites (such as hotel websites or destination websites).They also noted in their research that social media is more effective than traditional media in influencing traveller choices.

The majority of these studies are conducted in developed nations, with few empirical studies undertaken in developing countries, such as India. Given India's fast growing Internet population and e-commerce business, research into the elements that impact Indian consumers' purchase choices is long needed. This study's main goal is to assess if online travel shopping meets consumers' needs and expectations. Due to the importance of 'E-WOM' in the travel industry, the second key study focus is on the impact of user-generated content on travel choices. Most research on online travel intent has focused on 'Quality of travel website service' or 'Influence of travel reviews'. At this point in time, the author is unaware of any research examining the interaction of these two traits and their impact on the eventual 'Purchase intention' in the e-tourism market in India.

3. HYPOTHESES DEVELOPMENT

3.1. The relationship between the quality of a tourist website and the likelihood of making a purchase

There is a relationship between service quality and online purchase intent (Hsu et al., 2012; Kim, 2012). In this study, Website Quality is hypothesized as a second-order component. Using a higher order concept reduces the number of path-model links, resulting in model parsimony (Edwards, 2001; Johnson et al., 2011). Hence, the following hypothesis is proposed:-

H1: Purchase Intention is significantly influenced by the overall assessment of E-Travel Site Quality.

3.2. The relationship between Electronic word-of-mouth and Travel Intention

H2.1: There is a significant impact of electronic word-of-mouth communication on Purchase Intention of Travel products online.

H2.2: Electronic word-of-mouth communication significantly mediates the relationship between E-Travel Site Quality and Purchase Intention.

H2.3: Electronic word-of-mouth communication significantly moderates the relationship between E-Travel Site Quality and Purchase Intention.

4. RESEARCH METHODOLOGY

4.1 Construct Measures

To ensure content validity, the items for measuring the constructs are chosen from previous studies. A scale on Website Service Quality has been constructed based on several dimensions from previous researches(Chen & Kao, 2010; Ho & Lee, 2007; Jou & Day, 2021). The construct E-WOM comprising of 10 items have been adapted from Gretzel & Yoo(2008). The construct 'Purchase Intention' comprising of 3 items have been adapted from several researches (Chen & Kao, 2010; Puspitasari et al., 2021). The response format for all these statements are measured with a 5 point Likert scale.

4.1 Data Collection

The data was collected by framing questionnaires. The questionnaire was designed using Google forms and circulated through emails and social media channels like Facebook, Whatsapp and Linkedin. The number of items in the research is 42. For a 5 percent to 10% margin of error in multivariate research, the sample size necessary should be 5 to 10 times the number of variables (Hair et al., 2000).552 responses are collected for this purpose. Most of the sample respondents belong to Kolkata (242) and some are from Mumbai (82), Delhi (74), Hyderabad (79) and Bangalore (75). The study analyses cross-sectional data from customers of online travel services in India who are geographically scattered.According toBasu et al.(2014), the urban population residing in the metro cities of India show uniformity in their attitudes and temperaments, hence the choice of 5 cities can be taken as an appropriate representation of the Indian urban population.

4.2. Data Analysis

The analysis of the present study is divided into two stages: preliminary data analysis and structural evaluation of the model. The preliminary data analysis provides the general picture of the respondents and their responses. SPSS software is used for the purpose. The second part of the analysis consists of evaluation of the structural model to investigate the relationships between the independent and dependent constructs.

For this purpose, Structural Equation Modelling techniques have been employed. PLS-SEM is chosen for the current study for two reasons. First, PLS employs a variance-based approach that has less stringent restrictions on size of the sample, number of indicators, and normality of data. Second, PLS-SEM has been advocated by several researchers (Chin et al., 2020; Ali et al., 2018) for exploratory investigations.

5. RESULTS

5.1. Profile of the respondents

The socio-demographic profile is presented in Table 1. Males make up 57% of the responses, while females make up 43%. The bulk of respondents (46.6 percent) are in the age bracket 26-40. Postgraduates make up 46.6 percent of the total, with graduates accounting for 43 percent. 31 percent has an annual income between 5 and 7 lacs, with 29.6 percent having an annual income of more than 10 lacs.

Table: 1: Demographic profile of the data

Characteristics		No. of Respondents	% of Respondents
GENDER	MALE	303	57
	FEMALE	230	43
AGE (In Years)	<25	55	10.3
	26-40	248	46.6
	40-55	160	30
	>55	70	13.1
EDUCATION	UNDER-GRADUATE	55	10.4
	GRADUATE	230	43.0
	POST-GRADUATE	248	46.6
INCOME RANGE/ANNUM (In Rs.)	<5 LACS	117	22
	5 LACS-7 LACS	165	31
	7-10 LACS	93	17.4
	>10 LACS	158	29.6

5.2. Common method bias

The research uses two approaches to determine Common Method Bias: Harman's Single Factor Test (1976) and Kock & Lynn's Full Collinearity Test (2012) using VIF scores. In 'Harman's Single Factor Test,' one component accounted for 33% of the variation, which is below the 50% cut-off. The second approach is the Kock & Lynn's Full Collinearity Test (2012), which is fully automated using PLS. Simultaneous co-linearity values are found to be much below the cut-off score of 3.3. Thus, the model is free of common method bias.

5.3. Exploratory Factor Analysis

Principal Component Analysis with orthogonal varimax rotation is used to create the first solutions for the EFA. The 'Kaiser-Meyer-Olkin (KMO) Test' for sample adequacy and 'Bartlett's Test for Sphericity' shows statistically significant relationship between the items suggesting they are fit for EFA. Six components with Eigen values of unity or above are identified. Based on shared meaning on the items of each factor they are named as- Fulfillments, User Interface and Interactivity, Reliability, Incentives, Functionality and

Complaint handling. However, for research purpose, only the first four factors are retained. The reason being that the last two factors have only two and one item respectively, which is bound to create identification problems in Confirmatory Factor Analysis stage.

The created conceptual model is assessed utilizing a 'Two-step Technique' (i.e. 'Inner-model' or 'Measurement Model' and 'Outer-model' or 'Structural Model') (e.g., Chin, 2010; Henseler et al., 2009).

5.4. Measurement Model (First-order constructs)

Initially, the first-order constructs' convergent validity and discriminant validity are examined. No item in the study is observed to have factor loadings below 0.50 (Hair et al., 2019). Cronbach's Alpha for all the items ranged from 0.713 to 0.923, while Composite Reliability ranged from 0.819 to 0.935. Thus, both reliability indicators are found to be above the 0.70 threshold (Hair et al., 2011; Nunnaly, 1978). The 'Average Variance Extracted' (AVE) value for each construct is also observed to be between 0.59 and 0.75, which is over the cut-off value of 0.50(Table-2).

TABLE 2: 'Factor Loadings', 'Cronbach's Alpha', 'Composite Reliability' and 'AVE'
(First-order constructs)

	Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE
FULFILMENT		0.885	0.907	0.519
FULFILLMENT		0.885	0.907	0.519
Fulfil _1 ("The site should provide secure payment systems.")	0.698			
Fulfil_2 ("Prices should be shown with the items on the screen.")	0.734			
Fulfil_3 ("The online travel agent should provide accurate information.")	0.809			
Fulfil_4 ("The online travel agent should update information immediately.")	0.703			
Fulfil_6 ("The online travel agent should provide help when problems are encountered.")	0.71			
Fulfil_7 ("The customers should be informed immediately when transactions are completed.")	0.699			
Fulfil_8 ("Products/Services should be delivered by the time promised.")	0.688			
Fulfil _9 ("Policies for cancelling orders laid out on the site should be customer-friendly.")	0.696			
USER INTERFACE AND INTERACTIVITY		0.826	0.873	0.534
Interact_1 ("The online travel agent's website design should be innovative").	0.728			

Interact_2 ("One should be able to see the graphics clearly on the online travel agent's website.")	0.709			
Interact_3 ("The site has features personalized to users.")	0.749			
Interact_4 ("The website develops a platform for users to share travel experiences.")	0.763			
Interact_5 ("The website makes it easy for users to turn to chat rooms for ease of information.")	0.721			
Interact_6 ("Understands specific needs and gives personal attention.")	0.712			
RELIABILITY		0.716	0.819	0.533
Reliability_1 ("The site should provide a confirmation of items ordered.")	0.752			
Reliability_2 ("The site should provide a running total of purchases as the order progresses.")	0.799			
Reliability_3 ("The online travel agent should provide a site map." For example- Home page, Orders, FAQ etc.)	0.651			
Reliability_4 ("The website provides price comparison function.")	0.709			
INCENTIVES		0.713	0.839	0.635
Incentive_1 ("The website provides membership bonus collection for free gift.")	0.766			
Incentive_2 ("The website provides special offers exclusively for credit card holders.")	0.821			
Incentive_3 ("The travel purchase can be paid by installments using credit card.")	0.802			
E-WOM		0.923	0.935	0.591
E-WOM_1 ("Travel reviews are a good way to learn about a travel destination, product or service.")	0.721			
E-WOM_2 ("Help me evaluate alternatives.")	0.646			
E-WOM_3 ("Help me avoid places/services I would not enjoy.")	0.717			
E-WOM_4 ("Increase my confidence in the decisions I make.")	0.783			
E-WOM_5 ("Make it easier to imagine what a place will be like.")	0.746			
E-WOM_6 ("Reduce the risk/uncertainty involved in making travel decisions.")	0.791			

E-WOM_7 ("Help me plan my trips more efficiently.")	0.816			
E-WOM_8 ("Reduce the likelihood that I will later regret a decision.")	0.792			
E-WOM_9 ("Make travel planning more enjoyable.")	0.823			
E-WOM_10 ("Help me save time in the travel planning process.")	0.833			
PURCHASE INTENTION		0.84	0.904	0.757
PI_1 ("If I had to do it over again, I would make the next purchase again from online mode." (using sites like Booking.com, Make my trip, Yatra etc)	0.881			
PI_2 ("I feel buying travel products online has more benefits.")	0.874			
PI_3 ("The choice to purchase from an online medium was a wise one.")	0.855			

Then, discriminant validity for the first-order constructs is examined by the Fornell and Larcker criteria and the HTMT ratio. According to the 'Fornell and Larcker Criterion', the Square Root of AVE for each individual construct should be bigger than the correlation with other constructs for all components (Table-3), while an HTMT value of less than 0.90 is taken to be the threshold for establishing 'Discriminant Validity' which is satisfied in this research (Table-4). Therefore, all the first-order constructs are proven to be reliable and valid.

Table 3: - Assessment of Discriminant Validity using Fornell and Larcker Criterion (1981) (First-order constructs)

Constructs	Fulfillment	User interface and interactivity	Reliability	Incentives	E-wom	Purchase intention
Fulfillment	0.721					
User interface and interactivity	0.535	0.73				
Reliability	0.533	0.612	0.73			
Incentives	0.23	0.568	0.448	0.797		
E-wom	0.363	0.488	0.318	0.503	0.769	
Purchase intention	0.345	0.515	0.281	0.417	0.539	0.87

Table 4: - Assessment of Discriminant Validity using 'HTMT Ratio' (First-order constructs)

Constructs	Fulfillments	User interface and interactivity	Reliability	Incentives	E-wom	Purchase intention
Fulfilment						
User interface and interactivity	0.608					
Reliability	0.667	0.805	0.609			
Incentives	0.284	0.74	0.379	0.617		
E-wom	0.396	0.553	0.343	0.537	0.607	
Purchase intention	0.607	0.61				

5.5 Structural Model (with First-order constructs)

The next stage was to find the hypothesised causal linear connection between the exogenous and endogenous variables. The structural model obtained after a bootstrapping procedure consisting of 5000 re-samples (Hair et al., 2019) explain that the value of R² i.e. Coefficient of Determination for the construct 'Purchase Intention' is 38.5 % which means the four dimensions of e-service quality and 'E-WOM' can explain 38.5% of the variance in 'Purchase Intention' (Fig-1). The following table (Table-5) shows the significance of the paths from the first order constructs to the dependent variable. It can be observed that all the paths are significant, except the path from Incentives to Purchase Intention.

Table 5: Path coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Fulfilment ->PI	0.092	0.04	2.288	0.022
Interactivity ->PI	0.312	0.055	5.686	0.000
Reliability ->PI	0.111	0.047	2.372	0.018
Incentives ->PI	0.098	0.056	1.757	0.079
E-Wom ->PI	0.34	0.054	6.235	0

Figure 1: The Measurement and the Structural Model of the study
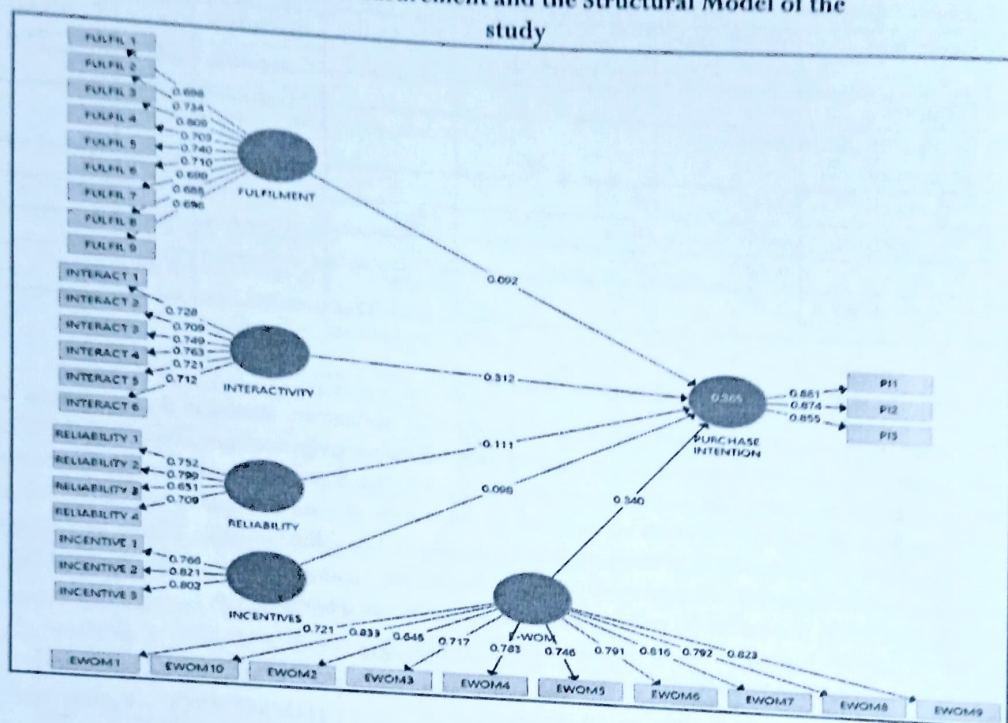
However, the substantial inter-correlations observed between the components clearly implied a higher-order component. This higher order construct is thus built on a reflective-reflective scale. The reflective-reflective higher-order construct was developed using repeated indicators approach where the reflectively measured lower-order components' indicators are assigned to the higher-order construct's reflective measurement model.

5.6. Validating the higher-order construct

As advised by Sarstedt et al. (2019), the higher-order construct is examined for reliability, convergent validity as well as discriminant validity with lower-order constructs in the research. Discriminant validity is established using both the Fornell and Larcker criteria as well as HTMT Ratio. The results reveal that both reliability and validity for the higher-order construct has been established (Tables 6, 7 and 8).

Table 6: Higher Order Construct Reliability and Convergent Validity

Construct	Cronbach's alpha	Composite reliability	Average variance extracted (ave)
E-travel site quality	0.792	0.864	0.616

Table 7: Fornell and Larcker (1981) Criterion – Higher-order Discriminant Validity

Construct	E-travel site quality	E-wom	Purchase intention
E-travel site quality	0.785		
E-wom	0.552	0.769	
Purchase intention	0.516	0.537	0.87

Table 8: HTMT – Higher-Order Discriminant Validity

Construct	E-travel site quality	E-wom	Purchase intention
E-travel site quality			
E-wom	0.623		
Purchase intention	0.608	0.607	

5.7. The final Structural Model (with the higher-order construct)

The final step was to determine the exogenous (independent) and endogenous (dependent) latent variables' hypothesized causal linear relationship. The value of R^2 i.e. Coefficient of Determination for the construct 'Purchase Intention' rises to 46.4 % which means 'E-Travel Site Quality' and 'E-WOM' together are able to explain 46.4% of the variance in 'Purchase Intention'. As a result, analysing E-Travel Site Quality as a second-order construct enhances the hypothesised model's prediction from 38.5 percent to 46.4 percent, implying that consumers evaluate E-Travel Site Quality as a whole rather than its individual dimensions separately. Therefore, it can be concluded that the model is moderately fit. The path coefficients (β) are shown in Table-9.

Table 9: Path coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ($|O/STDEV|$)	P Values
H1: E-Travel Site Quality -> Purchase Intention	0.315	0.04	7.857	0.000
H2.1: E-Wom -> Purchase Intention	0.364	0.052	6.992	0.000

Both the paths E-Travel Site Quality and E-WOM towards Purchase Intention are found to be significant. The highest significant relationship is observed to be between E-WOM and Purchase Intention ($\beta=0.364$ or 36.4% and t= 6.992) followed by E-Travel Site Quality on Purchase Intention ($\beta=0.315$ or 31.5% and t= 7.857).

5.8. Mediation Analysis

To determine the mediating role of E-WOM on Purchase Intention, a mediation study is conducted. The results (see Table 10) reveal significant ($p<0.01$) mediating role of E-WOM (H2.2: $\beta =0.201$, t=7.149, $p<0.01$). The total effect of 'E-Travel Site Quality' on Purchase Intention is observed to be highly significant ($\beta =0.516$, t=17.113, $p<0.01$). The direct impact is still significant when the mediator is included ($\beta=0.315$, t=7.857, p0.01). As a result, E-WOM mediates the association between E-Travel Site Quality and Purchase Intention to some extent. As a result, H2.2 is accepted.

Table 10: Mediation Results (E-WOM as a mediator between E-Travel Site Quality and Purchase Intention)

Total Effect E-TRAVEL QUALITY PURCHASE INTENTION	SITE ->		Direct Effect E-TRAVEL QUALITY PURCHASE INTENTIO	SITE ->	Indirect Effect E-TRAVEL SITE QUALITY -> PURCHASE INTENTION				
Coefficient	p-value		Coefficient	p-value	HYPOTHESIS	Coefficient	SD	T-value (Bootstrap)	p-value
0.516	0.000		0.315	0.000	H2.2: E-TRAVEL SITE QUALITY ->E-WOM -> PURCHASE INTENTION	0.201	0.027	7.419	0.000

5.9. Moderation Analysis

The strategy used for analysing the moderating effect is the interaction-effect or product-term effect approach. The moderating impact is represented by a new structural link in the structural route model (Henseler & Fassott, 2010). The results are presented in Table 11. It can be seen from the results that there is no moderation effect observed of the concerned variable, that is, E-WOM do not moderate the relationship between E-Travel Site Quality and Purchase Intention. (β =-0.021, t=0.174, p>0.05). Thus, Hypothesis H2.3 is rejected. This implies that the presence of E-WOM neither strengthens nor weakens the impact of E-Travel Site Quality on Purchase Intention.

Table 11: Result of Moderation of E-WOM between E-Travel Site Quality and Purchase Intention

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
H2.3: Mod_Ewom ->E-Travel Site Quality_Purchase Intention	-0.021	0.002	0.122	0.174	0.862

The structural model here is also evaluated by 'Effect size' (f^2), 'Predictive relevance' (Q^2) and 'SRMR'. Cohen (1988, p.413) claims that f^2 values of 0.02, 0.15, and 0.35 indicate weak, moderate, and substantial effects, respectively, for the important independent variables. Both E-Travel Site Quality (f^2=0.107) as well as E-WOM (f^2=0.143) are observed to have a moderate effect on Purchase Intention. The Stone-Gaisser Q^2 values for the constructs are revealed to be above the minimal criterion of zero ($Q^2 = 0.265$) using a blindfolding test (omission distance = 7) (Fornell and Cha, 1994). As a result, the findings have a high predictive value. Because the model contains reflective components, Model Fit in PLS is performed using the Consistent PLS method. The Standardized Root Mean Square Residual (SRMR) value of 0.065 indicates that the model fits well (SRMR<0.08 criteria) (Hu & Bentler, 1999; Henseler et al., 2014).

The following figure depicts the entire Structural Model.

Figure 2: The Final Measurement and the Structural Model (with R^2 values)
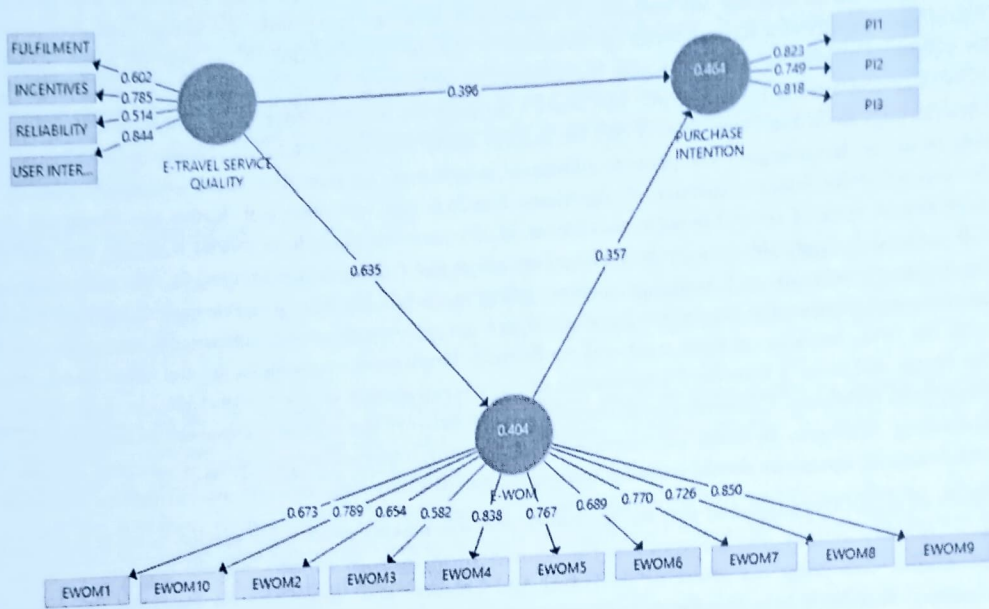
THEORETICAL AND MANAGERIAL IMPLICATIONS

The focus of this research was to determine how the quality of e-travel sites and E-WOM influence purchasing intentions for online travel products and services. Only a few researches have been conducted to better understand online customer behaviour while making online bookings, with the bulk of studies on online travel purchase behaviour focusing on the quality of travel website service or the effect of travel reviews. However, no study has attempted to combine these two traits, to the best of the author's knowledge.

The empirical findings of EFA are in line with several prior research findings (Elci et al., 2017; Ho & Lee, 2007; Bai et al., 2008) and results of CFA showed that the factors are reliable, valid and distinct from each other. The 'User Interface and Interactivity' dimension comprising of items like website design, customizable features, providing a platform to share personal experiences, chat box option and providing individual and personalized attention to users is found to be the most significant factor influencing online travel purchase intention. This proves that website design, graphics, customizable features, chat rooms, etc. have the highest impact on 'Purchase Intention'. For instance, based on the customer's preferences when a travel web site recommends other travel products or information, it increases the credibility of the site. The second most important factor is found to be the 'Reliability' dimension comprising of factors like showing confirmation of items and running total of purchases, having a dedicated FAQ page and providing price comparison functions. The third significant dimension is found to be 'Fulfillment' comprising of

factors like security of payment, information accuracy and reliability and customer responsiveness. The fourth dimension 'Incentives' comprising of items like membership bonus, special offers, installment payments, etc. was observed to not having any significant effect on Online Purchase Intention. However, when E-Travel Site Quality was evaluated as a latent higher-order construct, it is found to load perfectly on the second-order construct. Therefore, Online Travel Agents should constantly monitor and re-examine their sites to check whether any updating is required or whether any feature is lacking. Also, evaluating E-Travel Site Quality as a second-order construct increased the predictability of the hypothesized model from 38.5 percent to 46.4 percent, implying that customers perceive E-Travel Site Quality overall rather than its individual dimensions in exclusion. The study's findings on second-order reflective construct are in line with findings from Lin et al. (2005) and Ho & Lee(2007) who suggested that second-order constructs are able to obtain large impact and provide additional information on how first-order constructs interact with the second-order latent construct. A significant research gap was observed during the literature review stage that in spite of several benefits that hierarchical constructs provide in model building, the concept is still not widely applicable. As a result, the information and conclusions presented in this study will add to the existing literature and academic understanding in this field. The positive experiences of previous, current, and prospective passengers have an impact not only on their decision to continue doing business with the firm, but also on their trust and confidence. Unpleasant encounters, on the other hand, degrade the brand and modify travellers' impressions of the overall quality of the e-travel site; perhaps preventing them from returning. Customers' evaluation of service delivery is a critical component in the formulation of marketing strategies. In order to examine the underlying information regarding consumers' expectations and demands, operators should consider using customer-friendly measures and market-driven initiatives.

Brady et al. (2005) suggested that the consumer decision-making process for service items is best modeled as a complex system that incorporates the assessment of both direct and indirect impacts on behavioral intentions. Analyzing the effect of 'E-Travel Site Quality' and 'E-WOM' on Purchase Intention, it is observed that both have significant impacts on Purchase Intention, yet the effect of E-WOM is slightly higher than 'E-Travel Site Quality'. Also, E-WOM partially mediates the relationship between 'E-Travel Site Quality' and Purchase Intention. Therefore, the potential customer value user generated content more than the marketing communications from e-travel sites. This is consistent with the findings of Gretzel & Yoo(2008), who found that consumers of travel reviews believe customer evaluations are better than marketing content in terms of being up-to-date, trustworthy, and engaging.In today's world, a solid destination image and high service quality are no longer adequate; e-WOM has shown to be a cost-effective strategy to advertise a tourism site. Online Travel Agents should place a special emphasis on how to leverage public admiration for a travel website. Individuals place a high value on the opinions of their peers, particularly the professional opinions of insiders and enthusiasts. To allow members to exchange information, relationship-building technologies such as a travellers' forum, travel networks, and interaction mechanisms like messaging options should be incorporated. Considering the significance of travel reviews and the numerous benefits they provide for travel organizers, systems must be constructed in such a manner that they not only make travel reviews widely available, but also make it simple for travellers to contribute reviews. In order to make trip planning more effective, evaluations should be smoothly linked with other material such as maps and pictures or videos, rather than just relying on some special dedicated sites. Allowing clients to establish their own online logs and organizing competitions for the best photo or best write-up with the most views can be an interesting way to engage customers. However, the art of interpreting customer mood by analyzing traveller evaluations is still in its infancy. The findings from the present study will contribute towards the academic knowledge pertaining to consumer behaviour in e-travel

context as it substantially generates more apt understanding of the travel web site usage behaviour and online travel reviews on Purchase Intention than any previous research in this subject.

LIMITATIONS AND FUTURE SCOPE OF THE STUDY

The model is based on the findings of several studies conducted in the fields of computer technology, consumption patterns or consumer behaviour, psychology, and marketing. Nonetheless, there may always be factors influencing customers' online purchase intentions that have not been addressed in the literature. The main study, despite the limitations noted above, gives valuable insight into how online tourist websites could design their pages based on these particular criteria in order to affect purchase intent and visitor recommendations.

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THIRD
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❖ **Religious Tourism**

An Empirical Study of Factors Affecting Consumer Decision Making in the Indian E-Tourism Market

Satadruti Chakraborty* & Dr. Dipa Mitra**

[The purpose of this study is to determine if online word-of-mouth communication promotes travel purchase intent by mediating the impact of the level of service provided by travel websites or whether it has a higher or lower impact on travel purchase decisions independently when compared to marketing communications from e-travel sites. The study employed Structural Equation Modelling Techniques using AMOS to evaluate the underlying assumptions, and the findings show that both have a considerable impact on buying intention, with the impact of online word-of-mouth communications somewhat outweighing the impact of online service quality of travel websites. The study here considers online service quality of travel websites as a second-order construct with four sub-dimensions. The results of this study will advance academic understanding of consumer behaviour in the context of e-travel in a developing nation like India because they produce a significantly more accurate understanding of travel website usage behaviour and online travel reviews on Buying Intention than any previous research on the topic.]

The travel and tourism sector has been a crucial driver of growth in India's service economy.. The internet provides potential travellers with a platform to communicate with travel vendors and other travellers in addition to being a source for them to plan their vacations. People can now obtain information from strangers around the world who may have used a particular product or been to a particular location instead of merely relying on information from tourism organisations, acquaintances, and family members. Because of this, customers now feel more empowered, and the Internet has become the most effective and influential instrument for making decisions for contemporary travellers. The goal of this study is to ascertain if user-generated material, when compared to marketing messages from e-travel sites, encourages travel buying intent and whether it mediates the influence of website-based service delivery perceptions.

Research Objective

- To determine whether the likelihood of making a booking is significantly influenced by perceptions of the quality of travel websites.
- To understand whether the intention to book is significantly influenced by user-generated material.
- To determine whether user generated content mediates the influence of travel website quality on booking intentions.

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Theoretical Background

Service Quality of online travel booking sites

Academicians have long discussed the consequences of determining a website's effectiveness. According to the findings of several researchers, well-designed travel websites can draw in more potential customers than those with poor design. As a result, websites for travel service companies are absolutely essential to their operations. Few studies have specifically examined the calibre of e-travel services. For instance, based on the SERVQUAL instrument, the E-QUAL Scale was created by Kaynama and Black in 2000 to assess the effectiveness of online travel agents. Ho and Lee (2007) assert that a number of important and essential issues regarding the evaluation of e-travel services may not be appropriately addressed by dimensions from other service settings. The quality of an e-travel site is a key component in its success in the tourism industry, according to a recent study by Elci et al. (2017) that analysed the impact of 'Website Design Quality' on 'Bookings and Reservation Intentions'. According to Kumra and Singh (2018), 'Information', 'Responsiveness' and 'Security' are the three main criteria that significantly influence customer satisfaction when making online travel reservations in India. In accordance with the findings of several researchers (Taryadi et al., 2021; Sukarsa et al., 2022; Muzakir et al., 2021), perceptions of service quality have a sizable positive impact on visitors' decisions to travel.

Impact of User-generated content

According to several researchers (Xiang and Gretzel, 2010; Ye et al., 2011; Casaló et al., 2010), customer testimonials and endorsements not only aid prospective tourists in their planning and information-seeking on the

internet, but they also offer some crucial inputs for the travel industry. Therefore, e-WOM might be very important for both customers and travel companies in the online tourism business. WOM influences the consumer's awareness, perceptions, product evaluations, intentions, and expectations in the decision-making process, according to Choirisa et al. (2021). As electronic word-of-mouth is available for any service, tourist marketers must compete with user-generated content on a variety of social media platforms in addition to striving to provide interesting, intriguing, and engaging content for their websites. It is crucial for tourism planners and providers to identify and track patterns in online consumer communication during this stage in order to influence decision-making behaviour because the majority of travellers seek e-WOM during the information search stage. Knowing the impact of e-WOM will therefore open the door for better marketing outcomes.

Hypotheses Development

The following hypotheses are proposed for the study:-

H_1: The overall evaluation of a tourism website's quality has a significant impact on a customer's booking intention.

H_2: User-generated content has a significant impact on customer's booking intention.

H_3: The presence of user-generated content mediates the impact of the tourism website on booking intention.

Research Methodology

The items used to measure the components are taken from prior studies to ensure content validity. For understanding website quality of online travel sites, Ho & Lee's (2007) scale on Travel Website Quality has been adapted. The construct user-generated content which consists of 10 components, has been adapted and modified from Gretzel and Yoo (2008). Three components that make up the construct 'Booking Intention' were taken from several studies (Puspitasari et al., 2021). A 5-point Likert scale is used to evaluate responses to each of these assertions.

The research in this article is exploratory in nature and employs quantitative research methods. The study's data was gathered using questionnaires. The investigation consists of 42 items, to which 521 responses were gathered. SPSS software and Structural Equation Modelling techniques using Covariance based AMOS has been utilised for the current study.

Data Analysis and Interpretation

The response rate was 81% (n=521). 52% of the responses are from men, while 48% are from women. The majority of responders (58%) are between the 26–40 age ranges. Graduates make up 49% of the total, while postgraduates make up 41%. 39.6% of people earn more than Rs.10 lacs annually, compared to 34 percent who earn between 5 and 7 lacs.

In this study, Website Quality is considered as a second order component. The number of path-model links is minimized when a higher order concept is used, leading to parsimonious models. Hence, the items relating to the scale that tried to capture the dimensions of Travel Website Quality were put through Exploratory Factor Analysis in the first stage of the study.

Exploratory Factor Analysis

Principal Component Analysis with orthogonal varimax rotation were used to create the initial responses for the EFA. Both the Bartlett's test for sphericity and the Kaiser-Meyer-Olkin (KMO) test for sample adequacy found statistically significant connections between the items, indicating that they are appropriate for EFA. Four dimensions—Information Accuracy and Security, Website Design, Functionality and Inducements—were found based on the eigenvalue and variance explained.

In the second phase of the study, the created conceptual model was assessed by checking the Structural Model as well as the Measurement Model.

Structural Equation Modelling

Measurement Model Analysis

Using Confirmatory Factor Analysis, the measurement model's overall performance was evaluated. The research started with testing the reliability and validity of the individual constructs. As part of the measurement model evaluation, the higher-order construct was validated with the other lower order constructs. The constructs' reliability and convergent validity were evaluated in this study. In addition, the higher-order construct was also examined for discriminant validity with lower-order constructs in the research. The results for higher-order constructs' reliability and validity reveal that both reliability and validity have been established. The factor loadings, Cronbach's alpha, AVE, and CR for each factor are shown in Table 1. The permitted factor loading, according to Bagozzi and Yi (1988), is between 0.50 and 0.95. The average variance extracted (AVE) is above 0.50, while the acceptable value of composite reliability (CR) is over 0.70 (Fornell & Larcker, 1981). Obtaining a Cronbach alpha score of 0.70 or higher meant the measurement was reliable (Hair et al., 2010). Each factor loading was between 0.60 and 0.88. Due to low factor loadings, three indicators of the construct UGC (UGC1, UGC2 AND UGC3) were dropped from the study. Cronbach's Alpha Scores of 0.80 to 0.88, which are higher than 0.70, indicate credible measurements. High convergent validity was indicated

by the latent constructs' AVE, which was greater than 0.5 and varied from 0.59 to 0.65. The Composite Reliability scores for all constructs were in the range of 0.86 to 0.93, which is higher than the cut-off of 0.70 and shows that the measuring items for each construct had a high level of internal consistency.

Table 1: CFA and Measurement Reliability (n=521)

Constructs	Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE
Travel Website Quality	0.60-0.88	0.80	0.864	0.616
User-generated content	0.64-0.83	0.88	0.93	0.59
Booking intention	0.85-0.88	0.84	0.90	0.65

Notes: Fit indices: $\div 2 = 1043.4$; $df = 265$; $\div 2/df = 3.93$; AGFI = 0.895; GFI = 0.88, CFI = 0.90, RMSEA = 0.055

Table 2: Discriminant Validity Measures

	AVE	Travel Website Quality	UGC	Booking intention
Travel website quality	0.62	0.787		
Ugc	0.59	0.552	0.768	
Booking intention	0.67	0.516	0.537	0.82

The anticipated inter-correlations between all variables in Table 2 were lower than the square roots of the AVE for each concept, suggesting discriminant validity (Fornell & Larcker, 1981). The root mean square error of approximation (RMSEA=0.055), whose cut-off point is 0.08 (Hu & Bentler, 1999), the comparative fit index (CFI=0.90), and the goodness of fit index (GFI=0.88), which is at the threshold i.e. > 0.90 (Hair et al., 2010), all suggest that the data fits the measurement model in a satisfactory level.

Structural Model Analysis and Testing of Hypothesis

After the measurement model's accuracy had been confirmed, AMOS was used to analyse the structural model and test the hypotheses in order to examine the relationships. The squared multiple correlation for booking intention was found to be 0.46, indicating that Travel Website Quality and User-generated Content account for 46% of the variance in Booking Intention. It should be emphasised that this structural model should be used even if the squared multiple correlation value is low, as it frequently is in behavioural science prediction models, where R-squared values are frequently found to be less than 50%. The logical claim is that individuals are more unpredictable than physical systems (Frost, 2009). Additionally, it is suggested that important inferences can be drawn even if the R-squared value is small but the predictors are statistically significant. Here, it was discovered that the two predictors are statistically significant predictors. Table 3 presents the outcomes. Both the paths are found to be positive and significant. The highest significant relationship is observed to be between User-Generated Content and Booking Intention (b= 0.41, t = 8.83, p < 0.05) followed by Travel Website Quality on Booking Intention (b= 0.362, t = 6.52, p < 0.05). Hence, hypotheses HI and H2 are accepted.

Table 3: Structural Path Relations using AMOS

H.No.	PathRelations	Estimate	StandardError	C.R.	P	Supported/NotSupported
H1.	TWQ->BI	0.36	.069	6.52	***	Supported
H2.	UGC->BI	0.41	.082	8.83	***	Supported

Mediation Analysis

The study evaluated the mediating impact of user-generated content on the association between the quality of a travel website and intention to book. The findings supported H3 by showing a substantial indirect and favourable impact of travel website quality on booking intention (b=0.232, t=6.70, p=0.005). The direct impact of travel website quality on booking intention was also discovered to be significant (b=0.36, p=0.00) in the presence of the mediator. Consequently, User-generated Content had a role in mediating the link between Booking Intention and Travel Website Quality. The summary of the mediation analysis is shown in Table 4.

Table 4: Mediation Results

| H.No.	Relationship	Direct Effect	Indirect Effect	Confidence Interval		P-value	Conclusion
				Lower Bound	Upper Bound		
H3.	TWQ->UGC->BI	0.36	0.23	0.178	0.286	0.005	Partial Mediation

Table 5 provides a summary of the model fitting requirements. All of the results were seen to belong within acceptable ranges. Fit matrices (CMIN DF = 3.56, GFI=0.92, CFI=0.94, TLI=0.95, RMSEA = 0.04, SRMR = 0.06) revealed that the model fits the data well. Figure 1 shows the whole model in its entirety. As a result, we can draw the conclusion that the research supports Hypotheses H1, H2, and H3.

Table 5 Model Fit Indices using AMOS

Fit indices	Acceptable fit	Value obtained using AMOS
CMIN DF (<2 df)	2-5	1043.4/265=3.93
Goodness-Of-Fit Index(GFI)	Value >0.95 good fit; value 0.90-0.95 adequate fit	0.92
Comparative Fit Index(CFI)	Value >0.95 good fit; value 0.90-0.95 adequate fit	.94
Tucker Lewis Index(TLI)	Value >0.95 good fit; value 0.90-0.95 adequate fit	.95
Approximation Residual (RMSEA)	Value<0.05 goodfit; value 0.08-0.05 adequate fit	.04
SRMR:	<0.08	0.06

Figure 1 : Full Structural Model using AMOS
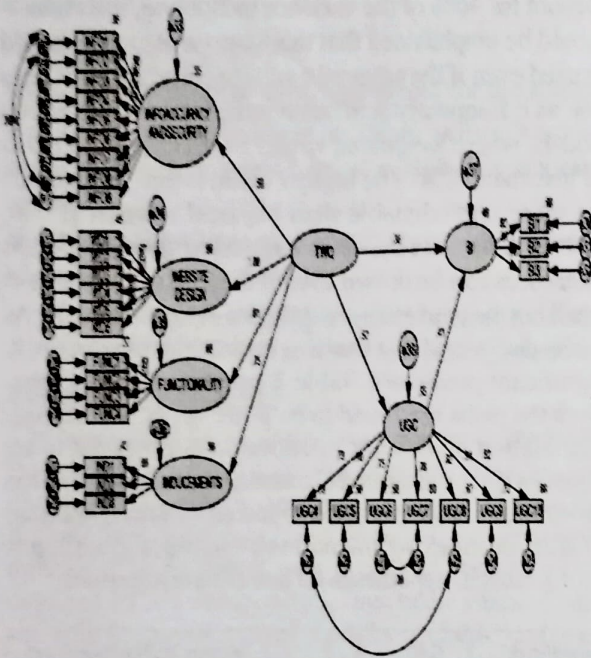
[Source: Researcher's Analysis]

Discussion

The study employed AMOS to evaluate the underlying assumptions, and the findings show that both have a considerable impact on booking intention, with the impact of user-generated content somewhat outweighing the impact of travel website quality on booking intentions. Additionally, it has been discovered that user-generated content partially mediates the impact of the quality of travel websites on booking intentions, suggesting that information or promotions from travel websites are also verified through customer reviews prior to any purchase decisions being made. Hence, it can be stated that public word of mouth is quite crucial for online travel Agents and this issue should be taken in mind. Systems must be designed in such a way that they not only make travel reviews publicly available but also make it simple for travellers to provide reviews, given the relevance of travel reviews and the multiple advantages they provide for travel organisers. This study's results give tourist marketers knowledge that can use to enhance their internet marketing strategies because it has been predicted that the future of internet-based tourism will be centred on consumer-centric technology that will help tourist organisers in dynamically interacting with their clients.

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DETERMINANTS OF ONLINE TRAVEL PURCHASE INTENTION: UNDERSTANDING THE MODERATING ROLES OF SOCIO-DEMOGRAPHIC VARIABLES IN THE CONTEXT OF A DEVELOPING COUNTRY

SATADRUTI CHAKRABORTY AND DR. DIPA MITRA

ABSTRACT

The influence of website service quality and consumer reviews on online booking for tourism services has been substantiated by a number of researches, yet there is hardly any research on the influence of socio-demographic variables on tourism purchase intention. The purchase stage in the online tourism market is heavily influenced not only by the informational parameters which include extensive and accurate information as well as traveller reviews, but are also affected by the socio-demographic parameters of the potential travellers. Even though several studies (Valaei and Jiroudi, 2016; Saleki et al., 2021) have observed that demographic variables act as moderators on consumer purchasing intentions, relatively little study has been done in the field of online tourism market, especially in a developing country context like India. Given India's rapidly rising Internet population, which is on track to overtake China as the world's second-largest e-commerce industry, study into factors that influence Indian customers' purchasing decisions is long overdue. The principal aim of this research is to understand the role that socio-demographic factors play on decision-making in the online travel industry. There has been relatively little study done in this area and given the aforementioned study gap, understanding the role and impact of these variables on consumer purchase intentions in the online tourism sector in India is crucial. The study performed Partial Least Squares based Multi Group Analysis to test whether socio-demographic based groups yield significant differences in their online travel purchase intention. Here five socio-demographic parameters were undertaken for the current study: gender, age, education, income and nature of traveller (occasional v/s frequent traveller). Even though gender was not found to act as a significant moderator on purchase intention, other variables like age, education, income and traveller's nature was found to significantly moderate travel purchase intention based on impact of website quality and e-WOM. This study adds to the growing body of work on the quality of tourism services in a web-based context. The implications of the research followed by the recommendations that have been provided will prove to be useful for marketing managers and practitioners who build strategic plans and implement solutions to increase tourist online shopping through B2C e-commerce. Because the modern day travellers plan their trips via the internet, the study aims to add to the body of knowledge about the moderating influence of socio-demographic variables on tourism website quality and e-WOM which ultimately lead to booking/reservation/purchase intention.

Keywords: Tourism Sector; Socio-demographic variables, Travel website quality; e-WOM; Structural Equation Modelling; Partial Least Squares Multi Group Analysis

INTRODUCTION

The advancement of technology in recent years, notably in the fields of communication and Web technology, has drastically changed how individuals seek information, make decisions, and acquire goods and services. The entire digitization process has ushered in a change in the tourism business. According to a report by the Indian Brand Equity Foundation (2018), India is emerging as one of the most digitally-advanced traveller nation with more and more citizens opting for digital tools to plan, book and experience a journey. According to the article, there are high chances of India to reach the top five business travel market globally by 2030. The most sought-after traditional offline travel agent is also now trying to utilise the online market to maintain its fast losing segment of potential travellers. Consumers in India generally avail both online and offline sources of information when planning for a trip. However, according to various survey reports, the majority rely on online channels as they conceive that online platforms offer better deals, discounts and more convenience than offline modes. Notwithstanding the fact that the internet has become a boon for the travel industry, certain features of e-commerce have also led to fierce competition among the online travel agencies. For example, price wars are a thing of the past now as pricing is now transparent on the internet platforms. The switching cost for customers is also low hence it becomes hard for the OTAs to retain customer loyalty. Therefore, the only way to differentiate and create a place in the consumer's mind is by providing a superior quality of service.

The purchase stage in the online market which comprises of the online booking part is heavily influenced not only by the informational parameters which include extensive and accurate information as well as availability, but they are also affected by the socio-demographic parameters of the potential travellers. The influence of

website service quality on online booking has been substantiated by a number of researches (Dutta et al., 2017; Li, 2018). The other factor that plays a significant role on purchase intention of travellers is user-generated content or e-WOM about the potential travel product or service (Xiang and Gretzel, 2010; Choirisa et al., 2021). Even though several studies (Valaei and Jiroudi, 2016; Saleki et al., 2021) have observed that demographic variables act as moderators on consumer purchasing intentions, there is hardly any research on the moderating impact of these variables on tourism purchase intention, especially in a developing country context.

Given India's rapidly rising Internet population, which is on track to overtake China as the world's second-largest e-commerce industry, study into the factors that influence Indian customers' purchasing decisions is long overdue.The principal aim of this research is to understand the role that socio-demographic factors play on decision-making in the online travel industry. There has been relatively little study done in this area and given the aforementioned study gap, understanding the role and impact of these variableson consumer purchase intentions in the online tourism sector in India is crucial.

The paper has been structured as follows: the next section gives a detailed literature review on the subject followed by hypotheses development. The following section presents the methodology followed by analysis and findings from the study. The last section presents the implications, limitations and the conclusion.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Impact of Travel Website Qualityon Purchase Intention

Fishbein and Ajzen (1975) were the first to propose that 'Purchase Intention' might be utilised as a predictor of consumer consumption behaviour. Understanding clients' buying intentions is critical since intentions can predict actual behavior.'Purchase Intention' means a consumer's eagerness for a definite product or brand. The way to measure purchase intention is to enquire about the possibility of buying the product/service. Various studies (Lee et al., 2016; Huang et al., 2014) have proved 'Service quality' has the strongest effect on 'Purchase intention'.Because there is no real context in the online world, an appealing 'Website design' is essential for attracting and engaging clients. Firms that provide high-quality e-services are more likely to gratify their clients, according to Ataburo et al. (2017), who will then buy and re-buy the product/service. Among the many factors that influence online travel purchase intent, website design or website quality may be considered the most important influencer, having a significant impact on consumer satisfaction and trust.Elci et al. (2017) evaluated the influence of 'Website Design Quality' on 'Bookings and Reservation Intentions'. The model was empirically evaluated with 700 samples acquired through a survey among internet travellers. The study revealed that an e-travel site's quality is a critical factor in its success in the tourism business.Several researches (Purnamasari and Budiatmo, 2019; Illah et al., 2019) believe that perceptions of 'Service quality' have a considerable favourable influence on 'Visiting decisions'. Therefore, the following hypothesis is formulated:-

H1: There is a significant impact of Travel Website Quality on Purchase Intention of Travel products.

IMPACT OF E-WOM ON PURCHASE INTENTION

For information-driven service industries like music, movies, tourism, etc. the internet is an extremely powerful medium. The growth and reach of technology have changed the scope and prospects for word-of-mouth communication. For potential travellers, electronic word-of-mouth has become the most convenient and sought-after avenue for obtaining accurate information. Gretzel and Yoo (2008) conducted a study to investigate how e-WOM from online reviews is being used for different parts of travel planning. They are of the opinion that online reviews are an extremely important source of information for prospective travellers since a majority of review readers feel that reading reviews increases their confidence levels, reduce risks and makes the decision-making process easier. Some of them also feel that reading reviews makes the planning process more enjoyable and aids in imagination.Several scholars (Xiang and Gretzel., 2010; Ye et al., 2012) have noted that testimonials and endorsements from customers not only help the prospective traveller to plan and search for information on the internet but also provide certain valuable inputs for travel businesses. Kim et al. (2012) states that potential tourists are prone to look for 'Online travel reviews' before taking any travel decision in order to reduce risk and get social reassurance especially in accommodation related decisions. Ramanathan (2012) notes online guest ratings are getting increasingly important for online customers in hotel selection and hotel bookings.Cao et al. (2017) mentions social media is also highly favoured by tourists. The behaviour of tourists can be heavily influenced by the communication and discussions available on social media platforms. Choirisa et al. (2021) notes that WOM affects the consumer's awareness, beliefs, product evaluations, intentions and expectations in the decision making process.Therefore, in the online tourism market e-WOM can play a significant role for both consumers and tourist firms. The consumers can get their share of required information, advice or planning schedules while the tourist firms can get visibility in the market domain from positive messages by customers. Therefore, the following hypothesis is proposed:-

H2: There is a significant impact of electronic word-of-mouth communication on Purchase Intention of Travel products.

Impact of Socio-Demographic Variables on Travel Decisions

The primarygoal of the research here is to understand the differences of certain socio-demographic variables (gender, age, education, income and nature of traveller) on travel decisions. Given the complexity of the subject, the impact of categorical variables on behavioural intentions is essential in theory testing (Cohen, Cohen, West & Aiken, 2003).

According to some researchers (Bakshi, 2012; Ye and Robertson, 2012), studies on consumer behaviour generally suggest apparent distinctions between male and female consumers in each stage of the decision-making process. Men and women have different impressions of travel website functioning and online search behaviour, according to Kim et al. (2007), who researched gender implications on visitors' information search. Females are more likely than males to browse travel websites, and they value both online and offline sources of information while looking for a vacation destination.Okazaki (2007) found that females have a higher preference towards mobile advertising than males. Meng and Uysal (2008), on the other hand, point out that findings on the influence of gender differences in tourism studies have been mostly inconsistent.Green and Singleton(2013) have found significant difference between male and female tourists on their decisional variables while Lin et al. (2014) observed no difference. Men and women interpret information differently, according to Kim et al. (2012). Women considered e-WOM to be more convenient than males, according to the research.

The second demographic variable considered in the research here relates to age of the potential travellers. Mostaghel (2016) notes that there is a stereotype that older adults are far removed from technology and services. Age was found to significantly influence technology adoption and usage in a study on mobile banking adoption in India (Chawla &Joshi,2017).Park et al. (2013) proposes that in the context of the elderly and ICT adoption, an absence of support, feelings of frustration and nervousness, a perceived lack of benefits, the complexity of learning, insufficient knowledge or bad prior experience all powerfully influence the elderly person's decisions about adopting technology.

The third socio-demographic variable, 'Level of income,' is also assumed to have an impact on consumer preferences. In a study conducted by Boztepe(2012), income was found to moderate consumer behaviours on purchasing of green products. Consumers with low income levels are affected by promotion activities rather than price, as is commonly assumed. The middle-income group, on the other hand, is more environmentally conscious and takes price into account.On the other hand, for the higher income group, promotion and environmental awareness are extremely important. Another study on consumer attitude towards private label brands by Shukla et al. (2013) point out that higher-income consumers respond favourably to end-of-aisle display proneness during physical shopping for branded labelled products. Ali et al. (2020) also noted that higher-income individuals are more confident of adopting technology compared to people belonging to lower-income groups.

The fourth variable 'Education Level' was found to moderate purchasing of green products in a study by Boztepe (2012). It was observed that green promotion has an effect on purchase decisions for elementary school graduates while for high school graduates, price and product features affect purchase of green products. On the other hand, for graduates and undergraduates, environmental awareness, product features and promotions affect their purchasing considerations. In another study by Shukla et al. (2013), higher educated consumers show more affinity towards end-of-aisle display products as it is more convenient to purchase. In a study on consumer adoption of online food delivery services by Ali et al. (2020), it was observed that less educated people have less cognitive skills which restrict their capability to learn new technology. Wang et al. (2019) also notes that higher-educated people show higher environmental concern and subjective norms compared to the low-education group.

The fifth and final variable for the study related to frequency of travel by the respondents. Woodside et al. (2016) defines 'Frequent Travellers' are the ones reporting four or more trips every year. For a developing country like India, where the majority of the population belongs to the middle-class segment, here 'Frequent travellers' are hypothesised as those who reported having more than two trips per year, while 'Occasional Travellers' are the ones who reported travelling for twice or less than two times per year. Tan et al. (2007) also noted differences in perception of preferences among business/leisure and frequent/infrequent travellers on customers of mobile tourism services. Lubbe et al. (2011) found significant differences in perception of services offered by airports in South Africa between frequent travellers and infrequent travellers as well as business and leisure travellers. Woodside et al. (2016) investigated whether heavy users of travel services differ substantially

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from light users and non-users. The findings indicated that they do differ from light and non-users based on demographic and media behaviour characteristics. They also clarified that it is important to understand this demarcation as it is useful in planning customer segmentation strategies and loyalty marketing strategies, for example – special service products, frequent hotel and airline programs etc. Understanding the uniqueness of each segment is crucial for profitability in travel service industry. The self-perception theory was used by Woosnam et al. (2018) to explain inhabitants' opinions of the degree of travel. According to the authors, citizens' sentiments toward tourism development are strongly influenced by their travel past. Infrequent travellers were found to provide less support on tourism development than frequent travellers. Kim et al. (2021) observed that international tourists who travel frequently follow recommended bio-security behaviours more strongly in times of the pandemic compared to the infrequent travellers. Therefore, the following hypotheses are formulated:-

H3: The impact of (i) website quality and (ii) e-WOM on travel decisions varies across (a) gender, (b) age, (c) education, (d) income and (e) type of traveller (occasional v/s frequent) demographic groups.

RESEARCH METHODOLOGY

Sampling Design and Data Collection

The primary data was collected by using questionnaires which were designed using Google forms and circulated through emails and social media channels. A purposive sampling technique was applied to collect data wherein the following three criteria were made a requirement to qualify the participant for research. The participant should be an Indian and residing in India, he/she should be above 18 years of age and he/she should have taken the help of any online travel agency (like Makemytrip, Yatra, Booking.com or any other site) to plan his/her last trip. The original number of items in the research was 41. For a 5 percent to 10% margin of error in multivariate research, the sample size necessary should be 5 to 10 times the number of variables (Hair et al., 1998).523 responses were collected for the purpose. The study analysed cross-sectional data from customers of online travel services in India who are geographically scattered.

Variables and Measures

When using survey methodologies, it is recommended to reuse already validated instruments, as indicated by Straub (1989). The 'e-travel service quality scale' by Ho and Lee (2007) has been adapted for the purpose of measuring the travel website's quality. For measuring the construct 'e-WOM', the questionnaire from Gretzel and Yoo (2008) has been adapted. For measuring the endogenous construct 'Purchase Intention', 3 items have been constructed based on several researches (Chen and Kao, 2010; Hsu, Chang and Chen, 2012). A 5-point Likert scale has been used to measure the response formats for all the statements.

Profile of the Respondents

The socio-demographic profile is presented in Table I. Males make up 58% of the responses, while females make up 42%. The bulk of respondents (69 %) are in the age bracket of 26-55 years. Graduates make up 43% of the total while post-graduates comprise of 38 %.48% has an annual income more than 5 lacs/ annum. 66% belong to the 'Occasional Traveller' segment that go for 2 or less than 2 trips per year.

Table: I: Demographic Profile of the Data

Characteristics		No. of Respondents	% of Respondents
Gender	Male	303	58
	FEMALE	220	42
Age (In Years)	<25	100	19
	26-55	363	69
	>55	60	12
Education	Under-Graduates	98	19
	GRADUATES	225	43
	POST-GRADUATES	200	38
Income Range/Annum (In Rs.)	<5 Lacs/Annum	173	33
	5-10 LACS/ANNUM	250	48
	>10 LACS/ANNUM	100	19
Frequency of Travel	Occasional Traveller (2 Or Less Trips / Annum)	345	66
	FREQUENT TRAVELLER (>2 TRIPS / ANNUM)	178	34

DATA ANALYSIS

The preliminary data analysis which provides the general picture of the respondents was done using the SPSS software. For the structural evaluation of the model, Partial Least Squares Structural Equation Modelling Techniques have been employed. The study examinesinternal consistency reliability, convergent validity, discriminant validity, multi-group analysis and the structural model as recommended by Hair et al. (2017).

COMMON METHOD BIAS

To assess whether the data has Common Method Bias, two approaches were used: Harman's Single Factor Test (1976) and Kock & Lynn's Full Collinearity Test (2012).The 'Harman's Single Factor Test' conducted through SPSS revealed that one component accounted for 34% of the variation. This is much below the 50% cut-off. On the other hand, the Kock & Lynn's Full Collinearity Test (2012)conducted using PLS showedcollinearity values to be much below the cut-off score of 3.3. Thus, it is concluded that the model is free of common method bias.

STATISTICAL ANALYSIS

Measurement Model

After elimination of several items whose factor loadings did not exceed the recommended value of 0.50 (Hair et al., 2019), 18 items were retained under 'Travel Website Quality' and 9 items were retained under 'E-WOM'. Cronbach's Alpha for all the constructs exceeded the minimum threshold limit of 0.70 (Henseler et al., 2009) and Composite Reliability exceeded the cut-off value of 0.80 (Chua et al., 2019). Average Variance Extracted (AVE) exceeded the threshold value of 0.50 (Hair et al., 2017). Thus, the Measurement model reached satisfactory level in terms of reliability and convergent validity (**Table II**). Next, discriminant validity is assessed using HTMT criteria (Henseler et al., 2014). As showed in **Table III**, all discriminant values are found to be less than the threshold value of 0.85. Therefore, discriminant validity is established.

TABLE II: 'Factor Loadings', 'Cronbach's Alpha', 'Composite Reliability' And 'AVE'

	Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE
TRAVEL WEBSITE QUALITY		0.919	0.928	0.509
TWQ3	0.649			
TWQ4	0.502			
TWQ6	0.569			
TWQ7	0.643			
TWQ8	0.578			
TWQ9	0.56			
TWQ10	0.635			
TWQ11	0.652			
TWQ12	0.712			
TWQ14	0.802			
TWQ16	0.729			
TWQ17	0.688			
TWQ18	0.609			
TWQ20	0.531			
TWQ23	0.541			
TWQ24	0.637			
TWQ25	0.5			
TWQ28	0.645			
E-WOM		0.912	0.932	0.582
E-WOM_1	0.711			
E-WOM_2	0.656			
E-WOM_4	0.788			
E-WOM_5	0.771			
E-WOM_6	0.790			
E-WOM_7	0.857			
E-WOM_8	0.839			
E-WOM_9	0.868			
E-WOM_10	0.834			

PURCHASE INTENTION		0.813	0.91	0.76
PI_1	0.867			
PI_2	0.9			
PI_3	0.854			

Table III: HTMT –A Measure of Discriminant Validity

	Travel Website Quality	E-Wom	Purchase Intention
Travel Website Quality			
E-Wom	0.632		
Purchase Intention	0.618	0.61	

Structural Model

The structural model obtained after a bootstrapping procedure consisting of 5000 re-samples (Hair et al., 2017) explain that the value of R^2 i.e. Coefficient of Determination for the construct 'Purchase Intention' is 34.9 % which means Travel Website Quality and E-WOM can explain 34.9 % of the variance in 'Purchase Intention'.The Stone-Gaisser Q^2 values for the constructs are revealed to be above the minimal criterion of zero ($Q^2 = 0.258$) using a blindfolding test (omission distance = 7) (Fornell and Cha, 1994). Therefore, the findings have a high predictive value.The Standardised Root Mean Square Residual (SRMR) value of 0.063 indicates that the model fits well (SRMR<0.08 criteria) (Henseler et al., 2014). The path coefficients (β) are shown in **Table-IV**.Both the paths are found to be significant, however, the highest significant relationship is observed to be between E-WOM and Purchase Intention (β=0.396 or 39.6% and t= 7.912) followed by Travel Website Quality (β=0.275 or 27.5% and t= 7.317).The results of bootstrapping and each path's t-statistics are also presented in Figure 1.

Table IV: Path Coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
H1 : Travel Website Quality -> Purchase Intention	0.275	0.04	7.317	0.000
H2: E-Wom -> Purchase Intention	0.396	0.052	7.912	0.000

Pls-Multi Group Analysis (Pls-Mga)

The Multi-group analysis (MGA) method is the preferred way of checking and analysing whether the different groups based on socio-demographic parameters differ amongst themselves on their choice of factors influencing decisions to purchase (Hair et al., 2017).**Table V-IX** shows the outcomes of the bootstrapping operation in PLS-MGA. 'Gender'is not found to significantly differentiate the individuals on their choice of decision regarding travel. Hence, H3 (a) is rejected. The second variable 'Age'is also not found to significantly differentiate the individuals on influence of travel website quality on purchase decisions, but significant differences could be observed between two age groups (Less than 25 years and 26-55 years) on impact of e-WOM on their purchase intentions. The respondents belonging to the age group less than 25 years show a much higher inclination towards e-WOM on their purchase intentions as compared to the age group 26-55 years (**Table VI**). Hence, H3 (b) is partially supported. The third socio-demographic variable 'Education'is found to significantly differentiate the individuals on influence of travel website quality on purchase decisions (**Table VII**). Post-graduates have a much higher reliance on Travel Website Quality than Undergraduates. Also, significant differences could be observed between all the groups on impact of e-WOM on purchase intentions. Undergraduates are observed to have the highest reliance on e-WOM compared to graduates and post-graduates are found to have the lowest reliance on e-WOM. Therefore, H3 (c) is supported. The fourth socio-demographic parameter that was analysed for differences in perception is based on income of the respondents (**Table VIII**). Respondents belonging to the income group less than 5 lacs per annum show a much lesser importance on Travel website quality as compared to the respondents belonging to higher income categories. However, no significant difference could be observed between all the groups on impact of e-WOM on purchase intentions. Therefore, H3 (d) is partially supported. The last socio-demographic parameter that was analysed for differences in perception is based on frequency of travel by the respondents. Here, two groups are created for the purpose: Group-1: Frequent Traveller and Group-2: Occasional Traveller. **Table IX** shows the outcomes. 'Nature of traveller'is found to significantly differentiate the individuals on influence of website quality on purchase decisions. Respondents belonging to the group of frequent travellers show a much higher reliance on

travel site quality, while respondents belonging to the group of Occasional travellers show a higher preference for E-WOM. Therefore, H3 (e) is supported.

Table V: Results of PLS-MGA (Gender)

Hypotheses	Path	Male (Beta) (A)	Female (Beta) (B)	Path Coefficients Diff (A-B)	P-Value
H3:The impact of (i) Travel website quality and (ii) e-WOM on travel decisions varies across (a)genders	Travel Website Quality-> PI	0.242	0.374	-0.132	0.08
	E-WOM-> PI	0.454	0.288	0.166	0.09

Table VI: Results of PLS-MGA (Age)

HYPOTHESES	PATH	Age group (a)	Beta (a1)	Age Group (b)	Beta (b1)	Path coefficients difference (a1-b1)	p-value
H3:The impact of (i) Travel website quality and (ii) e-WOM on travel decisions varies across (b)age groups	Travel Website Quality-> PI	< 25	0.204	26-55	0.323	0.119	0.282
		< 25	0.204	>55	0.295	-0.091	0.531
		26-55	0.323	>55	0.295	0.028	0.856
	E-WOM-> PI	< 25	0.693	26-55	0.313	-0.38	0.008
		< 25	0.693	>55	0.489	0.204	0.168
		26-55	0.313	>55	0.489	-0.176	0.176

Table VII: Results of PLS-MGA (Education)

Hypotheses	PATH	Education group (a)	Beta (a1)	Education Group (b)	Beta (b1)	Path coefficients difference (a1-b1)	p-value
H3:The impact of (i) Travel website quality and (ii) e-WOM on travel decisions varies across (c)education groups	Travel Website Quality -> PI	Undergraduates	0.256	Graduates	0.467	0.211	0.056
		Graduates	0.467	Post-Graduates	0.698	-0.231	0.21
		Post Graduates	0.698	Undergraduates	0.256	0.442	0.01
	E-WOM-> PI	Undergraduates	0.468	Graduates	0.206	-0.262	0.05
		Graduates	0.206	Post-Graduates	-0.283	0.489	0.042
		Post Graduates	-0.283	Undergraduates	0.468	-0.751	0.00

Table VIII: Results of PLS-MGA (Income)

HYPOTHESES	PATH	Income group (a)	Beta (a1)	Income Group (b)	Beta (b1)	Path coefficients difference (a1-b1)	p-value
H3:The impact of (i) Travel website quality and (ii) e-WOM on travel decisions varies across (d)income groups	Travel Website Quality-> PI	< 5 lacs	0.220	5 lacs- 10 lacs	0.468	0.248	0.008
		5 lacs-10 lacs	0.468	>10 lacs	0.261	0.207	0.292
		>10 lacs	0.261	< 5 lacs	0.220	0.042	0.708
	E-WOM-> PI	< 5 lacs	0.485	5 lacs- 10 lacs	0.282	-0.204	0.062
		5 lacs – 10 lacs	0.282	>10 lacs	0.146	0.136	0.498
		>10 lacs	0.146	< 5 lacs	0.485	-0.34	0.086

Table IX: Result of PLS- Multi Group Analysis for the 2 Groups under 'Nature of Traveller'

Hypotheses	Path	Occasional Traveller (Beta) (A)	Frequent Traveller(Beta) (B)	Path Coefficients Diff (A-B)	P-Value
H3:The impact of (i) Travel website quality and (ii) e-WOM on travel decisions varies across (e)type of traveller	Travel Website Quality-> PI	0.268	0.677	-0.409	0.00
	E-WOM-> PI	0.432	-0.037	0.469	0.00

Figure 1: Bootstrapping Results: The Structural Model
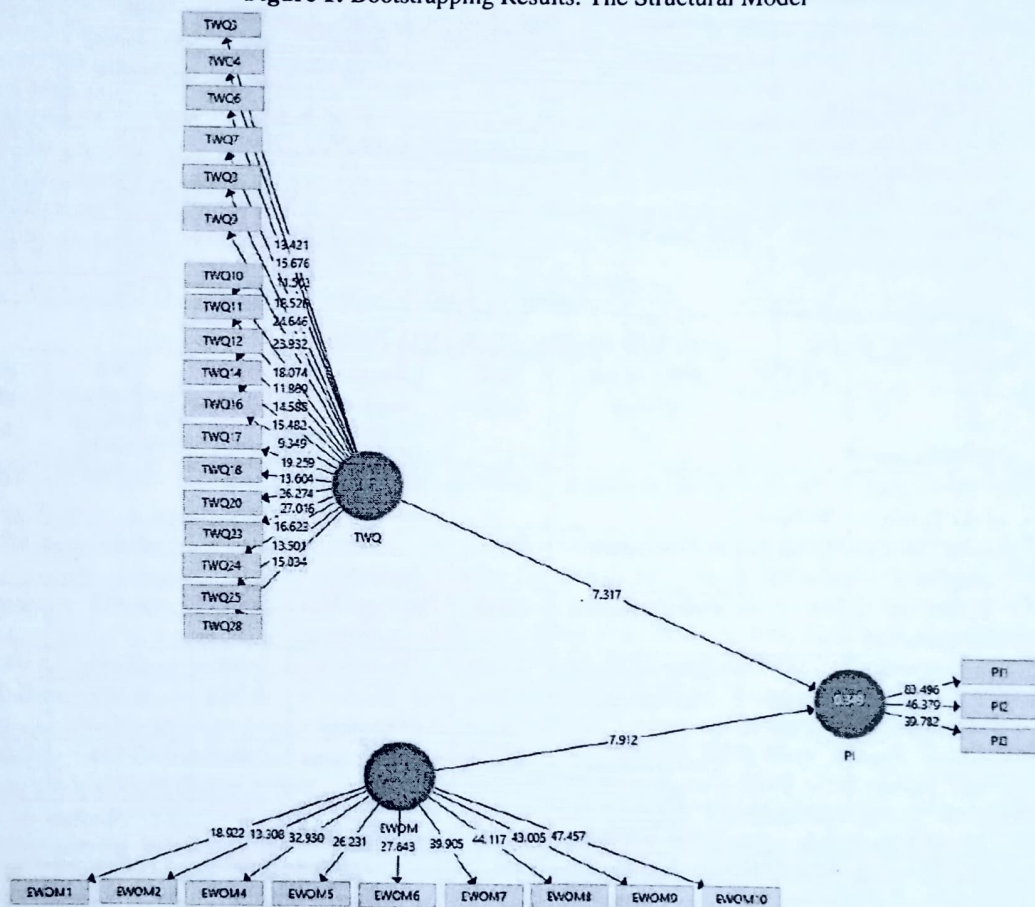
IMPLICATIONS AND FUTURE DIRECTION

A growing percentage of travellers are planning their trips online (including tickets, hotel reservations, travel insurance, and other services). As a result, the number of services offered by India's e-Travel portals has increased. These portals are evolving from separate entities to 'one-stop shops' for all of a traveller's travel requirements.The findings from the study can be taken as an important frame of reference by online travel agents who could identify several attributes that might help them in developing appropriate business strategies and strengthen their competitive position.

It was found in the study that e-WOM has a higher effect on Online Travel Purchase Intention than Travel Website Quality. Thus, it is critical for tourist locations to remember that providing a nice experience for their guests has a big influence on the production of positive impressions among non-visitors.Choirisa et al. (2015) also notes that e-WOM indications such as consulting other visitors to pick an appealing trip and reviewing a

destination boost travel confidence.Because of the emphasis on involvement, online communities may be utilised to enhance the knowledge and expertise available to other customers who come to learn.User Generated Content, on the other hand, might be misrepresented if it is produced by travel operators or community administrators who are paid by a company rather than by independent users or travellers. How can customers be certain that the reviews they're reading are truly independent? Is it true that community managers who are compensated by businesses provide skewed information? Trust in online information sources is essential for the development of effective social networks.

The study also performed multi-group analysis to test whether socio-demographic based groups yield significant differences in their online travel purchase intention. No significant difference was observed between males and females in their perceptions of Travel Website Quality and e-WOM on Online travel Purchase Intentions.This contrasts with other research (Green and Singleton, 2013; Elci et al.,2017) that found significant variations between male and female attitudes about the usage of social media and travel websites. However, the association between TravelWebsite Quality and Purchase Intention, as well as the relationship between E-WOM and Purchase Intention, is found to be significantly affected by other moderators like age, education, income and nature of traveller. Respondents belonging to the age group of less than 25 years, undergraduates and having income less than 5 lacs per annum show a higher inclination towards user generated content. On the other hand, Post graduates are observed to show the least reliance on e-WOM. This is an interesting observation and calls for further research on the subject. A possible explanation for this can be that online review impression and their emotional intensity may be the factors that are assessed by higher educated respondents before travel decisions are undertaken.It was observed in a research by Su et al. (2021) that online review trustworthiness moderates the impact on travel intention. Another interesting finding from the study is that the impact of Travel Website quality on Purchase Intention is stronger in the 'Frequent Traveller' than in the 'Occasional Traveller', whereas the impact of E-WOM on Purchase Intention is stronger in the 'Occasional Traveller' than in the 'Frequent Traveller'. The 'Occasional Traveller' might be more overwhelmed with decision making, hence reading other people's reviews and experiences help them to judge the communications and promises made by the tourism marketing companies. Therefore, the customers with a high degree of experience in travel may believe they do not require social reassurance as they are secure in their own knowledge. This group of 'Frequent Travellers' are also observed to place a high value on company-sponsored promotions. Companies may use re-engagement programmes with these types of travellers to build unique connections and deliver critical follow-up offers, free discounts, extra rewards, or purchase reminders automatically. The firms will also gain vital information into the problem areas by soliciting comments and surveys from these travellers.

This study adds to the growing body of work on the quality of tourism services in a web-based context.Because travellers plan their trips via the Internet, the study aims to add to the body of knowledge about the moderating influence of several socio-demographic variables on tourism website quality and e-WOM which ultimately lead to booking/reservation/purchase intention. The purpose of this study is to provide tourism enterprises with a more thorough understanding of how the aforementioned variables interact.The study's findings are applicable to marketing managers and practitioners who build strategic plans and implement solutions to increase tourist online shopping through B2C e-commerce.

Despite the fact that the model is based on the results of several researches, there may always be elements influencing customers' online purchase intentions that have not been addressed here.Because the goal of this study is to look into how potential travellers make online travel purchase decisions, future research might also look at risk and its relationship with purchase decisions. The primary research, however, provides valuable insight into the interplay of several factors that influence purchase intent in the online tourism world in the context of a developing country like India.

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CONTENTS

Dimension of Emotional Intelligence and Its Relationship to Gender and Domain of Undergraduate Students of Selected Colleges in Kolkata

Dr. Bodhisattwa Bardhan Choudhury*

ABSTRACT

This study aims to empirically examine emotional intelligence as it relates to gender and domain of undergraduate students. The study employed survey method and use the tool Trait Emotional Intelligence Questionnaire Short Form (TEIQue SF) as developed by Petrides and Furnham. One way ANOVA was used to see the significant difference between the means of different groups. The findings are analyzed and tabulated. Finding of the study shows there is no significant difference between different domains of undergraduate students on Trait EI dimensions but there is significant difference between female and male students on Trait EI dimensions.

Keywords: Emotional Intelligence, well-being, sociability, self-control, ANOVA

INTRODUCTION

Primary objective of undergraduate students is to score well academically which is reflected through higher percentage or grade in the examination. They perceive good academic score as springboard for higher studies or immediate job placement. They try to correlate academic achievement with successful career. In this respect thinking of educator is in sync with students. Predominantly IQ plays a major role in student's assessment. Hitherto Emotional Intelligence remains unutilized, at least in India, for assessing undergraduate students regarding their career competency. In 1995 Daniel Goleman in his famous book "Emotional Intelligence: Why it can matter more than IQ" popularized the concept of emotional intelligence. Emotional intelligence [EI] aims to provide a scientific framework for the idea that individuals differ in the extent to which they attend to, process, and utilize affect-laden information of an intra-personal (e.g., managing one's own emotions) or interpersonal (e.g., managing others' emotions) nature (Petrides& Furnham, 2003). With respect to education, research suggests that trait EI is particularly relevant to both disadvantaged and gifted students. Regarding low IQ pupils, those with higher trait EI scores perform better at school and exhibit lesser deviant behaviours (unauthorized absences, exclusions due to antisocial behaviours) than their lower trait EI peers (Petrides et al. 2004). Regarding gifted pupils, those with higher trait EI use more functional strategies to cope with their "difference" compared to their lower trait EI counterparts (Chan, 2003).In the world of business people who get high scores, appear better able to deal with customers' complaint or to mediate disputes and they also do well at making positive connections with subordinates and customer over a period of time. According to Andrea Jung, CEO

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of Avon Products, of all a leader competencies, emotional or otherwise, self-awareness is the most important because without it one can not identify the impact he or she has on others.

Various studies empirically proved EI as an effective predictor for career competencies across different job with different intellectually involvement of workers. These studies are done on partners of multinational consulting firm (Cherniss, C), Scientist (Goleman, 1998), workers in a cigarette factory (Law, Wong & Song, 2004), American Presidents (Greenstein, 2001). Everywhere emotional intelligence was proved more important for success compared to IQ. Emotional intelligence is also considered highly relevant for nurturing creativity and leadership skill among the students. One of the best examples of a leader who succeed because of superior emotional intelligence is Nissan's Carlos Ghosn. He has the social skill so he listens to people and win them over his ideas. He does not believe in corporate hierarchy so he encourages people at all levels of the organization to offer suggestion to operational, organisational problems. This way solutions to the problems of the company emerged. Through emotional intelligence great leaders move us – they inspire, motivate and energize us.

The primary purpose of this paper is to empirically examine emotional intelligence as it relates to gender and domain of undergraduate students. There are studies showing interaction effect of gender and domain on emotional intelligence (Rubinstein,2005; Sanchez Ruiz et al. 2010). But this study examines separately the relationship of emotional intelligence and the students of the different domain of undergraduate study and emotional intelligence and gender of those students. This paper focused on students of undergraduate students of different colleges in Kolkata. They are from mainly government aided and self finance colleges. The students' profile is a mix in terms of age, gender and domain. After completion of graduation these students generally go for higher studies and selected few opt for the campus placement offered by the colleges. They come to the college, take part in various students' activities, go to tuitions. The colleges they belong do not have any course which imparts emotional intelligence to the students. Since these students spend a considerable time interacting with teachers and friends so the data collected from them probably have high emotional variations. This study, at first, defines Trait EI and ability EI. Then the study develops hypotheses after reviewing literatures relating to emotional intelligence to different domains and gender. After reporting results of the study this paper concludes with discussions, limitation and direction for future research.

DEFINITION OF TRAIT EI AND ABILITY EI

Researchers distinguished Emotional Intelligence (EI) between two concepts namely Trait EI and ability EI. According to Petrides, K.V (2011) Trait EI indicates self-perceived abilities and emotion related behaviour disposition. Researcher can measure Trait EI through self-report questionnaire which is consistent with the subjectivity of emotion. Trait EI is related to the study of personality (Petrides& Furnham, 2001). Contrary to the Trait EI, ability EI is measured through maximum-performance test. According to Salovey &Mayer(1990) ability EI refers to emotion related abilities and applicable to cognitive ability. Warwick and Nettelbeck (2004) in their research paper founded low correlation between Trait EI and ability EI and thus supported conceptual and methodological distinction between them. The present study builds on using Petrides and Furnham's (2001) Trait EI definition.

HYPOTHESES FORMATIONS

Emotional intelligence and different domain of undergraduate study

There are very few studies studying the difference between undergraduate students across different domain on emotional related aspects. Castejo'n, Cantero, and P'erez (2008) in their study focusing on

Trait EI profiles of undergraduates shown that social science students scored higher than education and technical science students. To explore this line of research further this paper looking at how Trait EI varies across undergraduate students of contrasting domain namely science, arts and commerce.

H_{01}: There is no significant difference between different domains of undergraduate students on Trait EI dimensions.

Emotional intelligence and gender

Studies showing Trait EI profile differences between male and female students are less in number. Various studies (Beauchamp &McKelvies, 2006; Rubinstein, 2005; Sánchez-Ruiz et al. 2010) have established interaction effect of gender and discipline on personality traits. These studies have shown how male or female participants of a particular domain scoring higher than male or female of other domain. But how gender alone without the effect of discipline score on personality traits that needs to be explored. So this paper looking at how Trait EI varies across male or female undergraduate students.

H_{02}: There is no significant difference between female and male undergraduate students on Trait EI dimension.

METHODOLOGY

Participants

The sample comprised 125 undergraduate students of seven different colleges of Kolkata. The students are from three different domains namely commerce, arts and science. Among 125 students 62 are from commerce 38 are from arts and 25 are from science. There are 72 male students and 53 are female.

Instruments

This study chose Trait Emotional Intelligence Questionnaire –Short Form (TEIQue-SF) (Petrides& Furnham, 2006). TEIQue-SF comprised of 15 distinct facets grouped in four main factors namely emotionality, well being, sociability and self-control. Responses range from 1(strongly disagree) to 7 (strongly agree). The total scale scoring is derived by summing the score on each item in the scale (after reverse scoring for negative items) and is used to locate respondents on the latent trait continuum; the higher the score, the higher the trait EI of the individual (Zampetakis, 2011).

A high emotionality score indicates individual posses skills like recognizing internal emotions, perceiving emotions and expressing emotions. Conversely a low score conveys individual has difficulty recognizing their own emotions and conveying their feelings to others.

Individual with high well-being score are fulfilled and satisfied with life. Inevitably low score indicates persons having poor self-esteem and are not satisfied with life at the present time.

High score in sociability factor indicates individual having good listening communication skill. Individuals with low score appear unsure of themselves in social interactions and are unable to affect others emotions (Petrides, 2001)

High score in self-control factor indicates person having the ability to and regulate external pressure. People display impulsive behavior and are unable to properly manage stress if they score low in self-control factor.

Procedure

The data were collected through electronic mean. Google form was created with the entire TEIQue-SF questionnaire and then the Google Form link was shared with student's group. The link

was active for 3 days and during these 3 days span 141 students responded. Out of 141 students 16 students either did not record their gender or stream of study hence excluded. So the effective responded were 125.

Results

H_{01}: There is no significant difference between different domains of undergraduate students on Trait EI dimensions.

Factor	Domain	N	Mean	SD	F	p value
Emotionality	COMMERCE	62	4.1169	0.99663	0.694	0.502
	ARTS	38	4.2730	0.99783		
	SCIENCE	25	3.9950	0.67167		
	TOTAL	125	4.1400	0.93966		

One way ANOVA results corresponding to Emotionality conclude that students of Commerce (Mean = 4.1169, SD = 0.99663), students in Arts (Mean = 4.2730, SD = 0.99783), and students in Science (Mean = 3.9950, SD = 0.67167) do not differ significantly (F = 0.694, p value. = 0.502).

Factor	Domain	N	Mean	SD	F	p value
Self-Control	COMMERCE	62	4.4059	0.91118	0.928	0.398
	ARTS	38	4.6096	1.18441		
	SCIENCE	25	4.2800	0.81893		
	TOTAL	125	4.4427	0.98558		

One way ANOVA results corresponding to Self-Control conclude that students in Commerce (Mean = 4.4059, SD = 0.91118), students in Arts (Mean = 4.6096, SD = 1.18441), and students in Science (Mean = 4.2800, SD = 0.81893) do not differ significantly (F = 0.928, p value. = 0.398).

Factor	Domain	N	Mean	SD	F	p value
Sociability	COMMERCE	62	4.0672	1.08368	1.233	0.295
	ARTS	38	4.3860	1.05274		
	SCIENCE	25	4.0800	0.85136		
	TOTAL	125	4.1667	1.03436		

One way ANOVA results corresponding to Sociability conclude that students in Commerce (Mean = 4.0672, SD = 1.08368), students in Arts (Mean = 4.3860, SD = 1.05274), and students in Science (Mean = 4.0800, SD = 0.85136) do not differ significantly (F = 1.233, p value. = 0.295).

Factor	Domain	N	Mean	SD	F	p value
Wellbeing	COMMERCE	62	4.1640	0.88526	2.742	0.068
	ARTS	38	4.5746	0.78145		
	SCIENCE	25	4.3400	0.86933		
	TOTAL	125	4.3240	0.86377		

One way ANOVA results corresponding to Wellbeing conclude that students in Commerce (Mean = 4.1640, SD = 0.88526), students in Arts (Mean = 4.5746, SD = 0.78145), and students in Science (Mean = 4.3400, SD = 0.86933) do not differ significantly (F = 2.742, p value = 0.068).

H_{02}: There is no significant difference between female and male undergraduate students on Trait EI dimension.

Factor	Gender	N	Mean	SD	F	p value
Emotionality	Male	72	4.3142	0.91158	6.078	0.015
	Female	53	3.9033	0.93369		
	Total	125	4.1400	0.93966		

One way ANOVA results corresponding to emotionality conclude that male students (Mean = 4.3142, SD = 0.91158) compare to female students (Mean = 3.9033, SD = 0.93369) differ significantly (F = 6.078, p value = 0.015). Since the p value for emotionality is less than 0.05, hence we reject the hypothesis that there is no significant difference on emotionality between female and male students at 5% level of significance.

Factor	Gender	N	Mean	SD	F	p value
Self-Control	Male	72	4.5347	0.94486	1.487	0.225
	Female	53	4.3176	1.03428		
	Total	125	4.4427	0.98558		

One way ANOVA results corresponding to Self-Control conclude that male students (Mean = 4.5347, SD = 0.94486) compare female students (Mean = 4.3176, SD = 1.03428) do not differ significantly (F = 1.487, p value = 0.225).

Factor	Gender	N	Mean	SD	F	p value
Sociability	Male	72	4.2361	1.05992	0.764	0.384
	Female	53	4.0723	1.00081		
	Total	125	4.1667	1.03436		

One way ANOVA results corresponding to Sociability conclude that male students (Mean = 4.2361, SD = 1.05992) compare to female students (Mean = 4.0723, SD = 1.00081) do not differ significantly (F = 0.764, p value = 0.384).

Factor	Gender	N	Mean	SD	F	p value
Wellbeing	Male	72	4.4583	0.73784	4.214	0.042
	Female	53	4.1415	0.98839		
	Total	125	4.3240	0.86377		

One way ANOVA results corresponding to Wellbeing conclude that male students (Mean = 4.4583, SD = 0.73784) compare to female students (Mean = 4.1415, SD = 0.98839) differ significantly (F = 4.214, p value = 0.042). Since the p value for emotionality is less than 0.05, hence we reject the

hypothesis that there is no significant difference on emotionality between female and male students at 5% level of significance.

DISCUSSION

This study explored differences in students' trait EI profiles across different domain of undergraduate study. It also examined influence of gender of undergraduate students on their trait EI profile.

Trait EI across different domain of undergraduate study:

Results supported our hypothesis that there is no significant difference between different domains of undergraduate students on Trait EI dimensions. Although the arts students scored higher than commerce and science students in wellbeing, self-control, emotionality and sociability, neither of these differences reached statistical significance. Thus, we have limited evidence that arts students perceive themselves as highly satisfied with life, can regulate their emotions better, can control their stress better and are most effective communicator. This contradicts studies suggesting arts students appear to be less sociable and extroverted than students of other faculties (Csikszentmihalyie&Getzeb, 1973); arts scored significantly higher in Emotionality than technical studies (Sanchez-Ruiz et al, 2010).

Existence of conflict between students' personalities and their chosen academic field are very common. Establishing Trait EI profile across domain can help removing this conflict and achieve congruence. According to Henry P (1989) congruence between students' personalities and their chosen academic field facilitates academic achievement and successful professional development. Trait EI assessment across different domain can also be interpreted in light of person-environment fit theory (Caplan, 1987 ; Holland, 1997). This theory explains academic choices as expressions of personality dispositions. Students, after knowing Trait EI profile, can take proper academic and vocational decisions that are consistent with their effective dispositions which impact on individuals' professional and personal choices and satisfaction with the selected domain.

Trait EI and gender

Results rejected our hypothesis that there is no significant difference between female and male students on Trait EI dimensions. Male students scored significantly higher compared to female students regarding emotionality and well-being factors. In case of self-control and sociability male students also scored higher than female students but these differences are not statistically significant. These findings contradicted previous studies that female participants tend to be more agreeable (Larsen et al, 2007), but also more empathic and perceptive than male participants (Brody & Hall, 1993). Present findings will directly impact on academic interaction between students and teachers. Teacher will better understand the personality of their students and so they fine tune their academic interaction for mutual benefits. Teacher can also better understand how to boost student's motivation and what can be the appropriate reinforcement.

CONCLUSION

Daniel Goleman explained that one can achieve higher levels of influence as well as personal well-being by managing emotions and relating well to others. EI is not an innate trait but that can be learned also. Students can make stronger decisions, control themselves in volatile situation, overcome negative thoughts or understand others better by fine tuning their emotions. This study empirically proved that Trait EI does not vary significantly across undergraduate students of contrasting domain

namely science, arts and commerce but significantly vary across male or female undergraduate students of Kolkata. One of the limitations of the study is that the data was collected from colleges of Kolkata. It would be interesting to see how the Trait EI varies among colleges of non metro cities because of different socio economic background. Future studies may benefit from using bigger sample to allow for other variables like age or academic performances and its relation with Trait EI.

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APPENDIX

TEIQue-SF

Instructions: Please answer each statement below by putting a circle around the numberthat best reflectsyour degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

	1. . . . . . . 2. . . . . 3. . . . . 4. . . . . 5. . . . . 6. 7						
	Completely				Completely		
	Disagree					Agree	
1.	Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6	7
2.	I often find it difficult to see things from another person's viewpoint.	1	2	3	4	5	6	7
3.	On the whole, I'm a highly motivated person.	1	2	3	4	5	6	7
4.	I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5.	I generally don't find life enjoyable.	1	2	3	4	5	6	7
6.	I can deal effectively with people.	1	2	3	4	5	6	7
7.	I tend to change my mind frequently.	1	2	3	4	5	6	7
8.	Many times, I can't figure out what emotion I'm feeling.	1	2	3	4	5	6	7
9.	I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10.	I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11.	I'm usually able to influence the way other people feel.	1	2	3	4	5	6	7
12.	On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6	7
13.	Those close to me often complain that I don't treat them right.	1	2	3	4	5	6	7
14.	I often find it difficult to adjust my life according to the circumstances.	1	2	3	4	5	6	7
15.	On the whole, I'm able to deal with stress.	1	2	3	4	5	6	7

16.	I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6	7
17.	I'm normally able to "get into someone's shoes" and experience theiremotions.	1	2	3	4	5	6	7
18.	I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19.	I'm usually able to find ways to control my emotions when I want to.	1	2	3	4	5	6	7
20.	On the whole, I'm pleased with my life.	1	2	3	4	5	6	7
21.	I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22.	I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6	7
23.	I often pause and think about my feelings.	1	2	3	4	5	6	7
24.	I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25.	I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26.	I don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6	7
27.	I generally believe that things will work out fine in my life.	1	2	3	4	5	6	7
28.	I find it difficult to bond well even with those close to me.	1	2	3	4	5	6	7
29.	Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30.	Others admire me for being relaxed.	1	2	3	4	5	6	7

Source :http://www.psychometriclab.com/adminsdata/files/The%20TEIQue-SF%20v.%201.50.pdf last accessed on 21-08-18

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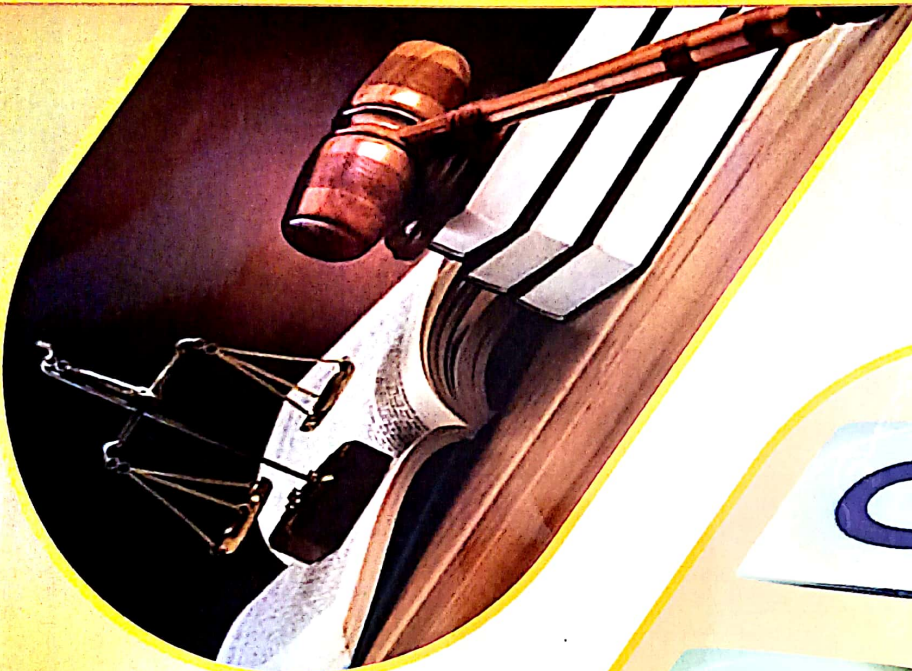
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Contents

Analysing Ethical Integrity of the Financial Information Presented in the Issue Prospectus of Indian IPO

Dr. Bodhisattwa Bardhan Choudhury, Asst. Prof.,
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Investors in Initial Public Offerings are always anxious about the performance of the companies after becoming public. There is always an apprehension in the investors' mind. Apprehension about whether the company will live up to the expectation of the investors. This expectation stems from the facts those were published in the issue prospectus. Issue prospectus of the company going for Initial Public Offering (IPO) tells investors about the past performance of the company. By seeing the past performance trend of the company investors calculate what will follow after the IPO. If in prospectus investors see that certain financial indicators are having upward trend then inevitably they assume that same trend will and should continue after the IPO. Any deviation from this expectation makes the investors skeptical about the ethical integrity of the financial information presented in the prospectus.

In case of initial public offerings (IPOs) one of the phenomena observed is lower post-issue operating performance after the company goes public. According to Khurshed, Paleari and Vismara (2005), performance of firms going public on the Official List deteriorates significantly after the issue. There are several explanations for this phenomenon. According to Khurshed et al. (2005) one of the major hypotheses explicating such underperformance after the issue is window dressing (earning management) hypothesis. The assumption on which the window dressing (earning management) hypothesis based is that before implementing IPO, companies try to window dress their accounting numbers so that firms look good before the offerings. Consequently this will lead to overvaluation of the issue. Realistically, after the IPO, company will not be able to maintain same kind of results as expected by the investors and the share price will start falling.

Whether earning management has taken place or not before the issue can be commented upon on the scrutiny of financial performance before and after the issue. But to do so what are the measures of financial reporting we will going to focus? Whether we will focus on sales based measure, return base measure, asset based measure or others? As financial measurement is a part of performance measurement so we have observed that Hult et al. (2008) examined 96 papers which reported performance measurement results in firms operating internationally. These papers were published in various academic journals (Academy of Management Journal, Administrative Science Quarterly, Journal of Marketing, Journal of Marketing Research, Journal of International Business Studies, Management Science, Organization Science, and the Strategic Management Journal). These papers were published between 1995 and 2005. From the analysis of Hult et al. (2008) it is observed that most popular measures of financial performance of a firm are sales-based and return-based. Other measures, though used, are not that popular. So in time of measuring the financial performance emphasis was given on using sale based and return based measure.

In the Indian context whether the companies try to window dress their financial results before the IPO is a crucial question whose answer needs to be explored. Firms manage earnings without violating GAAP and accounting rules, as they need external independent auditors' verification and approval for annual financial reports. Thus any violation of accounting rules pointed by independent auditors may jeopardize manager's reputation and success of the IPO. Earnings management is typically accomplished by shifting income from future periods with the use of abnormal accruals. In this article an attempt has been made to quantitatively explore the existence of earning management or window dressing, if any, in the published financial results of the companies in their prospectus at the time of IPO issue.

Methodology Used :

In this article we will measure the financial performance of the firms who has gone for IPO. Measurement of financial performance will be

done for both pre and post IPO period. On the basis of the comparison made between pre and post IPO periods in respect of financial performance, we will comment about whether the companies tried to window dress their financial results before the IPO or not.

Taking reference from Hult et al. (2008) we selected sales based and return based measures to analyse the financial performance of the firms. Question arises how these two measurements will help us to compare a firm's pre IPO and post IPO financial performance? Paleari et al.(2008) as cited in Tomas & Marek, 2011 (p-122) developed indices to measure the financial performance of firms entered into selected stock exchanges of Europe during 1996-2007 through initial public offerings. Two of the most popular indices created by Paleari are-

- Sales volume
- Net profit volume

The indices are based on data related to three years prior to the IPO, three years after the IPO and in the year of IPO. Taking reference from the above studies we have done the assessment of financial performance of the firms entering into IPO in Indian Capital Market by using the two indices

- Sales volume
- Net profit volume

However, because of the non-availability of data and to bring uniformity among the firms our indices were developed based on data related to three years prior to the IPO, two years after the IPO and related to the year of IPO. So, in all total six years' data have been considered. We used financial performance measure as referred by Marek (2009) and Synek (2000) as cited in Tomas & Marek, (2011, p-124). They are presented in table 1

Table 1

Financial Performance Measures (Horizontal Analysis)

Indices	Measure	Formula for the measure
Sales Volume	Change in sales compared to the base year (in %)	(Sales t=n / Sales t=0) x 100 Sales = Revenue from goods and services sold.
Net Profit Volume	Change in Net Profit compared to the base year (in %)	(Net Profit t=n / Net Profit t=0) x 100 Profit = Profit After Tax (PAT)

Source: Marek (2009) and Synek (2000) as cited in Tomas & Marek, (2011, p-124)

As done by Tomas and Marek (2011) we used horizontal analysis to evaluate the financial performance measure (sales and profit after tax). The year of IPO (t=0) has been taken as base year. Absolute values of three years prior to the IPO and two years after the IPO (t = -3,-2,-1,1, 2) were compared to base year, and the base year absolute value is 100%. Descriptive statistics i.e. arithmetic mean, standard deviations are used to find the characteristic value for the entire period of study. We also used Adj_Indicator as suggested by Siska and Lizalova (2011) as cited in Tomas & Marek, (2011, p-125).

$Adj\_Indicator = avg\_value/\sigma-1$ where

σ = standard deviation of the measure's values over the period $t = -3, -2, -1, 0, 1, 2$;

avg_value = arithmetic mean of the measure's values over the period $t = -3, -2, -1, 0, 1, 2$.

Adj_Indicator will show lower values than arithmetic mean if there is wide year to year fluctuation during the investigation period. These measures indicate the magnitude of fluctuations of annual values over the six years period of individual performance measure.

Sample and Data :

In this study a sample of 30 IPOs been selected on the random basis out of total number of IPOs listed in the National Stock Exchange (NSE), India, during the financial year April 2007 to March 2010. All these IPOs followed book building method. There were total 141 IPOs given in the NSE list. But from those 19 IPOs were not selected because either they were withdrawn or their shares were not listed or traded on NSE. So the total effective number of IPOs remained 122 or the population size is 122. From these 122 IPOs, we have made a Simple Random Sampling without Replacement (SRSWOR) of 30 IPOs which roughly constitutes 25 percent of the population. Information related to the IPOs is taken from the official website of NSE India and the price data also taken from there. A list of sample companies (in alphabetic order) is given in the Appendix-1.

At the time of analysis, we have hidden the original names of the companies, and the companies arranged in the Tables are not in alphabetic order. We analysed the financial performance of our sample 30 companies based

on measures we selected. The financial data of the firms were extracted from their final prospectus before the issue periods and for the future periods we get the data from their annual reports. The final prospectuses are available in the official websites of Security Exchange Board of India (SEBI) and the Annual Reports are available in the respective company websites. As our study included sample from the companies going for IPO during the period April 2007 to March 2010, so the total span of period for this horizontal analysis is from 1.04.2004 to 31.3.2012.

Financial Performance Measure Based on Sales :

Analysis on the basis of Adjusted Indicator

In Table 2 we have tabulated Mean, S.D and adj_indicator of Sales of the sample companies.

Table 2

Mean, S.D and Adj_indicator of Sales of the Sample Companies

Company	Mean	S.D.	Adj_indicator
Company 1	5846.2	3745	1.56
Company 2	53168	42727	1.24
Company 3	8773.6	3685.4	2.38
Company 4	37200	10762	3.46
Company 5	14722	13113	1.12
Company 6	59231	44384	1.33
Company 7	76265	43885	1.74
Company 8	7464.9	2381.3	3.13
Company 9	9295.1	2536.4	3.66
Company 10	22087	14230	1.55
Company 11	38945	14948	2.61
Company 12	877085	326980	2.68
Company 13	9306.5	3505.5	2.65
Company 14	8611.1	7228.6	1.19
Company 15	121361	85315	1.42
Company 16	269537	208849	1.29
Company 17	28646	5422.3	5.28
Company 18	13813	5408.4	2.55
Company 19	23934	11112	2.15
Company 20	20181	20220	1
Company 21	771866	298880	2.58
Company 22	556986	201234	2.77
Company 23	7928.4	5095	1.56
Company 24	5336.2	3027.8	1.76
Company 25	63019	29324	2.15
Company 26	16296	8167.1	2
Company 27	339241	142078	2.39
Company 28	36907	9453.4	3.9
Company 29	1962.4	250.27	7.81
Company 30	42171	12230	3.45

Source: Our own compilation from Annual Reports and Prospectus; Sales are in Lakhs of Rupees (See Appendix-2).

Companies with low adj_Indicator values suggest major fluctuations of sales levels.

Reported sales of the companies as a whole during the monitored period indicates a significant increase in sales before the IPO and a subsequent decrease in the post IPO period.

Horizontal Analysis

In Table 3 we have tabulated the horizontal analysis of sales (taking the sales of the year of IPO as 100) for the 30 sample firms. It is evident from the Table 3 that almost all the firms posted a significant growth in sales before the IPO but post-IPO development was different. In the post-IPO period, of the sample companies sixteen firms improved their sales whereas others showed a slight decrease or major decrease.

Table 3

Horizontal Analysis of Sales of Issuer Companies during the Period of Study

Company	Year					
	-3	-2	-1	0	1	2
Company 1	15.65	30.48	98.30	100.00	122.17	167.32
Company 2	11.49	22.36	45.76	100.00	142.16	171.83
Company 3	38.14	57.42	71.63	100.00	106.83	135.18
Company 4	70.70	80.45	96.75	100.00	93.67	153.15
Company 5	8.28	14.40	62.18	100.00	38.34	16.28
Company 6	7.01	14.45	33.89	100.00	82.49	89.17
Company 7	32.28	47.00	71.06	100.00	138.73	170.19
Company 8	69.64	75.01	104.93	100.00	126.78	160.62
Company 9	77.24	85.54	107.42	100.00	133.12	156.84
Company 10	31.30	55.51	80.72	100.00	172.93	212.53
Company 11	26.69	49.43	73.67	100.00	78.63	84.54
Company 12	68.63	66.78	75.30	100.00	131.17	157.05
Company 13	27.74	52.37	75.24	100.00	89.15	69.97
Company 14	21.30	33.90	47.18	100.00	133.04	230.90
Company 15	2.73	17.74	50.57	100.00	72.24	62.69
Company 16	7.92	18.90	23.60	100.00	63.37	53.16
Company 17	59.00	66.30	85.78	100.00	81.44	89.66
Company 18	38.21	61.88	81.34	100.00	110.46	132.85
Company 19	27.60	39.95	52.02	100.00	61.52	44.17
Company 20	1.97	27.62	43.23	100.00	177.53	274.53
Company 21	67.15	91.65	121.34	100.00	182.51	180.78
Company 22	54.63	69.27	82.70	100.00	119.72	149.12
Company 23	26.74	75.37	56.78	100.00	161.18	204.26
Company 24	44.19	57.17	73.83	100.00	145.46	197.01
Company 25	52.35	51.20	73.74	100.00	132.96	158.94
Company 26	47.48	67.95	94.71	100.00	183.74	174.33
Company 27	40.03	52.27	63.32	100.00	93.86	128.19
Company 28	51.76	68.78	77.92	100.00	106.99	73.90
Company 29	96.92	113.10	91.12	100.00	99.69	75.88
Company 30	49.06	74.50	83.04	100.00	105.69	122.10

Source: Our own compilation from Annual Reports and Prospectus.

Performance Measure Based on Net Profit or Loss

Analysis on the basis of Adjusted Indicator

In table 4 we have tabulated Mean, S.D and adj_indicator of actual profit (defined as Profit after Tax) for our sample 30 firms.

Table 4

Mean, S.D and adj_indicator of Profit after Tax (PAT) of Sample Companies

Company	Mean	S.D.	Adj_indicator
Company 1	319.46	262.53	1.21
Company 2	2358.41	1865.73	1.26
Company 3	721.35	466.89	1.54
Company 4	4761.94	1941.65	2.45
Company 5	5515.4	5183.5	1.06
Company 6	15443.57	11052.35	1.4
Company 7	28273.21	25057.09	1.13
Company 8	1154.89	210.73	5.45
Company 9	134.17	1068.39	0.13
Company 10	1907.55	687.75	2.77
Company 11	12876.87	6931.7	1.86
Company 12	54874.32	27717.42	1.98
Company 13	335.17	288.6	1.16
Company 14	1525.4	1605.66	0.95
Company 15	56736.83	49948.22	1.14
Company 16	93208.57	96194.95	0.97
Company 17	1146.27	915.25	1.25
Company 18	-402.61	2478.38	-0.16
Company 19	6351.49	11404.64	0.56
Company 20	416.17	408.96	1.02
Company 21	452590.7	195327	2.32
Company 22	30692.17	26150.11	1.17
Company 23	401.13	204.87	1.95
Company 24	166.19	112.04	1.47
Company 25	6420.08	4665.39	1.38
Company 26	173.49	949.57	0.18
Company 27	167717.5	76856.91	2.18
Company 28	1016.51	2607.76	0.39
Company 29	1243.12	511.39	2.43
Company 30	8767.58	2589.47	3.38

Source: Our own compilation; Amount of PAT are Rupees in Lakhs (See Appendix 3)

Companies with low adj_Indicator values suggest major fluctuations of PAT. Reported PAT of the companies as a whole during the monitored period indicates a significant increase in PAT before the IPO and a subsequent decrease in the post IPO period.

Horizontal Analysis :

In Table 5 we have tabulated horizontal analysis of Profit after Tax (PAT) for our sample 30 firms. It is evident that majority of the firms posted a growth in the PAT compared to last year in the pre-IPO period. Post IPO period, barring few who showed marked increase in their PAT compared to last year, others reported a slight decrease of PAT or even a deep loss compared to last year.

Table 5

Horizontal Analysis of PAT of the Issuer Companies

Company	Year					
	-3	-2	-1	0	1	2
Company 1	2.20	30.37	135.66	100.00	38.74	164.56
Company 2	2.38	21.05	37.11	100.00	113.05	126.16
Company 3	6.11	57.84	75.35	100.00	26.93	108.85
Company 4	41.10	76.34	98.48	100.00	76.53	152.74
Company 5	1.88	2.18	64.91	100.00	66.79	21.45
Company 6	8.00	15.87	37.60	100.00	71.45	83.67
Company 7	31.04	31.50	87.83	100.00	216.05	328.46
Company 8	101.02	104.70	130.05	100.00	74.22	119.79
Company 9	56.10	106.87	109.15	100.00	Loss	Loss
Company 10	29.55	56.94	79.56	100.00	94.53	71.95
Company 11	15.45	31.93	53.78	100.00	60.16	60.54
Company 12	64.96	46.79	90.52	100.00	103.83	192.35
Company 13	21.23	59.46	92.27	100.00	5.46	11.48
Company 14	10.97	35.62	29.59	100.00	173.01	314.95
Company 15	1.03	8.08	38.42	100.00	51.14	42.70
Company 16	2.63	8.83	15.76	100.00	60.20	29.81
Company 17	20.33	26.98	75.97	100.00	14.52	26.48
Company 18	Loss	Loss	Loss	100.00	Loss	1134.86
Company 19	4.47	20.21	80.58	100.00	Loss	647.09
Company 20	12.82	121.33	78.53	100.00	356.32	509.99
Company 21	67.31	94.31	126.84	100.00	188.53	210.76
Company 22	0.83	0.45	111.23	100.00	162.54	196.22
Company 23	10.16	106.54	109.71	100.00	169.77	105.20
Company 24	29.10	30.38	71.68	100.00	145.03	186.79
Company 25	12.00	20.83	54.44	100.00	127.59	143.69
Company 26	12.49	59.74	59.92	100.00	147.35	Loss
Company 27	44.17	48.52	52.45	100.00	103.64	132.59
Company 28	50.57	82.52	Loss	100.00	56.61	Loss
Company 29	110.93	103.42	107.12	100.00	101.72	14.80
Company 30	36.32	71.78	68.16	100.00	85.67	87.42

Source: Calculated by us; List of the company may not be in the same order

Analysis of Overall Performance :

Table 6 shows the trends shown by the sample companies based on the financial performance measurement we have used. We may observe that :

- In respect of sales majority of the companies shown growth in year to year basis before the IPO implementation year.

- However post-IPO sales performance is quite different than pre-IPO, companies shown growth in year to year basis drastically reduced

- In case of profit majority of the companies shown growth in year to year basis before the IPO implementation year but post-IPO only one third of the companies posted year to year growth.

Table 6

Increasing Trend in Pre-IPO and Post-IPO Period

Basis of Performance Measurement	Increasing Trend in pre-IPO Period (Out of sample 30 Companies)	Increasing Trend in post-IPO Period (Out of sample 30 Companies)
Sales	26 Companies	16 Companies
Profit	22 Companies	10 Companies

Source: Compiled by Us

We have analysed the selected financial performance of our sample firms over a period of six years (three years prior to IPO, two years after the IPO and the IPO implementation year). Considering the length of time findings of the analysis can be considered relatively reliable.

5.8 Conclusion :

To assess the quality of disclosure made in the offer documents we confined our discussion within the periphery of financial performance. We proposed that to make comment about the financial performance as reported in prospectus we need to go beyond the period of prospectus. That is why we developed two indices namely sales and profit which captured the trend of continuous six years, i.e. three years before IPO, one year IPO year and two years after IPO. Before IPO three years financial data were taken from the prospectus. We also stated that if the company shown positive growth rate in sales and in profit before the IPO but after the IPO that growth rates were not visible then the company may engage in a kind of earning management or they may have compromised the quality of disclosure. According to Khurshed et al. (2005) companies will try to window-dress their accounting number to make the firms look better before the public offerings.

To measure the financial performance of the sample companies' two performance measures of financial measures were chosen. Data were collected from the prospectus of the company and from their annual reports. Microsoft Excel Software were use to do the horizontal analysis and descriptive statistics on the collected data. The research results exhibit the phenomenon of underperformance of newly listed companies in the Indian Capital Market. Analytical results indicate better financial performance of the sample firms before the issue but lower performance after their entry into capital market.

References :

i. Khurshed, A; Paleari, S and Vismara, S (2005) "The Operating Performance of Initial Public Offerings: The UK Experience" Universita di Bergamo Working Paper January 2, 2005.

ii. Hult, G. T. M. et al. (2008). "An assessment of the measurement of performance in international business research" Journal of International Business Studies Vol.39

iii. Tomas, M and Marek, Z (2011) "Initial Public Offerings: The Relevance of the Market Timing Hypothesis under Conditions of the Czech Capital Market" Journal of Competitiveness Issue 4/2011

Websites

i. http://www.nseindia.com/ last visited on 30th Aug, 2012

Appendix 1: List of sample companies in alphabetic order

S. No	Name of the Companies
1	ALPA LABORATORIES LIMITED [ALL]
2	ARIES AGRO LIMITED [AGL]
3	ASIAN GRANITO INDIA LIMITED [AGIL]
4	AUSTRAL COKE & PROJECTS LIMITED [ACPL]
5	BARAK VALLEY CEMENTS LIMITED [BVCL]
6	BIRLA COTSYN INDIA LIMITED [BCIL]
7	CENTRAL BANK OF INDIA [CBI]
8	DLF LIMITED [DLFL]
9	EDELWEISS CAPITAL LIMITED [ECL]
10	EMMBI POLYARNS LIMITED [EPL]
11	EVERONN SYSTEMS INDIA LIMITED [ESIL]
12	EXCEL INFOWAYS LIMITED [EIL]
13	FORTIS HEALTHCARE LIMITED [FHL]
14	HOUSING DEVELOPMENT AND INFRASTRUCTURE LIMITED [HDIL]
15	INFINITE COMPUTER SOLUTIONS (INDIA) LIMITED [ICSL]
16	JINDAL COTEX LIMITED [JCL]
17	JYOTHY LABORATORIES LIMITED [JLL]
18	KOLTE PATIL DEVELOPERS LIMITED [KPDL]
19	MAGNUM VENTURES LIMITED [MVL]
20	MAHINDRA HOLIDAYS & RESORTS INDIA LIMITED [MHRIL]
21	MUNDRA PORT AND SPECIAL ECONOMIC ZONE LIMITED [MPSEZL]

22	NELCAST LIMITED [NEL]
23	NHPC LIMITED [NHL]
24	NMDC LIMITED [NML]
25	PURVANKARA PROJECTS LIMITED [PPL]
26	RAJ OIL MILLS LIMITED [RML]
27	SHRIRAM EPC LIMITED [SEL]
28	TEXMO PIPES & PRODUCTS LTD [TPPL]
29	TULSI EXTRUSIONS LIMITED [TEL]
30	UNITED BANK OF INDIA [UBI]

Appendix 2 : Sales Amount of the Sample Companies (The Amounts are in Lakhs of Rupees)

S No.	Name of the Companies	Three Years Prior to Year of IPO[-3]	Two Years Prior to Year of IPO [-2]	One Year Prior to Year of IPO [-1]	Year of IPO [0]	One Year After the Year of IPO [1]	Two Year After the Year of IPO [2]
1	[ALL]	147	412	640	694	38	80
2	[AGL]	71	667	869	1,154	311	1,256
3	[AGIL]	782	1,507	2,105	2,646	2,501	1,904
4	[ACPL]	202	915	3,647	4,525	-463	29,283
5	[BVCL]	1,112	1,152	1,431	1,100	817	1,318
6	[BCIL]	27	257	166	212	755	1,080
7	[CBI]	35,741	25,742	49,801	55,016	57,124	1,05,822
8	[DLFL]	6,770	22,740	40,577	2,57,440	1,54,986	76,738
9	[ECL]	2,342	4,645	11,006	29,268	20,913	24,488
10	[EPL]	52	54	127	177	257	331
11	[ESIL]	151	491	408	1,378	2,384	4,340
12	[EIL]	1,538	1,434	1,485	1,386	1,410	205
13	[FHL]	-80	-278	-4,668	268	-698	3,041
14	[HDIL]	1,457	11,393	54,181	1,41,039	72,121	60,230
15	[ICSL]	1,008	1,750	4,573	8,400	10,718	12,070
16	[JCL]	89	424	425	709	1,045	-1,651
17	[JLL]	2,154	4,001	5,161	5,241	4,011	8,005
18	[KPDL]	243	280	8,351	12,866	8,593	2,760
19	[MVL]	425	810	827	758	-89	-1,926
20	[MHRIL]	4,252	8,403	7,980	11,707	10,030	10,234
21	[MPSEZL]	6,625	6,723	18,744	21,341	46,109	70,098
22	[NEL]	529	702	1,977	2,602	378	689
23	[NHL]	92,327	1,01,431	1,09,653	2,09,050	2,16,667	2,77,177
24	[NML]	2,32,021	3,25,098	4,37,238	3,44,726	6,49,922	7,26,539
25	[PPL]	3,709	7,664	12,910	24,005	14,442	14,532
26	[RML]	1,815	2,962	-3,118	3,589	2,032	-1,181
27	[SEL]	84	745	1,314	3,540	4,002	4,466
28	[TPPL]	41	426	439	400	679	421
29	[TEL]	9	123	551	407	157	669
30	[UBI]	267	145	35,855	32,236	52,397	63,253

Appendix 3 : PAT Amount of the Sample Companies (The Amounts are in Lakhs of Rupees)

S No.	Name of the Companies	Three Years Prior to Year of IPO[-3]	Two Years Prior to Year of IPO [-2]	One Year Prior to Year of IPO [-1]	Year of IPO [0]	One Year After the Year of IPO [1]	Two Year After the Year of IPO [2]
1	[ALL]	147	412	640	694	38	80
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12	[EIL]	1,538	1,434	1,485	1,386	1,410	205
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14	[HDIL]	1,457	11,393	54,181	1,41,039	72,121	60,230
15	[ICSL]	1,008	1,750	4,573	8,400	10,718	12,070
16	[JCL]	89	424	425	709	1,045	-1,651
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23	[NHL]	92,327	1,01,431	1,09,653	2,09,050	2,16,667	2,77,177
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29	[TEL]	9	123	551	407	157	669
30	[UBI]	267	145	35,855	32,236	52,397	63,253