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SEMCOM Management & Technology Review

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Editorial

Dear Readers!

National Education Policy 2019 emphasizes on the role of Higher Education Institutes (HEIs) for creating vibrant environment and encouraging research activities. This will call for educational communities to become more responsible towards research. They need to be more observant in identifying gap areas, develop positive outlook in solving problems in designing futuristic growth strategies. HEIs also need to expand research activities by providing infrastructure and resources. This will significantly pave the ways for HEIs to turn into global institutes.

I am pleased to present before you October 2020 issue of SMTR. The issue brings to you variety of research work in the areas of finance, banking, marketing, entrepreneurship and human resource management. An empirical analysis on Indian domestic commercial banks studies the effects of priority sector advances on non- performing assets. It is an attempt to find out the growth in the volume of nonperforming assets of both public and private sector banks in India. Four research-based studies in finance deliberate the financial concerns of stock market, performance and profitability analysis of FMCG companies, and financing on Indian SMEs. A study on the relationship of exchange rate presents the correlation between variables and their effects. Performance measurements of FMCG companies takes into account the analysis of seven prominent companies in this sector and reveals how profitable companies manage liquidity as against that of risky profitable firm. Similar conceptual study in this line examines the earning performance and profitability related to sales of FMCG companies. MSME is considered as the growth engine of Indian economy. A study on Indian SME financing measures the performance of SME IPOs listed on NSE Emerge. Readers will also get the insight into the role of digital payment with special reference to millennial in India. Highlighting the importance of digital payment and its influence on young people, the study explores how the millennial are going to drive the next generation commerce.

In the area of marketing two research papers articulate the patterns of marketing campaign and digital marketing. A demographic analysis shows differences in aided awareness towards cause related marketing campaigns using statistical tools. Another study aims at identifying the core issues in the digital marketing and its importance in the northern states of India. A research on organizational development and its performance describes the relevance between the organizational development and performance management of the employees. A study on sustained business success of EPC companies in Indian Thermal Power sector examines the issues related to the subjects and presents the detailed recommendations so as to help these EPC organizations to attain sustained business success. A paper on factors of entrepreneurial readiness enlists factors like regulative, cognitive, normative, and conducive which are considered responsible for social readiness of entrepreneurship.

On HR front one study is about human resource management in the district library, its data collection and the management system for the smooth functioning of the library. A comparative study of project organization structure and problems faced during new product development by Tier 1 and Tier 2 suppliers in Indian automotive sector investigates the impact of existence of project organization structure the on the process of New Product Development (NPD).

Best wishes,

Waheeda Thomas

About SEMCOM

Sardar Gunj Mercantile Cooperative Bank Ltd. (Anand) English Medium College of Commerce and Management (S G M English Medium College of Commerce and Management) popularly known as SEMCOM was established in the year 1997 with the aim/vision to impart quality education to students who desire to graduate in commerce, management and IT. The college has successfully completed 22 years. Its alumni have established themselves in various walks of life across the globe. The college has been established by Charutar Vidya Mandal (CVM), an educational trust with a vision to regenerate society through education. SEMCOM was set up with the generous donation of Rs. 35 lakhs against the total project cost of Rs. 150 lakhs by Sardar Gunj Cooperative Bank Ltd. (Anand) on self- finance basis keeping in mind the changing policy of the government in inviting private institutions to supplement the government's efforts in higher education. The college has an ISO Quality System since 2004, which upgraded to 9001:2008 in September 2009. The college is re-accredited grade ”A” by NAAC with a CGPA of 3.01 on 4 point scale. The college, within a short span of time has made its presence felt in India and abroad.

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- To institutionalize quality in imparting education.
- To incorporate innovations on a continuous basis in the entire process of education at institutional level.
- To create platform for the students for exhibiting their talent and for development of their potentials.
- To generate stimulating learning environment for students as well as teachers.
- To build cutting edge amongst the students to withstand and grow in the competitive environment at the global level

The Relationship between USD-INR Exchange Rate and Indian Stock Market

Mr. Animesh Bhattacharjee, Dr. Joy Das

Abstract

The study investigates the relationship between USD-INR exchange rate and Indian stock market over the period 2005:04-2019:12. The study employs Augmented Dickey fuller test, Johansen cointegration test, Vector Error Correction model and Granger causality test to analyse the data. The analysis indicates that USD-INR exchange rate and Indian stock market are cointegrated which means that both the variables move together over time. The analysis further reveals that in the long-run there is a significant positive relationship between the exchange rate and Indian stock market but the relationship between the variables is found to be negative in the short-run. The result of granger causality test suggests that bi-directional causality exists between the two variables.

Keywords: Exchange rate, Indian stock market, Augmented Dickey Fuller test, Granger causality test, Vector Error Correction model.

1. Introduction

Theoretically, the relationship between exchange rate and stock prices can be explained by two classical economic models namely the Flow Oriented model and the Portfolio Balance model. Flow Oriented model developed by Dornbusch and Fischer (1980) is built on the macroeconomic view that stock prices of a firm represents the discounted present of it's expected future cash flows. The model argues that changes in exchange rate affects the firm's competitiveness in the international market and thus, affects the firm's future cash flows. Since, change in exchange rate is a phenomenon that affects the firm's expected future cash flows, it's stock price is also affected. The theory postulates that movement in exchange rate cause change in stock prices which implies there is unidirectional causality between the exchange rate and stock price. On the other hand, Portfolio Balance model developed by Branson *et al.* (1977) is just the opposite of Flow Oriented model and postulates that increase in domestic stock prices attracts foreign capital inflows, which increases the demand for domestic currency. Thus, this increased demand makes the currency strong and the domestic currency appreciates relative to other foreign currencies. The Portffolio Balance model implies that changes in stock prices cause change in exchange rate which means that there is unidirectional causality between exchange rate and stock prices and the causality runs from stock prices to exchange rates. In addition, in a export-dominant economy, stock prices react negatively to exchange rate appreciation while in a import-dominant country, stock prices react positively to exchange rate appreciation and *vice-versa*.

Although the theories provides an academic understanding of the relationship between exchange rate and stock prices but contradicts with the findings of few authors. For instance, Nath and Samanta (2003) failed to find any causual relationship between stock prices and exchange rates while on the other hand, Patel (2012) found a bi-directional causality between the variables. Furthermore, Naik (2013) found evidence of negative relationship while Aurangzeb (2012) concluded that a positive relation exists between stock prices and exchange rates. In addition some of the studies found a long-run equilibrium relationship between the variabales while other studies failed to observe such relationship. Due to the discrepancies in the findings there is a need for a comprehensive study to re-examine the relationship between exchange rate and stock prices in Indian context.

2. Review of Literature

Numerous studies have been conducted to measure the impact of exchange rate on Indian stock market. This section will discuss some of those research studies and highlight their opinions and key findings.

Aggarwal (1981) is one of the earlier researchers who investigated the relationship between exchange rate and U.S.Stock prices under floating exchange rate regime and found that stock prices and exchange rates are positively correlated. Following Aggarwal (1981), Soenen and Hennigar (1988) conducted a similar study considering a time period between 1980 and 1986 and is of the view that the impact of exchange rate on U.S. stock prices is negative which contradicts the findings of Aggarwal (1981). Abdalla & Murinde (1997) studied the interactions of exchange rate and stock prices in four emerging markets namely India, Korea, Pakistan and the Philippines. They found a unidirectional causality running from exchange rate to stock prices in all the selected countries, except the Philippines. Muhammad *et al.* (2002) explored the long-run and short-run association between exchange rates and stock prices in four South-Asian nations namely India, Pakistan, Bangladesh and Srilanka. The findings showed no long-run relationship between stock price and exchange rates. For Indian and Pakistan. However, bi-directional causality exits between the variables for Srilanka nad Bangladesh. Nath and Samanta (2003) studied the relationship between the Rupee-Dollar exchange rate and stock prices but failed to find a long-run equilibrium relationship between the variables. The results of granger causality test also failed to establish any causal relationship between the stock prices and exchange rate while Dimitrova (2005) found support for the hypothesis that a depreciation of the home currency can depress the domestic stock market. Aydemir and Demirhan (2009) examined the impact of exchange rate on five stock market indices in Turkey. The results of the study indicated a bi-directional casual relationship between the exchange rate and all the selected indices. Fauziah *et al.*(2015) studied the dynamic relationship between the exchange rate and stock prices in Asia during 2009-2013. The authors applied Johansen's cointegration test, vector error correction model and granger causality test to concluded that there is evidence of a long-run equilibrium relationship between the variables. They further suggested the existence of a two-way causal relationship between them. Islam and Habib (2016) employed a multivariate extension of linear regression model and found a negative relationship between USD-INR exchange rate and Indian stock prices. Bhuvaneshwari and Ramya (2017) examined the interaction between Indian stock market and exchange rate volatility and suggested that stock returns and exchange rate are not cointegrated and found the existence of bidirectional causality betweeen the two variables. Chowdhury and Anuradha (2018) investigated the linkage between exchange rate and BSE Index and concluded that in the short-run exchange rate and sensex have negative relation but in the long-run the relationship between the variables is found to be positive. In a recent study Luqman and Kouser (2019) using cointegration and causality test investigated the nexus between exchange rates and stock prices in 14 nations and concluded that a long-run relationship between the variables exists.

With globalisation the degree of integration between the financial markets has increased. As a result of which the demand for research in this field has seen a surge. However, despite various studies carried out to investigate the relationship between exchange rate and stock prices, authors failed to provide conclusive evidence that can explain the true relationship between the variables in the Indian context. Thus, this study will fill up the knowledge gap by re-examining the relationship between Indian stock market performance and Indian Rupee and U.S. Dollar exchange rate. The study specifically focuses on examining the long-run and short-run relationship between the exchange rate and Indian stock market. In addition, the study will investigate the direction of causality between the Indian stock market and exchange rates.

The rest of the paper is divided into the following sections: Section 3 describes the data sources and research methodology adopted , Section 4 contains the empirical results and Section 5 have the concluding remarks.

3. Data and Methodology

The empirical study is based on monthly time series data relating to Indian stock market performance and exchange rate. The study used monthly observations on stock market index and USD-INR exchange rate; covering a time span of 177 months (April 2005 to December 2019). The study uses 'EViews' for the purpose of analysing the data. The operational description of the variables are presented in Table 1

Table 1: Description of Variables

Variables	Proxy Used	Acronyms	Data Source
Indian Stock Market	CNX S&P Nifty 50	Nifty 50	NSE Web site
Exchange rate	Indian Rupee and U.S. Dollar exchange rate	USD-INR	RBI Web site

A brief explanation of the econometric techniques employed in the study is given below:

Unit root test is generally applied to check whether a time series data is stationary or not. If a time series data follow a pattern through which the future value may be forecasted, it is said to be stationary. In other words, if in a data series the effect of any shock gets nullify and the data approaches to its expected value, the data is stationary. With stationary data, expected values can be forecasted in straightforward ways and thus it becomes necessary to see if a data is stationary or non-stationary. The Augmented Dickey Fuller test is used to check whether the data is stationary or not. The null hypothesis of Augmented Dickey Fuller test is the data is non-stationary. In order to get the stationary data, the null hypothesis has to be rejected.

ADF test involves the estimation of the following equation:

$$\Delta Y_t = \alpha + \pi t + \delta Y_{t-1} + \sum_{i=1}^{m} \beta_i \, \Delta Y_{t-1} + \varepsilon_t \qquad (1)$$

Where Y_t is a Random walk with an intercept and time trend.

After establishing the time series properties of the variables, Johansen cointegration test is employed to test for the presence of long-run relationship among the variables. The Johansen cointegration test uses Trace and Maximum Eigen Value statistics to test for the number of cointegrating vectors

The Trace and Maximum Eigen Value statistics can be computed by the following equations:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{K} In(1-\lambda_i) \qquad (2)$$

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

If there exists long-run relationship between the variables, Vector Error Correction Model (VECM) can be estimated to observe the short-run dynamics.

Granger Causality test is a statistical hypothesis test for determining whether one time series data is helpful in predicting another. This method uses empirical time series data to find correlation pattern and is a probabilistic account of causality. It exhibits two types of output, namely, unidirectional relationship and bidirectional relationship.

To test the Granger Causality between the exchange rate and Indian stock market index, the following equations are used:

$$(Nifty\ 50)_t = \alpha + \sum_{i=1}^{m} \beta_i \, (Nifty\ 50)_{t-i} + \sum_{j=1}^{n} \tau_j \, (USD-INR)_{t-j} + \varepsilon_t \qquad (4)$$

$$(USD-INR)_t = \omega_0 + \sum_{i=1}^{m} \gamma_i \, (Nifty\ 50)_{t-i} + \sum_{j=1}^{n} \theta_j \, (USD-INR)_{t-j} + \varepsilon_t \qquad (5)$$

In time series analysis, it is always necessary to establish the stationary status of the variables. Therefore, Augmented Dickey Fuller test is performed to check if the variables contains unit root. After checking the stationarity status Johansen cointegration test is performed to examine whether the exchange rates and stock market index are cointegrated and the VECM is estimated to observe the error correction term and the short-run dynamics. Finally, the study applied Granger Causality test to investigate the direction of causal relationship.

4. Estimation Results

Figure 1 Line Graph of the Variables

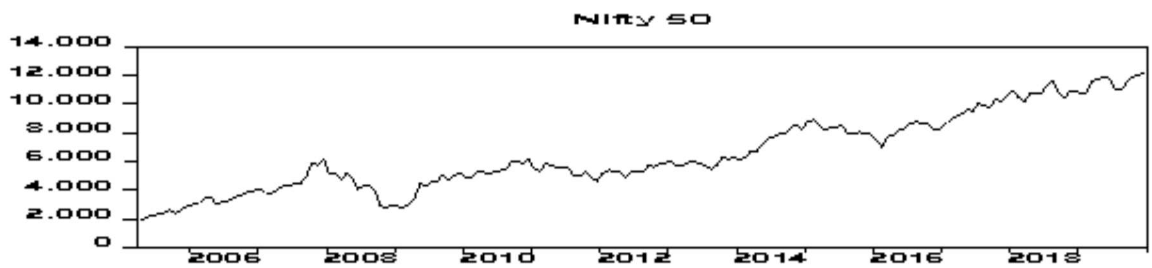

Table 2 Unit Root test (At Level)

Null Hypothesis: Variables have Unit Root					
Level Data	Test Critical Values				
ADF Test Statistic	t-statistic	10%	5%	1%	Prob*
NIFTY 50	-2.085	-2.576	-2.878	-3.468	0.251
USD-INR	-0.731	-2.576	-2.878	-3.468	0.835

Source: Author's Own

Table 3 Unit Root test (At First Difference)

Alternate Hypothesis: Variables are stationary					
On First Difference	Test Critical Values				
ADF Test Statistic	t-statistic	10%	5%	1%	Prob*
NIFTY 50	-12.688	-2.576	-2.878	-3.468	0.000
USD-INR	-9.619	-2.576	-2.878	-3.468	0.000

Source: Author's Own

Before employing unit root test, the trend of the variables is visually observed in Figure 1. The line graphs in Figure 1 indicate that the variables may be non-stationary at level since their respective means and variances are not constant. The study followed the standard procedure of unit root testing by performing Augmented Dickey Fuller test. The results of Augmented Dickey Fuller test is summarised in Table 2 and Table 3. From Table 2 it can be observe that the t-statistic of both the variables is insignificant at 1 per cent, 5 per cent and 10 per cent level. Thus, the null hypothesis cannot be rejected and it can be said that all the variables are non-stationary at level. However, the time series variables become stationary when their first differenced form is considered. In other words, both the variables are individually integrated of order 1 or I(1).

Table 4 Johansen Cointegration Test

Hypothesis	No. of lags	Null	Trace Test	Maximum Eigen Value	No. of Cointegrating Equation(s)	Cointegrating Relationship
No cointegration between Nifty 50 and USD-INR	2	$r = 0$ $r \leq 1$	16.351* 0.222	16.129* 0.222	1	Yes

Source: Author's Own

Note: The appropriate lag order is selected on the basis of Schwarz information criterion and Hannan-Quinn information criterion

Since both the variables are stationary at the same order, the presence of the long-run relationship between the exchange rate and Indian stock market can be investigated by Johansen cointegration test. The results of both Trace statisctic and Maximum Eigen Value statistic are summarised in Table 4. Both Trace statistic and Maximum Eigen Value statistic indicates the presence of a long run equilibrium relationship between Indian stock market and USD-INR exchange rate. Since the variables are cointegrated it is advisable to develop the Vector Error Correction Model (VECM) instead of VAR Model. The estimates of the VECM is summarised in Table 5.

Table 5 VECM Output

Cointegrating Eq:	CointEq1	
NIFTY50(-1)	1.000000	
USD-INR(-1)	-1.988273 (0.30204) [-6.58275]	
C	-0.761874	
Error Correction:	D(NIFTY50)	D(USD-INR)
CointEq1	**-0.080176*** (0.01876) [-4.27313]	0.008117 (0.00556) [1.45940]
D(NIFTY50(-1))	-0.041818 (0.08037) [-0.52034]	-0.061560* (0.02382) [-2.58395]
D(USD-INR(-1))	-0.685596* (0.27371) [-2.50480]	0.233512* (0.08114) [2.87788]
C	0.012444* (0.00476) [2.61632]	0.002808* (0.00141) [1.99171]

Source: Author's Own

**Significant at 5 per cent level*

From Table 5 it can be said that the long-run relationship between USD-INR exchange rate and Indian stock market is positive and statistically significant at 5 per cent level. The error correction term (ECT) in determination of Nifty 50 is negative (-0.080176) and statistically significant which suggests that the speed of convergence to equilibrium is over 8 per cent. Further, from observing the short-run coefficients in the VECM it can be said that in the short-run Indian stock market reacts negatively to changes in USD-INR exchange rate.

Table 6 Granger Causality Test

Null Hypothesis:	F-Statistic	Prob.
USD/INR does not Granger Cause NIFTY50	8.51979	0.0003
NIFTY50 does not Granger Cause USD/INR	4.58735	0.0115

Source: Author's Own

To test the direction of the causal relationship granger causality test is performed and summarised in Table 5. The output of the granger causality test indicates that a bi-directional relationship exists between Indian stock market and USD-INR exchange rate which means that in the short-run USD-INR exchange rate is helpful in predicting the Indian stock market and *vice-versa*.

5. Conclusion

The study investigates the relationship between exchange rates and Indian stock market index. The article used monthly observations from April 2005 to December 2019 and applied Augmented Dickey Fuller test, Johansen cointegration test and Granger causality test to analyse the data. The result of Augmented Dickey Fuller test indicates that both the variables are non-stationary at level and are individually integrated of order 1 or I(1). To investigate the long-run relationship between the variables Johansen cointegration test is performed. The results of cointegration test suggest that USD-INR exchange rate and Indian stock market index are cointegrated which indicates the presence of a long-run equilibrium relationship between the variables. Further, in the long-run the Indian stock market and USD-INR exchange rate are positively related to each other. The short-term elasticity from the VECM shows that in the short-run the variables are negatively related. The result of Granger causality test shows that there is bi-directional causality between USD-INR exchange rate and Indian stock market.

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Effect of Priority Sector Advances on the Non- Performing Assets: An Empirical Analysis of Indian Domestic Commercial Banks

Dr. Brajaballav Pal, Dr. Saswata Choudhury

Abstract

Rising non-performing assets lead the Indian banks to suffer asset loss. Banks advances can be classified into priority and non-priority sector advances. Every year banks provide a large volume of advances to the priority sector. It may cause the rise in the volume of non-performing assets of Indian banks. In this study we have made an attempt to find out the growth in the volume of non-performing assets of both public and private sector banks in India and also attempted to find out whether the priority sector advances affect the banks non-performing assets or not. We have collected data from 2009 to 2018 for 38 domestic commercial banks. We have used panel data regression model in this study. The results revealed that the priority sector advances of public sector banks have statistically significant effect of on their non-performing assets. But for private sector banks we cannot draw such conclusion.

Keywords: *Non-performing Assets, Priority Sector advances*

JEL Classification: *E5, G*

1. Introduction

Rising non-performing assets are making the Indian banks to suffer asset loss. Poor lending policy and also poor loan monitoring system of the banks lead to create such situation. Broadly, banks advances can be classified into two i.e., priority sector advances and non-priority sectors advances. Priority sectors are some specific sectors which need some special financial attention for the socio-economic development of our country. Every bank provides a large volume of advances to these sectors each year according to the policy of the government. It can lead to generate non-performing asset every year. This study confines to the growth in the volume of non-performing assets of both public and private sector banks as well as how the priority sector advances affect the non-performing assets of both public and private sector banks.

2. Review of Literature

For the purpose of the study we have reviewed some literatures. A few of them are mentioned below.

Desai, R. (2017) studied how sector-wise lending affects NPA in priority sector. The study was conducted using four years' data from 2014 to 2017. The study revealed that the priority sector NPA was positively related with agricultural lending, industrial lending, and personal lending. On the other hand, the service sector lending had negative effect on the NPA.

Goyal, N., Agrawal, R. &. Aggarwal, R. (2016) attempted to measure the effect of different sectors of priority sector lending on NPA for both public and private banks. The study period was from 2001 to 2013. They found that the priority sector lending had significant impact on NPA for both public and private banks. But the public banks' NPA was more affected by the priority sector lending than that of the private banks.

Mehta, L. & Malhotra, M. (2014) examined the trend in NPA's and the relationship between NPA's and profitability of the private sector banks. They also examined the priority sector NPA and the impact of priority sector lending on the gross NPA of private sector banks. The study period was 8 years from 2005 to 2012. The result showed that there was a significant impact of priority sector lending on the gross NPA of private sector banks.

Mishra, A. K. (2016) attempted to explore a brief comparison between the priority and non-priority sector NPAs for public sector banks in India. Secondary data was used in this study. The study period was 10 years from 2006 to 2015. The result revealed that both priority and non-priority sector have significant effect on banks NPAs.

Ramesh, K. (2017) analysed the role of priority sector NPAs and Non-Priority sector NPAs in total Non-Performing Assets of Public Sector Banks (PSBs) in India. He also examined the trends in sector-wise NPAs of the Public Sector Banks and whether there is a significant impact of priority sector NPAs and Non-priority sector NPAs on total NPAs of PSBs. The study period was 12 years from 2005-2016. The study revealed that there was a definite correlation between the Priority Sector NPAs and total NPAs and was a strong relationship between the Non-Priority Sector NPAs and total NPAs.

Selvarajan, B. & Vadivalagan, G. (2013) studied the NPA under the priority sector lending of Indian Bank and compared it with public sector banks. The study period was for 10 years. They found that the growth in the priority sector lending of Indian Bank is higher than that of the public sector banks. They also found that the NPA management of Indian Bank is better than that of the public sector banks.

Vallabh, G., Bhatia A. & Mishra, S. (2007) attempted to find out the fundamental factors which impact the NPAs of Indian public, private and foreign banks. They have considered macroeconomic factors and bank specific parameters in this study. They found that the banks' exposure to the priority sector helped to reduce the NPAs.

3. Research Gap

On the basis of the existing literature we have found that most of the studies are associated with sectoral advances of the priority sector lending and their effect on the banks NPA. There are few studies which are related to the priority sector advances of domestic commercial banks as well as their effect on their NPA. Keeping the above existing literature in mind, we have considered the following objectives.

4. Objective of the study

This study is based on two objectives. These objectives are:

1. To study the trend of Non-Performing Assets of domestic commercial banks in India.
2. To find out whether the Priority Sector Advances of Indian domestic commercial banks has any effect on their Non-performing Assets or not.

5. Research Methodology

5.1 Sample Design

For the purpose of the study we have considered all the Indian public and private sector banks working as on 31st march, 2018. But we have excluded only those banks which don't have available data throughout the study period. So finally we have obtained data from 21 public sector banks and 17 private sector banks.

5.2 Study Period

The period of study is 10 years, starting from the year 2009 to 2018, as the latest data available. We have selected this period because we wanted to focus on the current scenario of the financial condition of the banks.

5.3 Data Source

For the purpose of this study we have used secondary data. The entire data was collected from the database of Reserve Bank of India, “Statistical Tables Relating to Banks in India”.

5.4 Variables Used

For the purpose of the study, we have used only two variables. These are:

(i) Gross Non-Performing Assets Ratio (GNPAR): In this study GNPA Ratio is considered as the dependent variable. A non-performing asset (NPA) is a loan or an advance where;

(a) interest or instalment of principal remain overdue for a period of more than 90 days, in respect of a term loan,

(b) the account remains 'out of order' for a period of more than 90 days, for Overdraft/Cash Credit (OD/CC),

(c) the bill remains overdue for a period of more than 90 days, for bills purchased and discounted,

(d) interest and/or instalment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purposes, and

(e) any amount to be received remains overdue for a period of more than 90 days, for other accounts.

NPA can be classified into Sub-standard asset, Doubtful asset and loss asset. Sub-Standard assets are the loans or advances which remain non-performing for a period of less than or equal to 12 months. If the non-performing assets remain unpaid for a period of more than 12 months, it becomes Doubtful Assets. In the opinion of the internal or external auditor or RBI inspector, all those assets which cannot be recovered are called Loss Assets.

In our study we have taken volume of GNPA of public and private sector banks for the purpose of trend analysis and GNPA Ratio for the purpose of correlation and regression analysis. GNPA Ratio is calculated by dividing the GNPA of banks with their gross or total advances.

(ii) Priority Sector Advances Ratio (PSAR): Priority sectors are those sectors, specified by the Reserve Bank of India, which need some special financial assistance by which socio-economic development of India can be possible. Priority Sector includes the following categories:

(a) Agriculture

(b) Micro, Small and Medium Enterprises

(c) Export Credit

(d) Education

(e) Housing

(f) Social Infrastructure

(g) Renewable Energy

(h) Others

For the purpose of our study we have taken priority sector advances to total advances ratio. It is calculated by dividing the total priority sector advances with the total advances.

5.5 Tools and Techniques used

As we have said earlier that this study focuses only two objectives. Firstly, to study the trend of the NPA of the domestic commercial banks in India, we have used simple Trend Analysis technique of MS-Excel using the annual GNPA data of public and private sector banks separately. Secondly, to find out whether the priority sector advances have any effect on the NPA of the domestic commercial banks, we have used Panel Data Regression Model with both Fixed and Random Effect. We have considered GNPA Ratio and Priority Sector Advances to Total Advance Ratio for regression. We have also obtained Descriptive Statistics and Correlation of these variables.

5.6 Hypothesis to be tested

H_0: Priority sector advances do not affect the non-performing assets of the Indian domestic commercial banks

H_A: Priority sector advances affect the non-performing assets of the Indian domestic commercial banks

5.7 Empirical model

For the purpose of the regression we have used the following model.

$GNPAR_{it} = \alpha + \beta_{it} PSAR_{it} + u_{it}$

Where,

GNPAR = Gross Non-Performing Asset Ratio

PSAR = Priority Sector Advances Ratio

u = Error term

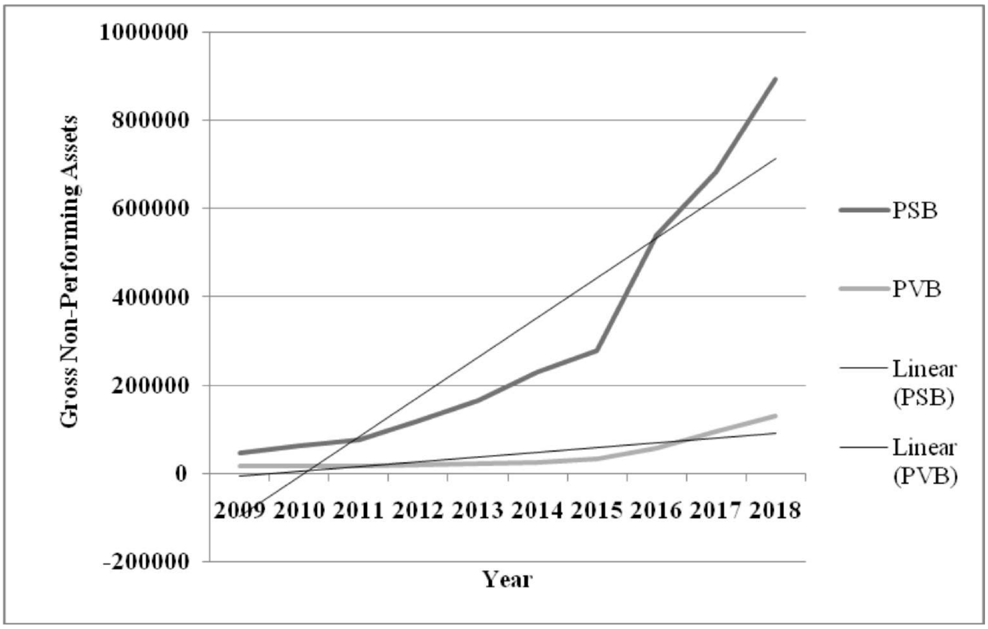
i = different banks

t = time

6. Analysis and Findings

Trend Analysis

Figure 1: Trend in GNPA of Public and Private Sector Banks



Source: Developed by Authors using MS-Excel

Figure 1 above shows us the year-wise GNPA of both public and private sector banks. From the above diagram we can visualize that GNPA of both public and private sector banks are rising. But the growth in GNPA for the public sector banks is much higher than that of the private sector banks. The steeper trendline of the public sector banks clearly indicates that there is a steady growth in the volume of GNPA every year. On the other hand the flatter trendline of the private sector banks, which is almost parallel to the horizontal axis, reflects that the growth in the volume of GNPA is very minimal. The reason behind such differentiation between the volume of GNPA of public and private sector banks may be due better loan monitoring system of the private sector banks.

Descriptive Statistics

Table 1: Descriptive Statistics (Public Sector Banks)

Variables	Obs.	Mean	Standard Deviation	Minimum	Maximum
GNPAR	210	6.18	5.73	0.63	27.95
PSAR	210	32.55	5.79	17.53	50.05

Source: Results obtained by Authors using Stata 11

Table 1 shows the descriptive statistics of the variables of public sector banks in form of No. of observations, mean, standard deviation, minimum and maximum values of the variables. The average GNPA Ratio of public sector banks during the study period is 6.18%. The minimum GNPA Ratio during the study period is 0.63% whereas the maximum GNPA Ratio during the period of study is 27.95%. The average Priority Sector Advance to Total Advance Ratio during the study period is 32.55. The minimum value of the PSAR during the study period is 17.53% whereas the maximum value is 50.05%.

Table 2: Descriptive Statistics (Private Sector Banks)

Variables	Obs.	Mean	Standard Deviation	Minimum	Maximum
GNPAR	170	2.73	2.15	0.2	11.2
PSAR	170	33.89	7.96	18.14	57.21

Source: Results obtained by Authors using Stata 11

Table 2 reflects the descriptive statistics of the variables of private sector banks. Here also we are showing No. of observations, mean, standard deviation, minimum and maximum values of the variables used. The average GNPA ratio for the private sector banks throughout the study period is 2.73%. The highest and the lowest GNPA ratio are 11.2% and 0.2% respectively during the study period. The average PSA ratio of the private sector banks during the study period is 33.89%, where the maximum value of priority sector advances to total advances ratio is 57.21% and its minimum value is 18.14%.

Correlation

Table 3: Correlation Matrix

Banks / Variables	**Public Sector Banks**		**Private Sector Banks**	
	GNPAR	**PSAR**	**GNPAR**	**PSAR**
GNPAR	1.000	-	1.000	-
PSAR	0.5129* (0.0000)	1.000	0.1275 (0.0975)	1.000
*Significant at 5% level				

Source: Results obtained by Authors using Stata 11

Table 3 above shows the Correlation Matrix of the variables for both public as well as private sector banks. From this table we can visualize that the correlation between the GNPA ratio and PSA ratio is statistically significant for the public sector banks (0.5129) at 5% level of significance but the correlation is not statistically significant for the private sector banks (0.1275).

Regression Analysis

Table 4: Regression Results for Public Sector Banks (Dependent Variable: GNPAR)

Model / Independent Variable	Fixed Effect Model Coefficients (p-value)	Random Effect Model Coefficients (p-value)	Hausman Test Chi^2 (p-value)	Preferred Model
Constant	-26.86* (0.000)	-15.65* (0.000)	222.89* (0.000)	Fixed Effect Model (As the p-value of Chi^2<0.05)
PSAR	1.01* (0.000)	0.67* (0.000)		
R^2	0.55	0.55		
F / Chi^2	231.72* (0.000)	114.91* (0.000)		
*Significant at 5% level				
GNPAR: Gross Non-Performing Asset Ratio PSAR: Priority Sector Advances to Total Advances Ratio				

Source: Results obtained by Authors using Stata 11

The above table shows us the Panel Data Regression results under both Fixed and Random effect models. The Hausman Test result in the above table accepts the Fixed Effect Model as the preferred model for making interpretation. The p-value (0.000) of the F-statistics (231.72) of the fixed effect model reveals that the model is a good fit for making interpretation. The value of R^2 indicates that the model is explaining 55% variation of GNPA ratio. Moreover, the p-value (0.000) of the Coefficient of PSAR (1.01) is lying below the significance level 0.05. So, on the basis of that we can reject the null hypothesis and can say that the priority sector advances of the Indian public sector banks have statistically significant positive effect on their GNPA. For every 1% change in the priority sector advances to total advances ratio, the GNPA Ratio changes directly by 1.01%.

Table 5: Regression Results for Private Sector Banks (Dependent Variable: GNPAR)

Model / Independent Variable	Fixed Effect Model Coefficients (p-value)	Random Effect Model Coefficients (p-value)	Hausman Test Chi^2 (p-value)	Preferred Model
Constant	0.630 (0.566)	0.977 (0.325)	0.37 (0.544)	Random Effect Model (As the p-value of Chi^2>0.05)
PSAR	0.062 (0.055)	0.051 (0.058)		
R^2	0.02	0.02		
F / Chi^2	3.73 (0.553)	3.59 (0.058)		
*Significant at 5% level				
GNPAR: Gross Non-Performing Asset Ratio PSAR: Priority Sector Advances to Total Advances Ratio				

Source: Results obtained by Authors using Stata 11

Table 5 above shows the regression results for the private sector banks using both Fixed and Random Panel Data Regression models. Here the Hausman Test result selects Random Effect model as preferred model. But interestingly, here the Random Effect model is not a good fit because the p-value (0.058) of Chi^2 (3.59) is marginally higher than the significance level of 5%. Moreover the p-value (0.058) of the Coefficient of PSAR (0.051) is lying marginally above the significance level 0.05. So, from the above result, for Indian private sector banks, we cannot reject the null hypothesis and can conclude that the priority sector advances do not affect their GNPA.

7. Conclusion

In this study we have made an attempt to find out the trend in the non-performing assets of both public and private sector banks in India. We have also made an attempt to find out the effect of the priority sector advances on the GNPA of the domestic commercial banks. We have found out that there is sharp upward trend in the volume of GNPA of the public sector banks. But for private sector banks the growth in the volume of GNPA is very low. We have also found that the priority sector advances of the public sector banks have statistically significant effect on their GNPA. But for private sector banks we have not found such evidence. The reason behind it may be because the private sector banks have better loan monitoring system.

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Factors of Entrepreneurial Readiness in Society

Navita Nathani, Rahul Pratap Singh Kaurav, Ravindra Pathak

Abstract

In the last decade, the Indian economy grew very rapidly but still was unable to generate more employment opportunities. The no-cost solution to this problem is entrepreneurship, which attracted the many researchers to investigate entrepreneurial aspects. On the same track, this paper has identified four factors, named as – regulative, cognitive, normative, and conducive – which are considered responsible for social readiness of entrepreneurship.

Key Words: *Entrepreneurial Readiness, Parental Influence*

Introduction

The incredible India grew exceptionally well in last few years but the rate of unemployment is decreasing day by day due to unavailability of employment opportunities.

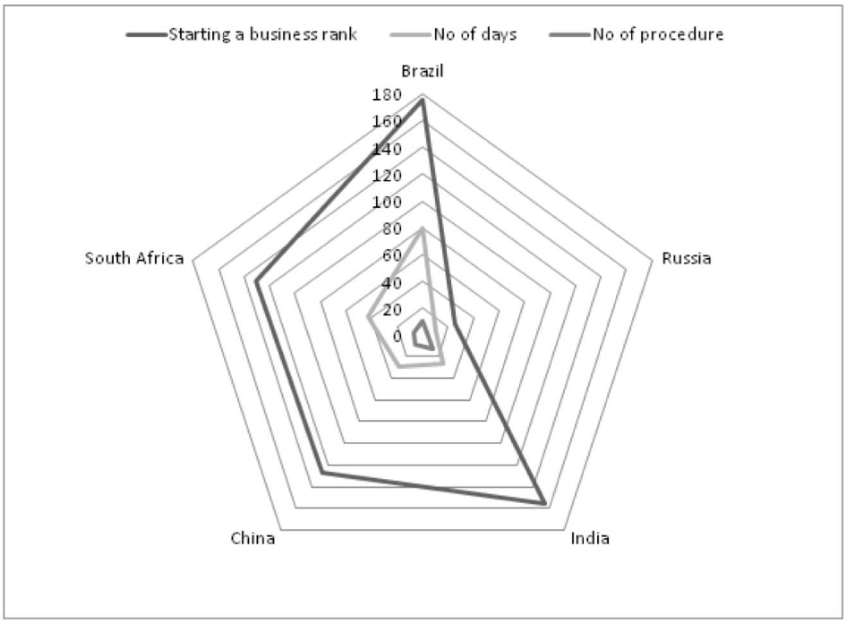
The unemployed population is creating a large gap between what is and what ought to be. To bridge the gap, a separate dedicated department was created by Government of India for Skill Development and Entrepreneurship under the Ministry of Skill Development, Entrepreneurship, Youth Affairs and Sports. National Skill Development Corporation (NSDC) proposed to train the youth and making them skill oriented heading towards skilling at least 400 million people by 2022.

Moreover, the initiative of the Govt by announcing separate ministry for skill development is remarkable and will help in lowering down the unemployment rate so that we can come out of the vicious circle of poverty. The ministry has come out with the policies like Make in India, digital India, start-up India, smart city and specialised zones and subsidies for starting a new venture and thereby generating enormous employment opportunities.

Statistics are showing that there are immense opportunities in entrepreneurial activities in India continues to drive growth in the third largest start-up economy in the world after the US and the UK. However, the question arises are we ready to handle these challenges? Is our society ready?

Indian economy has become the significant contributors in the emerging market developing economies by putting 75% of its share in the global growth in terms of both output and consumption. However, the economy has observed two major revolutions in terms of economic policy namely, Demonetization and GST resulting in to ease of doing business in India for existing as well as for new start-ups. Demonetisation facilitated digital transactions and hence encouraged cashless India, and as per the data of RBI, there was significant growth in mobile banking from 39 million in 2015 to 89 million in 2016, in the digital wallet from 53 million in 2015 to 213 million in December 2016, which itself a true representation of growing economy. Another reform taken by the Indian government in the last two years in the history of indirect taxes was the introduction of GST. Under the GST the uniform tax rate for all goods and services and thereby promoting ease of doing business which was complicated earlier due to different tax structures at different states in India but now a centralised registration helping start-ups to reduce their tax burdens and boosting the manufacturing sectors and hence creating many opportunities for budding entrepreneurs. Despite all these positive changes the Indian economy has been facing many problems due to strict policies, rigid rules and regulations and hence it is ranked at the bottom in all the major parameters of BRICS countries for starting a new business.

Fig 1: Ease of doing business in BRICS nations

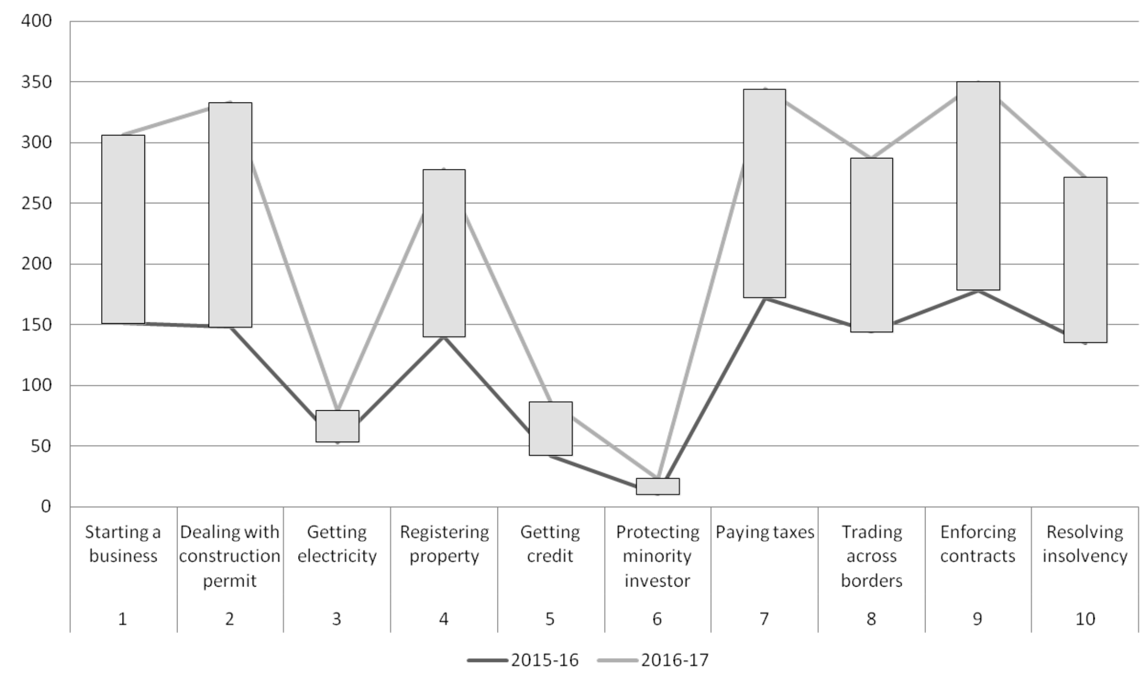


Source: Report on "Doing Business" by World Bank

Looking at the graph mentioned above the ease of doing business measured with three major parameters. They were initiating a business rank, total time in initiating a new business, and documenting the procedure. India came third in overall ranking but takes 26 days to start a business in comparison to 11 days in Brazil while it takes 13 days in documentation comes at last in all the BRICS nations. This comparison of India with its peer nations reflect that India still ahead in the bureaucratic and lengthy procedure for starting a new business.

In order to ensure more growth in small business, India has to take some major reforms in starting a business and to attract entrepreneurs, like proposing a bankruptcy law, reducing the time for registering companies, introducing e-Biz portal and making tax laws simpler.

Fig 2: Starting a business in India (Year wise comparison of parameters of starting a business in India)



Source: *Report on "Doing Business" by World Bank*

The survey itself indicates that in the last two years a significant change has been seen taking place in getting registration, electricity, dealing with construction, tax payments, trading internationally and imposed agreement and grievances. Overall the insulated climate has to develop in Indian economy by ensuring see through opportunities to prosper factor driven approach.

Conceptual framework

Considering the socio-cultural background, parental assistance plays a significant role in entrepreneurial orientation. In India, family administers entrepreneurial decisions, and the majority of Indian entrepreneurs are successful or failed, depending upon the family support, as suggested by some researches. The present study is a serious attempt to analyse the society's perception (parents') perception about choosing entrepreneurship as a career by their children.

Besides this, another objective of the study is to introduce a standardised tool to measure social readiness which undertakes multiple objectives. The first and foremost is that this tool can be valuable for potential entrepreneurs to understand the prevailing environment and secondly measuring social readiness may facilitate policymakers to incorporate changes in their tedious system. To deal with the present context the first section will explain Social readiness, the second section will throw light on entrepreneurial orientation, and the third section will describe the tools applied in this research.

Social Readiness

After years of vigorous debate entrepreneurship still holds the same concept which was advocated by Hagen (1962) in the theory of social change that presumes entrepreneur's creativity as an essential part of social revolution and economic growth. The theory augmented presented the general model of society which included the interrelationship of the physical environment, social environment, culture environment and personality traits with an entrepreneur. The theory further explained the historical shifts as a crucial force which brought social change and technological progress and provoked entrepreneurs to take up new ventures through personality formation and building competence.

Hundred years ago sociologist defined Social change was that which is needed to change for a better society and major concerns was on social change as an economic change (Karl Marx 1881). He further explained that different stages of development may be defined as a mode of their production and as technology changes production expands and social relationship changes accordingly. In the same line, Weber (1930) argued that social action as building blocks of the society. Value action, which means conscious belief third is a traditional activity that is actively controlled by tradition and fourth is an effective action that means actions done by one's affection and expectations. Based on this the role of family has become a significant parameter to take an entrepreneurial decision. It is the parents whose readiness can be counted as the readiness of their offspring.

Social readiness can be defined as the readiness of the society that considers overall external environment and availability of resources in such a way so that entrepreneurs may exploit the same to fulfil needs of the society and need for self-achievement. Further, the readiness can be described as a set of factors comprised of the conducive, normative, regulative and cognitive environment.

Entrepreneurial orientation

The emergence of EO can be seen from last four decades, and it has become the most discussed concept in entrepreneurship. EO refers to the attitude of entrepreneurs which includes engagement in innovative, proactive and risky ventures (Miller, 1883). EO has mainly four dimensions. The first dimension is autonomy which brings forth a business concept, the second one is innovativeness which is responsible for novelty, next one is foresightedness to seize opportunities, another is competitiveness that is to overcome threat in a marketplace and last one in risk-taking to take decision and action without knowledge (Covin & Sleving, 1991; Lumpkin & Dess, 1996). Previous studies have already proved EO is possible only when entrepreneurship is developed under the required environment and hence society should be ready for that. It is known that entrepreneurship is one of the ways to support the overall wealth of the country. Many scholars have considered entrepreneurship as an important driving power for economic growth and critically important social change (Schumpeter, 1934). Hence, entrepreneurial orientation is possible, only when entrepreneurs get a suitable environment for innovation and risk-taking.

Review of Literature

Plenty of research done on entrepreneurship but very little research was focused on society's perception as we think that Parents being part of society plays a significant role in establishing the new venture. Being the part of a family, the family members contribute significantly, in venture decision making process and thereby influence entrepreneurial intent. Numerous factor shapes parent's perception towards starting a new venture by their wards. Haq (2001) defined that children adopt the attitude and behaviour just like their parents. Apart from this the favourable economic environment also plays a significant role in developing entrepreneurial culture. Being the frontier in fastest growing economy (4th largest economy) India could become a powerful country in the world if due care has been taken for developing new generation (Huetter, 2007).

Scholars posited that entrepreneurial activities are interrupted when environmental change creates information asymmetries or other gaps in the industry (Timmons, 1991). Some of the researchers mentioned that environment and social change triggers of entrepreneurial opportunities. It had also asserted by researchers that technological, regulatory and political and demographic changes drive entrepreneurship (Shane & Venkataraman, 2000; Drucker, 1985). Kolvereid, (1996) found in his study that Socio-demographic factors have an indirect influence on entrepreneurial intention. Adema, Ali, Frey, Kim, Lunati, Piacentini, & Queisser, (2014) proposed that a healthy ecosystem encourage entrepreneurial orientation. Apart from this legal, regulatory and cultural environment also embraces the entrepreneurial culture. However, to foster the growth of the entrepreneurship, role of institution plays an important role, they further emphasised that rule of law and property rights characterises the context for innovation and future investment (Hernaldo De Soto & Marry Shirley, 2014).

The review also supported that there is a strong correlation between parents' expectation and academic performance of their wards and developing multiple skills at an early stage of a child (Do & Mancillas, 2001; Qadri & Manhas, 2001).

Prabhu & Thomas (2014) found that certain factors like considering role model to their parents, culture of family towards entrepreneurship, qualification of family members, their standard of living and utilizing the network of their parents are few important parental factors while opting entrepreneurship as their career. The findings were similar with the study explored by other author on counsellors. It seems that parental factors, individual traits and personal efficiency play a pivotal role in determining entrepreneurial intention (Akanbi, 2013). The paper studied that the students from B-schools inclined to the parental factors, i.e. role modelling to their parents, accessibility to business connections and associates of parents, social-economic background of family members.

Popli & Rao (2010) researched that student perception has changed regarding entrepreneurship in India. They noticed significant opportunities in the future for entrepreneurship. Entrepreneurship is taught as a different elective subject to the students of Engineering. Fauziah Rohaizat, & Haslinah (2004) conducted a study on technical students of Malaysia to know that how can they be acquainted with the entrepreneurial culture and the findings were really alarming. He found that the management students study entrepreneurship and its element in their degree or diploma programmes often as compare to non-technical students. There is a need and scope to incorporate various aspects of entrepreneurship in the curriculum of technical students as well to make their understanding clear about new product development, identification of opportunities and challenges in running start-ups etc.

Research Methodology

Coverage: The universe of the study would be plains of North India, the majority of the plain is covered by Madhya Pradesh, Uttar Pradesh and Rajasthan. The reason behind the selection of this part of the country is that it represents North India, which is appropriate for policy development.

Sampling Technique and Data Collection: Non-probability purposive sampling was done to attain a better and accurate response of the study. The research team has ensured possibly equal representation of all major segments of the community or social aspects. It has been decided to collect data from 1200 individuals. Following is the classification of sample:

100 parents' X 4 cities X 3 states = 1200 parents

To attain this targeted data, the researchers have distributed about 1400 self-administered questionnaire. 1357 questionnaire was returned as filled and finally, 1195 questionnaire was used for data analysis. Which means, 85% response rate, which is actually in social sciences is sporadic and easy to accept.

Sampling Element and Data Collection: Individual parents whose wards are pursuing PG or UG regular programmes was targeted for data collection for this study. As this generation is highly potent to become an entrepreneur, therefore, parents of this generation will only be contacted, and their response was recorded for understanding the conceptual phenomenon. Data was collected through a tailored and structured questionnaire, which is standardised through the statistical procedure and methodological process. All the places were either visited by the members of the research team, or by trained representatives who understands the study and its importance.

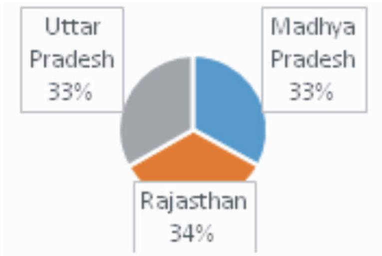
Scale Development: Entrepreneurial orientation of society (parents) was measured by requesting the respondents to record the likelihood of becoming their wards to an entrepreneur on a Likert's scale of 1to 5. This can be analysed vis-à-vis personal and situational variables like gender, course discipline, family background.

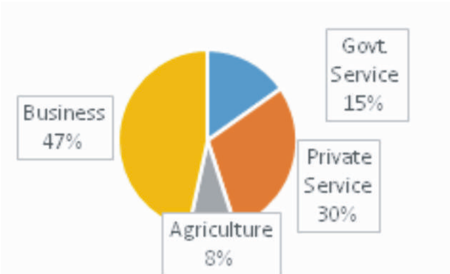
Data Analysis, Results and Interpretations

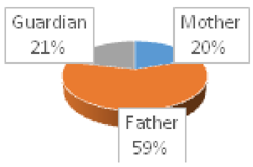
The assessment of the data was based on a sample of 1195 respondents spread across four cities in three states of India. The data was collected by using the non-probability purposive sampling. Following table 1, represent all the demographic and socio-economic data from respondents.

Table 1: Demographic data of respondents

State	Frequency	Percent
Madhya Pradesh	394	33
Rajasthan	404	33.8
Uttar Pradesh	397	33.2
Total	1195	100
Profession		
Govt. Service	182	15.2
Private Service	356	29.8
Agriculture	100	8.4
Business	557	46.6
Total	1195	100
Age groups		
Less than 40 years	408	34.1
41-55 years	648	54.2
56 and above years	139	11.6
Total	1195	100
Parenthood		
Mother	237	19.8
Father	702	58.7
Guardian	256	21.4
Total	1195	100







Measure of Reliability

In order to design good scales, it is always essential to assess the reliability of data collected through questionnaire (Zikmund, Babin, Carr, & Griffin, 2013). Nunnally (1978) recommended calculation of the Cronbach alpha, to assess the reliability of an attributed scale. The paper of Nunnally (1978) has suggested a threshhold level for the Cronbach's alpha coefficient. The reliability value of this scale was 0.748, which is upper than the minimum required limits.

Exploratory Factor Analysis (EFA) using Principle Component Analysis (PCA) method and Varimax rotation

The data was tested for sampling adequecyThe KMO measure is resulted with 0.764, which indicate that the data is suitable and adequate for further analysis.

The scores of 15 attributes were subject to Principle Component Analysis to recognize the factors that supports the formation of entrepreneurial intent (or orientation). Four factors solution with eigenvalues greater than one, were found suitable for the analysis. These factors account for 53% of total variance, which is good indicator. PCA results were rotated using Varimax method of rotation.

Table 2: The Results (Eigen values, variance and factor loadings)

Factor Name	Initial Eigen Value	Variance Explaining	Item's Converge	Factor Loading
Regulative	3.546	23.638	"Legal compliances affect the decision to start a new enterprise."	.774
			"Policy framework affects your decision to start a new enterprise."	.772
			"Export-import restrictions affect the decision to start a new business."	.728
			"Institutional mechanism of supporting agencies affects the start-ups."	.657
			"Creation of new venture provides financial stability."	.543
			"Financial freedom affects the decision to start a new business."	.500
Cognitive	2.122	14.144	"Professional education helps in understanding the market environment."	.708
			"Self-sufficiency and personal initiative are the results of experiential education."	.694
			"Entrepreneurial education promotes start-ups.	.608
			Technological advancements facilitate start-ups."	.494
Normative	1.257	8.381	"Successful entrepreneurs have a high level of status and respect."	.729
			"Successful entrepreneurs recognised by the media."	.727
			"Recognition indicates whether entrepreneurs are considered competent, resourceful individuals."	.474
Conducive	1.099	7.325	"Family environment encourages start-ups."	.699
			"Start-ups get social recognition."	.654

The first factor has emerged as Regulative Indicators, with six statements inherit into it. This factor explains about 24 per cent of the variance of factors among other factors. The second factor has emerged as Cognitive Indicators while having four statements within it. This factor has explained 14 per cent of the variance. The next factor has emerged normative Indicators of entrepreneurial intent. This factor has explained about eight per cent of the variance, and having three items in this factor. Factor four is about the conducive environment. This factor is having about seven per cent of variance explained with two statements.

Conclusions

The study concluded with the saying that "Small is BIG" which means that there is a lot of scope in small businesses hence it is essential to understand the inclination of society towards entrepreneurial growth. Entrepreneurs are the significant contributors in the growth of the countries and advent of new technologies, digitalisation and policy framework added fuel to it. To develop potential entrepreneurs has become the necessity of any nation. Earlier we thought that entrepreneurial characteristics are inborn characteristics but we can incubate entrepreneurs in entailed environment. For developing entrepreneurs, we need to understand the fundamental dimension; comprises of external and internal environment.

The study comes back with the answer of following two questions

1. What are the factors which influence social readiness towards entrepreneurial orientation?
2. How to identified and prioritize factors of entrepreneurial orientation?

To answer the first question, the study concluded four important factors out of 15 statements enquired, which may affect the entrepreneurial growth of the nation. The factors are calculated with the help of total variance explained and the data collected was not an identity matrix. The first factor regulative with high total variance seems as foremost factor which is always consider by society as it includes institutional mechanism, policy framework and legal compliances etc. the second factor emphasised on self-sufficiency and sincere feeling to do the duty carefully, named as Cognitive. The third factor emerged as Normative which deals with recognition in the society and the last factor came out as conducive which relates social environment in choice making. It seems that above mentioned factors may influence the decision making of their ward with respect to entrepreneurial orientation.

Besides this the study also introduced a standardize tool to measure social readiness which may facilitate potential entrepreneurs and policy makers in decision making process.

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Marketing in Digital Era: Emerging Factors for Business Success.

Dr Raj Kumar Gautam

Abstract

The paper aims at to identify the core issues in the digital marketing being considered important by the northern states of India. The study was conducted on exporters of different products in the Northern statesnamely Himachal Pradesh, Haryana and Punjab of ***India.*** *Total 150 units were approached and out of 150 exporters, 32 (11 from Himachal Pradesh, 9 from Punjab and 12 from Haryana) did not provided any information in spite of repeated requests. Hence finalsample consists128 respondents. A number of statements (35) indicating the various issues relating to digital marketing were prepared to know the responses of exporters. Factor analysis has been used to extract the important factors out of total 35 variables. The analysis shows 5 important factors namely organizational factors, product factors, price related issues, distribution management factors and promotional factors.*

The findings reveal that out of total 35 variables five factors has emerged important. Few important variables such asdigital marketing usage, digital marketing plans, new product or designing, Handling price Change, Calculation of cost, Offering price discounts/negotiations, Fault tolerance (error recovery), Physical Mapping, Prepare Country specific documents, Review of advertising methods and Usage of social Media are most important variables for doing the smooth business.

Key words*: Digital Marketing, Organizational factors, Product issues, Pricing, Distribution Management, Promotional factors.*

Introduction:

Digital marketing in the era of information technology enabled services have become an integrated part of businesses now days. Internet technology highways have made it faster for businesses to execute transactions, access markets which are otherwise not reachable, collect market information faster, respond to market changes quickly etc. Promoting your product through social and digital media not only through websites is the norm of the day. Since a lot of documents are involved in international business, customers have plenty of queries regarding.

Information Technology involves the application of computer technology and telephony to process, store, secure and exchange all forms of electronic data. Almost all the sectors have embraced the use of technology to serve its clients faster. Emerging technologies have changed the business methods from paper and branch based to digitized and networked banking services. In the present era, organizations are using the internet as a vital tool for providing awareness of their products to the prospective customers. The organization gains a vital competitive advantage by marketing through internet. The competitive position of any business is determined by how efficiently the management uses its resources, keeping abreast of changes in the technology and market requirement (Jacobson and Aaker, 1985). Internet is a tool which is extensively used and it satisfies the needs of the customers in a more effective and efficient manner than the traditional marketing tools (Srirojanant and Thirkell, 1998).

Digital Marketing is the process and strategies where digital technologies are having or likely to have significant impact. Digital technologies are rapidly changing the environment within which firms operate. Digital technologies are reducing information asymmetries between customers and sellers in significant ways. (Kannan, Hongshuang,2017). Dahiya and Gayatri (2018) in their study found that consumers feel positive towards digital communication, get affected from other customers' reviews and express their post-purchase feeling feelings over digital platforms.

Ritz and McQuitty(2019) viewed that the technological benefits may not be the only motivators for small business owner/managers who undertake digital marketing. So digital marketing have become extremely important as Consumers want to interact anywhere at any time, want to do truly new things, expect all data stored about them to be targeted more precisely to their needs or be used to personalize what they experience, and expects all interactions to be easy. Schirowsky and Peltier (2007) observed that three major research areas relating to internet are consumer trust pertaining to the internet, the use of the internet by consumers, and internet headed in terms of integrating strategies. Consumers want to interact anywhere at any time, want to do truly new things, expect all data stored about them to be targeted more precisely to their needs or be used to personalize what they experience, and expects all interactions to be easey. (Victoria and William, 2015).

Research Methodology:

The study was conducted on exporters of different products in the state of Himachal Pardesh, Haryana and Punjab. The study focused on the digital marketing awareness and its usage by these exporters in their respective businesses. The entrepreneurs/operating manager of these units manufacturing different products were considered for the purpose of this research. The list of registered exporters from these states was collected from their respective export promotion councils, registered associations and federation of Indian exporters. Total 150 exporters (comprising 50 from each state i:e Himachal Pradesh, Punjab and Haryana. were selected on for the purpose of study.

Out of 150 exporters, 32 (11 from Himachal Pradesh, 9 from Punjab and 12 from Haryana) did not provided any information in spite of repeated requests. Hence 128 respondents(150-32=128) were included for the purpose of final study. For the purpose of data collection Convenience sampling technique has been used keeping in mind the availability and approachability to the entrepreneurs/operation Managers.

A structured questionnaire was designed, keeping in mind the issues relating to the various issues in the era of digital marketing. A number of statements were prepared and respondents were asked to respond to these statements on five point Likert scale ranging from strongly agree (5) to strongly disagree (1). The data has been collected by using primary and secondary data collection methods.For the purpose of data analysis factor Analysis has been used to extract the important factors.

Discussion and Analysis:

To measure the adequacy of sample KMO value have been measured and results of following table shows that KMO value is 0.790 which is more than 0.5, hence, factor analysis can be applied. The results indicate appropriateness of factor analysis.The factor analysis has been applied to identify the factors becoming important for the exporters in Digital Marketing.

Table 1. KMO value and Bartlett's Test of Sphericity results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.790**
Bartlett's Test of Sphericity	Approx. Chi-Square	638.502
	df	231
	Sig.	**.000**

Table 2. Overall Reliability Statistics

Reliability Statistics	
Chronbach's Alpha	N of Items
0.898	35
Size of Sample : 128	

Table 2 clearly shows that Chronbach's alpha score is 0.898 and is closer to 1; hence factor analysis can be used.

Table 3. Factors affecting Digital Marketing (Descriptive Statistics and Communalities results).

			Communalities results	
	Mean	Std.Deviation	Initial	Extractions
1. Digital Marketing usage	4.48	1.36	1	0.836
2. Preferential/ Customize products	4.39	1.48	1	0.743
3. Customer liking & Preferences	4.23	1.41	1	0.613
4. New product or designing	4.15	1.51	1	0.619
5. Quality specifications and Product Standardization	3.87	1.48	1	0.611
6. Package and brand name	3.79	1.39	1	0.572
7. Developing digital marketing plans	3.86	1.49	1	0.594
8. Product diversifications/eliminations	3.11	1.39	1	0.526
9.Compliance with standards	3.07	1.29	1	0.531
10.Scheduling and updating of market information	3.85	1.29	1	0.563
11.Calculation of cost	3.66	1.61	1	0.592

12.Handling price Change	3.28	1.51	1	0.574
13. Review of pricing strategies	3.47	1.40	1	0.638
14. Countering competitive Prices/challenges	2.98	1.23	1	0.580
15.Offering price discounts/negotiations	2.86	1.32	1	0.532
16. Responding to customer price quarries	3.84	1.62	1	0.489
17.Developing competitive distribution strategies	3.72	1.39	1	0.437
18.Respond to customer queries rapidly	3.72	1.42	1	0.347
19.Reliable and fast Delivery	3.83	1.63	1	0.407
20.Use of ERP to increase efficiency	2.88	1.34	1	0.99
21.Security of product	4.68	1.69	1	0.679
22.Fault tolerance(error recovery)	3.14	1.43	1	0.542
23.Physical mapping	3.26	1.29	1	0.356
24.Web designing/development	4.61	1.65	1	0.682
25.Monitor change in International price	3.87	1.48	1	0.343
26.Competition challenges	4.18	1.39	1	0.618
27.Usage of Social Media	3.54	1.47	1	0.623
28.quickly increase decrease price as per demand	3.42	1.44	1	0.74
29. Prepare Country specific documents	4.25	1.53	1	0.454
30. Response Time	3.72	1.6	1	0.586
31.Advertising cost	3.46	1.37	1	0.553
32.Display and visibility	4.13	1.56	1	0.487
33.Search Engine usage	3.16	1.44	1	0.426
34.Review of advertising methods	3.26	1.38	1	0.552
35.Media usage (paid/earned/owned media)	3.82	1.61	1	0.638
Extraction Method: Principal Component Analysis) **N= 128**				

Table 4. Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loading
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.871	20.549	20.549	5.871	20.549	20.549	8.258
2	4.963	16.756	35.440	4.963	16.756	35.440	6.316
3	3.916	13.623	48.358	3.916	13.623	48.358	5.832
4	2.771	10.523	56.533	2.771	10.523	56.533	3.993
5	1.996	8.680	64.136	1.996	8.680	64.136	3.352
6	1.403	5.493	71.624				
7	.996	4.613	77.428				
8	.895	3.612	80.558				
9	.870	2.863	82.541				
10	.805	2.412	85.538				
11	.718	2.159	86.424				

12	.652	1.733	88.635				
13	.553	1.438	90.413				
14	.438	1.242	91.226				
15	.393	.971	92.723				
16	.371	.961	92.121				
17	.328	.912	93.879				
18	.292	.813	95.426				
19	.266	.698	96.102				
20	.237	.667	95.879				
21	.194	.572	97.782				
22	.184	.496	98.787				
23	.164	.424	98.141				
24	.147	.385	98.404				
25	.130	.246	98.301				
26	.119	.231	99.881				
27	.106	.207	99.652				
28	.097	.198	99.384				
29	.083	.187	99.296				
30	.074	.162	99.212				
31	.063	.143	99.164				
32	.057	.114	99.106				
33	.041	.068	99.063				
34	.032	.040	100.010				
35	.021	.039	100.070				

Table 5. Rotated Component Matrix

Variables	F1	F2	F3	F4	F5
1. Digital Marketing usage	**0.683**	0.856	0.086	-0.06	0.084
2. Preferential/ Customize products	0.103	**0.762**	0.057	0.083	-0.09
3. Customer liking & Preferences	0.604	**0.684**	0.112	0.275	0.117
4. New product or designing	0.347	**0.743**	0.039	-0.11	0.146
5. Quality specifications and Product Standardization	0.175	**0.668**	-0.01	0.382	0.396
6. Package and brand name	0.709	**0.613**	-0.03	-0.04	0.049
7. Developing digital marketing plans	**0.582**	0.089	0.293	-0.02	-0.05
8. Product diversifications/eliminations	0.065	**0.587**	0.163	0.08	0.065
9.Compliance with standards	0.131	**0.598**	-0.36	0.414	0.068
10.Scheduling and updating of market information	**0.483**	0.182	0.553	0.241	0.116
11.Calculation of cost	-0.092	0.237	**0.586**	0.616	0.035
12.Handling price Change	0.068	0.028	**0.643**	-0.06	0.166
13. Review of pricing strategies	0.59	0.234	**0.462**	0.176	0.237
14. Countering competitive Prices/challenges	0.18	0.053	**0.524**	0.077	0.538
15.Offering price discounts/negotiations	0.137	0.236	**0.529**	0.722	0.013
16. Responding to customer price quarries	0.354	0.158	**0.478**	0.151	-0.01
17.Developing competitive distribution strategies	0.163	0.235	0.224	**0.497**	0.427
18.Respond to customer queries	**0.563**	0.312	0.442	0.136	-0.02
19.Reliable and fast Delivery	0.079	0.156	-0.01	**0.487**	0.859
20.Use of ERP to increase efficiency	0.067	0.023	0.061	**0.589**	0.383

21.Security of product	-0.079	0.641	0.242	**0.528**	0.156
22.Fault tolerance(error recovery)	0.521	0.178	0.462	**0.682**	0.116
23.Physical mapping	0.316	-0.044	0.462	**0.616**	0.035
24.Web designing/development	**0.612**	0.045	0.124	0.077	0.538
25.Monitor change in International price	0.163	0.183	**0.484**	0.722	0.013
26.Competition challenges	-0.036	**0.426**	0.378	0.151	0.076
27.Usage of Social Media	0.176	0.253	0.175	0.197	**0.539**
28.quickly increase decrease price as per demand	0.314	0.064	**0.467**	0.145	0.276
29.Prepare Country specific documents	0.052	0.339	0.536	**0.534**	-0.02
30. Response Time	**0.428**	0.146	-0.01	-0.02	0.053
31.Advertising cost	-0.036	0.183	0.478	0.151	**0.518**
32.Display ads visibility	0.176	0.253	0.232	0.197	**0.427**
33.Search Engine usage	0.314	0.064	0.175	0.452	**0.476**
34.Review of advertising methods	0.206	0.339	0.536	0.145	**0.546**
35.Media usage (paid/earned/owned media)	0.53	0.183	0.283	0.251	**0.453**
Extraction Method: Principal Component Analysis **N= 128**					

Table 5 shows that five factors (shown in five columns) can be extracted out of these 35 variables. Within these columns, there are values in **bold row wise**. These bold values indicate the variables which are highly correlated and can be used to determine the respective factors.

Factor 1 consist six variables such as, digital marketing usage (0.683), web designing and development (0.612), developing digital marketing plans (0.582), respond to customer quarries (0.562) and scheduling and updating of market information (0.483), response time (0.428).

Factor 2has eight variables namely, Preferential/ Customize products (0.762), new product or designing (0.743), Customer liking & Preferences (0.684), Quality specifications and Product Standardization (0.668),Packageand brand name(0.613), Compliance with standards (0.598), Product diversifications/ eliminations (0.587), Competition challenges (0.426).

Factor 3 comprises total seven variables such as Handling price Change (0.586), Calculation of cost(0.586), Offering price discounts/negotiations (0.529), Countering competitive Prices/challenges(0.524), Monitor change in International price(0.484), quickly increase decrease price as per demand(0.467),Review of pricing strategies(0.462).

Factor 4. Fault tolerance (error recovery) (0.682), Physical Mapping (0.616), Use of ERP to increase efficiency(0.589), Prepare Country specific documents (0.534), Security of product (0.528), Developing competitive distribution strategies (0.497), Reliable and fast Delivery(0.487).

Factor 5 Review of advertising methods (0.546), Usage of social Media(0.539), Advertising Cost(0.518), Search engine usage (0.476), Media usage(Paid/Earned/owned media)(0.453)display ads Visibility(0.427).

Table: 6 (Factors extracted out of total variables)

FACTOR EXTRACTED	TOTAL VARIABLES
Organizational Information	Response Time Digital Marketing usage Web designing and development Developing digital marketing plans Respond to customer queries rapidly Scheduling and updating of market information

Product factor	Competition challenges Package and brand name New product or designing Compliance with standards Customer liking & Preferences Preferential/ Customize products Product diversifications/eliminations Quality specifications and Product Standardization
Pricing Related Issues	Calculation of cost Handling price Change Review of pricing strategies Monitor change in International price Offering price discounts/negotiations Responding to customer price quarries Countering competitive Prices/challenges quickly increase decrease price as per demand
Distribution management factors	Security of product Physical Mapping Reliable and fast Delivery Use of ERP to increase efficiency Fault tolerance(error recovery) Prepare Country specific documents Developing competitive distribution strategies
Promotional Issues	Advertising Cost Updated website display ads Visibility Search engine usage Usage of social Media Review of advertising methods Media usage(Paid/Earned/owned media)

Table 6 depicts the total five factors have been extracted out of the total 35 variable considered for study purpose.

Conclusion:

In the modern era also known as digital era the organizations operating in domestic as well as international markets have to use digital marketing or have to find out the ways to operate in the fast markets. Digital Marketing becomes extremely important when organization has to operate across national boundaries. The exporters need to understand from table 5 that they must prepare themselves to operate in the markets. **Factor 1**indicates that digital marketing usage, web designing and development, developing digital marketing plans and, respond to customer quarries are the factors which need utmost attention of the exporters. While **Factor 2**shows thatPreferential/ Customize products, new product or designing, Customer liking & Preferences, Quality specifications and Product Standardization, Packageand brand name, Compliance with standards, Product diversifications/eliminations, Competition challenges should be given due importance before/ during the production process. **Factor 3** deals with the pricing issues, hence becomes most important factor as pricing generates revenue for the organizations. Exporters must be careful while Handling price Change, Calculation of cost, Offering price discounts/negotiations, Countering competitivePrices/challenges,Monitor change in International price, and timely Review of pricing strategies for smooth fund management and flow of money.**Factor 4**comprises issues relating to distribution system as without accurate distribution system business cannot succeed in the long run. For smooth distribution system theyneeds to control/develop on the variables likeFault tolerance (error recovery), Physical Mapping, Use of ERP to increase efficiency, Prepare Country specific documents, Security of product, Developing competitive distribution strategies, Reliable and fast Delivery so that product reaches at time and delivered safely to the customers.**Factor** 5 indicates that advertisement has become very important to reach the target audience. In the present times organizations should develop the advertising plans to take lead in the market**. Hence, the focus should be made on** Review of advertising methods , Usage of social Media, calculation of Advertising Cost, Search engine usage , deciding onMedia usage(Paid/Earned/owned media and more clarity on display ads Visibility.

Therefore, it be concluded that in the digital era exporters must focus on the variables/issues affecting their businesses before, and during production process, controlling the cost so that competitive pricing policies can be made to attract the customer, developing proper distribution system and using proper advertising media to generate lead and attract the customers. Organizations focusing on the above factors may take lead over their competitors which will help them to survive and compete in market effectively.

Implications of the Study

In view of the resilient competition in almost all the sectors especially in the area of marketing as most of the products or services provided by organizations are facing stiff competitions from domestic and foreign organizations. The results of this research contribute to the theory and practical aspects of marketing factors contributing in the digital age. In theory, this research depicts the most prolific and comprehensive factors which are significant in the digital marketing efforts. To the researchers, the study contributes to the existing knowledge in the field of marketing with reference to the development and understanding of variables of research. The students studying digital marketing can also be benefitted by this research while reading about the subject or trying to link theory to practice. In practice, the findings of the study will benefit companies operating in domestic as well as international marketing to develop marketing strategies that would furthermore help them to improve their competitiveness at national and global levels. This will also enable policy makers/ entrepreneurs/associations in identifying the gaps in marketing area which may enhance their strategic response and help them to effectively manage the existing strategies which will eventually improve their overall performance to achieve goals/objectives of their business.

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A Comparative Study of Project Organisation Structure and Problems Faced during New Product Development by Tier 1 and Tier 2 Suppliers in Indian Automotive Sector

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Abstract

This study has been undertaken to investigate the impact of existence of project organization structure the on the process of New Product Development (NPD). In India, the demands for vehicles have extended dramatically over the past two and a half decades. Numerous vehicle manufacturers around the world and Tier-1 suppliers have effectively set up offices in India for research, improvement and assembly. The Indian automotive part sector started to update Lean methods to meet these customers ' interests. The automobile segment is the main player in the global and Indian economies. This paper aims to identify problems faced by leading Indian and International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers during NPD activity. Further, it also attempt to examine and categorize the problems in leading Indian and International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers during NPD.

Index Terms – Project Organization Structure, New Product Development, Suppliers in Indian Automotive Sector.

I. INTRODUCTION

New Product Development

The New Product Development (NPD) is the process in which the conception of a new product is done carrying out a series of steps like planning, designing, development, and marketing (Rouse, 2018) [1]. These NPD activities are executed by the organizations to bring continued growth process and enhance the performance of the company to high levels. The NPD plays an important role in the significant growth of the employment sector, economy and brings technological advancements necessary for raising the standards of living.

To make focus on project management, it is a process through which the resources of the company are planned, supervised and organized to achieve a particular task or accomplish any project (Labarre, 2019) [2]. The project management activities are conducted to achieve specific goals so that the pre-defined objects set by the organization are met accordingly.

The NPD process involves various phases like recognizing consumer's needs, setting up product conceptualization, creating a detailed proposal of the product, designing, testing and marketing the product for commercialization purpose by the Tier 1 and Tier 2 supplier's organization. Each stage of the NPD process requires conduction of research activities, promoting, mechanizing and other processes. In addition to this, it is also essential that the people involved in the product development process must communicate, collaborate and work as a team for the success of the new product (Kazimierska and Grębosz-Krawczyk, 2017) [3].

Indian Car Industry and New Product Development (McKinsey & Company, 2018) [4]

The Indian Car Manufacturing industry is also known as Original Equipment Manufacturers (OEM). The manufacturing industry is expected to increase its export volumes by 20%. The companies are making ties and supplying equipment to the developed countries such as Europe & America. Hence, the demand for quality goods and development of the new product in the specified time is necessary for the Tier 1 suppliers so that new OEMs will be able to provide quality services to the clients effectively. On the other hand, to meet the demand of the OEMs the Tier 1 suppliers have to manage and develop their ties with Tier 2 Suppliers so that supply chain of new product and resources will be met adequately.

Figure 1 shows the typical supplier structure.

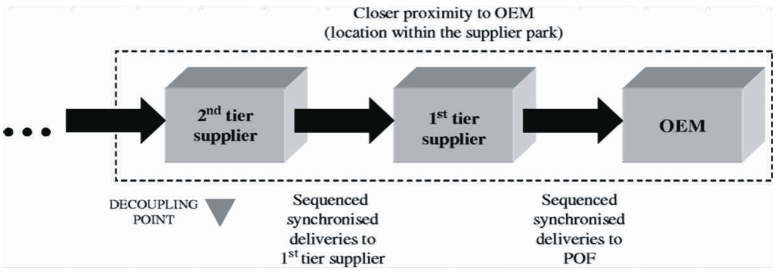

Figure 1: Typical Supplier Structure

Role of Suppliers

The suppliers play a major role in providing services to the automotive industries through their goods and supplies which are helpful in conducting businesses dealing and carrying out the development of NPD into the companies. The suppliers also act as an important source of information contributor, counselor and trade credit lenders to the automotive industry. The suppliers also keep a watch on the developments taking place around the world and introducing them to the automotive industry effectively.

As indicated by the Figure 1, it is seen that there is high dependency of OEMs on Tier 1 and Tier 2 suppliers for carrying out the activities related to New Product Development is highly responsible for the failure in the performance of the OEMs. It also includes the inadequate risk planning and presence of high risk factors in the New Product Development by Tier 1 and Tier 2 suppliers is also impacting the working of the OEMs negatively.

Figure 2   Shows typical activities in NPD process.

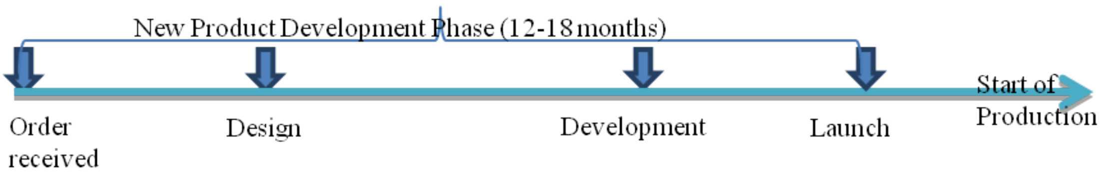

Figure 2: Typical Activities in NPD Process

The current research paper will attempt to identify the difficulties faced by the Indian Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers at the time when are conduct the New Product Development project for the OEM. The study will also propose new practical suggestions and bring valuable improvements in the working and designing of the Project Management System appropriately.

I. REVIEW OF LITERATURE

Most commonly used NPD technique 'Stage-Gate' methodology is adopted by Tier 1 and Tier 2 supplier's organization is to develop new products. The said methodology mainly includes the active participation of all the team members in the NPD project so that key decision is taken by avoiding oversights (Goffin and Micheli, 2010) [5].

It also ensures that clear management practice is established so that good leadership practices, interactions between the NPD project members are developed properly. Additionally, the conduction of the NPD process involves several stages so it is necessary to manage all the process effectively so that no conflict arises between the different functionaries. The process also includes the consideration of consumer needs and technology so that the new product is developed with the specified time frame by the project team members in Tier 1 and Tier 2 suppliers' organization (Cooper, 2009) [6].

The new product development activities have gained momentum over the past three years and many innovations are brought by the technology-enabled companies. For example, the introduction of Naukri, Ola, MakeMyTrip are some of the launches done by the IT professionals who have been successful and received high acceptance from the people. It has encouraged the investors to invest in the development projects which encourage the professionals and Tier 1 and Tier 2 suppliers company to conduct the NPD process. As per the survey conducted by Venture Intelligence, 74 NPD have been introduced in the Indian Markets from 2008-2017 by investing $681 million to gain profits of worth $4 billion (ET Contributors, 2018) [7].

However, the Tier 1 and Tier 2 suppliers company also face commercialization challenges while introducing the new product into the market. The acceptance of the consumers towards the new products does not happen instantly and it requires time for the successful reception of the new product (Patel et al., 2014) [8]. Hence, it is necessary that the launching of new products must be executed by keeping consumer preferences into consideration.

II. NEED OF THE STUDY

The new product development is essential for the effective growth of the company and makes movements towards the progressive expansion speedily (Boyle, 2017) [9]. Whereas, project management is done to conduct administrative activities in a proper manner so that organizational activities are conducted in accordance with the company goals. The current study which is related to the study of project organization structure and problems faced during new product development by tier 1 and tier 2 suppliers in Indian automotive sector is conducted to provide in-depth learning about the different aspect of the study effectively. The study also provides facts related to new product management and project management along with their respective process. The study highlights the benefits and the new innovations that are brought by the suppliers to the automotive industry. The new product development and effective conduction of project management ensure that more growth will be brought in the automobile industry.

III. OBJECTIVES OF THE STUDY

The main aim of the study is to make a comparative study of Project Organisation Structure and Problems Faced during New Product Development by Tier 1 and Tier 2 Suppliers in Indian Automotive Sector. In addition to this, other objectives are as follows:

- Identify Problems Faced by Top 3 Indian and International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers during New Product Development.
- Analyze and Categorize the Problems in Top 3 Indian and International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers during New Product Development.
- Study the Project Organisation Structure for New Product development in Top 3 Indian and International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.
- Gap Analysis of Project Organisation Structure for New Product development in Top 3 Indian and International Plastic Interiors Tier 1 and Tier 2 Suppliers.

IV. HYPOTHESIS OF THE STUDY

Study hypothesis are as follows:

H01: Project Organisation Structure does not help to develop New Products on Time and within Budget in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

H11: Project Organisation Structure helps to develop New Products on Time and within Budget in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

H02: Lack of Project Organisation Structure during New Product Development does not lead to Cost overrun in Indian Automotive Tier 1 and Tier 2.

H12: Lack of Project Organisation Structure during New Product Development leads to Cost overrun in Indian Automotive Tier 1 and Tier 2.

H03: Project Management Skills does not help Project Team to take quick decisions and reduces Problems Faced during New Product Development in Indian and International Plastic Interiors Tier 1 and Tier 2 Suppliers.

H13: Project Management Skills helps Project Team to take quick decisions and reduces Problems Faced during New Product Development in Indian and International Plastic Interiors Tier 1 and Tier 2 Suppliers.

V. DATA COLELCTION METHOD

The research collection tools are the primary as well as the secondary sources respectively. The primary sources of data comprises of interaction with the respondents that provides interview based data which has been collected. This data has been analyzed using a number of statistical measures. The target population has been consisting of Indian & International Plastic Tier 1 and Tier 2 Suppliers in India and the main sampling techniques used was All Plastic Tier 1 and Tier 2 in India. The data collection methods have been both subjective as well as objectives naming it to be qualitative as well as quantitative by nature. SPSS software has have been used for analyzing the data. Secondary data related to the subject has been gathered through various other sources such as news and articles, journals and published reports available on the web sites..

The sample used for this population was containing the following features.

- 100% of Population for Automotive Plastic Interiors Suppliers was selected.
- Program/ Project Management or New Product Development Department representative was considered for Questionnaire and Interview Response.
- Average Experience of Individual was 12+ Years in Automotive Interiors.
- Total 34 Professionals were interviewed.

The questionnaire that has been designed for the purpose of this study has been crafted with the following features

- Questions Design with Multiple Choices for Quantitative Analysis.
- Open Ended Questions and Detail Interview done with Professional for Qualitative Analysis.
- Questions were designed based on Researcher 20+ Years in Program Management in Automotive Plastic Interiors.

Limitations of Study

Every research initiative is faced with a number of challenges those surround the studies receptively. Until these factors do not result in the defeat of the objective of the respective research these could not be considered to be considerably large. In case of this research, the main limitation related to this section of the research include but are not limited to the source of data collection being narrow, the number of participants forming a rather smaller small size as well as the software being used for this research being single in source.

VI.DATA ANALYSIS

There are 34 respondents to the survey. These are 14 International Tier 1 and Tier 2 suppliers and 20 Indian Tier 1 and Tier 2 suppliers. Analysis of data revealed interesting findings. Some of these are as listed below.

- All International Tier 1and Tier 2 Suppliers have a dedicated department for New Product Development.
- Majority of Indian Tier 1 have dedicated department for New Product Development.
- Almost all Tier 2 Supplier do not have dedicated department for New Product development.
- All International Tier 1 and Tier 2 New Product development is managed through Project/Program Management Department.
- Majority of Indian Tier 1New Product Development is managed through Project Management department but also most of them have new product Development as department to manage new Products.
- Majority of Indian Tier 2 Supplier do not have separate Project Management department to manage New Product development.

Hypothesis Testing

Here we are considering only Hypothesis 1 and Hypothesis 2. We have applied combination of statistical tests (f test, t test etc.). Details of hypothesis testing are provided in Annexure 1.

It was found that the alternative hypothesis was accepted which are as stated below.

H11 Project Organisation Structure helps to develop New Products on Time in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

H21 Project Organisation Structure helps to develop New Products within budget in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

VII. CONCLUSION

The study concluded that it is essential to organizational structure so as to have an easy and efficient NPD (new product development activity within the organization; that can be monitored on timely basis. Existence of such Project Organisation Structure helps (organizations such as in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers), to develop New Products on Time. It was also mentioned that the Existence of such Project Organisation Structure helps (organizations such as in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers), to develop New Products within budget.

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Annexure 1: Hypothesis 1 and Hypothesis 2 Testing

Hypothesis 1

Null Hypothesis is:

H10 Project Organisation Structure does not help to develop New Products on Time in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

Alternative Hypothesis is:

H11 Project Organisation Structure helps to develop New Products on Time in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

Hypothesis 2

Null Hypothesis is:

H20 Project Organisation Structure does not help to develop New Products within budget in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

Alternative Hypothesis is:

H21 Project Organisation Structure helps to develop New Products within budget in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers

For testing these, we have considered responses for the following datasets:

- Type of the Organization (Q6) and Have dedicated department for NPD (Q2) and
- Type of the Organization (Q6) and Have dedicated cross functional team to manage NPD (Q5)
- Type of the Organization (Q6) and Is every NPD have separate budget (Q19)

  Statistical tests applied and their results are given subsequently.
- Type of the Organization (Q6) and Have dedicated department for NPD (Q2)

Data obtained for (Q6) and (Q2)

Description / Statistics	Q6	Q2
n (Count)	14	14
Mean (Average)	4.29	1.00
Median	4.00	1.00
Standard Deviation (Variance)	0.47	0.00
Standard Error	0.13	0.00

F-Test - Variance		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 variance > Q2 variance	
p-value:		
T-Student Test (Homoscedastic)		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 average > Q2 average	
p-value:	0.000%	
Reject equality of means		
T-Student Test (Heteroscedastic)		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 average > Q2 average	
p-value:	0.000%	
Reject equality of means		
Mann-Whitney Test		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 median > Q2 median	
p-value:	0.000%	
Reject equality of medians		

Inference: The alternative hypothesis H11 stands accepted.

H11 Project Organisation Structure helps to develop New Products on Time in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

- Type of the Organization (Q6) and Have dedicated cross functional team to manage NPD (Q5)

Data obtained for (Q6) and (Q5)

Description / Statistics	Q6	Q5
n (Count)	14	14
Mean (Average)	4.29	1.00
Median	4.00	1.00
Standard Deviation (Variance)	0.47	0.00
Standard Error	0.13	0.00

F-Test - Variance		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 variance > Q5 variance	
p-value:		
T-Student Test (Homoscedastic)		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 average > Q5 average	
p-value:	0.000%	
Reject equality of means		
T-Student Test (Heteroscedastic)		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 average > Q5 average	
p-value:	0.000%	
Reject equality of means		
Mann-Whitney Test		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 median > Q5 median	
p-value:	0.000%	
Reject equality of medians		

Inference: The alternative hypothesis H11 stands accepted.

H11 Project Organisation Structure helps to develop New Products on Time in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

- Type of the Organization (Q6) and Is every NPD have separate budget (Q19)

Data obtained for (Q6) and (Q5)

Description / Statistics	Q6	Q19
n (Count)	14	14
Mean (Average)	4.29	1.21
Median	4.00	1.00
Standard Deviation (Variance)	0.47	0.43
Standard Error	0.13	0.11

F-Test - Variance		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 variance > Q19 variance	
p-value:		
Cannot reject equality of variances - Use Homoscedastic T-Tests		
T-Student Test (Homoscedastic)		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 average > Q19 average	
p-value:	0.000%	
Reject equality of means		
T-Student Test (Heteroscedastic)		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 average > Q19 average	
p-value:	0.000%	
Reject equality of means		
Mann-Whitney Test		
Condition is True **Accept alternative hypothesis** **Insignificant p-value**	Q6 median > Q19 median	
p-value:	0.000%	
Reject equality of medians		

Inference: The alternative hypothesis H21 stands accepted.

H21 Project Organisation Structure helps to develop New Products within budget in International Automotive Plastic Interiors Tier 1 and Tier 2 Suppliers.

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Differences in Aided Awareness towards Cause Related Marketing (CRM) Campaigns – A Demographic Analysis

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Abstract

Marketing campaigns and promotions with a social dimension have become more visible. A growing number of firms have realized the importance of social alliances and are entering into commercial and social partnerships with nonprofit organizations to achieve their business and social objectives. The business organizations manifest their CSR through different modes. Under the umbrella of CSR, one of the emerging modes, known as Cause Related Marketing (CRM) has started receiving special interest among many Indian business organizations. The objective of this paper is to study the aided awareness level of youth regarding cause related marketing campaigns and to find out the differences in awareness level, if any, based on their demographic profile. An independent sample T-test and ANOVA was used for measuring the differences in the awareness level.

Keywords: *cause related marketing, youth, aided awareness, CRM campaigns and demographics.*

Introduction

Marketing, these days, is getting wider and is not purely moving around the marketplace only. In order to contribute positively and constructively towards social improvement and development activities, along with the fulfillment of corporate goals and objectives, the companies are developing different ways which serve them well by increasing the visibility of their outcomes in the form of enhanced public image, greater product sales and improved profitability (Cui et al., 2003; Drumright, 1996) . Cause related marketing (CRM) is one of the growing marketing tools which aim to connect social contribution to product sales. It is based on "profit motivated giving" (Varadarajan and Menon, 1988). It is emerging as an increasingly popular means of improving marketing associations with customers, equally for the sponsoring company and for the sponsored cause.

Varadarajan and Menon (1988), among the earliest writers on CRM defined it as "The process of formulating and implementing marketing activities that are characterized by an offer from the firm to contribute a specified amount to a designated cause when customers engage in revenue-producing exchanges that satisfy organizational and individual objectives". According to Bloom et al. (2006), "Cause-related marketing (CRM) is defined as the process of formulating and implementing marketing activities that are characterized by contributing a specific amount to a designated nonprofit effort that, in turn, causes customers to engage in revenue providing exchanges".

The very first step towards the acceptance and buying of CRM products is the awareness of CRM campaigns and their effective contribution to support various social issues. The marketing theory and principles are focused on customer orientation to understand what target audiences currently know, believe and do. Awareness is a necessary condition for any favorable attitude and behavioral response. Knowledge and awareness can evoke positive attributions for CRM activities. In order to generate a positive customer attitude and customer buying behavior, it is imperative to understand whether the target segments are actually aware about the CRM programs or not, to what extent are they aware and which CRM campaigns are the most publicized and known to the target audience. Customer awareness is one of the most common measure of research in consumer based studies. In the process of decision making, awareness is the first basic step. If customers are not aware of the product, they obviously cannot buy or demand that product (Adkins, 1999; Kim et al., 2005; Ross et al., 1992)

Objectives of the Study

- To study the overall aided level of awareness of youth towards CRM campaigns
- To study the differences in aided awareness of youth towards CRM campaigns with respect to selected demographic variables.

Research Methodology & Measurement

Youth has always been a prime market segment for the marketers. This segment has an influence in the family decision making and overall consumer spending. Over the years, there has been a rise in the purchasing power of youth with increased spending habits as they become earning hands at a younger age. Many countries are witnessing youth volunteerism as youth are coming forward to bring a social change in their surroundings by becoming social agents. They represent the symbol of change. For the present study, youth between the age group of 18 to 35 years has been taken as the population. By this age, they are mature enough to understand the importance of social contributions. Moreover, most of the products which associate with CRM comprise of convenience products which are frequently purchased by the youngsters. The respondents with a mixture of age, educational background, income background, place of residence etc. were included in the research study. A sample of 300 young respondents belonging to five districts of Punjab participated in the survey. For data collection, a self-designed and pretested questionnaire based five point Likert scale was used. The questionnaire was divided into two parts consisting of demographic variables and CRM campaigns. Based on the given objective, the hypotheses framed were tested using Independent Samples t-test and ANOVA respectively.

Results and Discussion

Aided awareness refers to the percentage of respondents who are aware of the concept of cause related marketing or any CRM campaign. They were given a list of CRM campaigns which assist them to answer their degree of awareness. Aided awareness leads to brand recognition by the customer among a given set of stimulus objects.

For studying the aided awareness level of respondents, they were presented with a set of CRM campaigns and their degree of awareness for each of the campaigns was assessed with respect to demographic variables. The CRM campaigns for which awareness was tested are P&G 'Shiksha- Padhega India, Badhega India' for children education, ITC Classmate Notebooks 'Let's Put India First' for rural development, Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur' for children education, Nestle Maggi, Nescafe, KitKat 'Nanhi Kali' for girl child education, ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar' for water conservation, KFC 'Add Hope' for meals to underprivileged children and Dabur Sani Fresh '700se7kadam' for hygiene and sanitation. The research hypotheses developed for studying the aided awareness with respect to demographics are as follows:

H0_1: There is no significant difference in aided awareness for cause related marketing campaigns and Gender of the respondents.

Table 1: Independent Samples Test - Aided Awareness for CRM and Gender

Independent Samples Test							
CRM Campaigns		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
P & G 'Shiksha– Padhega India, Badhega India'	Equal variances assumed	9.300	.002	-3.397	608	.001
	Equal variances not assumed			-3.431	565.785	.001**
ITC Classmate Notebooks 'Let's Put India First'	Equal variances assumed	.016	.899	.124	608	.901
	Equal variances not assumed			.124	605.513	.901
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	Equal variances assumed	5.610	.018	-2.088	608	.037
	Equal variances not assumed			-2.092	607.859	.037**
Nestle Maggi,Nescafe,Kit Kat 'Nanhi Kali'	Equal variances assumed	7.189	.008	-2.011	608	.045
	Equal variances not assumed			-2.015	607.890	.044**

ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Equal variances assumed	6.793	.009	-1.485	608	.138
	Equal variances not assumed			-1.488	607.948	.137
KFC 'Add Hope'	Equal variances assumed	3.984	.046	-.528	608	.598
	Equal variances not assumed			-.529	607.999	.597
Dabur Sani Fresh '700 se 7 kadam'	Equal variances assumed	.997	.318	.093	608	.926
	Equal variances not assumed			.093	604.837	.926

**Significant at 5 percent level*

Table 2: Group Statistics - Aided Awareness for CRM and Gender

Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
P & G 'Shiksha– Padhega India, Badhega India'	Males	314	4.1752	1.04433	.05894
	Females	296	4.4257	.74188	.04312
ITC Classmate Notebooks 'Let's Put India First'	Males	314	4.0955	1.10059	.06211
	Females	296	4.0845	1.10605	.06429
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	Males	314	3.3344	1.63419	.09222
	Females	296	3.6014	1.51709	.08818
Nestle Maggi,Nescafe,KitKat 'Nanhi Kali'	Males	314	3.4299	1.60367	.09050
	Females	296	3.6824	1.49139	.08669
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Males	314	3.5669	1.57161	.08869
	Females	296	3.7500	1.46773	.08531
KFC 'Add Hope'	Males	314	3.4427	1.62003	.09142
	Females	296	3.5101	1.52934	.08889
Dabur Sani Fresh '700se7kadam'	Males	314	3.0064	1.72186	.09717
	Females	296	2.9932	1.74471	.10141

In order to study the aided level of awareness of respondents with respect to gender, Independent samples t- test was used. The CRM campaigns were taken as the testing variables and gender was taken as the grouping variable. Levene's test for equality of variance was used to check whether the variances are equal for both the groups of gender i.e. males and females or not. The set of CRM campaigns displayed different levels of awareness based on the gender of the respondents. Out of the seven campaigns presented, only three were found to be statistically significant with respect to gender. The detailed results are presented in Table 1. For P & G 'Shiksha– Padhega India, Badhega India' campaign, the appropriate t = -3.431, degrees of freedom = 564.785 and p = .001 which is statistically significant at 5% level of significance. Similarly, for Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur' campaign, t = -2.092, degrees of freedom = 607.859 and p = .037 found to be statistically significant at 5% level of significance. Further, for Nestle Maggi, Nescafe, KitKat 'Nanhi Kali' campaign, t = -2.011, degrees of freedom = 607.890 and p = .044 which is statistically significant at 5% level of significance. It is therefore concluded that there is a significant difference in the average score of the male and female respondents regarding awareness for the above stated cause related marketing campaigns. The remaining campaigns were not found to be statistically significant for CRM awareness with respect to gender. For all the three campaigns found to be statistically significant, the mean scores of females (4.4257, 3.6014 and 3.6824) are more than the mean scores of males (4.1752, 3.3344 and 3.4299), which can be observed from Table 2 reflecting a significant difference in gender wise aided awareness regarding CRM. Based on the means, we can say that females have a higher level of aided awareness for CRM than males.

H0_2: There is no significant difference in aided awareness for cause related marketing campaigns and Place of Residence of the respondents.

Table 3: Independent Samples Test - Aided Awareness for CRM and Place of Residence

Independent Samples Test							
CRM Campaigns		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
P & G 'Shiksha– Padhega India, Badhega India'	Equal variances assumed	.427	.513	1.179	608	.239
	Equal variances not assumed			1.174	589.125	.241
ITC Classmate Notebooks 'Let's Put India First'	Equal variances assumed	.827	.364	-.350	608	.726
	Equal variances not assumed			-.351	607.667	.726
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	Equal variances assumed	.499	.480	.154	608	.878
	Equal variances not assumed			.154	605.124	.878
Nestle Maggi,Nescafe,KitKat 'Nanhi Kali'	Equal variances assumed	2.995	.084	2.133	608	.033**
	Equal variances not assumed			2.129	598.223	.034
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Equal variances assumed	21.085	.000	3.098	608	.002
	Equal variances not assumed			3.080	581.154	.002**
KFC 'Add Hope'	Equal variances assumed	.167	.683	-1.063	608	.288
	Equal variances not assumed			-1.062	599.905	.289
Dabur Sani Fresh '700se7kadam'	Equal variances assumed	1.112	.292	.468	608	.640
	Equal variances not assumed			.467	600.352	.640

***Significant at 5 per cent level*

Table 4: Group Statistics - Aided Awareness for CRM and Place of Residence

Group Statistics					
	Place of Residence	N	Mean	Std. Deviation	Std. Error Mean
P & G 'Shiksha– Padhega India, Badhega India'	Urban	319	4.3386	.87853	.04919
	Rural	291	4.2509	.95896	.05622
ITC Classmate Notebooks 'Let's Put India First'	Urban	319	4.0752	1.13851	.06374
	Rural	291	4.1065	1.06301	.06231
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	Urban	319	3.4734	1.60142	.08966
	Rural	291	3.4536	1.56483	.09173
Nestle Maggi,Nescafe,KitKat 'Nanhi Kali'	Urban	319	3.6803	1.52277	.08526
	Rural	291	3.4124	1.57843	.09253
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Urban	319	3.8370	1.42034	.07952
	Rural	291	3.4570	1.60840	.09429
KFC 'Add Hope'	Urban	319	3.4107	1.55730	.08719
	Rural	291	3.5464	1.59539	.09352
Dabur Sani Fresh '700se7kadam'	Urban	319	3.0313	1.71535	.09604
	Rural	291	2.9656	1.75151	.10268

The set of CRM campaigns displayed different levels of awareness based on the residential place of the respondents. Out of the seven campaigns presented, only two campaigns were found to be statistically significant with respect to residential place. The detailed results are presented in Table 3. For Nestle Maggi, Nescafe, KitKat 'Nanhi Kali' campaign, the appropriate t = 2.133, degrees of freedom = 608 and p = .033 which is statistically significant at 5% level of significance. Similarly, for ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar' campaign, t = 3.080, degrees of freedom = 581.154 and p = .002 found to be statistically significant at 5% level of significance. Hence, it is concluded that there is a significant difference in the average score of the urban and rural respondents regarding awareness for the above stated cause related marketing campaigns. The remaining campaigns were not found to be statistically significant for CRM awareness with respect to place of residence. For the two campaigns found to be statistically significant, the mean scores of urban residents (3.6803 and 3.8370) are more than the mean scores of rural residents (3.4124 and 3.4570), which can be observed from Table 4 reflecting a significant difference in residential place wise aided awareness regarding CRM. Based on the means, we can say that the urban residents have a higher level of aided awareness for CRM than the rural residents.

H0_3: There is no significant difference in aided awareness for cause related marketing campaigns and Working Status of the respondents.

Table 5: Independent Samples Test - Aided Awareness for CRM and Working Status

Independent Samples Test							
CRM Campaigns		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
P & G 'Shiksha– Padhega India, Badhega India'	Equal variances assumed	6.341	.012	2.458	608	.014
	Equal variances not assumed			2.408	518.080	.016**
ITC Classmate Notebooks 'Let’s Put India First'	Equal variances assumed	.339	.561	-.705	608	.481
	Equal variances not assumed			-.708	602.698	.479
Nihar Shanti Amla Hair Oil ‘Chotte Kadam Pragati Ki Aur’	Equal variances assumed	.884	.348	.453	608	.651
	Equal variances not assumed			.452	588.770	.652
SNestle Maggi,Nescafe,KitKat 'Nanhi Kali'	Equal variances assumed	3.729	.054	.982	608	.326
	Equal variances not assumed			.978	584.013	.328
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Equal variances assumed	6.001	.015	-1.659	608	.098
	Equal variances not assumed			-1.667	603.289	.096
KFC 'Add Hope'	Equal variances assumed	.610	.435	.725	608	.469
	Equal variances not assumed			.724	591.255	.470
Dabur Sani Fresh ‘700se7kadam’	Equal variances assumed	.322	.571	1.361	608	.174
	Equal variances not assumed			1.360	592.633	.174

***Significant at 5 percent level*

Table 6: Group Statistics - Aided Awareness for CRM and Working Status

Group Statistics						
	Working Status	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
P & G 'Shiksha– Padhega India, Badhega India'	Working	328	4.3811	.78861	.04354
	Non-Working	282	4.1986	1.04162	.06203
ITC Classmate Notebooks 'Let's Put India First'	Working	328	4.0610	1.13167	.06249
	Non-Working	282	4.1241	1.06823	.06361
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	Working	328	3.4909	1.56214	.08625
	Non-Working	282	3.4326	1.60872	.09580
Nestle Maggi, Nescafe,KitKat 'Nanhi Kali'	Working	328	3.6098	1.51652	.08374
	Non-Working	282	3.4858	1.59675	.09509
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Working	328	3.5610	1.56489	.08641
	Non-Working	282	3.7660	1.46920	.08749
KFC 'Add Hope'	Working	328	3.5183	1.56402	.08636
	Non-Working	282	3.4255	1.59060	.09472
Dabur Sani Fresh '700se7kadam'	Working	328	3.0884	1.72270	.09512
	Non-Working	282	2.8972	1.73925	.10357

Out of the seven campaigns presented, only one campaign was found to be statistically significant with respect to the working status of the respondents. The detailed results are presented in Table 5. For P & G 'Shiksha– Padhega India, Badhega India' campaign, the appropriate t = 2.408, degrees of freedom = 518.080 and p = .016 which is statistically significant at 5% level of significance. Hence, it is concluded that there is a significant difference in the average score of the working and non-working respondents regarding awareness for only P & G 'Shiksha– Padhega India, Badhega India' campaign. The remaining campaigns were not found to be statistically significant for CRM awareness with respect to the working status. The mean score of working respondents (4.3811) is more than the mean scores of non-working respondents (4.1986), which can be observed from Table 6 reflecting a significant difference in the working status wise aided awareness regarding CRM. Based on the means, we can say that the working respondents have a higher level of aided awareness for CRM than the non-working respondents.

H0_4: There is no significant difference in aided awareness for cause related marketing campaigns and Age of the respondents.

Table 7: ANOVA - Aided Awareness for CRM and Age

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
P & G 'Shiksha– Padhega India, Badhega India'	Between Groups	10.830	2	5.415	6.542	**.002****
	Within Groups	502.463	607	.828		
	Total	513.293	609			
ITC Classmate Notebooks 'Let's Put India First'	Between Groups	7.480	2	3.740	3.099	**.046****
	Within Groups	732.561	607	1.207		
	Total	740.041	609			
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	Between Groups	9.872	2	4.936	1.976	.139
	Within Groups	1515.835	607	2.497		
	Total	1525.707	609			
Nestle Maggi,Nescafe,KitKat 'Nanhi Kali'	Between Groups	15.059	2	7.529	3.140	**.044****
	Within Groups	1455.762	607	2.398		
	Total	1470.821	609			
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	Between Groups	10.757	2	5.379	2.327	.098
	Within Groups	1402.948	607	2.311		
	Total	1413.705	609			
KFC 'Add Hope'	Between Groups	2.683	2	1.341	.539	.583
	Within Groups	1509.448	607	2.487		
	Total	1512.131	609			
Dabur Sani Fresh '700se7kadam'	Between Groups	.971	2	.485	.161	.851
	Within Groups	1825.029	607	3.007		
	Total	1826.000	609			

***Significant at 5 per cent level*

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Table 8: Descriptives - Aided Awareness for CRM and Age

Descriptives					
	Age	N	Mean	Std. Deviation	Std. Error
P & G 'Shiksha– Padhega India, Badhega India'	18-25 years	223	4.1704	1.05592	.07071
	26-30 years	199	4.4824	.69518	.04928
	31-35 years	188	4.2500	.92282	.06730
	Total	610	4.2967	.91807	.03717
ITC Classmate Notebooks 'Let's Put India First'	18-25 years	223	4.1480	1.06989	.07165
	26-30 years	199	4.1809	1.05765	.07497
	31-35 years	188	3.9255	1.17222	.08549
	Total	610	4.0902	1.10235	.04463
Nihar Shanti Amla Hair Oil 'Chotte Kadam Pragati Ki Aur'	18-25 years	223	3.3094	1.64625	.11024
	26-30 years	199	3.6131	1.50958	.10701
	31-35 years	188	3.4894	1.57347	.11476
	Total	610	3.4639	1.58280	.06409
Nestle Maggi,Nescafe,Kit Kat 'Nanhi Kali'	18-25 years	223	3.3812	1.63106	.10922
	26-30 years	199	3.7588	1.45717	.10330
	31-35 years	188	3.5372	1.54217	.11247
	Total	610	3.5525	1.55407	.06292
ITC Aashirwad Atta, Salt, Spices 'Boond Se Saagar'	18-25 years	223	3.4888	1.59351	.10671
	26-30 years	199	3.7035	1.48648	.10537
	31-35 years	188	3.8032	1.46568	.10690
	Total	610	3.6557	1.52360	.06169
KFC 'Add Hope'	18-25 years	223	3.3946	1.63199	.10929
	26-30 years	199	3.5528	1.54592	.10959
	31-35 years	188	3.4894	1.54258	.11250
	Total	610	3.4754	1.57575	.06380
Dabur Sani Fresh '700se7kadam'	18-25 years	223	3.0493	1.74301	.11672
	26-30 years	199	2.9548	1.72415	.12222
	31-35 years	188	2.9894	1.73356	.12643
	Total	610	3.0000	1.73158	.07011

One – way ANOVA was performed in which the CRM campaigns were taken as the testing variables and age group containing three categories was taken as the grouping variable. The respondents for the study fall in the age categories of 18-25 years, 26-30 years and 31-35 years. Out of the seven campaigns presented, only three campaigns were found to be statistically significant with respect to the age of the respondents. The detailed results are presented in Table 7. For P & G 'Shiksha– Padhega India, Badhega India' campaign, $F(2,607) = 6.542$, $p = .002$. For ITC Classmate Notebooks 'Let's Put India First' campaign, $F(2,607) = 3.099$, $p = .046$ and for Nestle Maggi, Nescafe, KitKat 'Nanhi Kali' campaign, $F(2,607) = 3.140$, $p = .044$.

The p value for aided awareness for the above mentioned CRM campaigns was found to be less than 0.05. It is concluded that significant differences exist for awareness of CRM with respect to different age groups of respondents for P & G 'Shiksha– Padhega India, Badhega India' campaign, ITC Classmate Notebooks 'Let's Put India First' campaign and Nestle Maggi, Nescafe, KitKat 'Nanhi Kali' campaign. No significant differences were found to exist for other CRM campaigns with respect to age.

Further, Table 8 highlights the mean scores of different age groups of respondents for all the selected CRM campaigns. In the case of P & G 'Shiksha– Padhega India, Badhega India' campaign, the respondents in the age category of 26-30 years marked the highest mean score (4.4824) followed by respondents in 31-35 years of group (4.2500) and 18-25 years category were found to be the least aware (4.1704). In the case of ITC Classmate Notebooks 'Let's Put India First' campaign, the respondents in the age category of 26-30 years marked the highest mean score (4.1809) followed by respondents in 18-25 years of group (4.1480) and 31-35 years category were found to be the least aware (3.9255). In the case of Nestle Maggi, Nescafe, KitKat 'Nanhi Kali' campaign, the respondents in the age category of 26-30 years marked the highest mean score (3.7588) followed by respondents in 31-35 years of group (3.5372) and 18-25 years category were found to be the least aware (3.3812).

Conclusion and Managerial Implications

Every CRM campaign emphasizes to achieve certain economic as well as social goals. At the core of the CRM campaigns are the target customers, present and potential, who can make any such campaign a successful story by purchasing the products and letting the company as well as the NPO fulfill their respective underlying objectives. The very first step towards the acceptance and buying of CRM products is the awareness of CRM campaigns and their effective contribution to support various social issues. Due to the intense competition prevailing in the Indian FMCG market, companies spend a huge amount on the marketing and distribution of their products. Customer awareness matters because it leaves a mark on the customer's memory and helps them recall the products at the point of purchase. To make a conclusion on the aspect of awareness of CRM and CRM campaigns amongst the respondents, it can be restated that majority of the respondents had an understanding about business organizations making social contributions for the betterment of the society. Significant differences were found between gender, place of residence and working status of the respondents with the aided level of awareness.

The present study contributes to the existing literature in the domain of cause brand alliances. Although CRM originated in the western countries but it has been gaining rapid acceptance and momentum in India and other countries in recent years. India being a promising and developing economy holds a lot of potential for such new innovative strategic tools like CRM. In India CRM is relatively a new and challenging concept of marketing communication. Academic research proposes that effects of CRM campaigns are generally positive and winning for companies as well as for the causes so promoted. Since CRM campaigns focus on the social needs, they carry significant implications for the marketers, consumers and the nonprofit organizations associated with the charity. This research work would put forward both practical and theoretical contributions for the marketers, the nonprofit organizations and the customers in general. The companies and marketing practitioners can utilize the research results in order to implement their CRM based marketing programs in a more effective way and to be aware of the level of consumer awareness which lead their consumption behavior.

Limitations of the Study and Suggestions for Future Research

The study was restricted to the state of Punjab and only young consumers in the age group of 18-35 years were included. Due to the limited sampling unit and the area covered, the scope of the study can be broadened for future research. The study has a limitation in terms of its approach in other geographically and demographically diverse areas. Further research can be conducted on the awareness and popularity of various CRM campaigns of different companies. The respondents with diverse age groups and ethnic backgrounds may be studied. New studies can include the CRM campaigns and their impact on purchase decisions and the role of celebrities in endorsing CRM campaigns.

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Measuring the Performance of the Selected FMCG Companies – A Study

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ABSTRACT:

Performance analysis means an effort of critical investigation of achieving the goals or targets set by an organisation by utilizing the human, financial and god created resources effectively and efficiently. In this study our focus is on FMCG sector. For analysis seven leading FMCG companies have been selected. Such companies are Britannia, Dabur, Godrej, HUL, ITC, Marico and Nestle. Different profitability ratios like Net Profit Margin, Total Assets Turnover Ratio, Operating Profit Margin, Earnings per share, Dividend per share, Dividend Pay-out ratio, rate of return ratios like Return on Capital Employed, Return on Equity, Cash profit margin, solvency ratios like Current Ratio, Liquid ratio and structural ratios like Debt-equity ratio, Equity multiplier etc. have been used in this study. Du Pont 5 points analysis is being used to calculate ROE for measuring joint effect of ratios. From the study we found that Nestle, ITC and HUL are profitable sectors where liquidity and profitability tangle is properly managed by the companies.t. After considering the joint effect of ratios we found that Godrej is the risky profitable concern of the selected companies. Though there is significant difference in variables of the selected companies.

KEY WORDS:

Performance analysis, Profitability ratios, Rate of return ratios, Structural ratios, Solvency ratios, Descriptive Statistics, One way ANOVA.

JEL CODE: G32, G33, G35

1. INTRODUCTION: Performance Analysis consists two terms, performance and analysis. Performance means the efforts to get the goals or targets efficiently and effectively. In other words, performance means achievement. For getting or achieving the goals or targets it is necessary to properly utilize human, financial and god created resources. Analysis on the other hand, means critical investigation of efforts for increasing activities. In this regard we have to compare the actual performance with the standards, then we have to identify variations and finally necessary corrections have to be made. Performance analysis is not only evaluates the profitability of the company but also to provide information regarding the profit earning capability of the company. It also provides us information relating to operational efficiency, managerial efficiency, structural efficiency and solvency or liquidity position of the company. From performance analysis we also predict the growth of the company.

In this study we selected 7 FMCG companies of India. Fast-Moving Consumer Goods (FMCG) industry is the fourth largest sector in India contributing nearly 3 % of India's GDP. FMCG sector includes food, beverage, healthcare, personal care and household products. In India FMCG sector includes foods, chocolate, batteries, pharmaceuticals, packaged foods, plastic goods, toiletries, non-durable consumer products. There is a high growth in FMCG sector. Generally, FMCG sector focused on urban areas. Most of the middle-income group people are working in this sector. Agriculture, healthcare, education, MSMEs, infrastructure and employment are directly influence companies in FMCG sector.

In our study Financial Performance of the companies are discussed from four aspects, such as profitability, rate of return on investment, structural implications and liquidity.

2. About the Companies: Britannia: Britannia industries Ltd. manufacturing food products in India. During 2004 to 2018 the market capitalisation of the company moved from Rs. 2400 crore to Rs. 76000 crore. In 2017-18 the net sales of the company was Rs. 9905.60 crore. The net profit of the company in the year 2017-18 was 1777.40 crore.

Dabur: Dabur India Limited is well known FMCG company in India. In 2014, first time Dabur launches India's first Ayurvedic Medical journal. In 2015 there was an agreement between Dabur and Starcom Media Vest Group (SMG). On 26th September 2017 Dabur announced its alliance with Amazon to make its product global. From 2018, Dabur manufacturing products like cosmetic, Body and health products.

Godrej: Godrej consumer product is a famous FMCG company in India. It serves consumers of India over 122 years. This group enjoy the patronage of 1.15 billion consumers globally. Now Godrej expands their products to the emerging markets of Asia, Africa and Latin America.

HUL: Hindustan Unilever Limited is the largest FMCG company in India over 80 years. Around 18000 people are working in the company. HUL is the subsidiary of Unilever, the largest supplier of food. Now HUL is selling their products in 190 countries. It has around 67% shareholding in HUL.

ITC: ITC Ltd. is another popular FMCG company in India. ITC Ltd. produces food, personal care products, education and stationery products, agarbaties, cigarettes etc. It is one of the leading marketers in FMCG. It market capitalisation is nearly US$50 billion. Gross sales value US $ 10.8 billion. 6 billion people's livelihoods are maintained by ITC.

Marico: Marico Ltd. is another India's leading consumer goods companies providing consumer products and services in the areas of health, beauty and wellness. It has emerging markets around 25 countries in Asia and Africa. In 2017, it has own Flame award. In 2016, it has own International business PR awards. Marico's market capitalisation is 25000 crore.

Nestle: Nestle India is consumer goods company. 8th March, 2018 its famous product Maggi completed 35 years of business in India. It produces mill & nutrition, beverage, chocolate and confectionery items. Marico is selling products in many countries in Asia and Africa.

3. Literature Review:

A. Chakraborty (2017) conducted a study on Performance evaluation of leading FMCG firms. In this study he selected 5 FMCG companies. The objective of the study is to analyse the financial position of the companies. For analysing the differences in mean value of the selected ratios of companies he use one way ANOVA test. From profitability analysis ITC was in the top position. In terms of rate of return HUL was the best. From liquidity as well as structural point of view again ITC was in top.

S. Bansal, G. Singh (2017) conducted a study on Indian FMCG companies. The main objective of the study was to examine the fundamental analysis of the selected FMCG companies. In this analysis he used one way ANOVA test. He found that there is significant difference between the selected variables (Net profit margin, ROCE, EPS, DPS, Dividend pay-out ratio) of the selected companies.

A. Puwar, K. Jalan et.al.(2017) conducted a study on financial analysis of 12 pharmaceuticals Indian companies using Du Pont analysis with 3 points model and 5 points model. They have shown that the growth in ROE value of Torrent Pharmaceuticals was tremendous even though the Sun Pharma, the leading company in India having highest assets making , losses for its investors.

H. Desai made a study on earning per share in FMCG sector of India. For his study he collected earning per share ratio of 14 FMCG companies for a period of 10 years (2005 to 2014) from the annual reports. After that the researcher used Mann-Kendall trend detection test to find out the trend. The researcher found no such trend in this analysis.

In 2017 S.M.I. Haque and A. Afzal conducted a study on two FMCG companies. The study period of the study was 2011-12 to 2015-16. The objective of the study was to evaluate the financial performance of the selected companies. The results of the study were i) sound return for shareholders, ii) satisfactory liquidity position, iii) firms were not in trading on equity and iv) liquidity and profitability are positively associated with sales.

Khamrui (2012) made a study of two popular FMCG companies – ITC and HUL. In this study he computed different profitability ratios and made a comparison between them considering ROI as the dependent variable. The study revealed that both profitability and liquidity have significant impact on profitability.

Joshi (2013) conducted the study on three major FMCG companies – HUL, Colgate Palmolive & ITC-Agro Tech Foods. In this study he focused on various profitability ratios like Net operating profit, net profit margin, PAT to net worth, cash profit to net profit etc. He used mean and ANOVA test. He concluded that there have been vast differences among the selected ratios.

4. Research Gap: After prolong study of literature on financial performance analysis of companies it is clear that there are different angles of the evaluation of financial performances. In those studies so many relationships were established considering the FMCG sectors. But analysing the financial performance / profitability with the help of Du Pont analysis was not done yet in FMCG sector. Therefore, to cover the gap in earlier studies, the present work is considered to provide an insight into the fundamental analysis of selected FMCG companies. In the present study we used the Du Pont model in deeper sense by divided ROE into 5 points analysis also used one way ANOVA test. Apart from this test homogeneity, robustness of the data has also been tested. In between difference among the variables, Post Hoc Tukey HSD test has been done. And I think it will strengthen the fundamental analysis approach in future.

5. Research Methodology:

5.1 Research Statement: Measuring the performance of selected FMCG companies – a study

Hypothesis of the study:

H_0-Null Hypothesis- There is no significant difference between the variables (ratios) of the selected FMCG companies. Symbolically we can write $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7$

H_1-Alternative Hypothesis- There is significant difference between the variables (ratios) of the selected FMCG companies. Symbolically we can write $\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5 \neq \mu_6 \neq \mu_7$

5.2 About the research problem: The present study focuses on the profitability analysis of selected Indian companies in FMCG sector for a period of 15 years from 2004 to 2018. One of the important factors affecting the functioning of the company is the size of the unit. I have tried to use Du Pont model to analyse profitability of the selected FMCG companies. In this study my focus is on difference in profitability, return on investment, structural efficiency and solvency variables of the selected companies. For this reason one way ANOVA test has been done.

5.3 Research Design: The present study entitled "Measuring the performance of selected FMCG companies – a study" is an analytical, conclusion oriented and hypothesis testing type of research study. In this study we used different ratios like total assets turnover ratio (i.e. net sales / total assets). The efficiency of the business can be measured with the help of this ratio. To measure the solvency position of the business i.e. the capability of the company to meet its long term debts, we used interest coverage ratio (EBIT / Interest Expense) and equity multiplier (total assets / total debt). To measure the profitability of the company i.e. the company's ability to generate revenue / earnings as compared to the expenses of the company, we used net profit margin (net profit / net sales), Return on equity (net income / average shareholders fund) and operating profit margin (EBIT / net sales). Other profitability ratios like earnings per share, dividend per share, dividend pay-out ratio and return on capital employed, Cash Profit Margin of the selected companies has been considered for performance analysis. For structural efficiency we considered Debt-equity ratio and equity multiplier. For judging the solvency position of the company we used current ratio and liquid ratios.

Du Pont analysis: In our study we used Du Pont 5 points model to calculate ROE of the selected companies. ROE has been computed by multiplying 5 ratios with each other to get a composite ratio. Such ratios are Total assets turnover ratio, Equity multiplier, Operating profit margin, Tax retention rate and Interest expense rate. The joint effect of five ratios can nullify the effect of one or two ratios and help investors to take appropriate decision.

5.4 Objectives of the Study: The Objectives of the present study are as follows;

i) To analyse the profitability of the selected FMCG companies of India by comparing different profitability ratios.

ii) To analyse the rate of return of the selected FMCG companies of India by comparing different rate of return ratios.

iii) To analyse the leverage of the selected FMCG companies of India by comparing different structural efficiency ratios.

iv) To analyse the solvency position of the selected FMCG companies of India by comparing different liquidity ratios

ii) To analyse whether there is any difference between the variables (ratios) of the selected FMCG companies.

5.5 Nature and source of data: The present study is based on the secondary data and such data have been collected from Capitaline data base from the University of Burdwan. Other information have been collected from annul reports of the company and also from internet as per requirement.

5.6 Period of the study: The present study covers a period of 15 years from 2003-04 to 2017-18.

5.7 Sample Design: In the present study I used purposive sample technique to select the leading FMCG companies from the FMCG industry.

5.8 Population: The population consisted popular FMCG companies in India.

5.9 Sampling units and sample size: For the present study 7 FMCG companies have been selected as the sampling units. These companies are listed in the BSE and NSE or both in India. Out of many companies only the top seven companies have been selected in this study. Then all units of population are classified on the basis of size of the company.

5.10 Tools and Techniques: In the present study we used Ratio analysis and different techniques of average (mean), standard deviation. For testing the difference between variables Descriptive statistics and one way ANOVA test have been used. For homogeneity and robustness of the variables we used Levene Statistics, Welch and Brown Forsythe test respectively. In this analysis mean chart has been used.

6. FINDINGS OF THE STUDY:

Profitability Position:

Net Profit Margin (NPM): It is the ratio of Net Profit after tax and Net sales. It portrays that how much the company earned from its net sales. Higher net profit margin indicates the efficiency of management in transforming sales into profit. In Table- 1 Net profit margin of 7 FMCG companies has been computed. From the table it is clear that ITC (23.67 cr.) registered the highest mean net profit margin (NPM) among the selected companies under study. It depicts the good sign from the management of the company and helps the company to maximise its shareholders' profit. The variation of NPM is also minimum in case of Nestle than other companies. The alarming fact is that Britannia (5.87 cr.) registered the lowest mean net profit margin among the selected companies.

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	5.8750	1.75927	.45424	4.9007	6.8492	3.07	9.38
DABUR	15	12.7768	3.05594	.78904	11.0845	14.4691	5.63	16.02
GODREJ	15	14.8506	2.55537	.65979	13.4354	16.2657	9.03	19.46
HUL	15	13.0675	2.07361	.53540	11.9191	14.2158	10.64	17.68
ITC	15	23.6741	1.47913	.38191	22.8550	24.4932	20.82	25.88
MARICO	15	10.2051	2.60594	.67285	8.7620	11.6482	6.90	15.46
NESTLE	15	11.9534	.97148	.25083	11.4154	12.4914	9.60	13.18
Total	105	13.2003	5.47434	.53424	12.1409	14.2598	3.07	25.88

For testing whether there is any difference between the selected variables of the selected companies, we conducted one way ANOVA test. From the ANOVA table it is clear that in case of NPM the F value is 93.236 with its P-value is 0.00 which is less than 0.05. Therefore, we can say that the difference in the mean values of NPM of the selected FMCG companies is statistically significant.

ANOVA

NPM

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2652.108	6	442.018	93.236	.000
Within Groups	464.605	98	4.741		
Total	3116.713	104			

Total Assets Turnover Ratio (TATR): Total assets turnover ratio is the ratio between Total assets and Net sales of the company. It indicates the efficiency of the company to convert their assets into sales. Higher total assets turnover ratio signifies that the company is more efficient in converting their assets into sales. Contrary, lower assets turnover ratio indicates the inefficiency of the company in managing their assets properly. In Table- 2 Total assets turnover ratio of 7 selected FMCG companies has been computed. From the table it is clear that Nestle (5.986 cr.) depicted the highest mean assets turnover ratio among the selected companies. On the other hand, ITC registered the lowest mean assets turnover ratio. In case of Godrej (4.129 cr.) more variation in assets turnover ratio is observed and in case of ITC (0.148) the variation is lowest.

TABLE – 2 Descriptive Statistics of TATR

TATR

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	4.4627	1.37056	.35388	3.7037	5.2217	2.56	7.32
DABUR	15	2.9200	.75220	.19422	2.5034	3.3366	2.00	4.53
GODREJ	15	4.7760	4.12935	1.06619	2.4892	7.0628	1.29	13.74
HUL	15	5.6627	1.81764	.46931	4.6561	6.6692	2.93	8.62
ITC	15	1.9200	.14900	.03847	1.8375	2.0025	1.62	2.17
MARICO	15	2.7273	.95722	.24715	2.1972	3.2574	1.41	4.38
NESTLE	15	5.9860	2.89517	.74753	4.3827	7.5893	1.95	10.00
Total	105	4.0650	2.53589	.24748	3.5742	4.5557	1.29	13.74

From ANOVA table we can say that in case of FATR, F value is 7.95 with its P value is 0.00. The P value is less than 0.05. Hence the difference in the mean values of FATR of the selected FMCG companies is statistically significant.

ANOVA

NPM

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	219.118	6	36.520	7.959	.000
Within Groups	449.680	98	4.589		
Total	668.798	104			

Operating Profit Margin (OPM): Operating Profit Margin is the ratio between earnings before interest & tax and net sales. In Table- 3 such ratio of the selected companies has been computed. Operating profit margin is a better meaningful parameter to judge the company's earning ability to pay off its actual expenses because in it interest and tax deductions are included. From table it is clear that the mean operating profit margin of ITC (39.08 cr.) is highest and of Britannia (11.407 cr.) it is lowest. The variation of operating profit margin of Godrej, HUL and Nestle is similar. Due to higher interest charges the operating profit margin of Britannia is lowest. Hence importance should be given towards the improvement of their revenue as compare to their expenditure, otherwise the company making loss in future.

TABLE – 3 Descriptive Statistics of OPM

OPM

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	11.4080	4.59235	1.18574	8.8648	13.9511	4.89	21.28
DABUR	15	17.6886	3.41510	.88178	15.7974	19.5798	11.17	22.53
GODREJ	15	20.7850	2.85008	.73589	19.2067	22.3634	16.69	26.91
HUL	15	18.8785	2.45613	.63417	17.5184	20.2387	15.94	23.46
ITC	15	39.0834	2.90517	.75011	37.4745	40.6922	34.73	44.65
MARICO	15	14.8999	3.91508	1.01087	12.7319	17.0680	9.06	21.56
NESTLE	15	19.9340	2.06313	.53270	18.7915	21.0765	14.24	22.46
Total	105	20.3825	8.82639	.86137	18.6744	22.0906	4.89	44.65

From ANOVA table it is clear that the F value of OPM is 109.813 whereas P value is 0.00 (less than 0.05). It signifies that the difference in mean value of OPM of the selected companies is statistically significant.

ANOVA

OPM

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7053.080	6	1175.513	109.813	.000
Within Groups	1049.055	98	10.705		
Total	8102.135	104			

From Post Hoc Tukey HSD test of multiple comparisons of OPM depicts that except Britannia & Marico group (P=0.063), Dabur & Godrej group (P=0.140), Dabur & HUL group (P=0.954), Dabur & Marico (P=0.239), Dabur & Nestle (P= 0.499), Godrej & HUL (P=0.685), Godrej & Nestle group (P=0.992), HUL & Nestle group (P=0.974), all other groups are statistically significant. The P value of such groups is less than 0.05.

Earnings Per Shares (EPS): Earnings per share is the ratio between Net Income and No. of equity shares. Through EPS we judge the profitability of the company. The company having higher EPS signifies that the earning capability of the company is good. On the other hand lower EPS portrays the less earning capability of the company. In Table- 4 EPS of the selected companies has been computed. Table- 4 shows that the mean EPS of Nestle (55.164 cr.) is highest and the same in case of Marico (1.978 cr.) is lowest. The variation in mean in case of Nestle is maximum and the same in case of Dabur is minimum of the selected companies in the study. Therefore, importance should be given towards the improvement of EPS of Marico, Dabur, ITC and HUL. Instead of using equity capital debt capital can be used to increase EPS.

TABLE – 4 Descriptive Statistics of EPS

EPS

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	18.7607	15.12974	3.90648	10.3821	27.1392	7.41	58.35
DABUR	15	2.0780	1.37266	.35442	1.3178	2.8382	.37	4.88
GODREJ	15	9.1140	6.50859	1.68051	5.5097	12.7183	1.70	20.55
HUL	15	9.8540	4.01899	1.03770	7.6284	12.0796	4.78	17.01
ITC	15	3.5253	2.18213	.56342	2.3169	4.7338	1.08	7.14
MARICO	15	1.9780	1.57753	.40732	1.1044	2.8516	.41	4.93
NESTLE	15	55.1640	34.30745	8.85814	36.1652	74.1628	16.53	111.55
Total	105	14.3534	22.56091	2.20172	9.9873	18.7195	.37	111.55

From ANOVA table it is clear that the F value of EPS is 25.577 whereas the P value is 0.00 (less than 0.05). Thus it signifies that the difference in mean value of EPS of the selected companies is statistically significant.

ANOVA

EPS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32305.620	6	5384.270	25.577	.000
Within Groups	20629.820	98	210.508		
Total	52935.439	104	g		

Dividend Per Share (DPS): In Table- 5, Dividend per share of the selected companies has been shown. Dividend per share is the ratio between total dividend paid to equity shareholders / total no of equity shares. It also measures the profitability of the company. Higher the ratio better is the position of the company. Higher DPS increases the goodwill of the company. Shareholders evaluate this ratio at the time of investment in the company. From Table- 5 it is clear that Nestle (37.1 cr.) registered the highest mean DPS and Marico (1.014) showed the lowest mean DPS among the selected companies. The variation in DPS is maximum in case of Nestle and the same is minimum in case of Dabur. Hence the management of Marico, Dabur, Godrej etc. must take some preventive steps to improve DPS.

From ANOVA table it is clear that the F value of DPS is 43.312 and its P value is 0.00 (less than 0.05). Thus the difference in mean value of DPS of the selected companies is statistically significant.

ANOVA

DPS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14375.465	6	2395.911	43.312	.000
Within Groups	5421.088	98	55.317		
Total	19796.554	104			

Dividend Pay-out Ratio (DPR): Dividend pay-out ratio is the ratio of dividend per share and earnings per share. It measures the percentage of net income distributed to the shareholders in the form of dividends.

TABLE – 5 Descriptive Statistics of DPS

DPS

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	15.1333	8.55125	2.20792	10.3978	19.8689	6.50	40.00
DABUR	15	1.7233	.52944	.13670	1.4301	2.0165	.50	2.50
GODREJ	15	2.8667	2.47102	.63802	1.4983	4.2351	.00	5.75
HUL	15	8.7667	4.54292	1.17298	6.2509	11.2825	5.00	18.50
ITC	15	9.1600	7.87022	2.03208	4.8016	13.5184	2.65	31.00
MARICO	15	1.0147	1.32955	.34329	.2784	1.7509	.00	4.25
NESTLE	15	37.1000	14.94538	3.85888	28.8235	45.3765	14.00	63.00
Total	105	10.8235	13.79679	1.34643	8.1535	13.4935	.00	63.00

Higher the ratio better is the return to the shareholders of the company and vice-versa. In Table- 6 DPR of the selected companies has been computed. From the table it is clear that HUL (88.72 cr.) showed the highest mean DPR and Marico (32.63 cr.) registered the lowest mean DPR. The variation in DPR in case of Dabur is minimum whereas the same in case of HUL is maximum among the selected companies in study. Marico and Britannia must take initiative to improve their DPR in the future.

TABLE - 6 **Descriptive Statistics of DPR**

DPR

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	37.0107	15.75820	4.06875	28.2841	45.7373	9.91	59.63
DABUR	15	47.7440	8.62650	2.22735	42.9668	52.5212	22.45	60.99
GODREJ	15	58.6307	23.88412	6.16685	45.4041	71.8573	27.05	89.00
HUL	15	88.7187	21.16882	5.46577	76.9958	100.4416	66.75	127.35
ITC	15	54.9333	22.50228	5.81006	42.4720	67.3947	28.00	111.00
MARICO	15	32.6300	16.05744	4.14601	23.7377	41.5223	7.61	68.42
NESTLE	15	77.0527	19.25500	4.97162	66.3896	87.7157	45.06	107.07
Total	105	56.6743	26.32459	2.56902	51.5798	61.7687	7.61	127.35

ANOVA table shows that the F value of DPR is 17.622 whereas P value is 0.00 (less than 0.05). Thus the difference in mean value of DPR of the selected companies is statistically significant.

ANOVA

DPR

	Sum of Squares	dfaf	Mean Square	F	Sig.
Between Groups	37402.720	6	6233.787	17.622	.000
Within Groups	34667.595	98	353.751		
Total	72070.315	104			

Rate of return:

Return on Capital Employed (ROCE): In Table- 7 ROCE of the selected companies has been computed. ROCE is calculated by EBIT by Capital employed and multiply 100. This ratio indicates how efficiently the company manage the long term funds. Higher the ratio better is the management of the company to use long term funds and vice-versa. It is another indicator of profitability of the concern. From the table it is clear that the mean ROCE of Nestle (102.03 cr.) is highest and the same in case of Marico (33.195 cr.) of the selected companies is lowest. The variation in ROCE is minimum in case of ITC whereas the same in case of Godrej is maximum. For improvement of ROCE importance should be given to Marico, Britannia and Dabur.

TABLE - 7 Descriptive Statistics of ROCE

ROCE

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	37.2973	17.44338	4.50386	27.6375	46.9572	19.81	75.91
DABUR	15	47.2013	17.31204	4.46995	37.6142	56.7884	17.60	80.43
GODREJ	15	78.9620	61.24469	15.81331	45.0458	112.8782	22.23	198.12
HUL	15	88.5087	26.26986	6.78285	73.9609	103.0564	43.62	121.52
ITC	15	43.9780	5.52276	1.42597	40.9196	47.0364	37.38	52.14
MARICO	15	33.1953	4.84826	1.25182	30.5105	35.8802	26.52	41.22
NESTLE	15	102.0340	50.93828	13.15221	73.8253	130.2427	30.52	174.16
Total	105	61.5967	41.17830	4.01859	53.6277	69.5657	17.60	198.12

The ANOVA table depicts that the F value of ROCE is 10.408 and P value is 0.00 (less than 0.05). Hence there is difference in mean value of ROCE of the selected companies and such differences are statistically significant.

ANOVA

ROCE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	68635.873	6	11439.312	10.408	.000
Within Groups	107711.941	98	1099.101		
Total	176347.814	104			

Return on Equity (ROE): Return on equity is nothing but the earnings, the shareholders are getting from company by investing their money. Previously, we emphasised on ROA. ROA can be calculated in the following way. ROA= Net Income/Sales*Sales/ Total Assets= Net Income/Total Assets.

In this case both profitability and efficiency of the organisation are impacted. In Du Pont model the first shifts from ROA to ROE was made. ROE is one of the powerful indicators of profitability. In this study we used Du Pont 5 points model. For computing ROE we straight forward multiply equity multiplier (i.e. Total assets/Total equity or Financial leverage), Total assets turnover ratio, Operating profit margin, Tax retention rate (i.e. Subtracting tax rate from 1) and Interest expense rate (i.e. EBIT*TART/ Interest coverage ratio). From table it is clear that Godrej (728.89 cr.) scored the highest mean ROE and ITC (54.73 cr.) registered lowest ROE. The variation in ROE in case of Dabur is minimum whereas the same in case of Godrej is highest. The result of ROE is different from other profitability ratios discussed earlier may be due to incorporation of various aforesaid factors.

TABLE - 8 Descriptive Statistics of ROE

ROCE

Companies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	127.9159	163.53704	42.22508	37.3521	218.4797	5.22	632.90
DABUR	15	93.8247	57.81191	14.92697	61.8095	125.8398	15.08	203.50
GODREJ	15	728.8961	1099.04557	283.77235	120.2650	1337.5273	14.84	4151.74
HUL	15	88.1429	90.15103	23.27690	38.2189	138.0668	.52	302.04
ITC	15	54.7332	59.82942	15.44789	21.6008	87.8657	8.09	249.11
MARICO	15	139.0517	140.94367	36.39150	60.9997	217.1037	17.99	471.20
NESTLE	15	60.4079	70.90162	18.30672	21.1439	99.6719	1.94	278.37
Total	105	184.7103	471.44317	46.00814	93.4745	275.9462	.52	4151.74

From ANOVA table it is clear that the F value of ROE is 4.824 and P value is 0.00 (less than 0.05). It signifies that the difference in mean value of ROE of the selected companies is statistically significant.

ANOVA

ROCE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5270687.090	6	878447.848	4.824	.000
Within Groups	17844213.486	98	182083.811		
Total	23114900.576	104			

Cash Profit Margin (CPM): Cash profit margin is the ratio of Profit after Tax (PAT) & Depreciation and Gross Profit. It measures the operating performance of the business. In Table – 9 cash profit margin of the selected companies has been shown. From table it is clear that the mean CPM of ITC (17.517 cr.) is the highest and the same in case of Britannia (7.014 cr.) is lowest. The variation in CPM in case of Dabur is maximum and in case of Nestle the variation is minimum.

Table – 9 Descriptive Statistics of CPM

CPM

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	7.0147	1.82313	.47073	6.0050	8.0243	4.10	10.22
DABUR	15	14.1393	3.05493	.78878	12.4476	15.8311	7.40	17.36
GODREJ	15	15.5967	2.77120	.71552	14.0620	17.1313	9.87	20.23
HUL	15	13.4553	1.73862	.44891	12.4925	14.4181	12.01	17.42
ITC	15	17.5173	2.31588	.59796	16.2348	18.7998	14.11	20.98
MARICO	15	11.9100	2.48614	.64192	10.5332	13.2868	8.10	16.90
NESTLE	15	13.9020	1.21777	.31443	13.2276	14.5764	11.28	15.61
Total	105	13.3622	3.78869	.36974	12.6290	14.0954	4.10	20.98

ANOVA table shows that the F value of CPM is 31.532 whereas the P value is 0.000 (less than 0.05). Hence the difference in mean value of CPM of the selected companies is statistically significant.

ANOVA

CPM

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	983.430	6	163.905	31.532	.000
Within Groups	509.403	98	5.198		
Total	1492.833	104			

Solvency Position:

Current Ratio: Current Ratio is the common metric to measure the ability of the company to pay its short term obligation. It is the ratio of current assets and current liabilities of the company. In Table- 10 the current ratio of the companies has been computed. From the table it is clear that Marico (1.43) registered the highest mean current ratio whereas Nestle showed the lowest mean current ratio. In case of HUL (0.085) the variation in CR is minimum whereas the same in case of Godrej (0.309) is maximum. All the selected companies maintained below standard current ratio of 2:1.

Table – 10 Descriptive Statistics of CR

CR

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	.9327	.18414	.04754	.8307	1.0346	.66	1.24
DABUR	15	1.0640	.26822	.06925	.9155	1.2125	.79	1.73
GODREJ	15	.9133	.30935	.07987	.7420	1.0846	.66	1.72
HUL	15	.8533	.08575	.02214	.8058	.9008	.71	1.02
ITC	15	1.1680	.15020	.03878	1.0848	1.2512	.95	1.40
MARICO	15	1.4313	.18504	.04778	1.3289	1.5338	1.14	1.72
NESTLE	15	.7307	.13264	.03425	.6572	.8041	.57	1.00
Total	105	1.0133	.29112	.02841	.9570	1.0697	.57	1.73

ANOVA Table shows that the F value of CR is 19.967 whereas P value is 0.000 (less than 0.05). Hence the difference in mean value of CR of the selected companies is statistically significant.

ANOVA

CR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.848	6	.808	19.967	.000
Within Groups	3.966	98	.040		
Total	8.814	104			

Liquid Ratio (LR): Liquid ratio is another very common metric to measure the short-term debt paying ability of the company. It is the ratio of quick assets (current assets minus inventory) and current liabilities. In Table- 11 liquid ratio has been computed. Table – 11 shows that the mean liquid ratio of Britannia (1.129) among the selected companies is highest. Though, the mean liquid ratio of ITC is also 1.12. Contrary, the mean liquid ratio of Godrej (0.59) is lowest. Though, the mean liquid ratio of Nestle is 0.60. The variation of liquid ratio in case of Nestle is minimum whereas the same in case of Godrej is maximum.

Table – 11 Descriptive Statistics of LR

LR

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	.7979	.23021	.05944	.6704	.9254	.44	1.22
DABUR	15	1.0216	.38792	.10016	.8068	1.2365	.52	1.93
GODREJ	15	.5909	.44078	.11381	.3468	.8350	.21	2.01
HUL	15	.6393	.15335	.03959	.5544	.7242	.35	.91
ITC	15	1.1257	.27832	.07186	.9715	1.2798	.69	1.83
MARICO	15	1.0683	.35684	.09214	.8707	1.2659	.56	1.65
NESTLE	15	.6021	.12411	.03204	.5334	.6708	.35	.83
Total	105	.8351	.36545	.03566	.7644	.9058	.21	2.01

From ANOVA table it is clear that the F value of liquid ratio is 8.928 whereas the P value is 0.00 (less than 0.05). Therefore, the difference in mean value of LR of the selected companies is statistically significant.

ANOVA

LR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.909	6	.818	8.928	.000
Within Groups	8.981	98	.092		
Total	13.890	104			

Structural Efficiency:

Debt-Equity Ratio (DER): Debt-Equity ratio is computed by dividing the company's total liabilities by its shareholders fund. This ratio is the measure of financial leverage of the company. It is also known as risk, gearing etc. In Table-12 the debt equity ratio of the selected companies has been computed. From the table it is clear that the mean debt-equity ratio of Marico (0.44) is highest whereas the same in case of ITC (0.023) is lowest. The variation in DER in case of Marico and Britannia is maximum and the variation in DER in case of ITC is minimum.

Table – 12 Descriptive Statistics of DER

DER

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	.3000	.33558	.08665	.1142	.4858	.00	1.02
DABUR	15	.1700	.14076	.03634	.0920	.2480	.04	.54
GODREJ	15	.2833	.25972	.06706	.1395	.4272	.04	.95
HUL	15	.1180	.20723	.05351	.0032	.2328	.00	.75
ITC	15	.0233	.03697	.00955	.0029	.0438	.00	.15
MARICO	15	.4433	.34554	.08922	.2520	.6347	.02	1.02
NESTLE	15	.1953	.23250	.06003	.0666	.3241	.00	.66
Total	105	.2190	.26915	.02627	.1670	.2711	.00	1.02

ANOVA table shows that the F value of DER is 4.713 whereas the P value is 0.00 (less than 0.05). Thus the difference in mean value of DER of the selected companies is statistically significant.

ANOVA

DER

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.687	6	.281	4.713	.000
Within Groups	5.847	98	.060		
Total	7.534	104			

Equity Multiplier (EQM): Equity Multiplier of the selected FMCG companies has been shown in Table-13. It is nothing but the financial leverage of the company. It is the ratio of total assets and total equity or shareholders' fund. It indicates the financial risk that the company has taken by employing debt or fixed interest bearing capital in its capital structure. Higher equity multiplier is good for the shareholders point of view because it increases their assets over their investment. Higher equity multiplier means greater financial risk and it is riskier for the company. The mean equity multiplier of Marico (1.447) is the highest and of ITC (1.01) is the lowest. The variation of equity multiplier of ITC is minimum and of Nestle is maximum.

Table – 13 Descriptive Statistics of EQM

EQM

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BRITANNIA	15	1.3371	.45052	.11632	1.0876	1.5866	1.01	2.26
DABUR	15	1.1803	.16656	.04301	1.0880	1.2725	1.03	1.56
GODREJ	15	1.2798	.31935	.08246	1.1029	1.4566	1.00	2.02
HUL	15	1.2635	.25083	.06476	1.1246	1.4024	1.00	1.80
ITC	15	1.0172	.01485	.00383	1.0090	1.0254	1.01	1.06
MARICO	15	1.4480	.35688	.09215	1.2504	1.6456	1.03	2.09
NESTLE	15	1.3702	.48556	.12537	1.1013	1.6391	1.00	2.46
Total	105	1.2709	.34530	.03370	1.2040	1.3377	1.00	2.46

From ANOVA table it is clear that the F value of equity multiplier is 2.728 whereas the P value is 0.017 (less than 0.05). Therefore, the difference in mean value of EQM of the selected companies is statistically significant.

ANOVA

EQM

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.775	6	.296	2.728	.017
Within Groups	10.626	98	.108		
Total	12.400	104			

The homogeneity of variances of the designated variables of the selected companies, the Levene Statistic is less than 0.05 except in case of CPM (P value is 0.057). Therefore, the requirement of homogeneity of variances has been met. The Welch test of equality of means (robustness) of the used variables (except in case ROE of the selected companies due to conglomeration of different factors in calculation of ROE using Du Pont model) is statistically significant (P value less than 0.05) and also Brown Forsythe test of equality of means (P value is less than 0.05) of the selected variables of the companies is statistically significant ('F' is asymptotically distributed).

However it is not clear that which of the various pairs of means of the variables of the selected companies, the difference is significant. For this reason we made Post Hoc Tukey HSD test. From that test we can see that significance values have been generated for the mean differences of the variables between pairs of values of the selected companies. But as a whole these differences are insignificant.

6. Conclusion: From the above discussion and ANOVA tables it is found that the null hypothesis i.e. H_0 is rejected and H_1 i.e. alternative hypothesis is accepted $\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5 \neq \mu_6 \neq \mu_7$. There are differences in mean values of the selected variables of the companies under study.

But in many cases the in between differences of different ratios are statistically insignificant. As in most of the cases the differences persist so we can conclude that there is significant difference between the selected ratios of the companies under study.

From the above discussion we can see that in case of Net profit margin ITC scored highest and Britannia is the lowest among the selected companies in the study. The mean total assets turnover ratio of Nestle is highest and the same in case of ITC is lowest. ITC has highest mean operating profit margin and Britannia has lowest mean operating margin. Nestle has highest mean earning per share and DPS whereas Marico has also lowest mean EPS, DPS, DPR and ROCE. HUL registered highest mean DPR. The ROCE of Nestle is highest among the seven 7 FMCG companies in the study. In case of ROE using Du Pont 5 points model Godrej registered the highest and ITC registered the lowest mean ROE. From ROE point of view Godrej is the risky company among the selected companies. Investors are getting much interested to invest in Godrej at a low interest rate. Godrej confirmed the profitability of the investors.

From liquidity view point, in case of CR and LR, Marico is the highest and Nestle is the lowest among the selected companies. From capital structure angle in case of DER and EQM, Marico is the best and ITC is the least of the selected companies in the study.

Due to maintaining high liquidity position by Marico and Britannia their profitability position is not good enough. It supported the theoretical implication that higher the profitability lower should be its liquidity. ITC and Nestle maintained their capital structure in such a way that increases their profitability. Hence, the financial performance of ITC, Nestle Godrej are notable than the other selected companies. Importance should be given to management of Marico and Britannia for the betterment of their performance in future.

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Profitability Analysis of Selected FMCG Companies in India: An Empirical Study

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ABSTRACT

Profit is the prime objective of any business organisation. No business can survive without profit. Profitability analysis is performed to impose the light on current operating performance and business firm efficiency. This study however takes a fresh look at the probability position of selected FMCG firms during the period of 5 years that is from 2014-15 to 2018-19 in terms of various profitability ratio and ANOVA. The aim of the present study is to examine the earning performance and profitability related to sales of selected FMCG companies in India. The study purely based on secondary data. In the long run, profitability contributes to continued growth of the company therefore; the company must focus on productivity and optimal utilisation of resources. The present study revealed that ITC Ltd. has better performance in terms of profitability and HUL is better in terms of rate of return in comparison to other selected FMCG companies.

KEYWORDS: *Profitability, FMCG, Mean, Ratio analysis, Growth*

INTRODUCTION

The Indian FMCG industry witnessed significant changes through 1990s. Indian economy is the largest and fastest growing economy in the world. According to the government and market researcher survey FMCG is the fourth largest sector in Indian economy and an important contributor to the India's GDP (Gross domestic product).It is highly competitive industry in India exploding population of India is the biggest sign for the market to attract regular companies as well as foreign companies in FMCG sector. Day by day changing lifestyle of people has been key growth driver for the Fast-moving consumer industry.

The urban India is the largest contributor to the overall around 55% revenue generated by FMCG sector in India, however from the last decade the FMCG sector has grown at a rapid pace in rural India as well as urban India. The FMCG market is expected to reach $ 15,361.8 billion by 2025 after achieving a CAGR of 5.4 % from 2018-2025. FMCG industry in India also includes the Pharmaceutical products, consumer electronics products, soft drinks, packaged food and chocolate. The FMCG sector in India is divided in to two demographic parts of India which is rural India and urban India. The Urban segment contributes more than 60% of the consumption revenue of the FMCG market in India compared to rural India. While rural market contributes 40% of the overall revenue of the FMCG market in India.

In financial year 2018 the overall revenue of FMCG sector reached $ 52.75 billion and is projecting to reach $ 103.7 billion in 2020. The Government of India has introduced various initiatives to promote the FMCG sector in India for example 100 percent FDI is permitted in SBRT and cash and carry model for retail and minimum capitalisation for foreign companies to invest in India is $100 Million. After the execution of GST in India has had far-reaching result for the industry as the highest selling FMCG products such as soap, toothpaste, hair oil and some of cosmetic product now rate under 18% tax bracket from previous24%.

The major segment of FMCG sector is

Personal care and household products i.e. hair care, cosmetic, toothpaste makeup, hand soap, perfumes toilet, paper and detergent etc.

Food and beverages products i.e. Bakery products, dairy products, soft drinks, fruits ice cream cakes, biscuits, beverages etc.

Health care products i.e. media kit, OTC products, diseases care products etc.

WHY NEED TO STUDY PROFITABILITY ANALYSIS:

Profitability analysis can assist your company in better and informed decision making. The primary objective behind the analysis of profitability is to identify the trends and Soundness of the Company. It is useful for various stakeholders of the concern to know the profitability, soundness and solvency of the business. Trend analysis, common-size statements and ratio analysis are the most common methods to analyse the profit and loss statement. With the help of these methods the stakeholders can compare the present situation of the firm with the past records and can get idea about the financial soundness, strength and performance of the business. Profitability analysis can be able to help discern which products or services generate the least amount of revenue. Profitability analysis also allows companies to maximize their profit after detects loopholes and thus also maximizes the opportunities that business can take benefits of in order to keep itself successful and relevant in a very dynamic, highly competitive, and vibrant market.

LITERATURE REVIEWS

1. **Sri Aryan Chakraborty, (2017)[1],** tried to explain that, Performance of a company is evaluated with respect to its use of assets, shareholder equity and liability, income, expenses and ratios etc. The Objectives of the study is to analyse the financial position of top five leading FMCG Companies and to highlight the financial performance and return of the selected companies using various Financial Ratios and ANOVA. The period of the study is of 6 years that is from 2011 to 2016. The study is based on secondary data. The research revealed that ITC Limited position is better in comparison to other FMCG Firms.
2. **Rosy Dhingra, Kapil Dev, Madhuri Gupta, (2018)[2],** the purpose of the study is to examine and make a comparative analysis of performance of selected FMCG companies and to find out financial ratios. For this purpose Wilks' Lambda and multiple discriminant function analysis model is used. The study is based on primary as well as secondary data. The period of the study is for 12 years that is from 1 April 2006 to 31 March 2017. The study revealed that the discriminate function analysis help in realizing the significant financial ratios and which have major impact on company's performance in stock market.
3. **Dr Kashif Beg, (2018)[3],** the purpose of study is to investigate the impact of accounting information system on the financial performance of selected FMCG companies. For this purpose simple linear regression analysis has been used and hypotheses have been tested at confidence level of 95%.The Data collected from primary as well as secondary sources. the data collection period was ten months since May, 2017 to February, 2018.The Result shows that all the hypotheses have been rejected which means that there is a significant impact of AIS on the financial performance of selected FMCG companies.
4. **Dr.A.Saroja, (2019)[4],** the purpose of the paper is to evaluate the relationship between pre and post-merger firm's profitability and to identify the variables that most affect profitability. Profitability analysis has been measured with the help of i.e. net profit ratio, return on capital employed ratio, return on assets, return on net worth; earnings per share ratio have been used. The period of study is for three years prior and three years after the acquisition that is Pre merger from 2006-07 to 2008-09 and Post merger from 2010-11 to 2012-13. The study is based on the secondary data. For the study data collected from the annual reports of selected units and CMIE Prowess Data base. The study revealed that these results can be further strengthened if the firms manage their income sources in more efficient ways which will ultimately increase firm's profitability.

STATEMENT OF THE PROBLEM & SIGNIFICANCE OF THE STUDY

The primary objective of each and every business is to earn maximum profit. A business needs profits not only for its fulfil day to day expenses, but also for survival and expansion of the Business. The investors are also attracted towards the industry as there is a high profit margin with high demand in it and hence, there is a need to analyze the profitability of the FMCG Companies. Ratio analysis is the common method to analyze the profitability of the company and it is easily understood by any stakeholders and common man thus the research study on "PROFITABILITY ANALYSIS OF SELECTED FMCG COMPANIES IN INDIA: AN EMPIRICAL STUDY" is suitable.

OBJECTIVES OF THE STUDY

- To ascertain the overall probability performance of selected leading FMCG Companies in India.
- To examine and evaluate profitability related to sales of selected FMCG companies.
- To evaluate the profitability related to equity share of selected FMCG companies in India.

JUSTIFICATION AND USE OF THE RESULTS

The research study shows the result for of the profitability analysis of five leading FMCG companies in India. The result will help the stakeholders to know the efficiency and Performance of the relevant companies.

The study is useful for internal and external stakeholders of the company.

The study will guide the academicians and research scholars.

Provides useful information regarding soundness of the company.

RESEARCH METHODOLOGY

- **DATA COLLECTION**

Secondary data have been taken as a basis for profitability analysis for evaluation of empirical

Above Table.1 reveals that ITC Ltd has highest Mean Value with 42.69 while Britannia Industries ltd has lowest Mean Value 15.59 and other selected FMCG companies are maintaining moderate levels in PBDIT ratio. The Standard Deviation of GCPL is 3.46, the highest which means a higher degree of variability and lowest variability of 1.36 was observed in ITC LTD. The coefficient of variation of PBDIT margin ratio of GCPL is showing maximum (14.2) while ITC Ltd it is minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between PBDIT margin Ratio of selected companies.

H_1: There is significant relationship between PBDIT margin Ratio of Selected companies.

TABLE 2. ANOVA VARIATION

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groupsa	2143.41	4	535.8526	85.61545	2.73E-12	2.866081
Within Groups	125.1766	20	6.25883			
Total	2268.587	24				

(Sources: computed by researcher)

Conclusion: F-value (85.6164) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between PBDIT margin Ratio of Selected FMCG companies.

1. **PBIT margin ratio:**

PBIT margin ratio is a profitability ratio that measures how much earnings of the Company before interest and taxes as a percentage of revenue.

PBIT MARGIN RATIO= PBIT / Revenue.

TABLE 3. PBIT MARGIN (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	17.98	38.49	15.97	10.33	19.31
2015-16	19.29	40.73	19.38	14.38	20.32
2016-17	19.36	38.72	23.79	14.88	24.07
2017-18	21.33	40.67	20.6	15.54	25.48
2018-19	22.96	41.06	20.08	16.38	27.07
MEAN	20.18	39.93	19.96	14.30	23.25
SD	1.96	1.22	2.80	2.34	3.33
COV	9.71	3.06	14.03	16.36	14.32

(Sources: computed by researcher)

The above Table.3reveals that ITC Ltd has highest Mean Value with 39.93 while Britannia Industries ltd has lowest Mean Value 14.30 and other selected FMCG companies are maintaining moderate levels in PBIT ratio. The Standard Deviation of GCPL is 3.33, the highest which means a higher degree of variability and lowest variability of 1.22 was observed in ITC LTD. The coefficient of variation of PBIT margin ratio of Britannia Industries ltd maximum while ITC Ltd the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between PBIT margin Ratio of selected companies.

H_1: There is significant relationship between PBIT margin Ratio of Selected companies.

Table 4. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1891.188	4	472.797	79.44791	5.51E-12	2.866081
Within Groups	119.0206	20	5.951032			
Total	2010.209	24				

(Sources: computed by researcher)

Conclusion: F-value (79.4479) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between PBIT margin Ratio of Selected FMCG companies.

1. PBT MARGIN RATIO:

PBT margin ratio is a profitability ratio that measures how much earnings of the Company before interest and taxes as a percentage of revenue.

PBT MARGIN RATIO= PBT / Revenue.

Table 5. PBT MARGIN (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	20.08	38.34	15.61	12.29	18.67
2015-16	19.14	40.6	19.08	14.23	19.56
2016-17	20.05	38.67	25.53	14.86	23.31
2017-18	21.1	41.47	18.44	15.53	24.5
2018-19	22.29	40.99	19.87	16.37	25.93
MEAN	20.53	40.01	19.71	14.66	22.39
SD	1.20	1.42	3.63	1.54	3.15
COV	5.85	3.55	18.42	10.5	14.07

(Sources: computed by researcher)

The above Table.5reveals that ITC Ltd has highest Mean Value with 40.01 while Britannia Industries ltd has lowest Mean Value 14.66 and other selected FMCG companies are maintaining moderate levels in PBT ratio. The Standard Deviation of MARICO is 3.63, the highest which means a higher degree of variability and lowest variability of 1.20 was observed in HUL. The coefficient of variation of PBT margin ratio of Marico ltd maximum while ITC Ltd the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between PBT margin Ratio of selected companies.

H_1: There is significant relationship between PBT margin Ratio of Selected companies.

Table 6. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1876.737	4	469.1842	81.08273	4.55E-12	2.866081
Within Groups	115.7298	20	5.786488			
Total	1992.467	24				

(Sources: computed by researcher)

Conclusion: F-value (81.0827) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between PBT margin Ratio of Selected FMCG companies.

1. NET PROFIT RATIO:

Net profit ratio is a useful ratio to measure the overall profitability of the company or business. A high Net Profit ratio shows the efficient total quality management of the affairs of business also indicates the relationship between Net Profit and Net sales.

NET PROFIT RATIO = Net Profit / Net Sales

Table 7. NET PROFIT MARGIN (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	14	26.31	11.64	8.67	14.77
2015-16	13.31	26.72	14.18	9.42	15.37
2016-17	14.07	25.44	17.37	10.02	17.85
2017-18	15.16	27.62	13.89	10.18	19
2018-19	15.79	27.7	18.95	10.7	30.9
MEAN	14.47	26.76	15.21	9.80	19.58
SD	0.99	0.94	2.92	0.78	6.56
COV	6.84	3.51	19.2	7.96	33.5

(Sources: computed by researcher)

The above Table.10 reveals that ITC Ltd has highest Mean Value with 26.76 while Britannia Industries ltd has lowest Mean Value 9.80 and other selected FMCG companies are maintaining moderate levels in Net profit ratio. The Standard Deviation of GCPL is 6.56, the highest which means a higher degree of variability and lowest variability of 0.78 was observed in Britannia Industries ltd. The coefficient of variation of Net margin ratio of GCPL ltd maximum while ITC Ltd the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between Net profit margin Ratio of selected companies.

H_1: There is significant relationship between Net profit margin Ratio of Selected companies.

Table 8. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	816.2156	4	204.0539	18.85269	1.46E-06	2.866081
Within Groups	216.4719	20	10.82359			
Total	1032.687	24				

(Sources: computed by researcher)

Conclusion; F-value (18.8527) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between Net profit margin Ratio of Selected FMCG companies.

1. **Rate of Return Ratios:**

It indicates that the relationship between profit earned by the company and total investments of the Company or firm. The important Rate of Return Ratio are as;

- Return on Equity/Net worth
- Return on Capital Employed
- Return on Assets

Return on Equity: Return on equity (ROE) measures the profitability of owners' or shareholder's fund.

Return on equity (ROE) = PAT / Net worth

Table 9. RETURN ON EQUITY (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	115.87	31.31	23.26	50.37	19.34
2015-16	65.88	29.94	27.01	44.05	19.34
2016-17	69.18	22.49	28.81	32.67	19.38
2017-18	74.02	21.83	23.61	29.29	21.54
2018-19	78.8	21.5	32.26	27.78	35.62
MEAN	80.8	25.4	27.0	36.8	23.0
SD	20.23	4.79	3.76	9.89	7.09
COV	25.04	18.86	13.93	26.86	30.83

(Sources: computed by researcher)

The above Table.13 reveals that HUL Ltd has highest Mean Value with 80.80 while GCPL has lowest Mean Value 23.00 and other selected FMCG companies are maintaining moderate levels in Return on equity. The Standard Deviation of HUL is 20.23, the highest which means a higher degree of variability and lowest variability of 3.76 was observed in Marico ltd. The coefficient of variation of returns on equity of GCPL ltd maximum while Marico Ltd the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between return on equity of selected companies.

H_1: There is significant relationship between return on equity of selected companies.

Table 10. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	11652	4	2913	24.4926	1.83E-07	2.866081
Within Groups	2378.678	20	118.9339			
Total	14030.68	24				

(Sources: computed by researcher)

Conclusion: F-value (24.4926) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between Return on Equity of Selected FMCG companies.

1. **Returns on Capital Employed:**

Return on Capital Employed (ROCE) Indicate that the relationship between Operating profit and Capital Employed of the Company.

Table 11. RETURN ON CAPITAL EMPLOYED (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	88.95	29.54	21.58	49.41	19.29
2015-16	56.92	28.18	26.9	43.43	19.33
2016-17	81.82	32.76	28.59	32.36	24.5
2017-18	86.53	30.87	23.4	29.06	27.14
2018-19	92.27	30.7	34.09	42.19	30.69
MEAN	81.298	30.41	26.912	39.29	24.19
SD	14.15	1.70	4.88	8.38	4.97
COV	17.41	5.59	18.13	21.33	20.55

(Sources: computed by researcher)

The above Table.16 reveals that HUL Ltd has highest Mean Value with 81.30 while GCPL has lowest Mean Value 24.19 and other selected FMCG companies are maintaining moderate levels in Return on Capital Employed. The Standard Deviation of HUL is 14.15 , the highest which means a higher degree of variability and lowest variability of 1.70 was observed in ITC ltd. The coefficient of variation of Return on Capital Employed of GCPL ltd maximum while Marico Ltd the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between return on Capital Employed of selected companies.

H_1: There is significant relationship between return on Capital Employed of Selected companies

Table 12. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	11091.83	4	2772.959	43.09708	1.47E-09	2.866081
Within Groups	1286.843	20	64.34215			
Total	12378.68	24				

(Sources: computed by researcher)

Conclusion: F-value (43.0970) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between Return on Capital employed of Selected FMCG companies.

1. **Return on Asset:**

Return on Asset Shows that the relationship between Net Profit margin and Total Assets of the Company.

Table 13. RETURN ON ASSETS (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	31.65	21.73	16.87	25.28	13.29
2015-16	29.71	19.88	20.09	24.42	14.71
2016-17	30.43	18.81	22.39	22.82	13.75
2017-18	30.53	17.99	17.86	20.48	15.09
2018-19	33.78	17.85	24.39	19.85	26.33
MEAN	31.2	19.3	20.3	22.6	16.6
SD	1.59	1.60	3.12	2.38	5.47
COV	5.1	8.29	15.37	10.53	32.95

(Sources: computed by researcher)

The above Table.19 reveals that HUL Ltd has highest Mean Value with 31.20 while GCPL has lowest Mean Value 16.60 and other selected FMCG companies are maintaining moderate levels in Return on Asset. The Standard Deviation of GCPL is 5.47, the highest which means a higher degree of variability and lowest variability of 1.59 was observed in HUL. The coefficient of variation of Return on Asset of GCPL ltd maximum while HUL the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between return on Asset of selected companies.

H_1: There is significant relationship between return on Asset of Selected companies

Table 14. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	622.5058	4	155.6264	15.45004	6.53E-06	2.866081
Within Groups	201.4576	20	10.07288			
Total	823.9634	24				

(Sources: computed by researcher)

Conclusion: F-value (15.45) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between Return on Asset of Selected FMCG companies.

1. **Asset turnover Ratio:**

It is measuring a company's ability to generate sales from its assets by comparing net sales with average total assets.

Table 15. ASSET TURNOVER RATIO (%)

COMPANY/YEAR	HUL	ITC	MARICO	BIL	GCPL
2014-15	225.94	82.60	144.88	291.47	89.99
2015-16	223.13	74.39	141.65	259.12	95.72
2016-17	216.18	73.94	128.90	227.65	77.05
2017-18	201.32	65.12	128.62	201.06	79.42
2018-19	213.96	64.46	128.65	185.43	85.21
MEAN	216.11	72.10	134.54	232.95	85.48
SD	9.61	7.52	8.05	43.05	7.63
COV	4.45	10.43	5.98	18.48	8.93

(Sources: computed by researcher)

The above Table.15reveals that HUL Ltd has highest Mean Value with 216.11 while ITC LTD has lowest Mean Value 72.10 and other selected FMCG companies are maintaining moderate levels in Return on Asset turnover Ratio. The Standard Deviation of BIL is 43.05, the highest which means a higher degree of variability and lowest variability of 7.52 was observed in ITC ltd. The coefficient of variation of Asset turnover ratio of BIL ltd maximum while HUL the minimum.

Testing of the Hypothesis

H_0: There is no significant relationship between Asset turnover Ratio of selected companies.

H_1: There is significant relationship between Asset turnover ratio of Selected companies.

Table 16. ANOVA Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	108523.3	4	27130.82	63.83724	4.2E-11	2.866081
Within Groups	8499.997	20	424.9999			
Total	117023.3	24				

(Sources: computed by researcher)

Conclusion: F-value (63.8372) is more than the table value (2.866) therefore null hypothesis is rejected. Therefore, H1 is accepted. Hence, it is revealed that there is significant relationship between Asset turnover ratio of Selected FMCG companies.

LIMITATION OF THE STUDY

1. The study is related to a period of only 5 years that is from 2014-15 to 21018-19, so the results of the study are only indicative and not conclusive.
2. The present study is based on selected FMCG companies in India only.
3. The Analysis and interpretation is based on ratio analysis and ratio analysis is based on historical cost which is the limitation itself.
4. The present study is based on secondary sources hence it is a Limitation itself.

CONCLUSION AND FINDINGS

After analysing the profitability of the selected FMCG company it seems that the profitability of any company depends more or less upon the effective utilization of resources, cut off expense and total quality management function in products, customer services, manpower, goodwill and market share. The conclusion of the study can be summarised as under:

- PBDIT margin ratio of selected FMCG companies was positive and they showed increasing and decreasing trend throughout the period of study. In terms of margin ratio the ITC in the top position.
- In terms of net profit ratio ITC is in the top position Net profit ratio of BIL is not satisfactory for the business while net profit ratio of ITC ltd indicate the better performance. The increase in production cost had the major effects on the Net profit ratio of the company.
- The rate of return ratio: Return on equity, return on capital employed and return on asset HUL at the top position.
- In terms of asset turnover ratio, the HUL is in the better position in comparison to the other FMCG companies.
- The findings can be drawn from the ANOVA test is that from the above all hypothesis null hypotheses are rejected hence; it is revealed that there is no significance relationship between profitability ratios of the above FMCG companies.

SUGGESTION

Based on above findings and conclusion of the study some points come into view which are presented in the form of suggestion to improve the profitability position of the selected FMCG firms are as follows;

- BIL may give attention in the area of indirect expense as well as direct expenses to reduction in the cost because better performance of the company can be measured in terms of profitability.
- The profitability of HUL, ITC LTD and GCPL has been satisfactory during the study period. This profitability trend should be maintained in the future.
- Sales have satisfactory impacts the profitability of the firms during the period of study. It is suggested that to the BIL and MARICO ltd should try to increase their sales with the help of various promotional activities by wider the distribution channels and providing better training to their employee.

FUTURE SCOPE OF THE STUDY

At present the FMCG industry highly influence the national economy. The FMCG Industry in India has changed its strategies and has gone for a more well-planned marketing strategy of the products to inter both the rural and urban markets. The study will help to the management to take the effective decision and to improve the firm's profitability performance. The study will also help the various stakeholders of the company to understand the strength and weakness of the company. The research will be helpful to research scholars also.

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Organisational Development And Performance Management

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Abstract:-

Performance management is a key function carried by the organization with basic objective of keeping track of performances of the individuals, provide them opportunity to improve and grow within the organization, motivate them for better performance using set reward and punishment systems. Another major objective of this exercise is also to channelize the individual performances in the direction of achieving organizational goals which will lead to organizational development. This paper describes the relevance between the organisational development and performance management of the employees. We have tried to focus on importance of an effective performance management system in any organization, process of setting up a standard performance management system and impact of an effective system from perspective of all the stake holders. We have also tried to find out whether effective performance management, which starts from job designing and job description, can lead to organizational development in terms of achieving the organizational goals, organizational climate, and level of motivation of the human resources. This is an attempt of understanding the importance of performance management in organizational development irrespective of sector, area, status of the organisation.

Keywords: *performance management, organizational development, organizational climate, human resources and organizational goals, employee motivation*

Introduction:

Practices of Performance Management:

Performance management consists of different practices, such as: amongst persons, within person, system maintenance and documentation.

Amongst person practices are the ones referred to as administrative practices, consisting of recognition of individuals' performance to make decisions regarding salary administration, promotions, retention, termination, layoffs and so forth.

Within person practices are those identified using Management by Objectives (MBO), such as feedback on performance, identifying strengths and weaknesses to recognize training needs and determine assignments and transfers. This also helps in achieving organizational goals, which are referred to as system maintenance uses. Finally, documentation purposes are to meet the legal requirements by documenting HR decisions and conducting validation research on the performance management tools. Some organizations are attempting to meet all of these goals simultaneously, while they continue to use tools that were designed for one type of purpose [5].

As highlighted by Jawahar and Williams, ratings collected for administrative purposes are more lenient than ratings for research or motivation purposes. Although rating scale formats, training and other technical qualities of performance management influence the quality of ratings, the quality of performance management is also strongly affected by the administrative context, in which they are used [6]. Effective managers recognize PA (Performance Appraisal) as a tool for managing, rather than a tool for measuring subordinates. Such managers use PA to motivate, direct and develop subordinates, and to maximize access to important resources in the organization to improve productivity.

Performance management (PM) is an important tool in the hand of management to bring greater responsiveness in human resources of an organization. The performance management system helps the organisation in:-

1. **Improved Performance**: Performance feedback allows the employee, manager and personnel specialists to intervene with appropriate actions to improve individual and organisational performance.
2. **Placement Decisions**: PM provides information which can support decisions like promotions; transfers and demotions.
3. **Deciding Compensations:** Performance management helps decision makers determine who should receive the pay rise and how much. Most firms grant part or full pay rise and bonuses based on merit, which is determined mostly through performance management.
4. **Identifying Training and Development Needs**: Poor performance may indicate the need for training. Likewise, good performance may indicate untapped potential that should be developed.
5. **Career Planning and Development**: performance feedback may be helpful for individuals as a guide for career decisions such as

specific career paths, growth opportunities, strengths & weakness and goal settings. This can also help the management to align organisational goals with individual goals.

6. **Strengthening the Staffing Process and Employee Retention**: Effective performance management system can help the personnel department to analyse and understand the strengths and weaknesses of the staffing pattern followed by them. The analysis can help them in improving the system, not only for better results, such as engaging right person for right job, but also will help them in improving employee retention by providing suitable growth opportunities to the deserving employees. Identified poor performances may indicate errors in information on job analysis, planning on human resources or other parts of the personnel management information system. Reliance on inaccurate information may lead to inappropriate hiring, training, or counselling decisions.

7. **Effective Job Design**: Effective performance management can highlight ill–conceived job designs. Diagnosing such errors will result into accurate design which obviously will lead to appropriate planning, hiring and growth.

8. **Unbiased and Healthy Work Environment:** Effective Performance Management system, will provide equal performance based opportunity of growth to all employees. This will ensure sense of impartiality, fairness and trust across the organisation, which will result in having healthy competition and healthy organisational environment.

9. **Understanding and Overcoming External Challenges**: At times, individual performances are influenced by factors from outside the work environment such as family, financial & health problems, competitors etc. If such issues are revealed through appraisals as part of the performance management, the human resource department may offer assistance to deal with such issues. This will result into having motivated, committed and responsible human resources and effective employee engagement.

10. **Healthy Feedback System for Human Resources**: Performance management can help in building an effective feedback system to and from the Human Resource Department to employees. This again will result in healthy relations amongst the organisation. This can be an indicator for the performance of the human resource function of the organisation.

11. **Personnel Decisions**: An effective performance system can create information which is helpful for the organisation to take decisions related to personnel matters.

12. **Research Purposes**: The data generated and processed through an effective performance management can be used for research purpose which can act as guidelines for the organisation in future.

13. **Employer's Perspective:** Individual differences in performances can make huge impact on organizational performances. Proper Documentation of performance management and feedbacks may be useful and required for legal defense. Tools like, appraisal offers a rational basis for constructing a bonus or merit system. Appraisal dimensions and standards can help to implement strategic goals and clarify performance expectations and find out performance gaps.

    Individual feedback helps people to understand and rectify their mistakes and move ahead, focusing more on their unique strengths. Feedbacks of supervisors, peers, subordinates, self-analysis, users, and consultants play active and important role in performance management system.

Performance management is planned, developed and implemented through following steps:

a) **Establish Performance Standards:** It is essential to have performance standards, which serve as benchmark for measuring performance. Performance standards must be clear to both the appraiser and appraise. The standards must be developed after a thorough analysis of the job, design and requirements. Standards must be measurable within certain time and cost considerations and must be written.

b) **Communicate the Standards:** Performance management involves at least two parties; the appraiser who does the appraisal and appraisee whose performance is being evaluated. Both are expected to do certain things. The appraiser should have clear and specific job descriptions with set standards; help the appraisee set his/her goals and targets; analyze results; offer coaching and guiding to the appraisee whenever required and reward good results. The appraisee should be very clear about what he is doing,why he is doing it what is expected from him and where he wants to be?

c) **Measure Actual Performance:** After the performance standards are set, communicated and accepted, the next step is to measure actual performance. This requires the use of dependable performance measures or the ratings used to evaluate performance. The performance measures should be helpful, must be easy to use, reliable, and report on the critical behaviours that determine performance. Four common sources of information which are generally used by managers regarding how to measure actual performance are personal observations, statistical reports, oral reports and written reports. Performance measures can be subjective or objective.

d) **Compare Actual Performance with Standards and Discuss the Results:** Actual performance may be better than expected and sometimes it may go off the track. Whatever be the consequences, there has to be a way to communicate and discuss the final outcome. The assessment of another person's contribution and attribution is not an easy task. It has serious emotional overtones as it affects the self-esteem of the individual. Any appraisal based on subjective criteria is likely to be questioned by the appraisee and leave him quite dejected and unhappy when the appraisal turns out to be negative. Hence, an effective and assertive communication system is essential to discuss the results of the performance analysis.

e) **Taking Corrective Action:** Depending upon the outcome of the appraisal, corrective actions are required to be taken. These corrective actions can be of two types: the first one puts out the fire immediately, while the other destroys the roots of the problem permanently. Immediate, thoughtful and accepted action sets things right and get things back on track whereas the basic corrective action gets to the source of deviations and seeks to adjust the difference permanently.

Primary Data:

The primary data for this study purpose was collected on the basis of field survey. Two questionnaires were prepared for this purpose, and filled by respondents. Information was collected through free and frank discussions with selected respondents, relevant literatures of organizations and by using observation method. One questionnaire was specifically prepared for the Executives from personnel / HR, responsible for designing and executing Performance Management System in the organization for expressing his/her opinion regarding Performance Management System.

Measures:

Two separate questionnaires were developed one for HR Managers and for Department Managers to measure the factors found to influence the effectiveness of performance management.

The questionnaire for HR managers consisted of information regarding HR practices related to Performance Management.

The questionnaire for managers consisted of questions pertaining to perception of HR practices related to performance appraisal system, their views and acceptance of PMS, their perception of organizational environment and commitment to the organization.

Three scales were used in the study. Perception of Performance Management System was assessed by a scale developed by Freinn- von Elverfeldt, A.C, von (2005) consisting of 11 dimensions-instrument validity, distributive justice, procedural justice, goal-setting, performance feedback, performance based pay, employee participation ,360-degree appraisal, Rating techniques, Rating accuracy and training. In order to validate the scale it was distributed to HR managers and academicians in the field. Based on the response it was found to be usable in the Indian context.

Organizational environment was assessed by a scale developed by Dr. Shalindra Singh in 1988 consisting of seven dimensions.

Organizational commitment was assessed by using a scale development by Mowday R.T, Steers R.M, and Porter L.W in 1979 consisting of 15 questions.

Organizational environment and commitment scales are widely used in the Indian context.

All the scales were assessed on a five-point Likert-scale ranging from one to five, with one being “I absolutely disagree”, three being a neutral score and five being “I absolutely agree”.

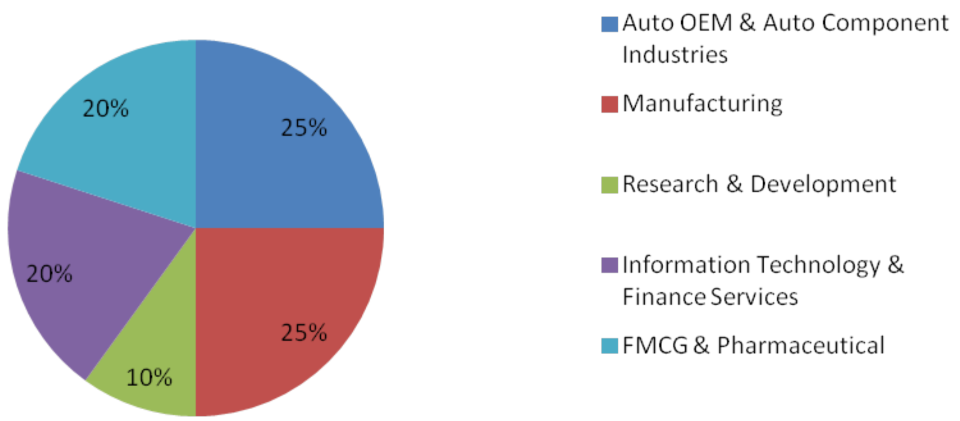
Secondary data:

In order to conduct the research, the relevant and concerned book, reports, literatures from internet and various libraries were referred. Further, important contributions in the subject matter, from various journals, magazines, periodicals, reports, bulletins, survey material, newspapers published in India & abroad also used were widely used for study. The same is acknowledged at various relevant points in the thesis and listing is made on Bibliography, at the end.

Table No. 1 - Table showing the type of industry

Sr. No.	Industries	Response	Percentage (%)
1	Auto OEM & Auto Component Industries	4	25
2	Manufacturing	4	25
3	Research & Development	2	10
4	Information Technology & Finance Services	5	20
5	FMCG & Pharmaceutical	5	20
Total		20	100

Graph No. 1 - Graph showing the type of industry

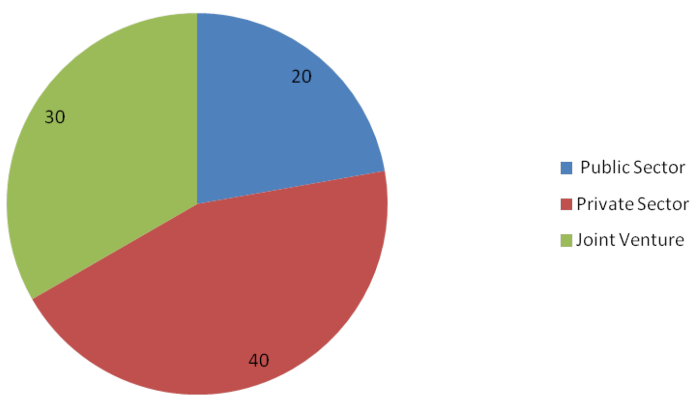


Description-

Out of the sampled industries considered for this study, 8 Industries (25% each of total sample size) are from the sectors Auto OEM & Auto Component and manufacturing sector. 10 Industries (20% each of total sample size) are from Information Technology, Finance Service and FMCG & Pharmaceutical industry.2 Industries (10% of total sample size) are from Research & Development sector.

Table No. 2 - Table showing the details of the segment of the organizations :

Sr. No.	Economic Segments	Response	Percentage (%)
1	Public Sector	1	20
2	Private Sector	12	40
3	Joint Venture	7	30
Total		20	100



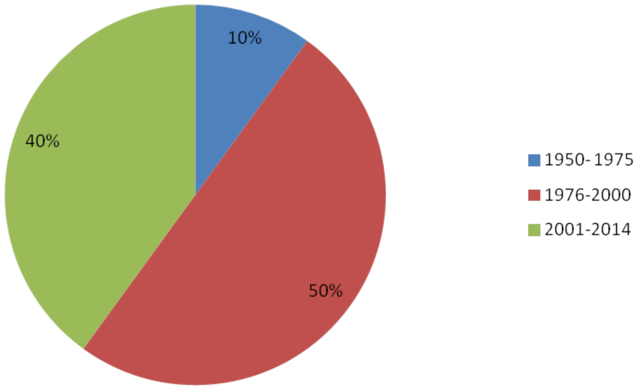
Description-

20 % of the total sampled organizations are from public sector, 40% are from Private sector and 30% of the organizations are joint ventures.

Table No. 3 - Table showing the year of establishment of the organizations:

Sr. No.	Establishment Year	Response	Percentage (%)
1	1950-1975	2	10
2	1976-2000	10	50
3	2001-2014	8	40
Total		20	100

Graph No. 3 - Graph showing the year of establishment of the organizations:



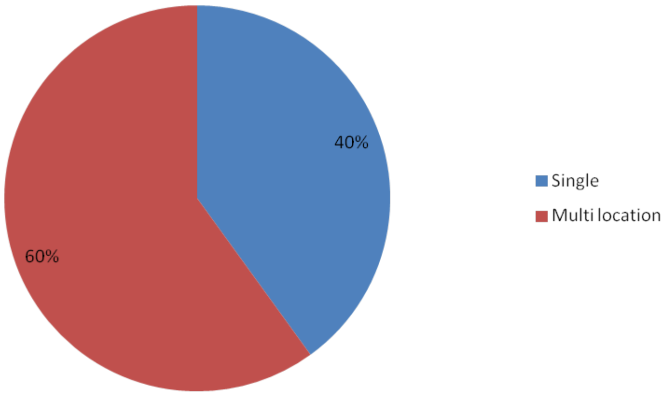
Description-

10% of the sampled organizations were established between year 1950-1975, 50% of the sampled organizations are established during year 1976-2000, 40% of the organizations are established during year 2001-2014.

Table No. 4 - Table showing the types of organisations based on their locations

Sr. No.	Locations	No. of Managers	Percentage (%)
1	Single	8	40
2	Multi location	12	60
Total		20	100

Graph No. 4 - Graph showing the types of organisations based on their location



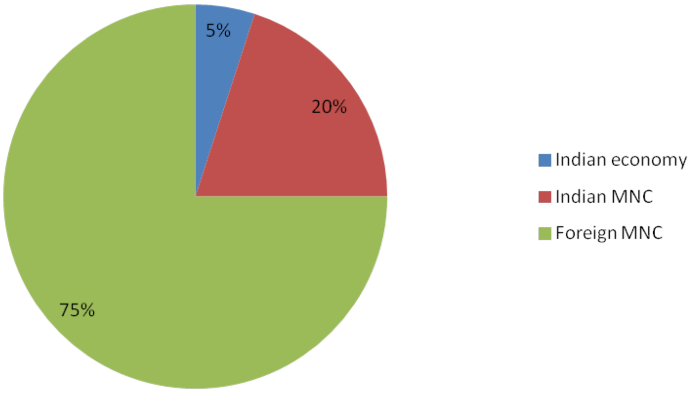
Description-

From the table above it can be seen that 60% of the sampled organizations are functioning on multiple locations while 40% of the organizations are functioning on single location.

Table No. 5 - Table showing the details of the structures of the organizations:

Sr. No.	Geographical orientation	No. of Managers	Percentage (%)
1	Indian Economy	1	5
2	Indian MNC	4	20
3	Foreign MNC	15	75
Total		20	100

Graph No. 5 - Graph showing the details of the structures of the organizations:



Description-

The table discloses that majority of the respondents i.e., 75% are from Foreign MNC's, 20% of the organizations are Indian MNC's, 5% of the organizations are Indian companies. Since globalization organizations are stretching across the world. Pune being a very suitable for industrial development it is obvious that many foreign MNC's and Indian MNC's are present; however majority are foreign MNC's.

Organizational development and performance management:

- Researchers have found that half of departmental managers are willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful. Most of the managers feel proud in taking positively for the present organization to their friends as a great organization to work. It is found that maximum number of departmental managers feel loyal to the organization. Departmental managers are eager to accept almost any type of job assignment in order to keep working for this organization.
- It is found that more than half of departmental managers agree that their values and organizations values are the same. It is found that departmental managers feel proud to tell others that they are part of this organization.
- It is found that maximum number of departmental managers feel that they are extremely glad that they choose this organization to work for over others they were considering at the time they joined. It is found that half of the departmental mangers agree that there is not too much to be gained by sticking with this organization indefinitely and others are disagreeing. It is found that half of the departmental managers agree that often, they find it difficult to agree with this organization's policies on important matters relating to its employees and others are disagreeing. It is found that more number of the departmental managers feel that they really do care for fate of this organization.
- It is found that maximum number of the departmental managers agrees that they feel this is the best organization for work.
- It is found that very few of the departmental managers agree that deciding to work for this organization was a definite mistake on their part and maximum departmental managers are disagreeing.
- **Hypotheses - 1**
- **Alternative Hypothesis:** Performance Management System is very useful tool to for organisational development
- **Null Hypothesis:** Performance Management System is not anuseful tool fororganisational Development.
- **Justification** Performance management (PM) is the process of managing the execution of an organization's strategy in order to achieve organisational goals. PM provides explicit linkage between strategic, operational, and financial objectives. It communicates these linkages to managers and employee teams in a way they can comprehend, thereby empowering employees to act rather than cautiously hesitate or wait for instructions from their managers. PM also quantitatively measures the impact of planned spending, using key performance indicators. Performance Management helps employees to understand what is expected from them and guides them in maintaining or improving performance to meet expectations. Performance Management also gives

employees motivation tools that help them .to grow and advance their careers.

- In this study, Manager's opinion regarding the application of performance management system in various sectors was measured on 5-point Likert scale. As variables were discrete categorical variables and further researchers were interested in finding out the association between these variables, Spearman's correlation was thought to be most appropriate test. The result of the correlation is as shown in the table below –

- **Inference –**
- Since, $p < 0.01$, there is evidence of strong positive correlation between performance management and the development of employees. **Spearman's correlation coefficient is 0.796 and this is statistically significant (P = 0.000).** Thus, null hypothesis is rejected and alternative hypothesis is accepted. Therefore, from the result **researcher can analyze that there is association between the performance management and the development of employees.**

Correlation		Commu about PM System
Development of Employee	Correlation Coefficient	.796**
	Sig. (2-tailed)	.000
	N	200

- **Conclusion:**

  Development of employees is used to foster growth and development to provide opportunities for employees to accept greater challenges. Further, to help employees in contributing towards achievement of organizational goals in accordance with the mission and vision. It also helps to build employee's self-confidence and commitment. It also provides a system to measure required change in performance and bring about the desired changes that can solve a variety of problems. It is concluded that the performance management is an effective tool for organizational development.

Organizational climate and performance management:

- It is found that the main concern of the managers is to help each other and develop the corporate skills. Half of the departmental managers agree that managers here have high concern for one another and help each other spontaneously when such help is needed. It is found that Managers in most of these organizations are not likely to express their feeling on important matters.
- It is found that half of the departmental managers agree that reward & promotions are given on basis of merit. It is found that the organization discourages consideration and involvement of informal and personal relations in the process.

Findings for Organizational Aspect:

- It is found that organizations considered are from different sectors like Automobile, Hospitality, Healthcare & Hospitals, Banking, IT in same proportion. Maximum organizations are from Private sector, few are from Public sector, Joint venture and very few are from other sectors. Organizations having departmental managers in between 0 to 100 are taken for the study. Maximum organizations taken for the study are established in the year 1976 to 2000, few organizations are established in year 2001 to 2014 and very few organizations are established in year 1950 to 1975. It is found that most of the businesses have multi-location and few businesses have single location. Most of the organizations are from Indian companies, few organizations are Indian MNC and there is only one organization which is Foreign MNC.
- It is found that more number of the departmental managers agree that managers are subject to strict, systematic implementation of discipline & control. Managers are strongly watched for obeying all the rules. There is a provision of punishments for violating rules and procedures of the organization and are severe in nature. Managers in the organization tend to be cold and aloof towards each other.
- It is found that organizations are willing to takes chance on good ideas .It is found that organizations prefers novel paths than slow, safe and sure approach.

- It is found that organizations encourage general orientation towards risk taking. It is found that the organizations take pretty big risks occasionally to keep ahead of the competition.
- It is found that there is a feeling of pressure to improve the personal and group performance. Managers seem to take much pride in their performances. It is found that managers are free to set their own performance goals.
- It is found that managers agree that convincing the top management becomes more important under situation of conflicts. It is found that philosophy of the top management emphasizes human factor. It is found that maximum number of the departmental managers believes that happy employees will produce more.
- It is found that achieving goals or targets set or excelling them is the main concern in the organization. It is found that communication is necessity. Transforming the relevant information, making it available to all concerned at right time, is essential to achieve high performance standards.
- It is found superiors often seek advice from their subordinates before decisions are made and most of the daily activities have set rules and procedures in the organizations.
- The maintenance of organizational norms and policies are the one of the main criteria of success.
- It is found that the job assignments in these organizations are clearly defined and logically structured. Rules and regulations are made and executed for handling any kind of problem which may arise in making most of the decisions.

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Sustained Business Success of EPC Companies in Indian Thermal Power Sector – A Literature Review

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Abstract

EPC Organizations working in Indian Thermal Power sector are facing huge challenges for several years due to shrinkage of market, threat of replacement by renewable power, fierce competition etc. Ensuring sustained business success is a primary concern of these organizations. This Study intends to deep dive and examine the major issues related to the subject and come out with findings and recommendations to help these EPC organization to attain sustained business success.

Keywords: *EPC organizations, EPC projects, sustained business success, business continuity, Indian thermal power sector, project risk management, enterprise risk management*

1.0 Conceptual Framework of the Study

1.1 The Context

For past several years, thermal power business in India is experiencing severe headwinds and tremendous challenges like a sharply diminishing market, threat of replacement by renewables, fierce competition etc. These factors have resulted in huge pressure on the bottom lines of the EPC organizations in this sector. Consequently, all these organizations are struggling to ensure sustained business success for them.

1.2 Key Features and Characteristics of EPC Projects

EPC means Engineering, Procurement & Construction. In simpler term, EPC execution of projects refers to turnkey execution of projects. These projects are characterised by:

- Very large size and value: Single or multiple units of 660 MW/800 MW/1000 MW comprising full EPC scope or split scope of BTG (Boiler Turbo-Generator) and BOP (Balance of Plant) packages or three separate packages-Boiler, TG and BOP. Order value ranges from Rs. 2-3 K Cr to Rs. 10 K Cr plus.
- Long gestation period: 4 to 6 years and beyond in a highly dynamic – Volatile, Uncertain, Complex, Ambiguous (VUCA) environment.
- Single point responsibility and accountability for end-to-end execution of the projects with a fixed completion date and mostly with fixed price contract with no price variation.
- Huge liabilities and risks with unilateral contractual conditions favouring the customers with practically no recourse for the contractor to claim redressal
- Management of many stakeholders e.g. shareholders, employees, customers, lenders, central/state govt. authorities, society, local community, political parties etc.

1.3 Financial Performance of EPC organisation in Indian Thermal Power Sector

While quite a few companies were active in 2007/2008 when the market for large Super-Critical units opened, in the last 10-12 years, the Indian market has stabilised around a very few players. In the complete EPC/BTG space, the main players now are BHEL. L&T and GE Power India. Doosan and Toshiba did participate initially in few select projects; however, they have practically withdrawn from the Indian market. Tata Projects and BGR are the main players in the BOP space. Other players have exited the market.

Analysis of the last 6 Years' Financial Performance (based on Annual Report) for FY 2013-14 to FY 2018-19 of BHEL, L&T and GE Power (India), Tata Projects Limited and BGR was reviewed. However, performance of the terminal years i.e. FY 2013-14 and FY 2018-19 is presented below:

		Revenue (Rs. Cr)	PAT (%)	ROCE (%)
BHEL	FY 2013-14	Rs. 39,569	8.9	7.3
	FY 2018-19	Rs. 30,368	3.3	4.12
	(Made loss in FY 2015-16)			
GE Power	FY 2013-14	Rs. 2,605	8.8	11.6
(India)	FY 2018-19	Rs. 1,903	3.9	15.2
	(Made loss in FY 2015-16 and 2016-17)			
L&T	FY 2013-14	Rs. 85,128	5.8	9.2
	FY 2018-19	Rs. 141,007	7.2	9.9
Tata	FY 2013-14	Rs. 3,598	2.7	17.1
Projects	FY 2018-19	Rs. 13,418	1.9	34.1
BGR	FY 2013-14	Rs. 3,301	2.9	11.4
	FY 2018-19	Rs. 3273	0.5	16.7
	(Made loss in FY 2014-15)			

L&T has seen increasing trend in its revenue for all years under comparison and has PAT of around 4.5-7%. It is, however, important to note that L&T's standalone performance for Power segment is not available in the Annual Report. However, since about 70% of L&T's business comes from EPC (that includes Power), it may be appropriate to assume that L&T too would have been impacted by the sector wide downtrend in thermal power. Its overall financial performance (PAT 6-7%) looks comparatively better which might be due to higher positive impact of its Engineering, IT and other service businesses. BGR Energy's revenue has been largely stagnant and PAT very low, less than 2% in most years. Tata Projects has had an encouraging trend in revenue growth in the period of study, but its PAT is again largely constrained to 2-3%.

On the whole, the above shows that all EPC companies in power sector are hugely stressed.

1.4 Intent of the Study

In the context of the existing business environment in EPC business in Indian power sector, the main objective of all the organizations is to strive and ensure sustained business success for themselves. This Study intends to delve deep into the subject and examine the factors that influence business success of these EPC companies working in Indian thermal power sector as well as the major findings and the way forward for them.

2.0 Review of Relevant Literature

It was found that some generic literature is available on Business Success, but hardly anything is available on Business Success of EPC project organizations in Indian power sector. Under the circumstances, the researcher thought it prudent to approach the subject from the first principle and sought to examine various critical issues connected to it. Major insights are presented under ten (10) main heads. During the study, it became apparent that these issues are not mutually exclusive, rather there are many touch points and overlaps exist amongst them.

2.1 Project Success

Pakseresht et al (2012) in their Study, "Determining the Critical Success Factors in Construction Projects: AHP Approach" identified the critical success factors in construction projects of Pars Garma Company of Iran that covers techno-economic assessment of the project resources, experience of the project manager, project strategic planning, experience of the contractor, on-time decision making, project and cost control, prioritization in purchase of items, payments as per project commitments. Chan (2001) in his Study, "Framework for Measuring Success of Construction Projects" gave a framework for measuring success of construction projects through Key Performance Indicators (KPI). While objective measures include construction speed & time, variation of time and cost, subjective measures include quality, satisfaction of customer etc.

2.2 Business Success – EPC/Construction Companies

Gadekar et al (2013) in their Study, "Success of Indian Construction Companies" defined business success as the extent to which goals and expectations are met. Contrarily, one of the definitions of failure is the inability of a firm to pay its obligations when they are due (Frederikslust, 1978). Some other definitions are: success is to focus on the ability to plan and execute projects (Abraham, 2003), success parameters for projects are mainly cost, time and quality (Huges et al. 2004). Pérez et al (2009) in their Study, *"The Importance of the Entrepreneur's Perception of 'Success'"*, found that major dimensions used in the literature (1995-2007) to measure success of newly created firms were growth, revenue, profit, liquidity, human capital, production process, market share, customers etc. Indicators proposed for the measurement of success of their business are financial perspective (e.g. sales, profit, liquidity), customer satisfaction, business process perspective, human capital perspective etc.

2.3 Business Continuity

Business continuity (BC) relates to the advance planning and preparation needed to enable an organization to operate its critical business functions during emergency events e.g. natural disasters, a business crisis, pandemic, workplace violence etc. that results in disruption of the business operation. Punla et al. (2017) defined BC as the process of creating systems of prevention and recovery to deal with potential threats to a company. Kliem et al. (2016) in their book, *"Business Continuity Planning – A Project Management Approach"*, said that a company needs to be resilient and should have the ability to respond and recover from the impact of events. BC is the discipline to help organizations to become resilient with a major emphasis on building business preparedness. Resiliency can be made a way of doing business where survivability is the key.

2.4 Key Features & Characteristics of EPC Contracts

DLA Piper (Global Law Firm), 2011 Report on "EPC Contractors in the Power Sector, Asia Pacific Projects Update" observes that EPC contractors undertake large scale and complex infrastructure projects and deliver a complete facility to a customer who needs only to turn the key to start operating the facility. Solabannavar et al (2017), in their Study, "Evaluation and Application of EPC Model to improve Project Construction" discussed various models of contracting. One of the earlier modes of execution was through Item Rate Contract where the Bill of Quantity (BOQ) is provided by the customer. It works well where the work is standard and repetitive. With increase in project complexities, development of accurate BOQ becomes difficult and rate contracts runs into time and cost overruns. In this context, EPC model has emerged as an optimum method of contracting and has been adopted by both the government and private customers. EPC Contractor carry out the design, procure equipment and materials as per the given specification and construct and commission the project within the specified time, cost and quality. Failure to comply with any of the specified project requirement attracts huge liability on the contractor. This model has gained popularity since it places the single point responsibility for the entire work on the contractor. Stringent contractual conditions including plant performance minimizes customer's risks.

The most common form of financing for infrastructure projects is project financing that refers to financing based on strength of the project assets. In this method, the revenue generated by the project assets must be enough to service the debt. Lenders ensures that there is no scope for the contractor to claim additional costs or time. Lenders prefer a fixed price - fixed completion date, limited technology risk, guaranteed output, efficiency and other performance parameters, liquidated damages for both delay and performance shortfalls, warranty/defect liability period, latent defect period, security from the contractor in the form of bank guarantee, cash retentions, etc.

2.5 Project Management

Rilo et. al (2012) in their book, *"Eight Key Levers for Effective Large-Capex-Project Management – Introducing the BCG LPM Octagon"*. enumerated some the important levers of project management like cost optimization, design, rigorous risk management, procurement excellence, contracting strategy etc. PMI-KPMG Study (2010) on *"Drivers for Success in Infrastructure Projects 2010 – Managing for Change"* based on survey of 100 plus top management personnel over across multiple infrastructure sector organizations found that cost overrun is caused by frequent design changes and increase in materials cost while time overruns occur due to factors such as land acquisition, regulatory authorities, local population, financial institutions, environmentalists, weak project planning and monitoring. The study recommended a few strategies like entering into fixed price contracts, long term supply agreements, early procurement of critical materials etc. Kerzner et al. (2009) in their book, "Value-Driven Project Management", observed that global economy and competition are compelling companies to take greater risks.

2.6 Project Risk Management (PRM) and Enterprise Risk Management (ERM)

Project Risk Management (PRM)

Zhao et. al. (2015) in their book, *"Enterprise Risk Management in International Construction Operations"*, mentioned that Project Risk Management (PRM) has long been conducted in separate business units separately within a company without considering the risk interdependence that led to duplication of expenditure. On the contrary, Enterprise Risk Management (ERM) treats each risk as a part of an enterprise's overall risk portfolio thereby creating an overall integrated risk management approach. Some scholars emphasized the negative impact or risk and considered risk as threat (Baloi et al, 2003, Rescher 1983, Rowe, 1977) while some others felt that risks encompass both threat and opportunity (Loosemore 2006; Segal 2011; Ward et al 2003). Some researchers used the terms, risk and uncertainty interchangeably (Del Cano et al 2002; Diekmann et. al. 1988; Vernon 1981).

Enterprise Risk Management (ERM)

The Committee of Sponsoring Organizations of the Treadway Commission (COSO 2004) defined ERM as "a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives". ERM is also known as Corporate Risk Management.

Difference between ERM and PRM

PRM is a silo-based approach where each silo deals with its own risks and no single group or person in the organization oversees the entire risk exposure. Since mid-1990s, ERM has been slowly recognized as an integrated approach to manage an enterprise's entire risk portfolio. Both ERM and PRM deal with risk that they encounter, but at different levels (Liu et al 2011, 2013), thus they do not contradict but complement each other as they have different goals.

2.7 Financial Management

Shelton (2002) in his article, "Working Capital and the Construction Industry", stated that working capital and current ratio analysis are the measures of liquidity. Kandpal (2015) in his research paper, *"An Analysis of Working Capital Management in Select Construction Companies"* studied the working capital management policies on profitability, correlation between liquidity, profitability and profit before tax of 10 Indian infrastructure companies (Gammon, GMR, HCC, IVRCL, Jaiprakash Associates, Lanco Infratech, L&T, NCC, Punj Lloyd and Simplex Infrastructure) between 2007 and 2012. He found that efficient working capital management increases firms' free cash flow and increases growth opportunities.

2.8 Entrepreneurial Leadership

Esmer et al (2016) in their Study, "Entrepreneurial Leadership: A Theoretical Framework" said that entrepreneurial leadership is a combination of leadership and entrepreneurship. Entrepreneurial leader is a leader who has the ability of taking risks, being innovative, productive and strategic. In today's intense and dynamic competitive business environment, entrepreneurial leadership is essential for survival and growth of any company. Abd-Hamid et. al. (2015), in their research Study, *"Predictors for the Success and Survival of Entrepreneurs in the Construction Industry"*, explored the factors which are required for construction entrepreneurs to succeed and survive. Entrepreneurship is considered as an important driving factor in business success (Kraus, 2013).

2.9 Stakeholders' Satisfaction

As per PMBOK (5th edition 2008), Project Stakeholder Management processes identify the people, groups, or organizations that could impact or be impacted by the project, to analyse stakeholder expectations and effectively engaging them in project decisions and execution. Stakeholder management also focuses on continuous communication with them to understand their needs and expectations. Stakeholder satisfaction is a key project objective. Carson in her research paper, "Customer Satisfaction and the Success of your Organisation" found that companies with high customer satisfaction, in terms of American Customer Satisfaction Index (ACSI), consistently outperform the S&P 500. Naseem et. al. (2011) in their research paper, "Impact of Employee Satisfaction on Success of Organization: Relation between Customer Experience and Employee Satisfaction", observed that employee satisfaction plays a significant role in defining organizational success. Satisfied employees generate customer satisfaction through excellence in performance.

It leads to organizational success.

2.10 Future of Thermal Power Plant in India

Study of future of thermal power sector is essential to understand the future of the EPC companies working in Indian thermal power sector. Electricity demand from thermal energy source of any country depends on the economic growth, energy efficiency, residential connectivity, T&D losses, penetration of Renewable power, electric vehicles etc. Various studies and reports have been conducted by Central Electricity Authority (CEA), Ministry of Power (MOP), The Energy and Resource Institute (TERI), NITI Ayog and various management consultants. Climate change is one issue that is having far reaching consequences on the future of new coal plants. In line with India's commitment to Paris Agreement 2016, Indian government has initiated a very ambitious plan of renewable capacity addition of 175 GW by 2021-22 from the present capacity of 50 GW. A study by TERI, "Transition in Indian Electricity Sector 2017-2030" estimated electricity demand to increase from 1115 BU in 2015-16 to 1692 BU in 2022, 2509 BU in 2027 BU and 3175 BU in 2030. The report considers two cases for renewable capacity addition – one, high and second, low. "High" case considers increase of renewable power from 50 GW now to 175 GW in 2021-22, 275 GW in 2025-26 and 853 GW in 2029-30. "Low Renewable scenario" considers 125 GW in 2021-22, 225 GW in 2026-27 and 284 GW in 2029-30. In both the case, Plant Load Factor (PLF)/Capacity Utilization Factor (CUF) of nuclear, hydro and solar plants have been considered as 75%, 35% and 19 % respectively. Generation and installed capacity of Coal in "High" and "Low" renewable scenario are estimated to be 1763 BU/218 GW and 2354 BU/474 GW respectively. As on January 31, 2020, installed capacity of Coal power plant is 205 GW. So, it may be seen in "High" renewable scenario, there is hardly any addition in coal plant. KPMG Report, "Energy Investment in an Uncertain World" (2018), points out that, in India, CEA anticipates addition of 6.445 GW of coal capacity till 2022. As per NEP 2018, this may be met through 47.855 GW of coal capacity currently under different stages of construction. Since the capacity under various stages of construction is much higher than the requirement till 2022, this may lead to stress in the system. As of date, about 40 GW of coal plants are identified as stressed assets by the government (this includes 16 GW under construction). During the period 2022-2027, CEA anticipates requirement of 46, 420 GW of coal-based capacity (NEP 2018) expected to be primarily met by the existing and under construction projects. Thus, addition of new plants seems doubtful. Also, the central government PSU, NTPC, the owner of the largest share power plants in India (about 60 GW) has declared that they will not build any green field projects. Jadav (2019) of CEA presentation titled, "Updates and Future of Indian Power Sector" stated that with 56.4 GW of coal-based capacity expected between 2017-22 along with the committed capacity of 38,040 MW from Hydro, Nuclear and Gas, there may not be any further requirement of additional capacity during 2017-22. The Plant Load Factor (PLF) of the coal plants may vary between 50% to 60%. Shah (2019) in her article, "Continued Decline in Indian Thermal Capacity Addition" observed that from the highs of 20 GW of new coal-fired power plants commissioned every year between FY13 to FY16, net capacity additions in FY 17, FY 18 and FY 19 have been 7 GW, 5 GW and 1.2 GW respectively. This decline is the result of a fundamental change in electricity market dynamics driven by competition from cheaper renewable energy sources. Capacity addition outpaced the rate of growth of demand in 12^{th} Plan (2012-2017) and there has been excess capacity addition in thermal. Around 50 GW is around various stages of construction that will come in by 2022 and significant capacity may remain under-utilized. Coal capacity addition envisaged during 2017-22 and 2022-27 to be nil. Only silver lining is the replacement of old inefficient plants. Thus, overall, very little fresh ordering in coal power is expected during this time frame. At present, indigenous manufacturing capacity for super-critical equipment consists of 22.7 GW/Year Boiler and 24.5 GW/Year Turbine-Generator. This gross over-capacity with respect demand, has started taking its toll on the manufacturers who had invested very heavily for their facilities. Almost all have reported lack of enough orders. Going forward, the situation is likely to worsen further. Lakshmanan et al (2017) observed that climate change cannot be achieved without reducing our dependence on coal which is the main contributor in India's energy production. According to BP Energy Outlook 2019, contribution of coal will go from 56 % (in 2017) to 48 % (in 2040). CEA reports that the country has an existing large fleet of coal plants and there is a mismatch between peak demand and output from renewables. This leaves a significant role for the coal plants. Power supply from renewable energy cannot be switched on and off like a fossil-fuel power plant. The sun doesn't shine at night, and the wind doesn't always blow. Thus, renewables cannot supply uninterrupted reliable power on 24X7 basis, especially during times of peak demand. Jain (2018) observed that the coal fleet utilization reduced from 77.5% in fiscal 2010 to 60.6% in 2019, due to faster capacity build up against slower-than-expected growth in power demand. The long-term outlook for coal power generation looks weak as the challenges facing the coal sector will persist in future. While capacity additions will ease off, the retirements of coal fleet will accelerate. The Central Electricity Authority in its National Electricity Plan 2018 expects 48 GW of coal-based generation capacity to retire by March 2027. Based on our long-term economic forecasts of India's power system, we expect renewable energy sources (including hydro) can supply 75% of India's total electricity needs by 2050. Solar and wind are expected to supply a third each of the total power demand. The share of coal will drop to just 14% in 2050 from 75% in 2017. Finally, apart from replacement of old inefficient plants, flue gas desulphurization plants and selective catalytic reduction plants will come for tendering for next 2-3 years for retrofitting into old coal plants, due to stringent emission norms stipulated by the government.

3.0 Major Findings of the Literature Survey

The foregoing literature survey brings out the following major points:

- Business success means to the extent of meeting expectations of all stakeholders of the business. In financial terms, it refers to Revenue, Profit, Return of Capital Employed (ROCE), Order Book, etc. and in non-financial term, it refers to completion of project within given time and cost, brand image, enhanced shareholder value, satisfaction of various other stakeholders, sustainability of business etc.
- Business Continuity is key in business to develop resilience and bounce back from suspension of operation due to severe disruptions like tsunami, civil war or any pandemic like COVID 19.
- EPC business faces multitudes of risks. It warrants excellent project management capability covering each of the areas of Engineering, Procurement and Construction activities, robust contract management, Project Risk Management, Enterprise Risk Management systems and processes.
- Although, thermal power has remained the mainstay in India's energy mix, it had already reached its peak and in the last 7-8 years and addition of new thermal megawatts is reducing drastically. Other issues like emphasis on climate change with government push for renewables, reducing plant PLF and lower power demand is clearly indicating that golden days of thermal power is over. It is, however, expected that till 2040 thermal power will remain the largest contributor to India's power generation. But it may drop from around 60% to 45% in the energy mix. Power market is already fiercely competitive, it is likely to be more competitive since market size is declining and the indigenous power plant equipment capacity is several times more than the demand.
- In the year 2007-2008 when the large super-critical plants started getting tendered, quite a few EPC companies came on the scene. With time, pressure of sustaining the business became too severe and many players exited the scene. There are around 2-3 companies participating in Main Plant Equipment as well as BOP tenders. The same trend is likely to continue in foreseeable future.

4.0 Conclusion

Considering the difficult situation, EPC organizations are required to concentrate to achieve cost leadership through innovative methods, entrepreneurship, continuously build new knowledge & skills, ensure sound financial management, sustainability measures, good communication, lean organization, leverage on IT and Digital applications and meeting stakeholder expectation.

The organizations should concentrate on securing flue gas desulphurization and selective catalytic reduction orders to exploit the new market opened due to stringent environment emission norms and look for options like clean fuels, energy storage, electric vehicle etc. both in India and overseas.

Integrated Strategic Planning is a key requirement for any company for setting its short-term and long-term business goals. It is also very important to monitor its progress and make necessary course correction. In addition to Strategic Plan, many progressive organizations develop Perspective Plan for a longer time frame of 5-10 years identifying the mega trends.

Human resource development, learning & training and entrepreneurial leadership development have to be given very high priority.

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Does the Listing Performance Differ with Categories? : An Evidence From Indian SME Financing

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ABSTRACT

Micro, small and medium enterprises (MSME) is important part of the Indian Economy. MSME sectors significantly contributes to the GDP and generates huge employment to about 11 crore people. Securities Exchange Board of India (SEBI) has approved the establishment of a separate exchange for the SME companies in the year 2012. Present study measures the performance of SME IPOs listed on NSE Emerge. Using 187 IPOs listed on NSE Emerge during 2012 to 2019, present study measures security return and initial excess return (underpricing) for initial one month from listing. Further, it compares the performance based on issue specific variables, market related variables and company specific variables. Security return and Initial Excess return (IERs) reported significantly higher for IPOs with higher RNOW, subscription ratio, issues with prestigious lead manager and issued during positive market sentiment.

Keywords:

India, NSE Emerge, SME IPOs, Underpricing

INTRODUCTION

As per World Bank data, Small and Medium Enterprises (SMEs) significantly contribute to the most countries' economic development and employment. SMEs comprises of 90 percent of business and 50 percent of employment worldwide. 40 percent of national income (GDP) in emerging countries contributed by formal SMEs. 7 out 10 jobs are created by formal SMEs. With growing population, more jobs needs to be created by 2030, which makes the SME segment as high priority worldwide. In the context of India, MSME contributes the 29 percent of GDP and generates 80 percent of jobs through investment size of 20 percent. MSMEs are expected to contribute to 50 percent of GDP along with creation of jobs for 75 lakhs to 1 cores people by next 5 years.

Worldwide, significant importance of SME sectors for economy growth is recognised. SMEs access to finance is biggest challenge for exponential growth of the business. To overcome this, almost all the major capital market have realised the need for separate exchange for SME. More than 20 countries operate separate exchange for SME. In India, BSE SME and NSE Emerge, established in 2012, provides a listing opportunity to the SMEs with minimum compliances and cost as compared to the mainboard. SME raises the IPOs benefits to the companies as well as its investors, exit route to private equity investors as well as liquidity to the ESOP holding employees.

NSE Emerge and BSE SME exchange has raised 6315.3 cores by successfully issuing 519 SME IPOs during 2012 to November 2019. 71 companies from BSE SME and 24 from NSE Emerge have grown exponentially and migrated to mainboard exchange. During 2016 to 2019, number IPOs are getting listed on SME exchange are significantly higher compared to mainline board. Upto November, 2019, 15 issues on mainboard compared to 50 on SME; for the year 2018, highest ever, 145 SME IPOs compared to 24 in mainline and in the year 2017, 133 SME IPOs compared to 36 mainline boards are listed. Though the amount raised by IPOs on mainstream board is much higher than SME platform IPOs.

Regulations for listing at SME exchanges are significantly different than mainboard IPOs listing. Listing at SME exchanges are exempted from SEBI approval, in principle approval of stock exchanges and public notice requirement. SME IPOs issue paid up capital range is 10 to 25 million, minimum 50 investors at the time of IPO listing and 100% underwritten issue, 15 percent with the underwriter's account for 3 years of lock-in.

SME IPOs plays important role for economy growth and their IPOs are characterised with unique features compared to mainboard IPOs. Present study tries to measure the performance of 187 SME IPOs of India, listed on NSE Emerge up to August 2019 since its inception in the year 2012 and compares the performance. Study is significantly contributing to literature by comparing the extent of IPO performance with various company, issue and market specific variables. Company specific variables encompasses of Age, operating cash flow of total assets, post issue promoter's holding, return on net worth and debt to equity ratio. Issue specific variables consists of share premium, listing delay, risk factors, subscription times, offer size, lead manager prestige and method of pricing. Market sentiment is considered as market related variables.

LITERATURE REVIEW

Ibbotson (1975) first time reported a positive mean initial return of 11.4 percent for a sample of 120 IPOs during 1965-69. Underpricing of IPOs has been reported in almost all equity markets and across time with a comparison of 45 countries (Loughran, Ritter & Rydqvist, 1994). First study was reported on IPO underpricing (Ibbotson, 1975) and several studies on initial public offering reported underpricing in Singapore (Wong & Chiang, 1986); in U.S. (Ritter, 1991; Ritter & Welch, 2002); in the UK (Levis, 1993); German (Ljungqvist, 1997); in India (Krishnamurti & Kumar, 2002) and in Malaysia (Yong & Isa, 2003).

Finance and natural resource industry have higher probability of survival (Lamberto & Rath, 2010); underpricing in boom phase while these reverse the effect under recession phase of economy (Sohail, Raheman & Durrani 2010). Uncertainty and underpricing are positively related (Deb, 2009); Listing price is negatively related to number of shares offered and positively related to investor's optimism (Chen & Guo, 2010). Underpricing is positively related with by age and size of the firm, whereas negatively with industry type and offer size (Islam, Ali & Ahmad, 2010). Enough empirical evidence suggests that IPOs are underpriced on the listing day (Ibbotson, 1975; Ritter, 1991; Sullivan & Unite, 1999; Ritter & Welch, 2002; Sahoo, 2014; Sahoo, 2017; Bhattacharya, 2017).

Underpricing and underperformance is extensively researched for Indian mainboard IPOs (Bansal & Khanna (2012), Krishnamurti & Kumar (2002), Sahoo & Rajib (2010)) SME IPOs are launched in 2012 in Indian market, literature reports that SME IPOs are less underpriced than mainline IPOs in India (Bhattacharya , 2017 and Dhamija and Arora , 2017). Majority of the IPO valuation studies focus on the listing day return. It is clear that most studies agree that IPOs leave some money on the table.

Based on the detailed review of literature, present study tries to fulfil the gap by following ways. **First,** recent dataset, sample of IPOs listed on NSE EMERGE from its inception from year 2012 to August 2019 is used to uncover initial returns up to 30 days of listing and trade ratio up to 1 year of listing. **Second,** the study **compares** the magnitude of underpricing for issue, company and market specific variables.

OBJECTIVE

The present study has two fold objectives; 1) is to measure performance of IPOs listed on NSE Emerge in terms of underpricing and 2) is to compare issue, company and market specific variables on underpricing.

RATIONALE

SMEs in India significantly contribute to the GDP and creation of jobs. To encourage equity issues by the SMEs in India there by removing the biggest obstacle of finance, separate exchange is established with ease of regulations. These regulations are different compared to mainline board IPOs. The pricing and performance of SME IPOs plays significantly in future interest of investors, issuers and regulators.

DATA AND METHODOLOGY

SAMPLE SELECTION

The sample data for this study consists of all the IPOs that were listed on the NSE Emerge stock exchange from its inception in September 2012 to August 2019. Table 1 outlines the sample for the study. From the population of 196 IPOs issued during the sample period, 187 IPOs are taken as final sample after excluding 7 IPOs traded less than 30 days from listing and 2 IPOs from finance and investments companies. Data has been collected from various sources. Majority of the data is collected and analysed from https://www.nseindia.com/emerge/ and Capitaline Plus Software, which is the leading database for the Indian capital market and is widely referred to in existing studies. To calculate abnormal return and Market specific variables, NIFTY Small Cap 250 Index data collected from https://www.nseindia.com. Company specific and issue specific variables are collected from red-hearing prospectus for the issuing firms available at https://www.nseindia.com/emerge/ and https://www.chittorgarh.com/.

TABLE 1 DETAILS OF SAMPLE

Sample period September 2012 to August 2019	
Particulars	**Number of IPOs**
Total number of IPOs issued during sample period	196
Excluded Traded less than 30 days from listing Finance and Investment Sector Firms	 7 2
Final Sample Size	**187**
Sample as percentage of total IPOs	95.41 %

DESCRIPTION OF VARIABLES

This study measures the IPO performance i.e. on underpricing post one month of listing and further evaluates the difference in IPO performance with different categories. Variables mentioned in below included in the study based on significance proved in the earlier studies.

DEPENDENT VARIABLES

UNDERPRICING

Present study measures security return as period of offer to listing of the security and underpricing as abnormal return is defined as difference between security return and market return (represented by NIFTY Small Cap 250 Index). Along the lines of existing studies i.e. Dhamija and Arora, 2017, study quantify the extent of underpricing using initial excess returns (IERs).

IER = IR – MR,
Where,
IER = Initial Excess Return of the Stock;

$$IR = \frac{\text{(Closing Price of the Stock on the Listing Day – Offer Price)}}{\text{Offer Price}}$$

$$MR = \frac{\text{(Stock Index on Listing Day – Stock Index on the Issue Closure Day)}}{\text{Stock Index on the Issue Closure Day}}$$

Market encompasses NIFTY Small Cap 250 Index as it best way represents MSME sector of Indian economy. A stock generating positive IER is said to be underpriced, negative IER said to be overpriced on listing day. IER, underpricing and listing day returns are used interchangeably throughout the study.

DESCRIPTION OF CATEGORIES

TABLE 2: DESCRIPTION OF COMPANY, ISSUE AND MARKET SPECIFIC VARIABLES

Variables	Definition
CATEGORY 1 Company Specific Variables	
Age of the firm	Age of firm is defined as years between date of incorporation and IPO listing. Older firms are expected to witness the lower underpricing as long history of the firm is available about fair valuation. Age is divided in four quartiles based upon age from new (Q1) to old (Q4).
CFO_TA	Operating cashflow during the financial year immediately preceding the IPO, scaled by total assets of the firm is encompassed as CFO_TA. Higher the CFO_TA, higher would be IER. The sample has been divided into four quartiles based upon the lower CFO_TA (Q1) to high CFO_TA (Q4).
Post-Issue Promoters Holding (PIPH)	Percentage of equity ownership held by the Promoter, post IPO defined as PIPH. Higher PIPH, indicates the future earnings for the issues. Higher holding of promoter signals higher underpriced issues. The sample has been divided into four quartiles based upon the promoter's holding lower (Q1) to high holding (Q4).
Return on Net Worth (RNOW)	Ratio of Profit after tax to net worth in the financial year immediately preceding the IPO defined as RNOW. Higher the RNOW results in higher attraction of the investors for investments, results in higher IER. The sample has been divided into four quartiles based upon the RNOW lower (Q1) to high (Q4).
Debt to Equity Ratio (DE)	Ratio of book value of the Debt to equity capital in the financial year immediately preceding the IPO is considered as DE. Higher the DE ratio, higher would be IER. The sample has been divided into four quartiles based upon the lower DE (Q1) to high DE (Q4).

Issue Specific Variables	
Share Premium	Present study defines the share premium as the ratio of offer price to face value of the share has been taken as proxy for share premium. Higher the share premium indicates IPOs are fully priced, very near to the fair value, leaves less scope of IER. Lower share premium is a signal to deviation of the fair value, gives the scope for higher IER. The sample has been into four quartiles based upon the share premium from low premium (Q1) to high premium (Q4).
Listing Delay	Listing delay is considered as number of days between offer closing day and listing day. Higher the listing delay increases the duration of the investments, decreases the extent of IER. Sample has been divided into four quartiles from higher listing delay (Q1) to lower (Q4).
Risk Factors	Number of Risk Factors mentioned in the IPO prospectus plays significant role in IPO return and risk. Higher the risk factors indicates higher would be IER. Sample has been divide in four quartiles from less (Q1) to high (Q4).
Subscription Times	The extent of subscription does impact the IER. Subscription times defined as number of times the overall IPO is over scribed measured as ratio of total number of shares applied to number of shares offered. Sample has been divided on four quartiles based on subscription times lower (Q1) to high (Q4).
Offer Size	Large offer size indicates the higher supply of shares, results in higher underpricing. Offer Price multiplied with number of shares issued is defined as offer size. The sample has been divided into four quartiles based upon the issue size from small (Q1) to large (Q4).
Lead Manager Prestige	Lead manager prestige plays significant role as certification for SME IPOs. If IPOs is managed by top Lead manager, issue must be near to fully priced, leaves less scope for IER. Based on the market capitalisation of LM, sample has been divided in to 2 parts. IPO is issued by top 4 lead manager and rest not issued by top 4 lead manager.
Method of Pricing	Book building method is more transparent method for pricing as it bids from the investors, whereas in a fixed price issue price is fixed by issuer. Book building pricing method is more preferred method, results in less underpricing compared to fixed pricing method. Present study considers dummy variable (1,0), value is 1 if IPO is issued through fixed method and 0 if IPO is issued through book building method.
Market Specific Variables	
Market Sentiment	Market conditions and investors optimism for the secondary markets impacts the listing day returns of IPOs. Nifty Small Cap 250 index average daily return during 30 trading days preceding the IPO opening is encompassed as market index return. If market index return has increased during 30 days prior to IPO issue, market sentiment is said to be positive. IER is expected to be higher when the market sentiment is positive. Here sample are divided in to two categories, positive and negative market sentiments.

EMPIRICAL RESULTS AND ANALYSIS

EXTENT OF IPO PERFORMANCE: UNDERPRICING

The performance of SME IPOs are depicted in the Table-3. 187 sample resulted in 6.59 average security return, whereas market adjusted return is 6.09 percent. Negative IER is 22.02 percent whereas most positive is 59.73 percent.

TABLE 3 PERFORMANCE OF SME IPOS

	N	Minimum	Maximum	Mean	Std. Deviation
IR	187	-20.00	56.14	6.59	10.40
IER	187	-22.02	59.73	6.68	10.64

COMPARISON OF IPO PERFORMANCE BASED ON CATEGORIES

Normality check dependent variables i.e. IR and IER indicates that, data are not normal. To compare the performance based on company, issue and market specific variables, Non Parametric test such as Mann-Whitney U test and Krushkal- Wallis test is applied. Results of the same is depicted in the Table 4.

TABLE 4 IERS OF SME IPOS BASED ON DIFFERENT CATEGORIES

Variable	Category	Number of IPOs	IR	p Value (IR)	IER	p Value (IER)
Company Specific Variables						
Age	Q1	47	6.66	0.455	7.33	0.241
	Q2	47	9.00		9.29	
	Q3	46	4.99		4.88	
	Q4	47	5.67		5.18	
CFO_TA	Q1	47	6.35	0.630	6.50	0.454
	Q2	47	6.29		5.61	
	Q3	46	4.49		5.44	
	Q4	47	9.22		9.16	
PIPH	Q1	47	9.20	0.352	9.23	0.089*
	Q2	47	4.88		4.45	
	Q3	46	5.14		5.31	
	Q4	47	7.14		7.71	
RNOW	Q1	47	5.72	0.034**	6.05	0.060*
	Q2	47	6.78		6.48	
	Q3	46	3.45		3.67	
	Q4	47	10.37		10.47	
DE	Q1	47	7.77	0.989	8.07	0.827
	Q2	47	6.41		6.58	
	Q3	46	5.88		5.31	
	Q4	47	6.31		6.74	
Issue Specific Variables						
Share Premium	Q1	47	5.66	0.264	5.70	0.611
	Q2	47	7.69		7.39	
	Q3	46	7.01		7.60	
	Q4	47	6.04		6.05	
Listing Delay	Q1	47	5.75	0.701	6.25	0.946
	Q2	47	6.41		6.25	
	Q3	46	7.90		7.57	
	Q4	47	6.36		6.68	
Risk Factors	Q1	47	6.36	0.108	6.10	0.258
	Q2	47	4.81		4.92	
	Q3	46	7.63		8.26	
	Q4	47	7.61		7.48	
Subscription Times	Q1	47	2.05	0.000***	3.05	0.000***
	Q2	47	2.82		2.95	
	Q3	46	6.81		6.36	
	Q4	47	14.72		14.37	
Offer Size	Q1	47	7.18	0.392	6.60	0.888
	Q2	47	4.54		5.53	
	Q3	46	7.29		7.07	
	Q4	47	7.40		7.54	
Lead Manager	Top-4	113	7.74	0.011**	7.75	0.035**
	Others	74	4.85		5.04	
Method of Pricing	Book Building	45	7.64	0.125	7.93	0.101
	Fixed	142	6.27		6.29	
Market Related Variables						
Market Sentiment	Positive	113	8.16	0.018**	8.18	0.020**
	Negative	74	4.21		4.39	

*, **, *** indicate significance at 10 %, 5 % and 1 % level respectively

Close perusal of Table 4 indicates that IERs of IPOs with lowest PIPH quartile (Q1) was 9.23 percent compared to IPOs with highest quartile (Q4) was 7.71 percent. Here, the difference is statistically significant. The evidence supports the phenomena of signaling theory, which supports the negative relationship between PIPH and IERs. The higher PIPH indicates the higher extent of managent confidence in the long-term prospects for the IPO firm and reduces the uncertainty during the issue. This leads to fully priced IPOs and reduces the extent of IERs.

IPOs with highest RNOW quartile (Q4) resulted highest IERs of 10.47 percent. Quartile (Q3) IPOs results in lowest IERs of 3.67 percent IERs. Here, difference is found to be significant. IPOs with highest RNOW (Q4) resulted in higher IR and IER as higher RNOW signals long run growth prospect of the firm leads to higher price.

IPOs with higher level of subscription result in higher IR and IERs. The IERs of IPOs with lower subscription quartile (Q1) was just 3.05 percent compared to 14.37 percent for IPOs with higher subscription quartile (Q4). Higher subscription quartile form Q1 to Q4 has resulted in continuously increase in IERs. Here, the difference is statistically significant. The evidence supports the hypothesis that higher level of subscription results in higher demand on listing day by investors without the IPO allotment, results in higher extent of IERs.

IERs on shares managed by top-4 lead manager is 7.75 percent, whereas IPOs managed by other lead manager generated 5.04 percent. The difference is statistically significant. Certification hypothesis angled on the underwriter's reputation indicates negative relationship of prestige and initial return on IPOs. Prestigious investment bankers may signal less uncertainty surrounding the IPO thereby enhancing the firm performance and less underpricing. Inconsistent with past studies, present study covers relatively new primary market of India, SME IPOs, and resulted higher IERs for IPOs issued by prestigious lead manager.

IPOs issued during positive market sentiment resulted in 8.18 percent IER compared to 4.39 percent IERs during the negative market sentiment. Here, also, the difference is statistically significant. The evidence supports the hypothesis that positive market significantly leads to investors' optimism towards the new offerings, leads to more participation of investors, results in the higher IERs.

IPOs by relatively older companies, issues with lowest share premium and issues with the lowest listing delay witnessed lowest IERs though the difference is not statistically significant. IPOs garner the highest CFO_TA, lowest debt to equity ratio, the higher risk factors, larger offer size and priced through book built method generated the highest IERs though the difference is not statistically significant.

CONCLUSION

Present study investigates the performance of about Indian SME IPOs, study concludes that international phenomena of underpricing is present in case of Indian SME IPOs. Study reported is 6.09 percent of IER. Further, comparison of performance based on issue specific variables, market related variables and company specific variables evidenced significantly higher Security return and Initial Excess return (IERs) for IPOs with higher RNOW, subscription ratio, issues with prestigious lead manager and issued during positive market sentiment.

IMPLICATIONS AND FUTURE SCOPE OF STUDY

Comparative analysis of IPO aid in understanding the nature of it and assist in better decision making for primary market investors. The scope of the study is limited in twofold: one is in terms of its coverage to SME IPO's listed on NSE Emerge only and the other is only comparison. The future researcher can delimit the same by extending the study to explore the factors responsible for difference of performance of IPO based on above categories.

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Role of Digital Payments in Changing Ecosystem of Payments in India: With reference to Millennial

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Abstract:

Purpose: *This research paper focuses the role of digital payment in India. According to government of India in present situation digital payment is must in each and every area. Various steps, policies and program have been undertaken by government in digital payment system. In digital payment area youth of the country plays very important role. This generation is developing various apps which are paperless, cashless, safe and secure and they are also using artificial intelligence, machine learning etc. This paper is also highlighting the importance of digital payment and its influence on young people. Thus, one can say that millennial are driving next gen commerce.*

Type of paper: *The present paper is of empirical research paper.*

Design/Methodology/approach: *The research applies the inferential statistical research design.*

Findings: *It is observed that young people are comfortable with digital payment system.*

Implication: *Technology has made our life much easy than ever before in each and every field. Digital payment is one of them and there is also a huge potential to increase the contribution of the youth for this. The study will helpful to students, government and also to those who are working for betterment of youth.*

Research limitations: *Primary data was collected through questionnaire which may suffer from the subjectivity biases of the respondent. Although the care has been taken in selecting the samples but then also it may not be representative of the actual population. Among the respondents many haven't response for optional questions.*

Key words: *Digital payment, Millennials, cashless, mobile payment, online transaction*

Introduction

Digital Payment in India:

As digital payment can save national savings, increase productivity, improve Tax collection. India has largest data consumption at cheapest rate in the world. In short digital payment will helps to combat various financial crimes.

As per report of national Payments Corporation of India BHIM unified payments Interface increased up to 913 millions in volume from 7 million. It shows the decrease in the use of cash. Various data available from "Fintech Festival at Singapore on November 2018that it is the time to use technology in finance for financial inclusion Aadhar has been created for 1.3 million and with Jandhan Yojna more than 330 million new bank accounts has been opened. Now students can get scholarship directly in their bank accounts. Around 4000 micro ATMs are available in remote villages. Farmers have been provided with access land record, price, credit, insurance, market etc. BHIM UPI app is most sophisticated and simple payment method in world AEPs without mobile & internet. Over 128 banks are connected to UPI in India. UPI transactions grow by 1500 times in last 24 months and value of transactions also increased over 30%. (The Indian Express, 2018)

1.2 What is Digital Payment?

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments. The following are the different types of digital payments.

The definition of an electronic payment system is a way of paying for a goods or services electronically instead of using cash or a check in person or by mail. Digital payment programme is very important to transform India into a digitally empowered society. There are various modes available for cashless transactions like:

1. Banking Cards
2. USSD
3. AEPS
4. UPI
5. Mobile wallets
6. Banks Pre paid cards
7. Point of sale
8. Internet Banking
9. Mobile Banking
10. Micro ATMs

1. Banking Cards

In India banking cards are found most convenient for making payment as it is widely used by people. Banking cards are used for purchase, payment at online transaction. Most popular card payment systems are Master card, Rupay and visa etc. Banking card can be issue against depository account. There are various types of cards like Debit card/ATM card, credit card.

Banks issued card of plastic with a magnetic stripe. This card's holds identification code which can be read by machine. The card issued by banks holds client's name, issuer's name, card number. The first bank card was issued by Barclays in London.

2. USSD

USSD means unstructured supplementary service data. This is one type of best mobile financial service to low income customers. This method of payment can be used without downloading app to carryout mobile transactions. In this type mobile data facility is not necessary. This method provides services like fund transfer, bank statements and balance queries. The advantage of this type is that it is available in Hindi as well.

3. AEPs

AEPs means Aadhar Enabled Payment System. AEPs is method of getting money from bank accountwithout visit of bank branch. AEPs is used for various types of banking transactions like cash deposit, cash payment, cash withdrawal, balance enquiry, and fund transfer etc. All the banking transactions are based on Aadhar verification. This system do not required to visit branch or to provide card number and there is no need to sign any documents. In this payment mode registration of Aadhar number with bank account is necessary. It is very simple to use with accurate Aadhar number.

4. UPI

This is a system by which the customers who have bank account can receive and send money through UPI based app. This service is available 24/7 and on all 365 days a year. To transfer money bank account and IFSC code is not needed. Only virtual payments address is necessary. On both Android and iOS platforms this app is available. The person should have registered mobile number and valid bank account number.

5. Mobile Wallet

A person can used mobile wallets by downloading an app. Mobile wallet can store different information like account number, card information in encoded format. For making payments & purchases mobile wallet can be used for that person have to add money in his virtual wallet. Various mobile wallet apps available in country are paytm, freecharge, Mobiwik etc. Transaction fee may charge for services offered. Mobile wallets are absolutely safe. It is more safe than swiping of cards physically.

6. Bank pre paid card

In such types of instruments you have to load money to make purchase. The bank account may not link with card but the debit card is linked with bank account of customer.

7. PoS terminals

Point of Sale terminal is a hand held device which can read banking cards. It is installed where purchases are made by using credit cards and debit cards. Physical PoS, mobile PoS and virtual PoS are various types of PoS terminals.

8. Internet banking

To carry out banking transaction online is known as internet banking. It is also known e- banking or virtual banking NEFT, RTGS or IMPS are used for online fund transfer.

9. Mobile banking

The financial activity done with the help of mobile phone is known as "Mobile Banking". The use of smartphone to carry out financial or banking transaction is referred as mobile banking. The main purpose of the mobile banking is to expand mobile wallet, digital payment app, UPI and such other services. Now a days many banks have introduced their own app so customer can download and used it.

10. Micro ATMs

Micro ATM is a mini version of an ATM. IT can perform various transactions like cash deposit, withdrawal, fund transfer, balance enquiry, Aadhar seeding, saving account opening based on eKYC and service request accepting. This machine is carried by bank representative at remote locations and it is not capable to keep any cash as it is handy. The cash is carried by representative of bank. (cashlessindia.gov.in, 2018)

2. Literature Review

2.1 Introduction

In the present time digital payment is playing very important role in India. By giving significant drive to digital payments our present Prime Minister Shri Narendra Modi wants to make our country –"Digital India." So along with the increase in digital payment transactions various studies have been conducted in the area of digital payments.

2.2 Literature Review

Extensive research related to digital payment has been carried out from various perspectives. The review of research studies at national and international has been presented in two categories viz.

(a) Studies in India.

(b) Studies outside India.

(a) Studies in India:

Gandhi et. al. (2014) in their research article, "Pre and Post Behavioral Study of Students Regarding e-commerce and Cyber Security." In the field of e-commerce students had idea about purchase and sale only. Students don't have credit/debit card as they are not financially independent. Students are quite confident after getting knowledge of e-commerce. They are also ready to spread awareness among friends, parents and others.

Chaudhari et.al.(2014) in their research paper, "A Study on Awareness of E-banking Services in college Students of Bhusawal City" Most of the students have their saving account in nationalized bank. They are aware about different e-banking services. Students trust & used net banking. ATM service is popular among students. It is also found that there is need to create awareness about digital security.

Kalyani *(2016)* in his research paper, "An Empirical study about the awareness of paperless e-Currency Transaction like E wallet using ICT in the Youth of India." As with changing environment it is better and advisable to accept and adopt change. As the digital payment system is one of the advancement of modern financial system. Mobile wallet is popular among customers only for some specific services like paying bills, recharging etc. It is observed that awareness of mobile wallet and its practical usability is quite low.

Kadamudimatha (2016) has written an article on "Go Digital, Get Benefits- Special Incentives to Encourage Digital Payment" The study revealed that the purpose of the digital payment incentive is for use and development of digital payment. The dream of cashless society is possible with the help of support of Indian society.

(c) Studies outside India

Cheng et.al. (2013) in their research paper "A Risk perception Analysis on the use of Electronic Payment System by Young Adults." studied that Nation's competitiveness can be increased by use of e-payment system as it is beneficial both to customer and service providers. The customer satisfaction depends on how risk is perceived by them.

Dr. Ali M A-Khouri (2014) in his paper "Digital Payment Systems: Global Opportunities still Waiting to be Unleashed" concluded that for technological development in the field of digital payment within few years we can see number of applications around us with, "a wave of a mobile or a gesture with a wearable device". But it is also noticed that more auxiliary opportunities for more innovative developments in this field

Davies (2017) in his research work on "To Study University Student's Perception towards their Cashless Financial Transaction" The cashless method is used by young people as they are more aware of technology. It was also clear that all participants compare methods of payment to determine time consumed by each. The study shows positive perception towards cashless financial transaction. The perception of university students was quite different from other generation people.

Mathangi et.al. (2017) in their article, "Improving service quality through digital banking- Issues and Challenges." It was found that for many years cyber appellate tribunal was not working properly due to vacancy of chairman. A big awareness is needed for rural, illiterate and elder people as they can full easily to fraudster. In long run cashless economy can promote with the help of Adhar number, Jandhan Yojana, IMPS etc.

Research Gap:

Most of the studies are on particular mode of payment like digital wallet, pay-tm, credit card but for overall digital payment awareness studies have not been attempted by any researchers in India. No particular studies have been conducted particular for Gujarat for digital payment awareness and perception. Most of the studies are carried out of India.

3. Research Methodology:

3.1 Identification of the Research Problem:

People of Gujarat being enthusiastic, vibrant, innovative and dynamic in nature are the most important section of the population of India. People show strong passion, motivation and will power which also make them the most valuable human resource for fostering economic, cultural and political development of a nation.

It is need of the hour to welcome digital payments in an era of technology revolution. Indian government has great focus on digital India and making the country cashless economy. It is therefore relevant to pay attention towards awareness and perception of people about digital payments. The primary research question for this study has been identified as follow:

"Role of Digital Payments in Changing Ecosystem of Payments in India: With reference to Millennials"

3.2 Objectives of the study

1. To have an idea about basic characteristics of digital payment system.
2. To know whether millennial are using digital payment service or not.
3. To study the sources of information about digital payment.
4. To understand how millennial perceive digital payment service
5. To understand various risk and challenges faced by millennial while using digital payment.

3.3 Research Design:

This research applies the inferential statistical research design.

3.4 Data collection

The data for the present study was collected from primary and secondary sources. Secondary data was collected from websites, newspaper, journals, magazines etc. Primary data was collected through structure questionnaire. Questionnaire was distributed among students.

3.5 Sample Size & Technique:

The sample size consists of 100 respondents. Convenience sampling technique was used for a period of one month November 2018

3.6 Hypotheses of the study:

The following hypotheses have been examined:

1. There is no significant awareness about digital payment among millennial.
2. There is no significant difference in the perception of male and female.
3. There is no significant impact of age on their perception.
4. There is no significant impact of income on their perception.
5. There is no significant impact of education on their perception.
6. There is no significant impact of residential area on their perception.
7. There is no significant impact of profession on their perception.

3.7 Data Analysis and Interpretation:

The collected data from the different sources are analyzed using appropriate statistical techniques like t-test, chi-square test, Anova test, Excel and SPSS etc. Frequency analysis has been done to analyze the awareness of respondents about digital payment. For analyzing perception of respondents on the basis of their age and family income, chi-square test and for analyzing their perception on the basis of income and education, Anova test has been used.

Table 1- Demographic Profile of Respondents

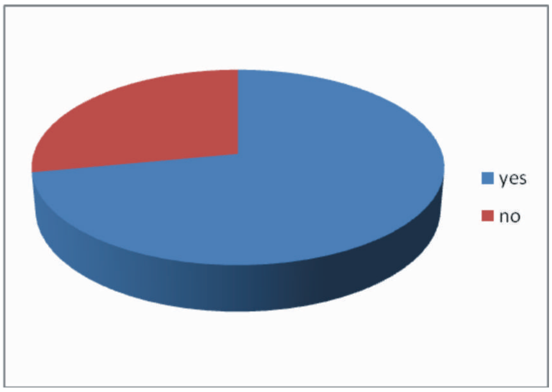
	Category	Frequency	Percentage
Gender	Female	58	58
	Male	42	42
Age	18-25 years	50	50
	26 to 30 years	40	40
	31 to 35 years	10	10
Education	Illiterate	1	1
	High school	10	10
	Undergraduate	31	31
	Postgraduate	53	53
	Other	5	5
Income	No income	6	6
	Up to 20000	25	25
	20001 - 30000	23	23
	30001- 50000	16	16
	Above 50000	23	23
	No response	7	7
Residential area	Rural	31	31
	Semi urban	25	25
	Urban	44	44
Profession	Student	19	19
	Business	10	10
	Housewife	12	12
	Professional	9	9
	Service	47	47
	Unemployed	3	3

From the above table 1, it is clear that majority 60.9% of the total respondents are between18 to 21 years of age whereas only 7% are of 27 to 35 years of age. From total respondents 56.5 % were male and 43.5 were female. 53.9% of them are undergraduate degree and 2.6% have Doctoral degree 40.9% of the respondents have their monthly family income below Rs.15000 20% of them have above Rs. 40000 income and 2.6 of them have not responded for their family income.43.5% of them were belongs to urban area whereas 19.1% were from semi urban area. Most of the respondents (52.2%) were from commerce background and only 3.6% were from arts.

Statistical Analysis:

H1: There is no significant awareness about digital payment among people.

Figure 1 Awareness about digital payment



The above graph indicates that from the total respondents around 72% are aware and using or plan to use digital payment method. Only 28% have never used digital payment system. So H1 is rejected and it is clear that respondents are aware about digital payment system.

H2: There is no significant difference in the perception of male and female.

Table.2 Descriptive statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Corruption	**Male**	41	1.0976	.30041	.04692
	Female	32	1.0938	.29614	.05235
Payment	**Male**	41	1.0000	.00000	.00000
	Female	32	1.0938	.29614	.05235
Enough Information	**Male**	41	1.1463	.35784	.05589
	Female	32	1.3125	.47093	.08325
Benefit	**Male**	41	1.0244	.15617	.02439
	Female	32	1.0625	.24593	.04348
Mode To High	**Male**	41	1.9268	1.10432	.17247
	Female	32	1.8125	1.35450	.23944
Security	**Male**	41	2.1707	1.65684	.25876
	Female	32	2.9688	1.17732	.20812
Not Necessary	**Male**	41	1.0976	1.11366	.17392
	Female	32	.9063	1.05828	.18708
Satisfied	**Male**	41	3.0488	1.04765	.16361
	Female	32	2.5625	1.29359	.22868
Using Digital Payment	**Male**	41	1.0244	.15617	.02439
	Female	32	1.0313	.17678	.03125

Table 3 INDEPENDENT SAMPLES TEST

		Levene's test for equality of variances		T-test for equality of means					95% confidence interval of the difference	
		F	Sig.	T	Df	*Sig. (2-tailed)*	Mean difference	Std. Error difference	Lower	Upper
CORRUPTION	Equal variances assumed	0.012	0.914	0.054	71	0.957	0.00381	0.07042	-0.13661	0.14423
	Equal variances not assumed			0.054	67.2	0.957	0.00381	0.0703	-0.1365	0.14412
	Variances not assumed									
PAYMENT	Equal variances assumed	20.528	0	-2.03	71	0.046	-0.09375	0.04616	-0.18579	-0.0017
	Equal variances not assumed			-1.79	67.2	0.083	-0.09375	0.05235	-0.20052	0.01302
ENOUGH INFORMATION	Equal variances assumed	11.693	0.001	-1.71	71	0.091	-0.16616	0.09696	-0.35949	0.02718
	Equal variances not assumed			-1.66	56.36	0.103	-0.16616	0.10027	-0.36699	0.03467
BENEFIT	Equal variances assumed	2.666	0.107	-0.81	71	0.423	-0.03811	0.04726	-0.13235	0.05613
	Equal variances not assumed			-0.76	49.76	0.448	-0.03811	0.04985	-0.13825	0.06203
MODE TO HIGH	Equal variances assumed	4.868	0.031	0.397	71	0.692	0.11433	0.28775	-0.45942	0.68808
	Equal variances not assumed			0.387	59.17	0.7	0.11433	0.29509	-0.47611	0.70477
SECURITY	Equal variances assumed	16.351		-2.31	71	0.024	-0.79802	0.34601	-1.48794	-0.1081
	Equal variances not assumed		0	-2.4	70.45	0.019	-0.79802	0.33207	-1.46023	-0.1358
NOT NECESSARY	Equal variances assumed	0.899		0.744	71	0.459	0.19131	0.25707	-0.32127	0.7039
	Equal variances not assumed		0.346	0.749	68.24	0.456	0.19131	0.25544	-0.31838	0.701
SATISFIED	Equal variances assumed	2.528		1.775	71	0.08	0.48628	0.27397	-0.05999	1.03255
	Equal variances not assumed		0.116	1.729	58.9	0.089	0.48628	0.28118	-0.07638	1.04894
USING DIGITAL PAYMENT	Equal variances assumed	0.124		-0.18	71	0.861	-0.00686	0.03903	-0.08469	0.07097
	Equal variances not assumed		0.726	-0.17	62.34	0.863	-0.00686	0.03964	-0.08609	0.07237

We can observe that the mean of male respondent than female respondents is higher for their perception about security and necessity of digital payment. This indicates also indicates that female respondents have more information compare to male respondent. It means there is significant difference in the mean score of male and female respondents.a

H 3: There is no significant impact of age on their perception about corruption and security.

Table.4 Cross tabulation for Age

Income		Yes	No	Total
	18 to 25 years	33	4	37
	26 to 30 years	25	3	28
	31 to 35 years	8	0	8
	Total	66	7	73

Table.5 Chi-Square Tests

	Value	DF	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.953	2	.621
Likelihood Ratio	1.714	2	.424
N of Valid Cases	73		

Table 5 shows p value of chi-square test is .621 which is higher than 0.05, therefore null hypotheses cannot be rejected at 5% level of significance. Therefore there is no association between age of respondents and their perception about corruption.

H4: There is no significant impact of income on their perception.

Table 6 Anova test for Impact of income on their Perception

		Sum of Squares	Df	Mean Square	F	Sig.
Corruption	Between Groups	.459	4	.115	1.208	.317
	Within Groups	5.798	61	.095		
	Total	6.258	65			
Mode to High	Between Groups	7.873	4	1.968	1.378	.252
	Within Groups	87.112	61	1.428		
	Total	94.985	65			
Security	Between Groups	7.769	4	1.942	.924	.456
	Within Groups	128.170	61	2.101		
	Total	135.939	65			
Not Necessary	Between Groups	6.164	4	1.541	1.256	.297
	Within Groups	74.821	61	1.227		
	Total	80.985	65			
Satisfied	Between Groups	20.801	4	5.200	4.326	.004
	Within Groups	73.320	61	1.202		
	Total	94.121	65			
Using Digital Payment	Between Groups	.102	4	.025	.844	.503
	Within Groups	1.838	61	.030		
	Total	1.939	65			

Table 6 helps in drawing following inferences:

- p= 0.317 for their perception about reduction in corruption by using digital payment which is Higher than 0.05 and therefore there is no significant difference in their perception.
- p= 0.252 for their perception about cost of using digital payment which is Higher than 0.05 and therefore there is no significant difference in their perception.
- p= 0.456 for their perception about security while using digital payment which is Higher than 0.05 and therefore there is no significant difference in their perception.
- p=0.297 for their perception about their thinking digital payment system is not necessary which is higher than 0.05 and therefore there is no significant difference in their perception.
- p=.0.004 for their perception about their satisfaction with digital payment which is higher than 0.05 and therefore there is significant difference in their perception.
- p=0.503 for their perception about their thinking about continuous using of digital payment system is higher than 0.05 and therefore there is no significant difference in their perception.

So we can conclude that income of respondents do not have much impact on their perception.

H5: There is no significant impact of education on their perception.

Table. *7* **Anova**

		Sum of Squares	df	Mean Square	F	Sig.
Corruption	Between Groups	.418	3	.139	1.625	.191
	Within Groups	5.911	69	.086		
	Total	6.329	72			
	Total	2.877	72			
Mode to High	Between Groups	2.675	3	.892	.596	.620
	Within Groups	103.215	69	1.496		
	Total	105.890	72			
Security	Between Groups	12.526	3	4.175	1.899	.138
	Within Groups	151.693	69	2.198		
	Total	164.219	72			
Not necessary	Between Groups	3.974	3	1.325	1.128	.344
	Within Groups	81.013	69	1.174		
	Total	84.986	72			
Satisfied	Between Groups	3.904	3	1.301	.934	.429
	Within Groups	96.123	69	1.393		
	Total	100.027	72			
Using Digital Payment	Between Groups	.034	3	.011	.410	.746
	Within Groups	1.911	69	.028		
	Total	1.945	72			

Table 7 helps in drawing following inferences:

- p= 0.191 for their perception about reduction in corruption by using digital payment which is Higher than 0.05 and therefore there is no significant difference in their perception.
- p= 0.620 for their perception about cost of using digital payment which is Higher than 0.05 and therefore there is no significant difference in their perception.
- p= 0.138 for their perception about security while using digital payment which is Higher than 0.05 and therefore there is no significant difference in their perception.
- p=0.344 for their perception about their thinking digital payment system is not necessary which is higher than 0.05 and therefore there is no significant difference in their perception.
- p=.0.429 for their perception about their satisfaction with digital payment which is higher than 0.05 and therefore there is significant difference in their perception.

- p=0.746 for their perception about their thinking about continuous using of digital payment system is higher than 0.05 and therefore there is no significant difference in their perception.

So we can conclude that income of respondents do not have much impact on their perception.

H6: There is no significant impact of residential area on their perception about cost of digital payment.

Table 8

Resident		SD	Disagree	Undecided	Agree	SA
	Urban	3	13	6	10	2
	Semi urban	4	4	5	8	0
	Rural	2	6	4	4	2
	Total	9	23	15	22	4

Table 9 Chi-Square Tests

	Value	DF	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.968	8	.651
Likelihood Ratio	6.950	8	.542
N of Valid Cases	.124	1	.725

Table 9 shows p value of chi-square test is .651 which is higher than 0.05, therefore null hypotheses cannot be rejected at 5% level of significance. Therefore, there is no association between residential area of respondents and their perception about cost of digital payment.

H7: There is no significant impact of profession on their perception that they have enough information for digital payment or not.

Table 10

		Yes	No
Profession	Service	27	7
	Students	13	2
	Professionals	5	2
	Housewife	5	4
	Business	7	1
	Total	57	16

Table 11

	Value	DF	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.945	4	.413
Likelihood Ratio	3.652	4	.455
N of Valid Cases	0.291	1	.590

Table 11 shows p value of chi-square test is .413 which is higher than 0.05, therefore null hypotheses cannot be rejected at 5% level of significance. Therefore, there is no association between residential area of respondents and their perception about information of digital payment.

3.8 Major findings:

1. Majority of the respondents 72% using /plan to use digital payment system.
2. Residential area of respondent has much impact on their awareness.
3. Income of respondent has no impact on their perception
4. Age of respondent not have much impact on their perception.
5. There is significant difference between perception of male and female.
6. There is no significant difference in the awareness and perception of UG and PG students.
7. Most of the respondent 80.3% have been informed about digital payment through friends and relatives.
8. Network connectivity is one of the most important problems faced by respondents.
9. Majority of respondents 80.9% believes that digital payment system can reduce corruption in India.
10. 84.3% of respondents agree that digital payment system is better than offline system.
11. 46 % are using many times whereas only 11.8% are using digital payment daily.
12. Banking cards are most preferable mode of digital payment.
13. Many of the respondents found data hacking is greatest risk which is associated with digital payment.
14. 60.5% of respondents are satisfied with digital payment service.
15. 97.4% of respondents want to continue using digital modes of payment.

3. 9 Suggestions

As our PM Shri Narendra Modi wants to make India Digital various steps have been taken by GOI. As it is clear that youth of country plays vital role in accepting change it is necessary that various programs and policies should formulate for educating youth in this area, so proper benefits of this technology can avail.

3.10 Limitations of the research

1. The study is restricted to millennial only.
2. Primary data was collected through questionnaire which may suffer from the subjectivity biases of the respondent.
3. The present study is limited to only 100 respondents of university. Although the care has been taken in selecting the samples but then also it may not be representative of the actual population.
4. Among the respondents many haven't response for optional questions.

3.11 Scope for further research

1. Similar type of studies can be undertaken for other emerging technology.
2. The study can be expanded to cover the state wise implementation and awareness among people on digital payment.
3. Similar study for other stakeholder viz., school students, women, rural population, senior citizens etc. would be interesting to carry out.
4. Similar study for comparing the perception of millennial with other age group is also possible.

Conclusion

Technology has made our life much easy than ever before in each and every field. Digital payment is one of them and there is also a huge potential to increase the contribution of the youth for this. The study reveals that the respondents are highly aware about digital payment. As most of the respondents consider digital payment system easy, convenient and time saving as it is available 24*7. It is also observed that millennial are more interested and they are actually using digital payment service. The study will helpful to students, government and also to those who are working for betterment of youth.

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Status of human resource management in District library in Bhavnagar

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Abstract

In this study, information about Human Resource Management of District Library in Bhavnagar is collected. This library is a public library and located in the middle of the city, the collection of books in this public library is fabulous. Here books of various languages like Gujarati, Hindi & English & other Reference books are purchased. To provide the best services in the public library, there is a necessity to employ human resources. It is managed as to how the employees of this library provide services efficiently. The data is collected by a mini-survey conducted in this library. Here the information about Human Resource Management (HRM) is searched for. In this study, data about the collection of books in the library, consumers (members), and employees working in the library is collected. The types of Human Resources, their professional classes, affairs related to jobs are analyzed. First, the analysis and interpretation of data collected about HRM in the library were conducted, and based on this analysis, a database was prepared. The utilization of public libraries is getting lesser day by day that is why there is a special need for HRM. The government has also become aware of the development of the public library. The information whether Computer, RFID (Radio Frequency Identification), Barcode Technology, Internet facilities are made available or not is also essential for the automation of the library. The services of the staff are required for the management and development of the institution. The details regarding recruitment, operation, promotion of employees are based on HRM. If HRM of the institute is sound enough, no problems encountered regarding the management and operations of the institute will be encountered. The information related to HRM of this public library is collected by this survey.

Introduction

The main component of this public library is its human resources and the operations done by its employees. The importance of human services is at the topmost level in these institutes, that is why the development of the institutes is depended on them. Physical, technological, economical, individual & societal problems are to be faced in most of the libraries. It becomes inevitable to hire a human resource for managing the public library as generally the collection of books is very huge & the number of members is also enormous. The main operation of the public library includes the purchase of books, numbering, sorting, data entry, technical work, lending, and borrowing of books and other services. For each of these works, there is a need for employees to fulfill these chores. Every employee plans to carry out the chores. The task is completed within stipulated time & the data is availed to the users from time to time. Different types of users visit the library & it is obvious that the type of data of every such user is also different & that is why it becomes necessary to provide the information asked for by each varied user. As & when research is done, development takes place, there is a change in the previously collected data in the bazaar & library can't purchase all researched data added now and then.

The users have no time they need the updated data too quickly. So to provide quick updated data access to users, operations like management, working, services provided y public library should also be quick & to provide easy and quick access of data to the end-users, the services of human resources are required. To fulfill personal, group, and organizational goals along with financial & physical resources, the human resource also plays a vital role. The sources of financial and physical resources are made available in a public library but along with that, it is necessary to provide a human resource in an equal ratio. To decide about human resource policy, some particular institutes decide about various methodologies. The recruitment of employees, operations, types of operations, promotion policy all these are directly related to the methodology undertaken. As per the types of operations undertaken, remuneration is fixed and time slot for such operation is fixed and it becomes inevitable to see that the employees get job satisfaction. More work and fewer pay scales should not be followed to dissatisfy the employees and they should not feel stressed due to overburden of work. All of the above should be duly considered. HRM is used to achieve organizational goals through collective efforts. But these efforts, attitude, and efficiency have to be planned from time to time for optimizing the effectiveness of human beings. HRM is widely used in every type of library because most of the libraries are huge and their collection of books is too vast & ultimately several users are also very large. So if management is not done through with HRM then it creates many problems regarding the functioning and services provided by the library.

For carrying out the above functions, the automation of the library becomes inevitable. Most of the operations of a public library should be done on computers so the work process becomes speedy and there is less need for the services of employees. To carry out all the operations, the right person knowing the functioning of the library is to be recruited & that is known as HRM. This huge building is located in the middle of the city of Bhavnagar.

Here there is a beautiful garden and big ground so that the users can read outside on the ground. Such types of arrangements are made for the users. Students, servicemen, businessmen, and senior citizens of society make profound use of this library. The government has now become aware of the development of the library. Here the government keeps vigilance in the matter of finance and economy

Review of Literature

Mangi (2014). It is concluded in this paper that there is a difference in the strategic approach of HRM & HRD managed by the employees of the library and other institutes in India. Then also the partnership of these library managers is very low from zero to average. The evaluation of varied health, safety, and the functioning of various libraries are done. Due to the partnership, the evaluation of recruitment, HRD, employment relations is also done. In matters of HRM by the managers of the sensitive library, HRM was also included and that has benefitted a lot. To grab attention, it is recommended that the managers of the library should discharge their duties as team members of HR Professionals Team Research and sensitive methods should be used by HRM to conduct further study on it and considered effective on services provided in this library as well as libraries in sub-regions.

In these libraries, HRM & HRD strategies will be included at every level of training principally and practically. To bring awareness about this, the premier institutes of India like ICT should commence various short term courses and training programs. In the activities at institutes and at home programs related to automation should be developed so that with manpower, computer applications, website designing & such other related courses make them skilled literate or training can also be imparted. The training program for six months duration is made available for students of M.C.A. by NISCAIR and the students of M.Sc., B.E., B.Tech., M.E., and M.Tech. I have received degrees for working partially on projects in the IT field. Various institutions in India work for providing training and development of research work and much care is taken for this. Due to this, for the development of HRM, communication is done between required facilities and expert manpower & thereby human resources becomes useful in facing challenges during present situations.

Defa (2018). In every library, HR works as effective and there is a need for an administrative department in the library. For this, they have to of present needs & atmosphere in their performance.

1. Continuous worry about the confidence of employees.
2. What is the relation between library administration with other people and faculty?
3. Between faculty and staff?
4. What is the work relation between library & campus HR?
5. There is a need to evaluate HR group nature in the institute of political leaders of the library.
6. Do they see strategically role for HR or is it for administration and functioning of group library, Is it international and work-oriented providing limited input?
7. If due to the ever-changing changes going on in Higher Education HR world problems create havoc in the library or services provided by campus HR division.
8. If the library is not responsible for management then HR can give attention to some changes that are required.

Then also this journal is centralized on the role of HR Officials of the library of educational institutions and their aims. The director of the public library in systems faces many challenges and the same way can benefit by using special HR Administrative Models. The real purpose is to keep HR Expert abreast with various affairs of the library in many cases and to take appropriate decisions,

Roknuzzaman (2007).The success of the University Library is most probably based on intellectual structure. To increase the effectiveness of the library system along with Intellectual structure, it is necessary to get assistance for physical and technical infrastructure. In Bangladesh due to the lack of marketing of the library and as a consequence of this there is no increase in the effectiveness of working in the library system. Generally here pay scale, low social status, and pride are prevalent for a long time. For this service, there is no encouragement given for mental attitude and other limited facilities. But it can be known that the condition of the University library is somewhat. Through this study, it is noticed that Human Public Library uses resources, and comparatively, with better amenities universities gain good returns and benefits by following autonomy rules. They use to gain profit & return the same as Government servants like salary, incidental bonus, leaves along with housing facilities, gratuities, provident fund, and compensation against loss occur by the death of an employee and accidental benefits, etc. In public recognized universities, the employees working in the libraries were dissatisfied with a salary in more or less way. The employees working in the library of the public were more or less dissatisfied. They used to receive pay scale with promotion, working hours, working environment, and many other amenities according to their service. Those who are working at present used to get basic salary, house rent, medical allowance, etc. as per the National Remuneration Grade System. The techniques to measure job evaluation and performance according to professional manpower, IT facilities, and opportunities for training and HRD issues by HRM in the library. The provision should be made to recruit more professionals to train employees on daily basis, IT facilities to be increased, to make HRD programs successful, to use suitable different techniques for the journal, evaluate job analysis and exhibition, and centralize human resources. To frame strong policies for HRM in libraries, strategic planning for managerial policies, planning, staffing, direction, and budget are essential requirements and take suitable care for the preparation of the budget for present and future organizational and personal requirements, all libraries should ensure about eligibility, knowledge, calibers, and workforce.

Umeozor (2018).The library managers should ensure to provide better services generally. It is inevitable for the managers to make an effective strategy. According to Koni (2003), if there is no suitable leadership then it affects the employees and through this, it affects the internal inspiration of the employees because they control work distribution, freedom and autonomy, work challenges, and diversities. It is to increase the morale of the employees through staff development, training, and opportunities for progress. It is requested to get familiar with requirements as well as factors affecting employees due to weak management of libraries that affect whole performance, attitude, and behavior of the library so it is necessary to establish a suitable atmosphere so that after being assured about management and make the competent atmosphere. Brayson (1999) gave the opinion that the two factors theory of Harzburg can be used in the library. To overcome the dissatisfaction of library employees by making adequate usages of health factors and receive satisfaction for working conditions by providing a suitable pay scale. To keep the working environment safe, the management by the supervisors should be competent enough. There must be good mutual relations and management among the employees of the library. If the need arises for this, the needs are fulfilled by giving a warning. By encouraging the employees, the state of satisfaction among employees arises. Suitable atmosphere and facilities should be made available so that no difficulties are to be faced by employees in their work & they must get an environment where security is maintained. Due to low salary and inadequate amenities, employees of the public library remain dissatisfied and the factors affecting this dissatisfaction are as follows:-

1. The belief of personal efforts
2. To accept new skill by making the environment of institution encouraging for Employees to learn and to give support for new matters
3. Shoulder challenging responsibilities to employees
4. To encourage personal development by providing experiences of varied works And also opportunities for development
5. Employees be it human resource are the most important wealth of any institutes

In the public library, as management is the spinal cord, maximum efforts should be made to make it inspiring. Motivation is required for high productivity in the existence of any institute. Generally, inspiration controls behavior and thereby encourages & then maintains it. Inspired employees exhibit good work performance & thereby increase productivity. There is not any single method to increase inspiration level for employees because the one who gives inspiration changes other person & with times, transformation is observed in many people. The conditions affecting employees' inspiration are highly affected by library managers because generally work distribution, freedom, and autonomy, work challenges are controlled by HR managers. There must be opportunities for the development and training of staff employees. The managers are instructed to provide good remuneration through outside factors as also facilities to provide sufficient lighting for office, air conditioner, job rotation, job enlargement are created, and thereby securities, as well as inner inspiration factor and business, should be established. To reach the requirements of employees of library-related to inspiration related to the growth in service and thereby ensures the improved commitment, satisfaction, and productivity. Through these activities, it excites

More finances, beliefs, and praise in the library.

The objective of the study

Know whether manpower resources are utilized or not in a public library

1. The establishment and maintenance of the constitution of the library and get Informed. about the aspired work relationships among all the members.
2. Get informed about the needs of library employees and the users
3. Get informed about the development of the library. Do get informed about the provision of maximum opportunities and the development of the library.
4. Do get informed about services & works by the collection of the library.

Methodology

When data is to be collected by a survey in this public library, the chief employee of the institution is given a questionnaire in that questionnaire, the objective questions are asked related to the information to be collected. This is known as personal study or survey study. For research, data, and compilation and after achieving data, it is analyzed and interpreted & this data is presented in a tabular form. This table can also be shown in the form of percentages and graphs as per the requirement so that correct information about this study can be understood there the information related to the utilization of HRM in the management of public libraries is collected. The information related to the importance of HRM in management and its utilization is collected here.

Data collection

Data collection is an important factor for Research therefore here. Watch appropriate information is not collected then several difficulties arise for Research study. So it becomes inevitable to collect information data according to the need in Research and include those factors which are required for such research. Here questions related to data collation are prepared and divided into different sections so that it becomes quite easy to analyze the collected data. Here various 8 to 9 questions were asked for data collection for the study on the topic status of Human resource management in the District library in Bhavnagar & the information collected thereof is analyzed.

Human Resource and Human Resources Management in District library

The best appropriate management is done by the utilization of HRM in every government and private institute. It is mandatory for every employee of different make use of HRM so that with less number of employees also best work can be done & thereby users achieve satisfaction. The eligibility related to the virtues can be achieved by HRM. HRM means intrapersonal efficiency awareness in society, teamwork, leadership & capability. The library employee should possess necessary virtual traits eligibility so that various uses of society get benefited and the management work in institutes becomes the best and speedy. For the best management and speedy services in the library, the below-mentioned requirements of staff of the public library should be fulfilled by HRM.

1) Educational Qualification

It is mandatory to equip with technical knowledge & related practical training. The library employees should be polite during conversations with other &achieve intrapersonal Intelligence. If anyone difficulty arises in the institution, try to resolve it.

2) Conversation on vacant seats in a public library

In the most of the public libraries, the seats are vacant. it is the need of the hour to recruit such employees after duly considering pre-required educational qualifications & the expectation of work to be done by an employee should be clear to him/er so that whenever they join the institution, they don't face any difficulty or confusion regarding their work assigned.

3) Selection & Recruitment of Library staff

The list of recruitment of employees for the library should be asked for and on that basis face to face interview should be arranged for which the information released to the candidate educational qualifications, behavior, nature and calibres should be collected and based on the above information, selection of employee should be done.

4) Training & Development of Library staff

The employee who joins public library should know about every department and orientation program should be arranged for every employee & he/she should be well equipped with the rules & regulations the institute and he/she should be well informed about responsibilities, traditions, systems and it should also be seen that he/she easily adjusts with all the above in workplace sometimes. If there rises a need to provide training related to the new system it should be imparted to the employee.

5) Performance Evaluation

It is necessary to evaluate the performance of every staff member by the HR Manager in the public library so that necessary steps can be taken for the development of the library. So it becomes easy to make decisions related to the evaluation of the promotion and salary of employees.

Data Analysis and interpretation

1 District library Users

The information obtained from the query for District Library Users is displayed in Table-1 below.

Table 1 showing information about District library users

Users	Number of Users
Male	5549
Female	2987

The information obtained in the table above is analyzed and interpreted here. The total number of users in this public library is 8536. The number of male users is 5549 while the number of female users is 2987. The number of male users has increased here.

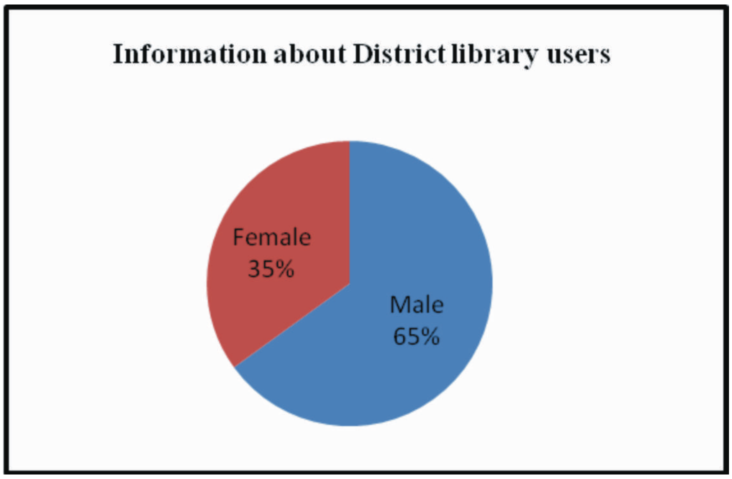

Fig.1- Information about District library users

2. District library types of Users

The information obtained from the query for District library types of Users is displayed in Table-2 below.

Table 2 showing information about district library types of Users

Users	Number of Users
Students	2448
Businessman	1818
Employees	276
Children, Woman & Senior Citizens	3976
Research Students	18

This public library analyzes and interprets information about the number of types of users. Here the number of student users is 2448. The number of businessmen users is 1818. The number of Employee' users is 276. Children, Woman & Senior Citizens Users receive 3976 this number is the highest here. The number of Research student users is 18. This number is the lowest.

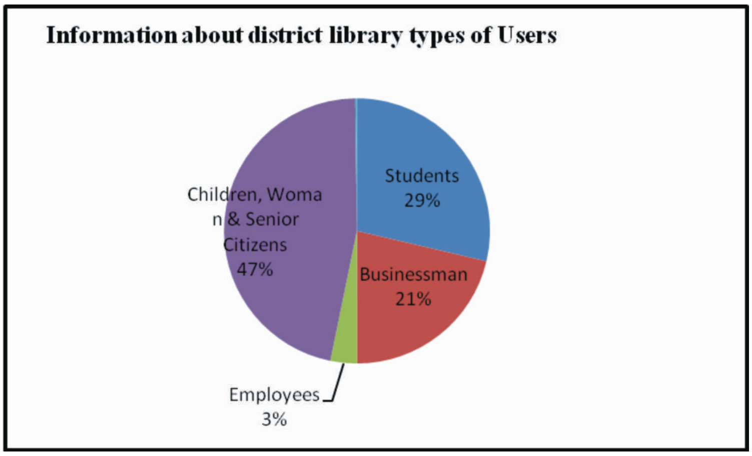

Fig.2- Information about district library types of Users

3. Total Collections for library users

The information obtained from the question asked for Total Collections for library users is displayed in Table-3 below.

Table-3 showing information about Total Collections for library users

Library Collection	Number of Collection
Books	58395
Reference Book	2500
Magazine	34
Newspaper	11

The information obtained in the table above is analyzed and interpreted here. This public library receives information about the number of Library Collection in which the number of Books Collection is 58395. The number of Reference Book Collection is 2500. Magazine Collection Number 34 is obtained. The number 11 of the Newspaper Collection is received.

4. Types of language books for users in the library

The information obtained from the question asked for Types of language books for users in the library is displayed in Table-4 below.

Table 4 showing information about the types of language books for users in the library

Types of language books	Number of language books
Gujarati	24040
English	18149
Hindi	18704

The information obtained in the table above is analyzed and interpreted here. This public library receives information about the number of Types of language books for users in the library in which the number of Gujarati language books is 24040. The number of English language books received is 18149. The number of Hindi language books is 18704.

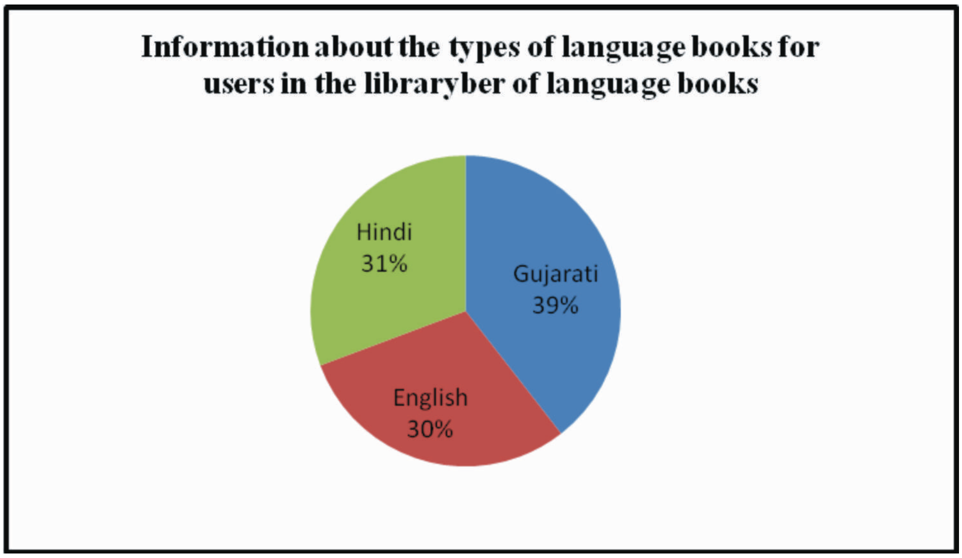

Fig.3- Information about the types of language books for users in the library

5. Total Library Staff for HRM

The information obtained from the question asked for Total Library Staff for HRM is displayed in Table-5 below.

Table 5 showing information on Total Library Staff for HRM

Library Staff for HRM	Number of Library Staff
Librarian	0
Clerk	1
Out Sourcing staff	3
Peon	1

The information obtained in the table above is analyzed and interpreted here. This public library receives information about the total number of Library Staff for HRM in which the number of Librarians is zero. The number 1 of the clerk is obtained. The number of outsourcing staff is 3. The number 1 of Peon is obtained.

Conclusions and Recommendations for HRM

The number of users in the public library is 8536. It includes students, businessmen, employees, children, women & senior citizens, and research students. The traditional method of providing information as per the requirement of each of these users is different. Mandatory automation is required here. That is why the government has made every one of these public libraries aware of automation. The number of collections received at this library is 58395. This number can be said to be very large as a large space of furniture, racks, etc. is required to place this collection here. As well as finding information from this collection, a very good HRM is required for users to exchange. If there is a need for the good management and good staff in running the library, then functions and services should be provided in this public library and also this time, books in different languages have been collected. No information is received that the number of books is close. Information is received that there is a vacancy for a librarian in the public library while the whole is managed by the library clerk as the chief staff. In this public library this library clerk whose qualification is Master in Library Science Studies and Ph.D. The study has been completed so that all kinds of operations and management of this library are done by them. No new permanent staffs have been recruited at this library but the outsourced staffs that are given salary fix have been recruited from this outsourcing. That those who Work in this library under the guidance of Dr. Ravi Parmar. So that is to say that information about very good HRM management and function is obtained. Efforts are made by these employees to provide the best services to every user of this library and excellent services are provided. The barcode method and RFID method are used in this library Efforts are being made to provide fast information services to the users.

The reason why the use of the public library is decreasing day by day in our country is due to a lack of human resources. A glance at each of the public libraries reveals that most libraries have vacancies for librarians. Public libraries have more than 50000 collections against 5000 users and the number of employees is 2 or 3 at a time. How to prepare these employees if they are prepared as per HRM as no training can be given to fewer employees here. Also, if they do not have the required qualifications, they will not be able to perform well. Therefore the recruitment of new staff in these public libraries becomes necessary. There is always a problem with the need for manpower to manage against the government managing the budget for storage and services. Not every type of library in the country is specially recruited so it is difficult to operate according to HRM.

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