

## PERFORMANCE OF INDIAN TOURISM INDUSTRY: WITH SPECIAL REFERENCE TO RAJASTHAN TOURISM DEVELOPMENT CORPORATION

**K. Gahlot**

Churu Balika Mahavidyalaya, Churu, Rajasthan, India

### ABSTRACT

*The financial analysis is a powerful technique to analyze a Corporation's performance and financial strength. Financial statements communicate its users how business has prospered under the leadership of the management. Financial ratios' are widely used technique to evaluate the financial performance of organizations in terms of its liquidity, solvency, efficiency and profitability. Rajasthan Tourism Development Corporation has enjoyed financial backup with largest infrastructure network and facilities provided by state government. Rajasthan Tourism Development Corporation Ltd (RTDC) could not commercialize its touristic product to the maximum extent in the state. Despite of large network of hotels, motels and midways, it could not generate substantial return on investment. Many RTDC owned properties are either given on lease or some are even on the verge of sale. It has made innovative attempts to supplement source of income by introducing Rajasthan Royal on Wheels. Therefore, the present research attempts to examine the financial performance of RTDC by using popularly used tool of analysis –Ratio Analysis and Karl Pearson Correlation. This study attempts to analyze the financial statements of RTDC for the period of 10 years (2001 to 2010). Financial Ratio Analysis has been used to assess profitability and risk, current and future, from the viewpoint of lenders, investors, and other transactions with the Corporation. The presence of sever competition with private sector has created survival challenge in front of RTDC.*

**Keywords:** Tourism , Performance, Financial, Profitability

### Introduction

Financial statements provide information about the financial performance and changes in financial position of the corporation. It is useful to a wide range of users in making economic decisions. On the basis of the information provided in the financial statements, we can make a review of the corporation progress and decide future course of action. Financial statements make known how a business has prospered under the leadership to its management personnel. The analysis of financial statements is done to examine the financial position. Ratio analysis is a widely used technique for financial analysis. Financial Ratio Analysis has been used to assess profitability and risk, current and future, from the viewpoint of lenders, investors, and other transactions with the corporation. Ratios vary depending on the trading conditions. The Economic conditions during the periods covered by the accounts being analyzed is an important consideration. The Rajasthan Tourism Development Corporation Ltd. (RTDC) was incorporated as a wholly owned state government enterprise. The presence of sever competition with private sector has created survival challenge in front of RTDC. It has made innovative attempts to augment source of income and financial figures by

introducing popular Rajasthan Royal on Wheels. The corporation has its hotel units spread in all Rajasthan State. Of late, Rajasthan has a tremendous growth in tourist arrivals. We examine the correlation between tourist's occupancy in RTDC hotel units and its income by Karl Pearson coefficient.

### Review of related studies

To review the status of research and development in the subject, no significant work has been done so far in any part of globe. R. K. Malhotra (1997) discussed coach tours provided by RTDC and Vimla Pokharna (1997) introduces Rajasthan tourism. Her work was based on the growth performance of tourism in Rajasthan and its sustainability. The work of Krishnan (1997) deals with festivals celebrated by RTDC. Later on, A. K. Raina and Dr. S. K. Agarwal (2004) discussed role of Rajasthan Tourism Development Corporation and functions of the Corporation. Later on, A. K. Raina (2005) stressed on the tourism promotional measures and discussed the operational aspects of the Corporation. Bruce Prideaux and Chris Cooper (2002) examine the relationship between destination growth and destination marketing by investigating the relationship between destination marketing organizations and local government authorities.

Harsha E Chacko (2002) describes the different aspects of the positioning tourism destination process. Amitabh Kant (2003) takes us through a journey to discover a branding idea for India probably the biggest brand in the world. Michael Grosspietsch (2005) examines whether there is any evidence that tourism actually constitutes one of the potential reasons that lead to terrorist activities. V Partha Sarathy (2006) gives a perspective of religious tourism with respect to Hinduism, Buddhism, Islam, Christianity, Sikhism, and Jainism. Subhasis Ray and Amit Teckchandani (2008) evaluate the Indian hotel industry's current strengths, weaknesses, opportunities, and threats keeping in view the growth potential and competition from international players such as Amanda, Satinwoods, Banana Tree, Hampton Inns, Hilton, and Mandarin Oriental. The foregoing comprehensive review of literature on RTDC, it peters out that very few researches are found to be relevant. However, there is a dearth of research studies on the occupancy in RTDC hotels. The present study is an endeavor to present the tourist profile occupancy in its hotels.

### Objectives

- To gain a consideration of organized efforts for tourism promotion in Rajasthan.
- To obtain a review of tourism projects and initiatives in Rajasthan.
- To determine the future strategy for tourism development in Rajasthan.
- To provide recommendation on the promotion of tourism in Rajasthan.

### Hypotheses of the study

**H01:** There is a positive relationship between arrivals of tourist in RTDC accommodations and income.

### Research methodology

The study is based on secondary data. The data for the analysis was collected from the published annual reports of RTDC. A study period 10 years from 2001 to 2010 was chosen. The study was conducted in scientific manner with careful planning. It was planned in four steps in which subject of research work was selected, Data was collected & analyzed, hypotheses were tested for significance, and

finally the findings were summarized and suggestions were provided. Secondary sources include published and unpublished sources. Published sources are newspapers, reports of WTO, ITDC, and official publications of national and international tourism bodies including Central and State Governments. Unpublished sources viz., the records maintained by the Government and private hotels, studies undertaken by research institutions, scholars, executives, and economists have served the purpose.

The research has been based on a large number of information's sources. The inputs for the research collected from secondary information sources. The secondary data research aims firstly at defining the terms related to the research and secondly exposes the different points of view of experts about tourism. Administrative officers of RTDC and Department of Tourism, Rajasthan were interacted to collect detailed information pertaining to research work. Secondary data were collected from sources like in house database: available published material and reports from the Department of Tourism, Rajasthan, Ministry of Tourism, India & other Government departments, agencies, associations, and internet search. Various tourism points were visited with the objective to find the occupancy in RTDC hotels. During personal visits to the RTDC units, many difficulties arise. Administrative officers of these units do not want to share any information regarding number of arrival tourists, from where tourists are coming in RTDC units, and occupancy. We had to depend upon the secondary sources of data. The findings drawn out of this study are the obvious outcomes of the data and information collected from the study area.

### Net profit ratio

This ratio represents the relation of net profit to net sales. The net profit ratio is the overall measure of a firm's ability to turn each rupee of sales into profit. It indicates the efficiency with which a business is managed. A firm with high net profit margin is an advantageous to survive in the face of rising cost of production and falling selling prices. Whereas the net profit ratio is low it is difficult for a firm to survive in

adverse situations. An increase in the ratio over the previous period indicates improvement in

the operational efficiency of the business provided the gross profit ratio is constant.

$$\text{Net Profit Ratio (\%)} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

### Operating Ratio:

This is also an important profitability ratio. This ratio explains the relationship between cost of goods sold and operating expenses on the one hand and net sales on the other. The operating ratio is the yardstick to measure the

efficiency with which business is operated. A high operating ratio is considered unfavorable because it leaves a smaller margin of profit to meet non-operating expenses. On the other hand a lower operating ratio is considered a good sign.

$$\text{Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100$$

### Debt Equity Ratio:

This ratio measures the proportion of debt and capital – both equity and preference in the capital structure of a company. Thus this ratio measures the extent of assets financed through the long term borrowings. This ratio helps in

### Net Sales

assessing whether a company is relying more on debt or capital for financing assets. Higher the debt more is the financial risk of default in interest and debt service. Therefore company needs an optimal capital structure in the form of equity and debt.

$$\text{Debt Equity Ratio (Times)} = \frac{\text{Long term debt}}{\text{Total Net Worth}}$$

### Total Net Worth

### Solvency Ratios

The capacity of a company to discharge its obligations towards long term lenders indicates its financial strength and ensures its long term survival. It is important for analyst to study the solvency position or leveraging capacity of a

company. It is important to analyze the capacity of a company to raise further capital and borrowings. These ratios are useful to banks, financial institutions and other lenders to assess the credit worthiness of a company

### Interest Coverage Ratio

This ratio measures the capacity of a company to pay the interest liability which it has incurred on its long term borrowings out of its cash profits. It is also known as Times-Interest Covered. This ratio helps in assessing whether

a company is comfortably placed to service its interest obligations out of revenues it generating. This ratio shows that the higher the ratio, the greater the ability of a company to pay its interest. And lesser the financial risk of default and higher the comfort level for lenders.

$$\text{Interest Coverage Ratio (Times)} =$$

$$\frac{\text{PAT} + \text{Interest on Long Term Debt} + \text{Non Cash Charges}}{\text{Interest on Long Term Debt}}$$

$$\text{Interest on Long Term Debt}$$

### Liquidity Ratios

The capacity of a company to discharge its suppliers and service providers and to meet its day to day expenses indicates its liquidity and ensures smooth continuity of operations, which in turn have a strong bearing on the long term survival of the company. The liquidity position of a company is determined by analyzing the structure of current assets and liabilities, credit period allowed to the customers, credit period

received from suppliers and inventory holding of the company. The major ratios in this group are:

#### Current ratio

Current ratio is a measure of firm's short-term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability. It is also called Banker's Ratio or working capital ratio (if expressed as a percentage). Standard ratio is 2:1.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

#### Quick ratio

The Quick Ratio is an alternative measure of liquidity that does not include inventory in the current assets. The current assets used in the quick ratio are cash, accounts receivable, and notes receivable. These assets essentially are

current assets less inventory. The quick ratio often is referred to as the Acid Test Ratio. Minimum desired ratio is 1:1. If bank overdraft is payable on demand, it should be considered as a quick liability and not deducted here.

$$\text{Quick ratio} = \frac{\text{Quick or Liquid Asset}}{\text{Quick or Liquid Liabilities}} = \frac{\text{Current Asset} - \text{Stocks}}{\text{Current Liabilities} - \text{Bank Overdraft}}$$

#### Return on capital employed

Return on Capital Employed is sometimes referred to as the "primary ratio". It tells us what returns management has made on the resources made available to them before making any distribution of those returns. It

judges the overall performance of the concern. In other words, it evaluates the earning capacity of the net assets of the business. Higher the ratio the more efficient is the management and utilization of capital employed.

$$\text{Return on Capital Employed} = \frac{\text{EBIT}}{\text{Capital Employed}} \times 100$$

#### Fixed Assets Turnover Ratio

This ratio measures the extent of turnover or volume of gross income generated by the fixed assets of a company. In other words it represents how efficiently company utilized its fixed assets. Fixed assets are the income

generating assets of a company. Therefore the more efficiently it utilized, the more they contribute towards operating revenues. This ratio plays a very important role in improving the overall profitability and financial position of a company.

$$\text{Fixed Assets Turnover Ratio (Times)} = \frac{\text{Net Sales}}{\text{Net Block of Fixed Assets}}$$

Net Block of Fixed Assets

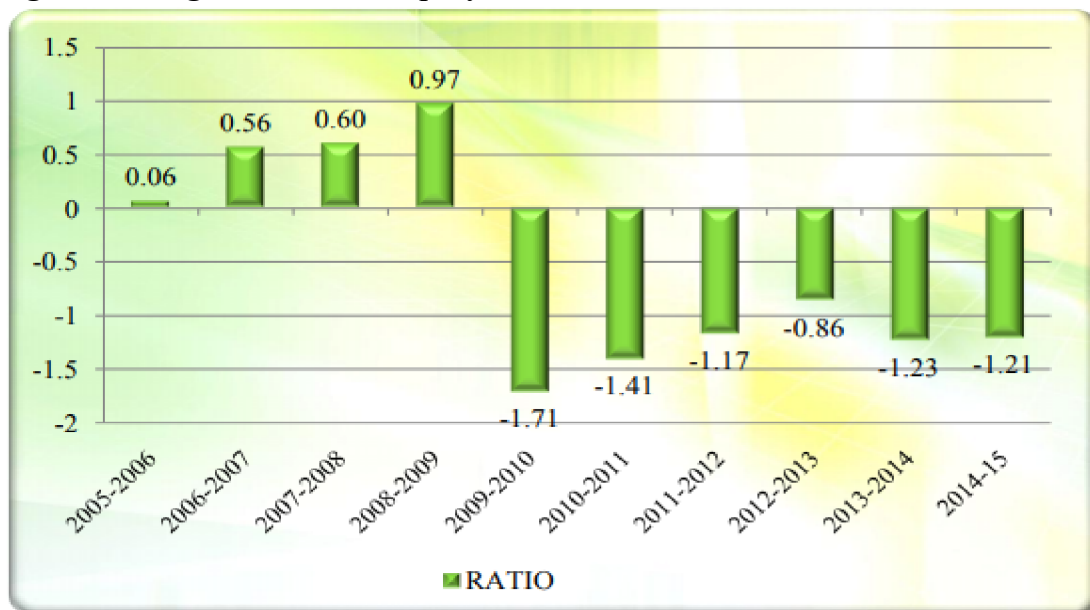


Research analysis and results

**Table 1: Long-Term Debt - Equity Ratio in RTDC from 2005-2006 to 2014- 2015 (in times) ( In Lacs)**

Year	Long Term Debt	Shareholder’s Equity	Ratio
2005-2006	107.32	1835.17	0.06:1
2006-2007	1045	1868.05	0.56:1
2007-2008	1120	1871.38	0.60:1
2008-2009	1720	1774.99	0.97:1
2009-2010	1378	-805.02	-1.71:1
2010-2011	1133.93	-805.02	-1.41:1
2011-2012	1394	-1189.34	-1.17:1
2012-2013	1228.53	-1423.02	-0.86:1
2013-2014	1280	-1043.1	-1.23:1
2014-15	1567.4	-1291.48	-1.21:1
TOTAL	11974.18	792.61	-5.38:1
AVG.	1197.41	79.26	

**Figure 1: Long-Term Debt - Equity Ratio in RTDC from 2005-2006 to 2014-2015**



**Interpretation:** The Long-term Debt Equity Ratio of RTDC has been presented in the Table1. In RTDC, the Long-term Debt - Equity Ratio shows fluctuating trends. It ranged between 0.06 times in the year 2005-06 and 0.97 times in the year 2008-09. The ratio shows increasing trend from the year 2005-06 to 2008-09.As the graph 1 indicated that in the year 2008-09 this ratio reaches at highest rate at 0.97 times due to high rate of borrowed funds. Graph1 represents that in the year 2009-10, Long-term Debt equity ratio goes to negative

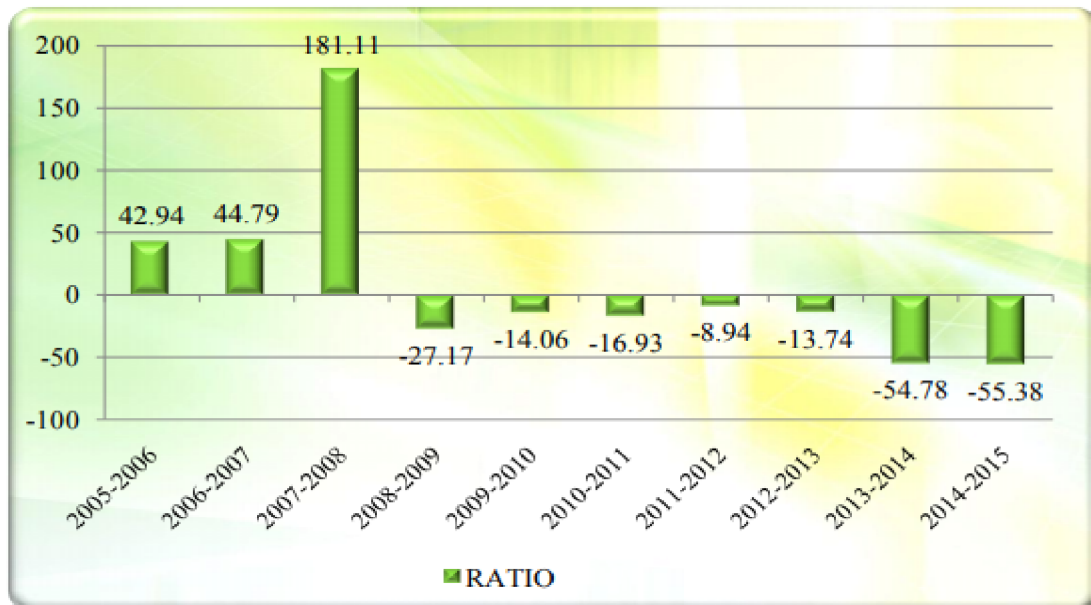
due to negative net worth of corporation which occur because of huge amount of operating loss face by corporation in that year. Thus it indicates that owner’s funds are used to compensate loss of corporation. The Graph indicates that Long-term Debt - Equity Ratio is highly fluctuated and it is below than standard margin 1:1 which represent that corporation depends more on owner’s fund compare to borrowed fund and thus it indicates insufficient financial policy of corporation

**Interest Coverage Ratio**

**Table 2: Interest Coverage Ratio in RTDC from 2005-2006 to 2014-2015**

Year	EBIT	Interest	Ratio
2005-2006	214.1	4.98	42.94:1
2006-2007	111.65	2.49	44.79:1
2007-2008	19.4	0.107	181.11:1
2008-2009	-923.54	33.99	-27.17:1
2009-2010	-2531.35	180.02	-14.06:1
2010-2011	-2519.37	148.73	-16.93:1
2011-2012	-1047.47	117.05	-8.94:1
2012-2013	-1071.75	78	-13.74:1
2013-2014	-2386.19	43.56	-54.78:1
2014-2015	-2214.01	39.98	-55.38:1
TOTAL	-12348.5	648.907	77.84:1
AVG.	-1234.85	64.89	

**Figure 2: Interest Coverage Ratio in RTDC from 2005-2006 to 2014-2015**



**Interpretation:**

The Interest Coverage Ratio of RTDC has been presented in the Table 2. In RTDC, the Interest Coverage Ratio shows a fluctuating trend. It ranged from 42.94 times in the year 2005-06

and 181.11 times in the year 2007-08. Though, the ratio shows a fluctuating trend during the whole study period except from the year 2005-06, it was increasing.

### Financial Leverage Ratio

**Table 3: Financial Leverage Ratio in RTDC from 2005-2006 to 2014-2015 ( In Lacs)**

YEAR	EBIT	EBT	RATIO
2005-2006	214.1	209.12	1.02:1
2006-2007	111.65	109.16	1.02:1
2007-2008	19.4	19.29	1.01:1
2008-2009	-923.54	-957.54	0.96:1
2009-2010	-2531.35	-2711.38	0.93:1
2010-2011	-2519.37	-2689.99	0.94:1
2011-2012	-1047.47	-1165.52	0.90:1
2012-2013	-1071.75	-1149.76	0.93:1
2013-2014	-2386.19	-2429.75	0.98:1
2014-2015	-2214.01	-2253.99	0.98:1
TOTAL	-12400.7	-13080	9.67:1
AVG.	-1240.07	-1308	

**Figure 3: Financial Leverage Ratio in RTDC from 2005-2006 to 2014-2015**



#### Interpretation

In RTDC, the Financial Leverage Ratio shows decreasing trend. It ranged between 1.02 times in 2005-06, 2006-07 and 0.90 times in 2011-12. The ratio shows decreasing trend during the whole study period except in the year 2005-06, 2006-07 and 2007-08. However, this ratio remains less than 1 in many years of the study.

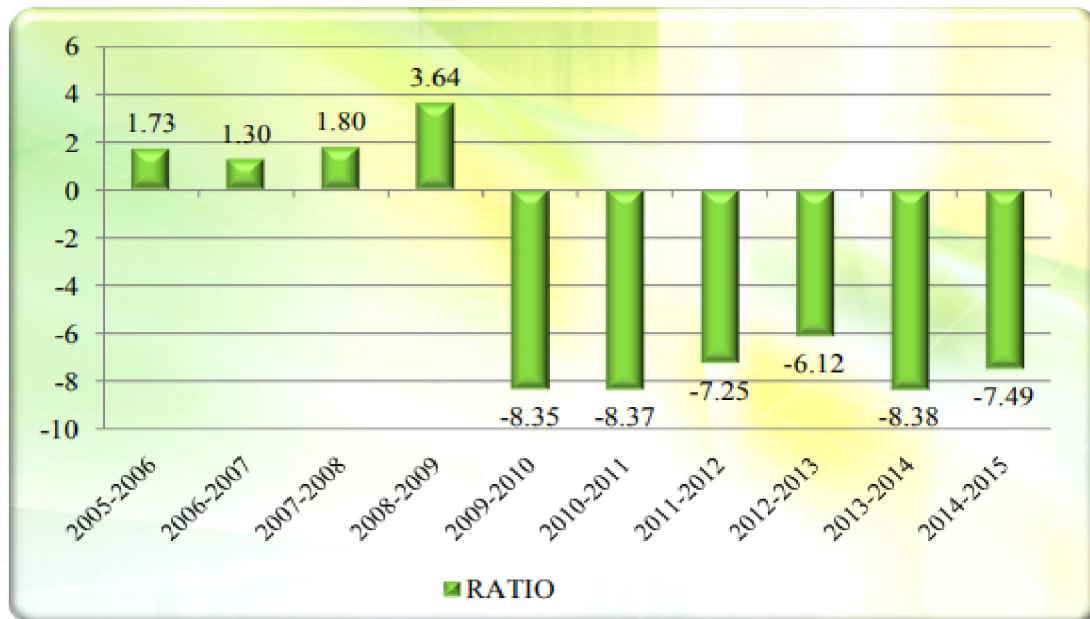
The ratio registered a sudden increase in the year 2013-14 and 2014-15 because of short term loan has been taken by corporation from State. Overall declining trends of financial leverage of RTDC indicates that burden of Interest is not too high and corporation use more owner's fund compare to borrowed fund to finance its total assets.

**Fixed Assets to Net worth Ratio**

**Table 4: Fixed Assets to Net Worth Ratio in RTDC from 2005-2006 to 2014-2015 ( In Lacs)**

YEAR	FIXED ASSETS (NET)	NET WORTH	RATIO
2005-2006	3175.62	1835.17	1.73:1
2006-2007	3426.66	1868.05	1.3:1
2007-2008	3473.99	1871.38	1.8:1
2008-2009	6463.58	1774.99	3.64:1
2009-2010	6723.26	-805.02	-8.35:1
2010-2011	6740.83	-805.02	-8.37:1
2011-2012	8623.55	-1189.34	-7.25:1
2012-2013	8702.2	-1423.02	-6.12:1
2013-2014	8737.92	-1043.1	-8.38:1
2014-2015	9677.47	-1291.48	-7.49:1
TOTAL	65745.08	792.61	-37.49:1
AVG.	6574.51	79.26	

**Figure 4: Fixed Assets to Net Worth Ratio in RTDC from 2005-2006 to 2014-2015**



**Interpretation**

The Fixed Assets-Net worth Ratio as presented in the Table 4. it ranged between 1.3 time in year 2006-2007 to 3.64 times in 2008-2009. The ratio shows decreasing trend. In the beginning of the study period this ratio shows decreasing trends. The Table 4 shows that in the year

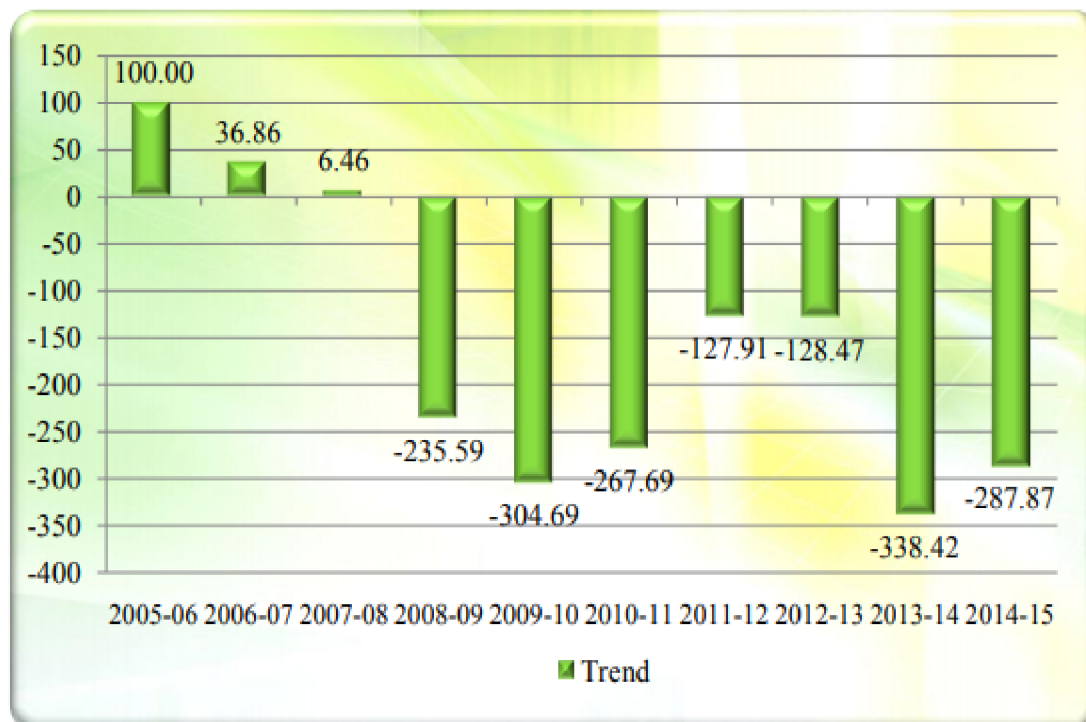
2008-09 this ratio goes sudden high due to reduction in net worth of corporation. Thus overall trends of Fixed Assets represent that during the whole study period corporation assets are more than its net worth which implies that corporation depends on borrowed fund to finance its fixed assets.

**Return on Gross Capital Employed**

**Table 5: Return on Gross Capital Employed in RTDC from 2005-2006 to 2014-2015 (in percentage) (In Lacs)**

Year	Net Profit Before Tax	Gross Capital Employed	Ratio	Trend
2005-06	214.77	2396.37	8.96%	100
2006-07	109.16	3303.98	3.30%	36.86
2007-08	19.29	3328.94	0.58%	6.46
2008-09	-957.29	4533.73	-21.11%	-235.59
2009-10	-1098.27	4021.82	-27.31%	-304.69
2010-11	-2668.09	11121.11	-23.99%	-267.69
2011-12	-1164.52	10158.35	-11.46%	-127.91
2012-13	-1149.75	9985.2	-11.51%	-128.47
2013-14	-2929.75	9659.26	-30.33%	-338.42
2014-15	-2253.99	8736.35	-25.80%	-287.87
Total	-11878.44	67245.11		

**Figure 5: Return on Gross Capital Employed in RTDC from 2005-2006 to 2014-2015 (in percentage) (In Lacs)**



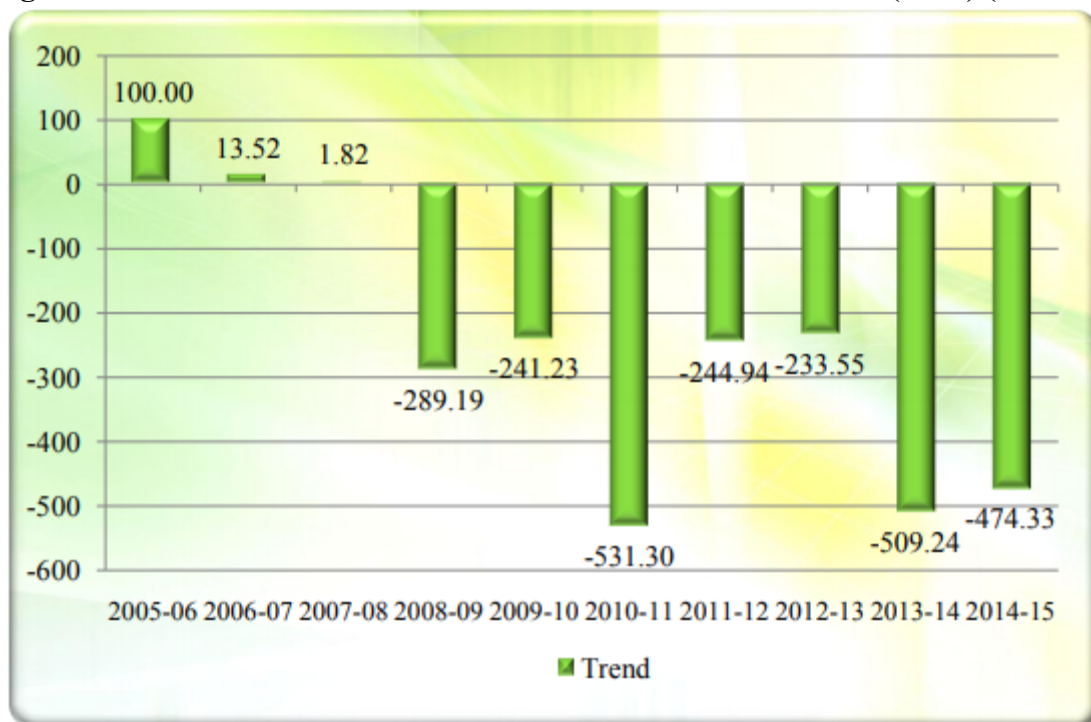


**Net Profit Ratio**

**Table 1.6: Net Profit Ratio in RTDC from 2005-2006 to 2014-2015 (in %) (‘ In Lacs)**

Year	Net Profit After Tax	Revenue from Operation	Ratio	Trend
2005-06	225.45	3712.75	6.07%	100
2006-07	34.83	4242.03	0.82%	13.52
2007-08	5.08	4587.63	0.11%	1.82
2008-09	-836.14	4761.49	-17.56%	-289.19
2009-10	-996.09	6800	-14.65%	-241.23
2010-11	-2668.1	8270	-32.26%	-531.30
2011-12	-1164.5	7829.52	-14.87%	-244.94
2012-13	-1149.8	8107.3	-14.18%	-233.55
2013-14	-2429.8	7857.58	-30.92%	-509.24
2014-15	-2254	7825.65	-28.80%	-474.33
Total	-11233	63994		

**Figure 6: Net Profit Ratio in RTDC from 2005-2006 to 2014-2015 (in %) (‘ In Lacs)**



**Interpretation:**

That the net profit ratio has been positive in the first three years from 2005- 06 to 2007-08 and after that it is negative. The expansion of the ratio is (-)0.322 to (+) 0.607 according table 6

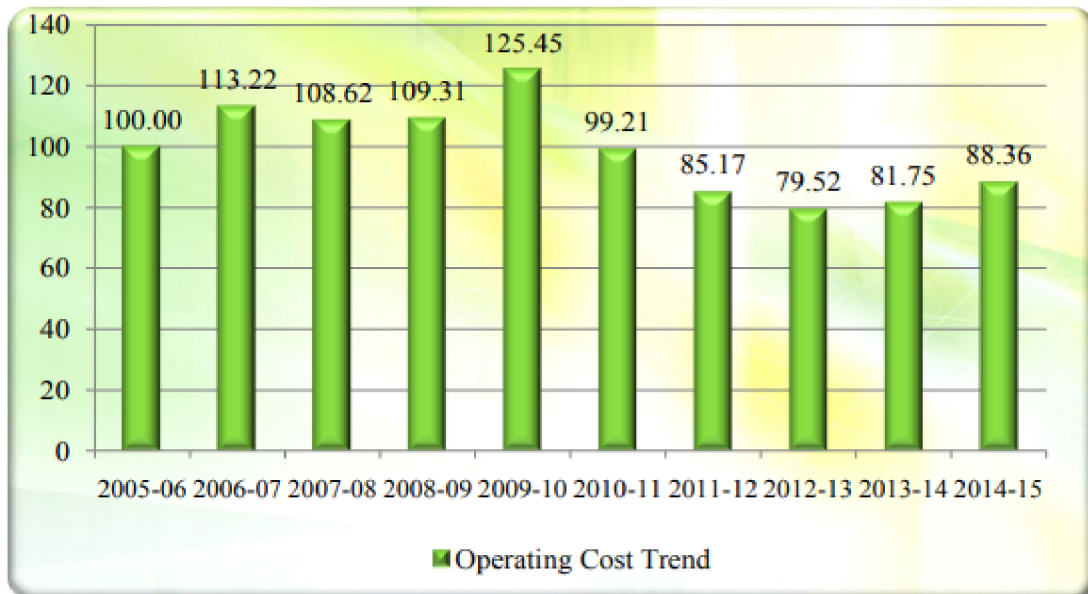
.The inclination of the ratio is continually decreasing, so it can be said that the net profit ratio of RTDC is worth concern and needs improvement

**Operating Cost and Profit Ratio**

**Table 7: Operating Cost and Profit Ratio in RTDC from 2005-2006 to 2014-2015 (%)  
(` In Lacs)**

Year	Operating Cost	Revenue from Operation	Ratio	Operating Cost Trend	Operating Profit	Operating Profit Trend
2005-06	1866.26	3712.25	50.27%	100	49.73%	100.00
2006-07	2414.44	4242.03	56.92%	113.22	43.08%	86.63
2007-08	2505.11	4587.63	54.61%	108.62	45.39%	91.27
2008-09	2616.49	4761.49	54.95%	109.31	45.05%	90.59
2009-10	4288.47	6800	63.07%	125.45	36.93%	74.26
2010-11	4124.9	8270	49.88%	99.21	50.12%	100.78
2011-12	3352.27	7829.52	42.82%	85.17	57.18%	114.98
2012-13	3240.91	8107.3	39.98%	79.52	60.02%	120.69
2013-14	3229.36	7857.58	41.10%	81.75	58.90%	118.44
2014-15	3476.08	7825.65	44.42%	88.36	55.58%	111.76
Total	31114.29	63993.45				

**Figure 7: Operating Cost trend in RTDC from 2005-2006 to 2014-2015**



**Interpretation:**

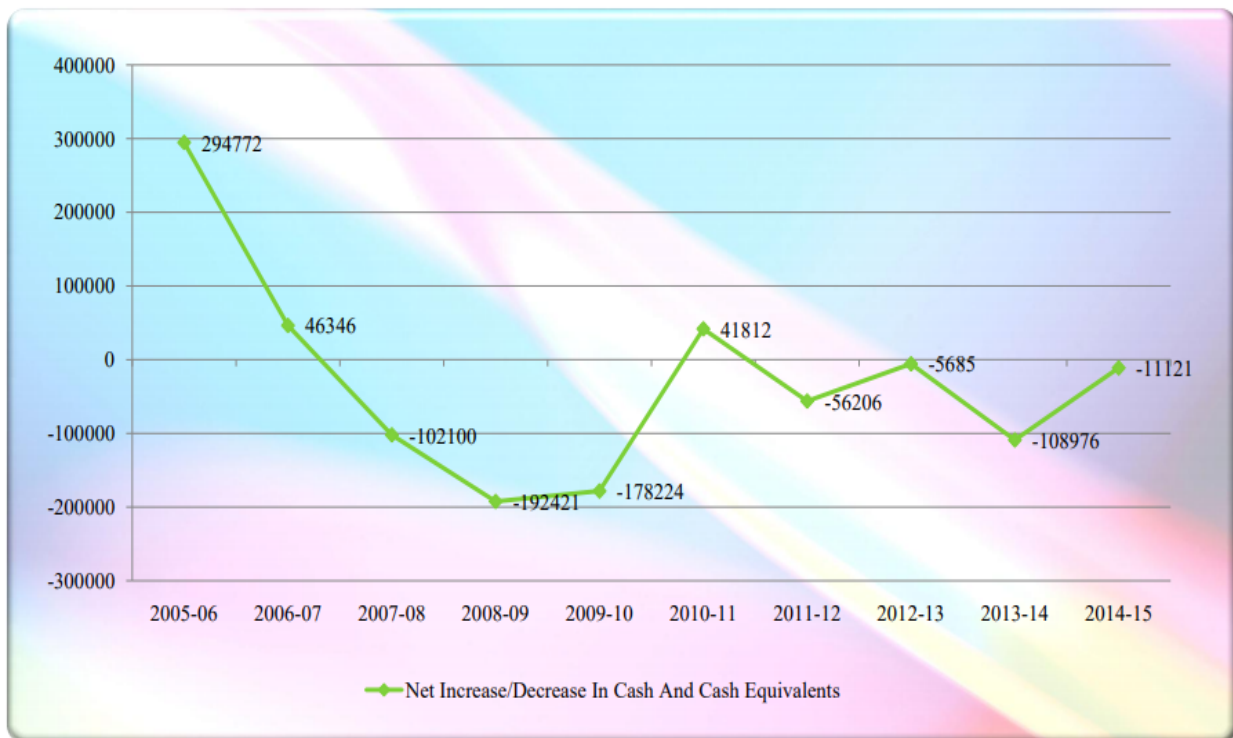
Through analysis of table 7 the above table we come to know that operating expenditure is 50.44% of Operating Revenue. Expansion of

the ratio is 40% to 63%. The nature of ratio has been variable during the research period.

Table 8: Net increase and decrease cash & cash equivalents in RTDC from 2005-2006 to 2014-2015 (`in thousands)

PARTICULAR	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A. Cash Flow from Operating Activities	300948	-36317	-38075	-112612	-59829	66885	-13353	-527	-225458	-20401
B. Cash Flow from Investing Activities	555	-10856	-71514	-211410	-66193	14207	2005	2097	-5017	27284
C. Cash Flow from Financial Activities	-6731	93519	7489	131601	-52202	-39280	-44858	-7255	121499	-18004
<b>Net Increase/Decrease In Cash And Cash Equivalents</b>	<b>294772</b>	<b>46346</b>	<b>-102100</b>	<b>-192421</b>	<b>-178224</b>	<b>41812</b>	<b>-56206</b>	<b>-5685</b>	<b>-108976</b>	<b>-11121</b>
Cash And Cash Equivalent At The Beginning Of The Year	354539	649311	695657	593557	401136	222912	264724	208518	202833	93857
<b>Cash and Cash Equivalent at the end of The Year</b>	<b>649311</b>	<b>695657</b>	<b>593557</b>	<b>401136</b>	<b>222912</b>	<b>264724</b>	<b>208518</b>	<b>202833</b>	<b>93857</b>	<b>82736</b>

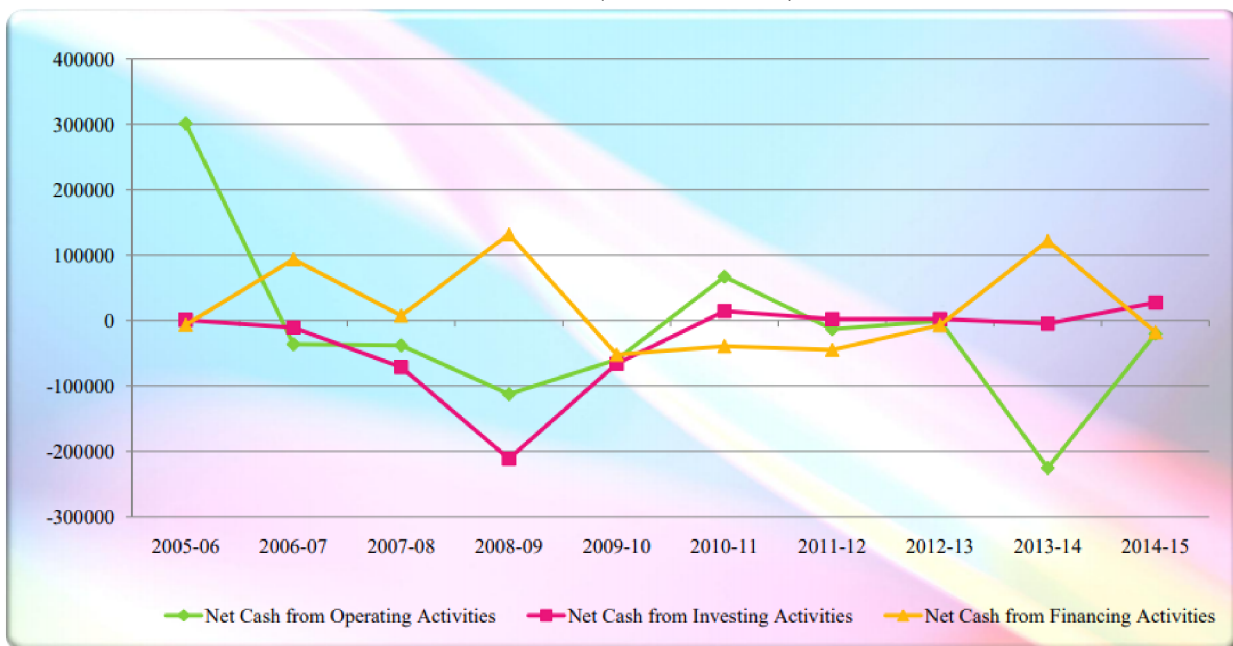
**Figure 8: Net increase and decrease cash & cash equivalents in RTDC from 2005-2006 to 2014-2015 (in thousands)**



**Table 9: Analysis of the Main Factors Dominating Cash Flow Pattern of the RTDC Operating Cash Flow v/s Investing Cash Flow v/s Financing Cash Flow from 2005-2006 to 2014-15 (in thousands)**

S. No.	Particular	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	Net Cash from Operating Activities	300948	-36317	-38075	-112612	-59829	66885	-13353	-527	-225458	-20401
2	Net Cash from Investing Activities	555	-10856	-71514	-211410	-66193	14207	2005	2097	-5017	27284
3	Net Cash from Financing Activities	-6731	93519	7489	131601	-52202	-39280	-44858	-7255	121499	-18004

**Figure 9: Analysis of the Main Factors Dominating Cash Flow Pattern of the RTDC Operating Cash Flow v/s Investing Cash Flow v/s Financing Cash Flow from 2005-2006 to 2014-15 (in thousands)**



The examination of above tables its uncover that the cash flow from working exercises in the money related year 2005-06, 2010-11, 2012-13 is demonstrating in flow. While with the exception of these it is demonstrating cash outflow from 2005-06 to 2013-14. The Cash inflow from investing exercises in 2005-06, 2010-11, 2011-12, 2012-13 and 2013-14. While, outflow is in 2006-07, 2007-08, 2008-09 and 2009-10 in the equivalent, cash (liquid) inflow from monetary exercises has been 2007-

08, 2008-09 and 2013-14 in the other exploration study period with the exception of these it show outflow during research period cash and cash equivalents are variance the extension of the cash and cash equivalents has been '93857 thousand to '695657 thousand. We see from the examination of Cash Flow Statement in Table that the organization has not had the option to create that quite a bit of cash from working exercises in all most all the years aside from in 2010-11. These are talked about

underneath year shrewd. It is additionally seen that in the year 2010-11 cash was created through charging devaluation, payment of payment, and from various leasers. Consolidated impact of these all has changed over the outcome from negative PBT (Profit before Tax) into positive working cash flow.

In the year 2008-09, there is second most elevated negative figure of PBT (Profit before Tax) which has happened basically for increment in compensation of the employees. Be that as it may, assets from the expanded Current Liabilities and Provisions, the second most elevated increment during the period under examination after 2008-09, included with assets from deterioration alteration has decreased overwhelming measure of negative PBT into a small measure of negative cash flow for example from '112612 thousand to '59829 thousand in particular. The year 2013-14, has brought about most noteworthy ever loss of '225458 thousand during our examination period, which is again because of expanded pay according to changed compensation. Nonetheless, we see that there is generous

increment in various loan bosses. The primary supporters of the cash flow from tasks are the arrangement for deterioration payment of premium, and diminishing/increment in various lenders.

### Conclusion

The performance of hotels of this corporation has been a cause of considerable concern to the state government. The low occupancy of foreigners is caused by unfavorable external environment and managerial deficiencies such as inadequate emphasis on research and development, poor maintenance, poor management of remote area hotels, weak employee commitment, inadequate human resources, and wrong capital structure. This mismanagement did not occur overnight but developed gradually over time. The performance of the corporation hotels deteriorated in recent years. Now the situation is bad because of intense competition in the marketplace. Though it has reasonably valuable assets and some good lines of business, it is mired into financial problems.

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## E-COMMERCE VS TRADITIONAL COMMERCE: A COMPARATIVE STUDY IN BANGALORE CITY

**D.V. Vidyashree<sup>1</sup>, S. Saranya<sup>2</sup>, H.M. Hari priya<sup>3</sup> and M.V. Maitri<sup>4</sup>**

Department of Commerce (PG), St. Claret College, Bangalore, India

<sup>1</sup>vidya@claretcollege.edu.in, <sup>2</sup>saranyaharikumar123@gmail.com,

<sup>3</sup>hari60418@gmail.com, <sup>4</sup>maitri.mv@gmail.com

### ABSTRACT

*E-commerce- the word got more significance in the current world. When the world was turning into lock-downs, E-commerce was getting its new heights and opportunities. E-commerce or online purchasing became a habit in most of the household and that was the most preferred purchasing option for most of the families in metro cities. E-commerce means buying and selling the product or services online. Nowadays people are using e-commerce for both personal and business purposes. The online platforms provide a wide range of purchasing options to its customers. E-commerce emerged as a better alternative for retail shops. It changed the traditional concept of buying and selling products at sales points. The consumers started buying things online based on the reviews which the existing customers have given for particular products or services. The present study focuses on the comparative analysis between traditional and online commerce (e-commerce). Also we are trying to find out the challenges involved in e-commerce as well as the user's opinion on both traditional and e-commerce. This paper is based on both primary as well as secondary data with the sample size of 150 individual consumers. Structured questionnaire that contained 18 questions, circulated through Google forms. We received online responses from 127 individuals. By using Microsoft Excel, present the data in graphical forms. The study concluded that there are a lot of concerns that need to be addressed in the e-commerce sector. However, there are not many dissimilarities between traditional and e-commerce. The e-commerce can be widely accepted if we can there can be much efficient awareness programme.*

**Keywords:** E-commerce, Traditional Commerce, Internet, Consumers opinion, Products and Services.

### Introduction

With the development of technology and the improvement of Internet, use of electronic commerce occupies a vital position in this modern world and daily lives. Consequently, there is a gradual development in the business and there are many new innovative businesses rising up with advanced technology. This research paper targets to study the existing scenario and competitive spirit between traditional commerce and E-commerce which is based on practical happenings, statistical data and responses received from users. Besides this research paper discuss the customers purchase interest towards online stores and traditional retail stores in future. E-commerce though it is a time saving process here products cannot be received immediately after making purchase when it is in need, whereas in traditional shopping consumers can make purchase and get the products immediately for usage.

E-commerce is where the customers purchase goods and services through online. They use electronic devices for their shopping. Almost many products are available online now a days. Traditional commerce is where the customers

purchase the products or services directly from the market that is wholesale or retail stores which involves face to face dealing with sellers. In this consumers have an option to visit physical stores personally. So traditional commerce and e-commerce have their significance but the principal difference is E-commerce can be controlled online through an electronic device.

### Review of Literature

**Gligorijevic** (2019) conducted this research for the purpose of examining what information sources consumers utilized to assess products related information, and which of those were influencing on buying decision making process. The methodology used for this research was primary data and sample size was 22 shoppers who conducted online purchase and also purchased in traditional store and finally concluded that consumers seemed to be least vulnerable to advertising and most liable to word of mouth info from known people and product appraisals given by other consumers and professionals.

**Jimenez et. al.** (2019) has made a comparative study between traditional retail and e-commerce. The study focused on finding the value of e-commerce in the day-to-day life of the people. They used both primary and secondary data for the research preparation. Sample survey was conducted and used descriptive statistical analysis for data interpretation. The study was conducted by taking samples from different countries. The researchers came to a conclusion that most of the online consumers have the concerns about data privacy and other security threats.

**Hasan** (2019) has observed the working of e-commerce and how it effects on retail outlets especially in Slovakia. The study mainly focused to find out the problems that are faced by the retail outlets because of the emergence of e-commerce. The researcher used secondary data. This paper was mainly consists of theoretical approximation of general concepts and used statistical tools for analysis purposes. By using Microsoft Excel, the researcher presented the data in a graphical as well as tabular form. The study concluded by saying that, the e-commerce now emerging as a threat to the retailers and they should adopt proper mode of advertisement to attract more customers.

**Gupta et.al.** (2018) conducted a research on traditional commerce v/s Electronic-commerce and the effect of demonetization on Electronic-commerce. The objectives for conducting this study were to know about the people who have used e-commerce website in their lives and the growth of ecommerce in upcoming days and also to know the platform which people preferred for shopping. The methodology used for this research was both primary and secondary data and the sample size was 60 respondents. Hence through this study it was found that e-commerce will have great future in India and e-commerce was more preferable by customers compared to traditional commerce.

**Rao et.al.** (2014) made a study on Traditional Vs Retail Stores: A Comparative Analysis. The objectives of the study were to know the behavior of the customer in traditional retail stores & online retail stores and to know the problems faced by consumers from traditional retail stores & online retail stores. The methodology used in this study was primary

data and secondary data and sample size was 100 candidates from Nagpur. Through this study they concluded that people from Nagpur mostly preferred traditional shopping than online shopping except only for ticket booking, accessories purchase.

**Abraham (2012)** conducted this study to identify the advantages and disadvantages of E-commerce websites and to know the satisfaction of customers towards e-commerce websites. The methodology used for this study was both primary and secondary data and Sample size was 30 consumers. This study was conducted for 3 months and concluded that E-commerce was very much essential in the present world. It also found that there was a vast scope for improvement of E-commerce, but still had lot of drawbacks which had to be rectified to make E-commerce more effective and efficient in all aspects.

### Objectives

- To know the factors influencing on customers to opt online or offline shopping.
- To know the customers experience about product quality in E-commerce v/s Traditional commerce.
- To evaluate the customer opinion about traditional and online market.
- To analyze the issues that customer face in traditional shopping and online shopping.

### Hypothesis

- 1)  $H_0$ : There is no significant relationship between customer's designation and social network influencing on them to purchase goods online.  
 $H_1$ : There is a significant relationship between customer's designation and social network influencing on them to purchase goods online.
- 2)  $H_0$ : There is no substantial connotation between gender and their determination of purchase.  
 $H_1$ : There is a substantial connotation between gender and their determination of purchase.

### Research Methodology

This study is descriptive in nature and includes several process of data collection. When it comes to data collection, it consists of two

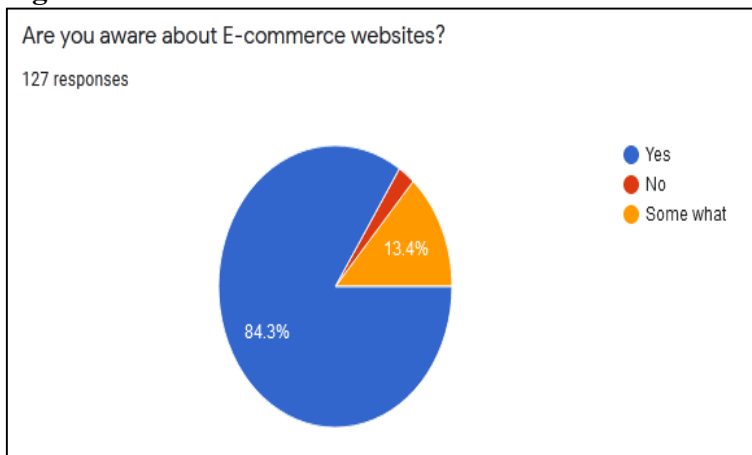
methods they are primary and secondary data. Primary data is based on interview/questionnaire method, observation method whereas secondary data method includes collecting data which already exists. In this study for data collection, a structured questionnaire of 18 questions is used. Additionally, five demographic variables - name, gender, age, education, designation is also included in the survey. According to the data obtained, (43%) of respondents are stated as male and (57%) are stated a female. Majority of the respondents are post graduate students (47%) followed by graduate students (34%) and the remaining respondents are professionals and PUC students. Most of the

respondent's age is ranged from below 25 to 25-40.

The present study includes both qualitative and quantitative data. The qualitative data was collected through sampling method and the sampling technique used is convenience sampling. The sample for this study is 127 respondents out of 150 sample size and the sample individual are from different group of people including students, employees, people with own business, home makers, retired persons etc., are considered as sample for this study. From this majority of respondents are employees (47%) followed by students (38%) and remaining are home makers, retired persons etc.

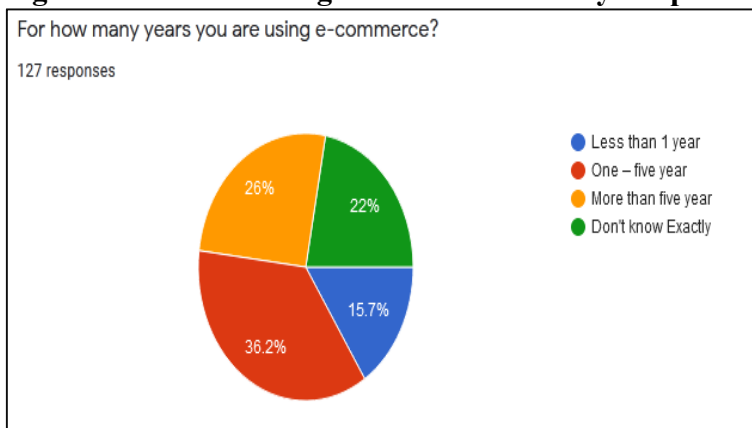
### Analysis and Interpretation

**Figure 1: Awareness about E-Commerce Websites**



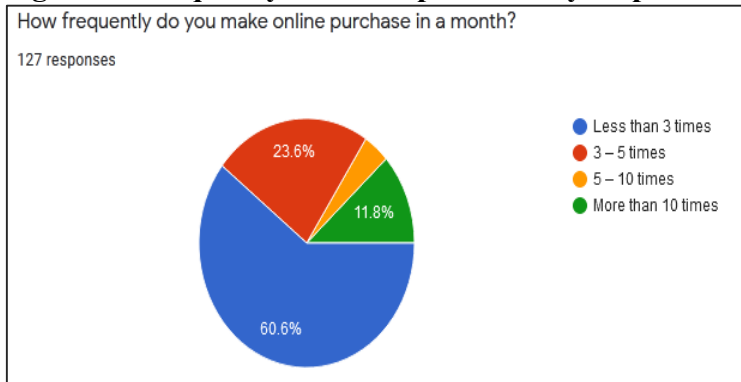
Among the responses received most of the people are aware of E-commerce websites. So that it can be considered as many people are using E-commerce websites for their shopping. Only 2.3% are not aware about e-commerce. It also refers to the internet literacy level of people are increased a lot.

**Figure 2: Period of usage of E-Commerce by Respondents**



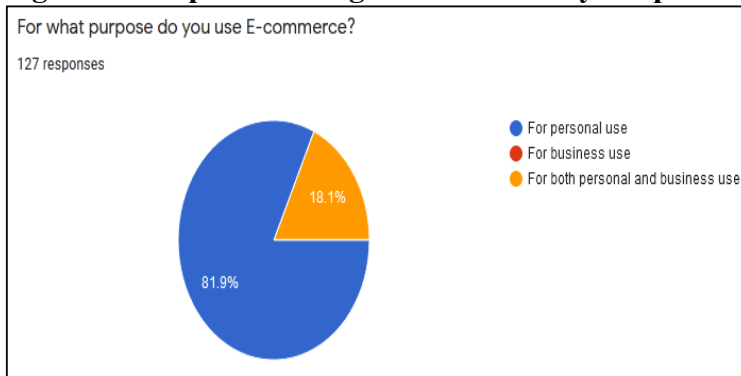
The response shows that the people who were using E-commerce from one -five years are comparatively more followed by more than five years. Online shopping is gradually improving from the past five years. There is a chance of improvement in

**Figure 3: Frequency of online purchase by respondents**



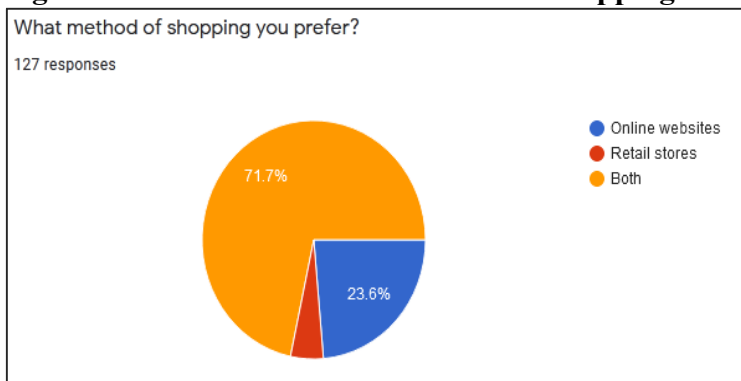
From the pie chart above, according to consumer’s preferences, the majority of them make online purchases less than 3 times a month followed by consumers by purchasing 3-5 times and the remaining consumers purchase 5-10 times and more than 10 times in a month.

**Figure 4: Purpose of using E-Commerce by Respondents**



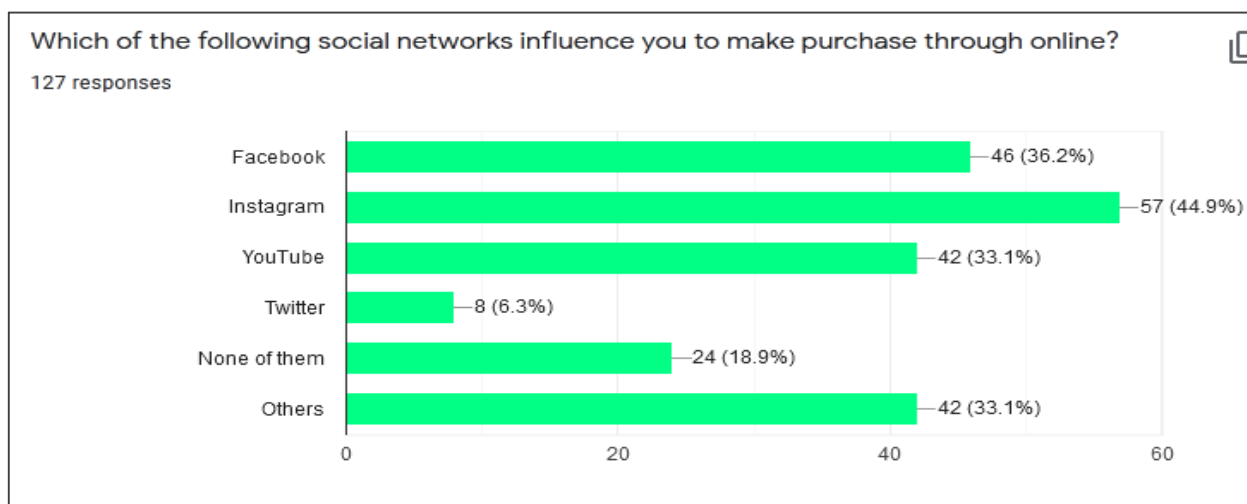
Among the selected respondents, the majority of them are using e-commerce mainly for their personal purposes. Only 18.1% are using it for both personal as well as business purposes.

**Figure 5: Preference of online vs offline shopping**



This chart shows that most of the respondents use E-commerce websites for their personal use and many of them prefer both E-commerce and traditional commerce for their purchase of goods and services. So there is a scope for improvement in both traditional commerce and Ecommerce.

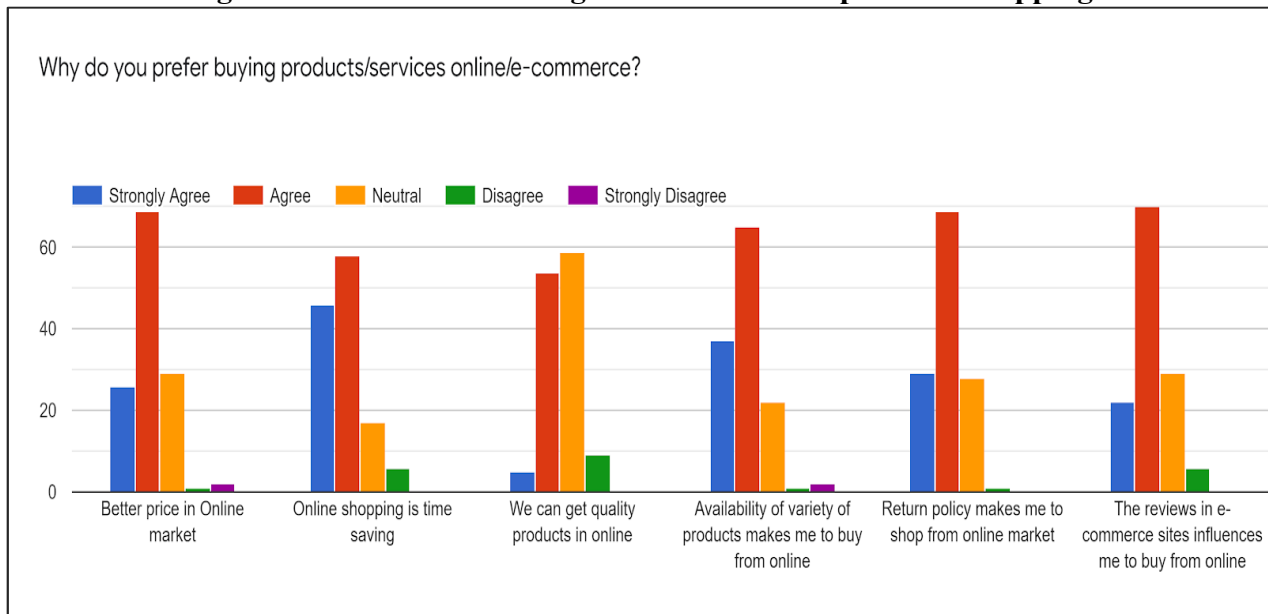
**Figure 6: Influence of social media channels on online purchase**



The above graph describes that the social networks influence consumers to purchase through online. It indicates Instagram (44.9%) is the social network that influences more compared to other social networks. It can be clearly marked out that Facebook (36.2%) is also leading social network in influencing people to purchase online. YouTube (33.1%)

Followed by some other social media networks (33.1%) like Twitter (6.3%). The social media networks play a vital role in influencing customers to purchase online in the means of Advertisements and posts. It helps them to reach more customers very easily across the geographical boundaries.

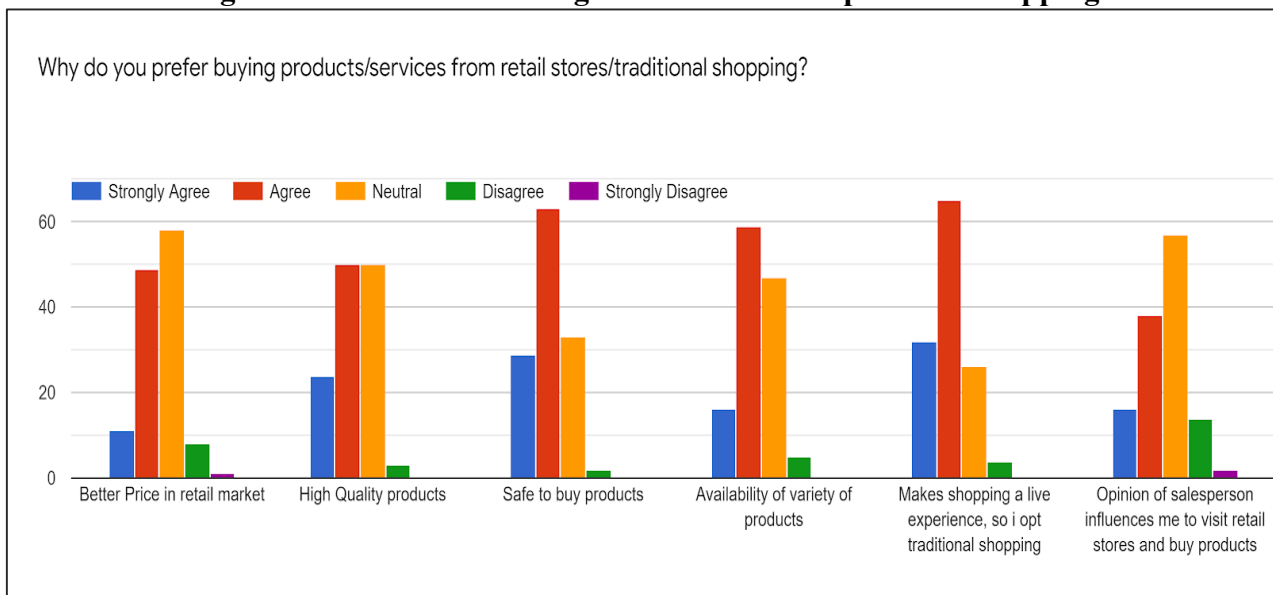
**Figure 7: Factors influencing on consumers to opt online shopping**



From the above chart, the majority of the consumers prefer buying products through online websites because when compared to retail stores prices for products in online websites are more reasonable with good quality

and wide variety products and also time saving. Along with that the return policy and reviews in E-commerce websites influenced those customers to prefer online shopping rather than retail stores.

**Figure 8: Factors influencing on consumers to opt offline shopping**

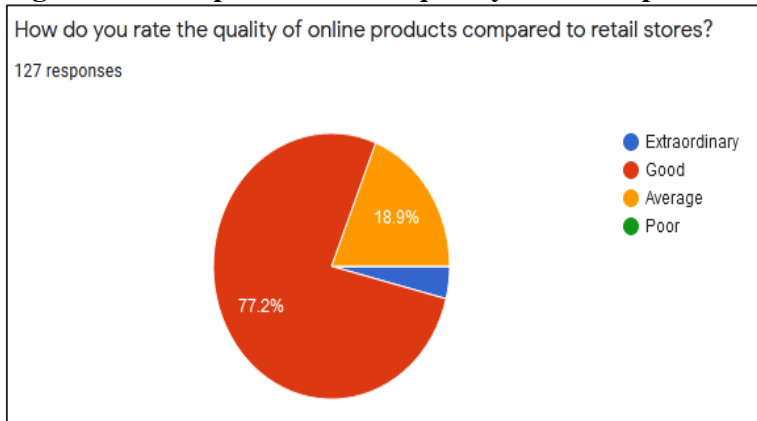




The above chart states that majority of consumers prefer buying products from retail stores because the price for products in retail stores are better than online stores, and the products are of good quality and also safe to make a purchase through retail stores and

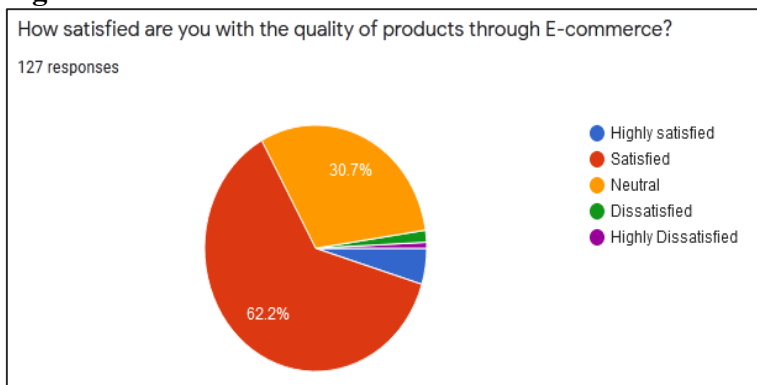
moreover availability of variety of products and live experience of shopping made them to opt retail stores instead of online purchase. The sales person knowledge is a least factor that influences on consumers to buy online products.

**Figure 9: Perception towards quality of online products**



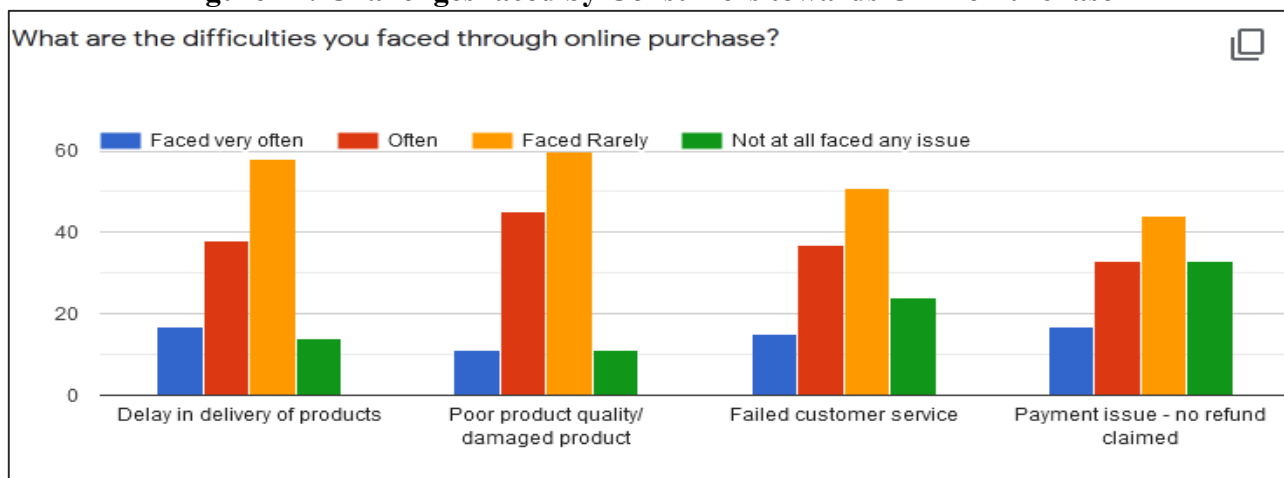
From this chart, the majority of the consumers rated the online products are of good quality (77%) followed by consumers who rated the products as average quality (19%) and very few customers rated that the online products are of extraordinary quality compared to retail stores and none of them rated online products as poor quality.

**Figure 10: Satisfaction level towards E-Commerce**



This chart shows the satisfaction level of customers about the quality of products through e-commerce. About 62.2% of people are satisfied with the quality of products. Only a small portion of respondents experienced poor quality products and 30.7% of them are in neutral statement.

**Figure 11: Challenges faced by Consumers towards Online Purchase**



From the above chart most of the customers rarely faced difficulties of delay in product delivery, receiving damaged products, failed customer service and payment issues. Only

some of the customers often or very often faced these difficulties and some customers not at all faced any issues through the online purchase.

**Hypothesis Testing**

1) **H<sub>0</sub>: There is no significant relationship between customer’s designation and social network influencing on them to purchase goods online.**

**H<sub>1</sub>: There is a relationship association between customer’s designation and social network influencing on them to purchase goods online.**

**Table 1: Cross tabulation: Designation \* Social Network influencing to purchase online**

Designation	Facebook	Instagram	You Tube	Twitter	None of them	Others	Total
Student	15	12	4	3	10	4	48
Employee	12	22	11	5	4	4	58
Own Business	3	2	2	1	1	1	10
Home maker	3	2	2	0	1	3	11
<b>Total</b>	33	38	19	9	16	12	127

**Table 2: Chi Square Test**

	Value	degrees of freedom	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.4973 <sup>a</sup>	15	0.416
Likelihood Ratio	15.1872	15	0.438
Linear-by-Linear Association	0.21074	1	0.646
Number of Valid Cases	127		

Table 2 depicts that 15 cells (62.5%) have anticipated count less than 5. The least expected count is .71. P=0.416 > 0.05 H<sub>0</sub>-Accepted, H<sub>1</sub>-Rejected. The Chi Square value between Designation and Social Network influencing to purchase online is 15.4973<sup>a</sup> and P value is 0.416 which is not weighty at 5% level. Thus there is no association between

customer’s designation and social network influencing on them to purchase goods online.

2) **H<sub>0</sub>: There is no substantial connotation between gender and their determination of purchase.**  
**H<sub>1</sub>: There is a substantial connotation between gender and their determination of purchase.**

**Table 3: Cross tabulation-Gender \* Purpose of purchase**

Gender	For Personal use	For Business use	For both personal and business use	Total
Male	38	2	15	55
Female	61	2	9	72
<b>Total</b>	99	4	24	127

**Table 4: Chi-Square Tests**

	Value	Degrees of freedom	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.651a	2	0.98
Likelihood Ratio	4.626	2	0.99
Linear-by-Linear Association	4.614	1	0.32
N of Valid Cases	127		

Table 4 depicts that 2 cells (33.3%) have ordinary count less than 5. The least possible expected count is 1.73. P=0.98 > 0.05 H<sub>0</sub>-Accepted, H<sub>1</sub>-Rejected. The Chi Square value between gender and their purpose of purchase is 4.651<sup>a</sup> and P value is 0.98 which is not significant at 5% level. Thus, there is no

association between gender and their purpose of purchase.

**Findings**

- 62% of the customers are satisfied with the quality of product that they purchase through e-commerce.

- Many feel that online shopping is time saving and a wide variety of products are available.
- Consumers prefer offline shopping as it makes to feel real purchase experience.
- There has been a rapid growth in the usage of e-commerce in the last three years.
- Most of the users have the concern about security of payment methods, delivery and after sales services.

### Suggestions

- The internet literacy of the people should be increased.
- A trusted payment platform needs to be developed.
- After sales services like delivery, product return and warranty services should be properly extended to the remote area as well.
- There should be a standard regulatory system to review the quality of product and services.

### Conclusion

Now-a-days Electronic-commerce is the top-rated system of business switched by majority

of sellers, business merchants as well as wholesalers. Virtual shopping is a brand innovative exposure and has highly wedged the breathes of consumers in its short period. Gradually along with increase in internet literacy rate it has made consumers more active and effectual in their shopping behavior. Traditional business is still quiet in demand in places where there is no carriage of online products and amenities in distant spaces. Based on the research, most of the respondents preferred both online shopping and retail stores considering its own advantages. In traditional shopping price of the product and safety is its main merit whereas in online websites time consuming process and wide variety of products is its main concern.

Like this though e-commerce has made convenient for purchasing of any products or services, still many people opt for traditional commerce over e-commerce because of their belief that at the end it is not safe, anyhow it is just their misconception. However, commerce both traditional and online shopping have their own pros and cons, so we have shortened the dissimilarity between traditional commerce and E-commerce.

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## EFFECTIVENESS OF CONTENT MARKETING IN ECOMMERCE PLATFORM WITH RESPECT TO BUYING FACTORS OF CONSUMER

**B.S. Shivaprasad and L. Shetty**  
 St. Claret College, Bangalore, India  
 shivaajibsp@gmail.com, ranjueml@gmail.com

### ABSTRACT

*This study is to find the factors influence customer to E-Commerce. The sample size is of 120 respondents and simple random sampling method was used to data collection by using a self-administered questionnaire that was distributed through Google forms to respondents and sending mails to consumers through their past experience of purchasing in E-Commerce sites. This study of Content Marketing within the content of on-line industrial product pages. Its aim is to know the way to use content Marketing to drive conversion, by understanding shopper attitudes and buy intention towards content. An in-depth study of existing theories and preliminary primary analysis was developed in alternative to realize these objectives. The preliminary analysis was characterized by a survey experiment with on-line shoppers. Participants were exposed to stimuli of content marketing tested in keeping with their attitudes and purchase intention. The main target was to know the impact of 2 totally different content marketing tactics on attitudes and purchase intentions and the way they move with content quality. This study is to find the factors influence customer to buy in E-Commerce. The sample size is of 100 respondents and simple random sampling method was used to data collection by using a self-administered questionnaire that was distributed through Google forms to respondents and sending mails to consumers through their past experience of purchasing in E-Commerce sites*

**Keywords:** Content Marketing, E- Commerce, purchase, attitude

### 1. Introduction

Content Marketing is a special tool which use to attract or convey product-related information to customers. The information which they are providing in content marketing technique passively attracts the customers and make them buy the products and services.

In the field of E-commerce content marketing plays a vital role because customers are not always thinking about the offers like discounts, cash backs, special coupons, etc., As like some customers they need particular information regarding contents, design, descriptions, manufacturer's information, and feedback or responses of other customers. Generally, the behavior of customers depends on their own decision but sometimes decisions influenced by different areas like customers before going to buy the product they will conduct research in their own way like discussing with friends or relatives, searching information online, comparing the products with the other companies.

The perception of buying the products online, it fully depends on the E-commerce website. Because as in the regular course of buying activity customers they visit shops physically and they decide whether they have to the buy the product or not through touch and feel but

when it comes to E-commerce there is no option of touch and feel, therefore content marketing is very important in terms of attracting the customers, sharing knowledge with the customers and make them understand the benefits of buying the products.

Overall this study is concentrating on the role of content marketing in the field of E-commerce with respect to buying factors or behavior of customers while they purchasing the products. This study will help start-up companies to gain the attention of customers by effectively utilizing the content marketing strategy.

### 2. Review of literature

#### a. Online Commerce

E-commerce enables consumers to purchase products and services online using Internet technologies and associated infrastructure (Olson & Olson, 2000). Online shopping habits differ from the traditional consumer behavior due to some notable differences, such as the distant and impersonal nature of the online environment, the ease with which data can be collected, processed and used by multiple parties, and the newness of the transaction medium (Pavlou & Chai, 2002).

Online shopping is the combination of information search and purchase (Mathieson et al., 2001). Prior to purchasing a product or service, consumers search for information and recommendations to assess and decide on its quality (Cheong & Morrison, 2008). The use of e-commerce is related to how well the consumer feels web technology fits the task (Mathieson et al., 2001). The adoption of e-commerce will depend primarily the consumer's behavioral intentions to engage in product purchases.

### b. Content Marketing

According to the Content Marketing Institute, "Content marketing is a marketing technique of creating and distributing valuable, relevant and consistent content to attract and acquire a clearly defined audience – with the objective of driving profitable customer action". It seeks to answer the questions, helping the consumers in the problem at hand and decision-making process, rather than focusing on the brand or company (Templeman, 2015).

According to Content Marketing Institute's North America Report 2014, B2C marketers are increasing the number of tactics used each year. The most widely used content marketing tactics by B2C companies were social media, articles on the company website, eNewsletters, blogs and videos.

Bhaskar Kumar (2014) found that there is a very important role of e-commerce in the real estate industry. He focused that e-commerce or digital marketing can create handsome number of leads and can help the salespersons to contact the right kind of customers.

Sonia Dara (2016) examined the use of digital media to attract customers. The various forms of digital media include digital images and videos, mobile phones, social networking sites, display advertising, web pages, etc. She presented that it should be more user-oriented and must learn to cater to their demands and needs for it to be successful.

### 3. Research Gap

- Survey have been done for analyzing the content marketing.
- Study largely focuses on buying behavior of customer with respect to content marketing in e-commerce

## 4. Research Methodology

Being an exploratory research it's based on both primary and secondary data.

Primary Data: Close ended Questionnaire

Secondary Data: Journals, Paper, books

Sample Design: Convenience Sampling

Sample Size: 100 respondents

Sampling Frame: Different company employees and entrepreneurs of Bangalore

### 4.1 Research Objective

- To identify the factors influencing consumer buying behavior.
- To evaluate the effectiveness of content marketing.
- To study the effectiveness of E-commerce platform via promotional activities.

### 4.2 Research Hypothesis

**H1:** Review, advertisement, social media and peer group have positive influence on consumer buying behavior

**Ho:** Review, advertisement, social media and peer group doesn't have positive influence on consumer buying behavior

**H2:** Content marketing have positive influence on consumer buying behavior

**Ho:** Content marketing doesn't have positive influence on consumer buying behavior

**H3:** Promotional activities have positive influence on consumer buying behavior

**Ho:** Promotional activities doesn't have positive influence on consumer buying behavior

### 4.3 Data Collection and Analysis Method

The Study focused mainly on the working people of different companies of Bengaluru irrespective of their income. A self-administered questionnaire was developed and distributed based on judgmental sampling technique. The questionnaire contained 12 closed end instruments. The data collected was analyzed and tested using Statistical Software for Social Science (SPSS) and the statistical tool employed were Cronbach's alpha and t-test (one sample).

## 5. Analysis and Interpretation

### Statistical tools used

1. Cronbach's alpha to check the consistency and validity of data



2. One sample t-test to check whether the variables has positive influence on consumer behavior or not

**Statistical Analysis**

**Cronbach's Alpha  
Reliability Statistics**

Cronbach's Alpha	N of Items
0.651	12

Since the alpha value is greater than 0.5, the data is more consistent

Frequency table

	Option 1	2	3	4	5
Q1	10	9	20	30	31
Q2	8	17	24	25	26
Q3	16	24	9	40	11
Q4	13	29	22	25	11
Q5	17	34	19	22	8
Q6	19	22	33	23	3
Q7	15	20	21	28	16
Q8	7	27	17	37	12
Q9	17	38	28	14	3
Q10	8	8	30	32	22
Q11	15	10	18	41	16
Q12	15	13	21	26	25

**First hypothesis**

**H1:** Review, advertisement, social media and peer group have positive influence on consumer buying behavior

**Ho:** Review, advertisement, social media and peer group doesn't have positive influence on consumer buying behavior

One sample t-test and Test value = 3	T	df	Sig. (2-tailed)
I buy online because my peer group (Friends group) influence me to do so	4.905	99	.000
My buying decision is completely based on advertisement	3.476	99	.001
Social media plays the vital role in my decision making behavior	.456	99	.650
I believe product with good or average review for the best buy's	-.651	99	.516

From the above table, significant values for peer group and advertisement are less than 0.05, we can conclude that **peer group and**

**advertisement has positive influence on Consumer buying behavior**

From the above table, significant values for social media and review are greater than 0.05, we can conclude that **Review, social media doesn't have positive influence on consumer buying behavior**

**Second Hypothesis**

**H2:** Content marketing have positive influence on consumer buying behavior

**Ho:** Content marketing doesn't have positive influence on consumer buying behavior

One sample t-test and Test value = 3	T	df	Sig. (2-tailed)
The success of product is purely based on effective content marketing	-2.462	99	.016
Content marketing leads to profitable customer action (Example: Buy a mobile get a head set free)	-2.777	99	.007
Product packaging and design place a vital role in my personal decision making	1.706	99	.031

From the above table, all the significant values are less than 0.05, we can conclude that **Content marketing have positive influence on consumer buying behavior**

### Third hypothesis

**H3:** Promotional activities have positive influence on consumer buying behavior

**Ho:** Promotional activities doesn't have positive influence on consumer buying behavior

One sample t-test and Test value = 3	t	Df	Sig. (2-tailed)
Word of mouth place a vital role in my purchase decision making	-5.050	99	.000
I buy only during festive offers	4.487	99	.000
I believe in cash back offers, which leads to my buying behavior	2.563	99	.012
One of the reason to purchase product online is No cost EMI.	2.394	99	.019

From the above table, all the significant values are less than 0.05, we can conclude that **Promotional activities have positive influence on consumer buying behavior**

### 6. Findings

- Digital way of serving the information, it creates positive impact on buying decision.

- A information served by the friend's group are significant, which influence to make buy in online.
- Advertisement is very important mode of communicating the information, which educate the customers.
- Now a days Content marketing attracts the more customers towards online buying compared to product packaging and design.
- Vocational offers or special offers are vital force to buy the products in online.

### 7. Recommendation for Future Research

Buying decisions are fully depended on content marketing in ecommerce platform, which helps in earning profits and creates positive relationship in the minds of customers to buy prodcuts in online. A research on promotional activities relating to buying behavior of customer with resepect to e-commerce will be recommended on basis of this research paper.

### 8. Conclusion

The objective of this study is to find out the factors influencing the consumer buying behavior and effectiveness of content marketing in e-commerce platform. Also, to check the effectiveness of e-commerce via promotional activities. The findings of the study concluded those inference compelled in the study were accepted. Lastly, this study adds on to literature and provides a core values for distinct research.

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## AN EMPIRICAL STUDY ON CUSTOMER PERCEPTION TOWARDS DIGITAL PAYMENTS IN INDIA A SPECIAL REFERENCE TO BENGALURU DISTRICT.

<sup>1</sup>K.S. Chaitra and <sup>2</sup>R. Anand

<sup>1</sup>Department of PG, M.Com, BBMP First Grade College, Bangalore

<sup>2</sup>Department of Commerce St. Claret College, Bangalore

### ABSTRACT

*Banking Industry in India has undergone tremendous transformation in terms of its operations, adoption of technology in providing banking and financial services to its customers, covid-19 pandemic certainly accelerated the digitisation of banking sector in India. There should be greater appreciation to the technology as it made people to be safer and secured while conducting banking activities at the time of this unprecedented situation created arose in the country due to this pandemic. Customers of banks have done huge amount of digital transactions in these days right from payment of water and electricity bills to depositing their savings in various kinds of deposits offered by the Bank. In the present research study an attempt is made to understand and analyse the customer perceptions towards the digital payments available in India a special reference to Bengaluru District.*

**Keywords:** Covid-19 Pandemic, Digitization, Banking Sector.

### I. Introduction

In India Majority of the population started using technology in each and every aspects of life as this is considered to an inevitable part of our lives. When occupation, socialization and cultural dissemination are closely associated and greatly influenced by the globalization, people in our country cannot survive without the usage and application of technology in their daily lives. However, the current situation in the country more revolves around the novel corona virus pandemic, it has proven that the technology is considered to be a basic requirement for survival and also to keep them more connected, work, and communicates with everyone in the society. There has been a huge transformation in each and every sector of our country due to an incredible amount of adoption and usage of technology. Indian banking sector which is an integral part of Indian economy plays pivotal role in the development of Indian Economy. It is also being proven that banking system in India is a strong backbone to the development of Indian financial system Banking Industry in India was also been a part of this transformation phase as the operations of the banking system have been greatly influenced by the technology prevailing in the country.

The Indian banking sector consists of 20 public sector banks. 22 private sector Banks, 44 foreign banks, 44 regional rural banks, 1542 urban co-operative banks 94,384 rural co-

operative banks in addition to co-operative credit institutions. As on March 31, 2019, the total number of ATMs in India increased to 2, 21,703 and is further expected to increase to 4, 07,000 by 2021. As of 2017, 80 Per cent of the adult population has bank accounts, as on March 31, 2019 the number of debit card and credit cards issued were 925 million and 47 Million Respectively. Now the Indian banks are increasingly focusing on Indian banks are increasingly focusing on adopting integrated approach to risk management. Banks have already embraced the international banking supervision accord of Basel II. Interestingly, according to RBI, majority of the banks already meet capital requirements of Basel III, which has a deadline of March 31, 2019. Most of the banks have put in place the framework for asset-liability match, credit & derivatives risk management. (Source: IBEF).

### II. Background of the Study

After the implementation of demonetization way back in 2016 Government of India is rigorously working towards promoting and propagating digital India which is also been guiding force for many Indians to adopt online payments for taking economic and financial decisions. After the launching of Cashless India, presently we have ten methods of digital payment methods made available in India. Some methods have been in use for more than a decade, some have become recently popular, and others are relatively new.

## Most Innovative Digital Payments in India

**1. Banking Cards:** Most of the Indians largely use Banking Cards i.e., Debit or Credit card as a substitution to cash payments. The first credit card was launched in India in the year 1981 by Andhra Bank. Banking Cards are preferably used because of its multiple benefits such as public convenience, mobility, safety, and security. In the present day situation, lot of Applications have been launched with the sole objective of managing various card transactions such as cred, Square, Etc.,

**2. Unstructured Supplementary Service Data (USSD):** USSD was implemented with an objective of enabling those people who don't have to access internet facilities to have easy and hassle free access to proper banking and internet facilities in India. Mobile banking transactions can be done without using internet connections just by dialing \*99# on essential feature phone.

**3: Aadhaar Enabled Payment System (AEPS):** It is a Bank-led model digital for digital payments which was introduced establish relationship between two banks accounts linked Adhar. Under this system, customers were allowed to transfer money between two Adhar linked bank accounts with the help of their Adhaar linked bank accounts.

**4: Unified Payments Interface (UPI):** UPI is a method of payment system which culminates many bank accounts into a single application in order to enable the transfer of money easily between any two parties. UPI is more as compared systematic and well-structured system compare to NEFT, Real Time Gross Settlement TGS, and IMPS, UPI is far more well-defined and standardized across banks. Bank transfer can be initiated by the users any time or anywhere just by using UPI. The Major advantage of using UPI for bank transfer is that it allows customers to pay money directly from their account without the need to type in the card or bank details. This method has become one of the most popular digital payment modes in 2020, with October witnessing over 2 billion transactions.

**5: Mobile Wallets:** Mobile wallets allows the customers to carry cash in a digital form this is made possible when customers link their bank accounts or cards to the mobile wallet to

facilitate most secured digital transactions. In the current scenario both the public and private banks have initiated their wallets. Some of the popular mobile wallets used by the customers are ones Paytm, Freecharge, Mobikwik, mRupee, Vodafone M-Pesa, Airtel Money, Jio Money, SBI Buddy, Vodafone M-Pesa, Axis Bank Lime, ICICI Pockets, etc.

**6: Bank Prepaid Cards:** A bank prepaid card can be given to any bank customer who has a KYC complied account by logging into bank's official website. It is used a pre-loaded debit card issued by a bank, usually not for multiple uses rather for a single-use except in certain cases where it can be reloadable for multiple uses. It is distinct from a standard debit card because the latter is always linked with your bank account and can be used numerous times. This may or may not apply to a prepaid bank card.

**7: PoS Terminals:** PoS (Point of Sale) is known as the physical place or segment where a sale of goods and services takes place. Customers can make purchases in malls and stores by swiping the debit and credit card with the help of PoS machine used in most of the checkout counters. PoS method has been initiated due to the emergence of digitization and online payment system. Mobile PoS terminals are those which work through a tablet or smartphone and Virtual PoS systems are those that use web-based applications to process payments.

**8: Internet Banking:** Internet Banking, also known as e-banking or online banking which allows the customers of a bank to make various kinds of banking transactions and also to perform various other financial activities just by visiting that particular bank's official website with the help of log-in details. Internet connections are crucial for E-banking which allows the customer to pay or receive payments and access a bank's website.

**9: Mobile Banking:** Mobile banking is a method of banking in which the transactions and other banking activities are conducted through the mobile devices, specifically through the bank's mobile application downloaded in the mobile devices. Now a day most of the banks have their mobile banking apps that can be used on with the help devices such as smart phones and tablets and



sometimes on computers as well. Mobile banking is known as the future of banking, thanks to its ease, convenience, and speed. Mobile Banking applications act as a single platform for enabling various digital payment options like IMPS, NEFT, RTGS, IMPS, investments options, generating bank statements for specified period of time, telephone, electricity, water bill payments, etc., are made without any much difficulty. Perhaps most of the Banks in India motivates their customers to go digital as it makes processes easier and saves time for them.

**10: Micro ATMs:** These ATM's are used as devices by the Business Correspondents in order to deliver the basic and essential banking and financial services needed by the customers. These are owned and managed by the BCs to provide accessibility to the customers at the time of conducting instant and quick transactions. With the help of these Micro ATMs customers can transfer funds from on account to another account through Addhar enabled bank accounts. Furthermore, these BCs will act as banks for customers but the customers need to verify authenticity with the help of UID number. The various essential services provided by the Micro ATMs are withdrawals, balance inquiry, deposits etc.,

### III. Review of Literature

**Namita Rajput, Anil Kumar Goyal (2019):** "Indian Banking Sector a Major Contributor to Economy: Constancy Major Concern" In their research study they concluded that the financial stability of banking sector plays an indispensable role at the time of policy making and also in recognising various factors which helps in resolving the unexpected discrepancies. Financial stability is a phenomena or situation, where the banking system achieves maximum efficiency and develops the capacity to tackle any economic shocks. The current banking developmental policies are paving their ways to strengthen and broaden the pathway for a more transparent system. As far as soundness, measured by capital adequacy ratio and leverage ratio, the mount improved from the year 2015-2018 due to the implementation of capital conservation buffer, which reduced the credit growth. Even though the overall performance of the banking

industry is satisfactory, it also needs to focus on adopting policies and practices for enhancing the quality of their banking operations.

1. **Mohammad Auwal Kabir, Siti Zabedah Saidin, Aidi Ahmi (2015):** School of Accountancy, University, Utara, Malaysia, School of Accountancy, Universities Utara Malaysia, International conference on E-Commerce: in their research study emphasized on critically evaluating the previous research studies on existing e-payment methods adopted all over the world. The research study also highlighted on the recommendations on using various other methods rather than survey method to understand the gap between the previous researches and future researches to be done on this area. Similarly, the use of different data collection instruments such as the structured interview and observation is highly recommended as they might yield better results from respondents.

2. **Dorothy Sagayarani" Digital Payments in India" (2016):** In this research study they concluded that the data collected from the study reveals that majority of the population in India accepts the decision of the government on the usefulness of cashless economy as it helps the country to fight against terrorism, corruption, money laundering and other illegal issues related to money in the country. The study also highlighted there is a major problem in the working of cashless economy in India is cybercrime and illegal access to primary data. Therefore, it is important to strengthen Internet Security from protection against online fraud. However, the large portion of the population is still belonging to category of low literary especially in rural areas this acts as a hindrance for the implementation of cash less system in India in each and every corner of the nation. Therefore, the financial literacy campaign should be conducted by government time to time to make population aware of benefits of electronic payments.

3. **Burhan Ul Islam Khan Rashidah F.Olanrewaju, Asifa Mehraj Baba, Adil Ahmad Langoo Shahul Assad (2017)** "A Compendious Study of Online Payment Systems: Past Developments, Present Impact, and Future Considerations" : The study

revealed that an evolutionary succession has been witnessed by the recent methods of banking from cash to cheque, to debit cards and credit cards, and presently electronic commerce and mobile banking. In the present research paper, it is also mentioned that online payment is being used increasingly to do regular online payments and also people started to adopt E-commerce platform or for making payments by customers. Mobile transactions are greatly increased due incredible amount of advancement in the field of technology which is also making the transactions more convenient and transparent as result of customers who are becoming habitual of employing this mode of payment. This state transformation in the behavior of customers indicates that traditional to an advanced online mode of payment is apparent in retailing and banking.

4. **Ms. Fozia “A Comparative Study of Customer Perception toward E-banking Services Provided by Selected Private & Public Sector Bank in India” (2013):** The study has analyzed the overall perceptions of the customers towards the services of e-banking. The study disclosed that the major demographic factors such as age and occupations of the customers are taken into consideration for measuring the perceptions of the customers towards e-banking. The study also indicates that the process of E-Banking will be successful for banks only when they have Commitment to wards e-Banking along with a deeper understanding of customer needs and expectations.

5. **Sanghita Roy, Dr. Indrajit Sinha” Determinants of Customers” Acceptance of Electronic Payment System in Indian Banking Sector – A Study” (2013):** This paper presented an empirical review of Electronic payment acceptance in Kolkata. The model formulated evaluated Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Perceived Credibility (PC), Perceived Risk (PR) and Customer Attitude (CUAT) to continue using E-payment acceptance. Among the factors Perceived Ease of Use (PEOU) is found to be the most significant predictor. Conversely, customer attitude was found to have least significant effect on adoption of E-payment. From the finding it is clear that customer have

to use more and more this online payment system. More we use the new technology more it will be friendlier with us.

6. **Dr. Roshan Lal, Dr. Rajni Saluja” E-Banking: The Indian Scenario” (2012):** In the current scenario in India e-banking is an emerging concept. Undoubtedly banks in India are sincerely working towards the adoption and installation of advanced technology to enhance e-delivery channels to provide qualitative services to the customers but still masses are wary of the concept. It has also been revealed in the study the Indian banks are making sincere efforts to popularize the e-banking services and products. Youths of our country started to give more importance to convenience and benefits of e-banking. In the upcoming years e-banking in the country will not only be acceptable mode of banking but will be a most preferred mode of banking.

7. **Rahul Gochhwal:” Unified Payment Interface An Advancement in Payment Systems” (2017):** mobile phones are used as a primary payment device with the help of UPI for making and accepting payments. Even though India has poor infrastructure in the area of merchant banking UPI enables the smallest merchant to accept hassle free digital payments without the requirement of POS Machine. Every account holder is allowed to make digital transactions. UPI has done away with the need to know the complicated payment details of the transacting parties, which makes payments easy and seamless for transacting parties.

#### IV. Objectives of the study

1. To study the various most innovative digital payments available in India
2. To study the customer perception towards Digital Payments available in India with a special reference to Bengaluru district.

#### V. Research Methodology

**Method of Study:** Descriptive survey method has been used to observe the respondents in their environmental setting:

##### Research Design

The sample required for the study has been collected from the both private and public sector banks customers of which 300 respondents were given their feedback on their

perception towards digital payments used in India.

**Population:** customers of private ,cooperaive and public sector banks were taken into consideration for the present study.

**Sample – 175 samples**

**Data Collection Sources of Data**

- i. **The secondary data:**The secondary data required for the study has been collected with the help various research papers presented on the same topic, Journal, Magazines and various websites to collect information related to digital banking.
- ii. **The Primary Data:** The primary data required for the present study has been collected with the help of
  - a. **Structured Questionnaire consisting closed ended questions**
  - b. **Personal Interview**

**c. Contact method**

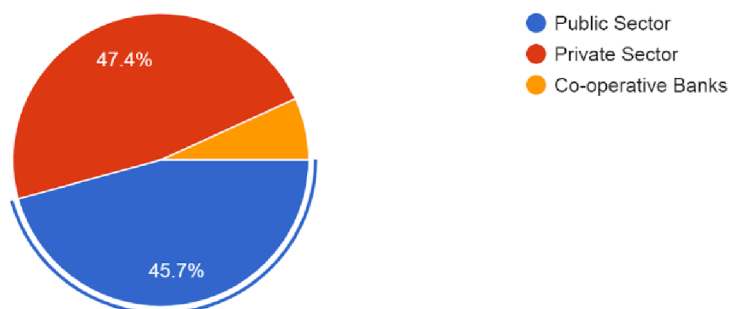
The questionnaire has been designed with the questions on the type of bank used by the customers, their profession, and also the questions which helps the researcher to measure the level of technology used by the customers in Banking, customer satisfaction on ATM services, Phone and internet banking services etc., The responses given by the respondents are used test the hypothesis with the help of various statistical tools required for the present research study.

**VI. Data Interpretation and Analysis**

The questionnaire was distributed to 175 samples and their views about the various services provided by the banks have been collected and analyzed.

Which category of banks do you consider as most technologically advanced?

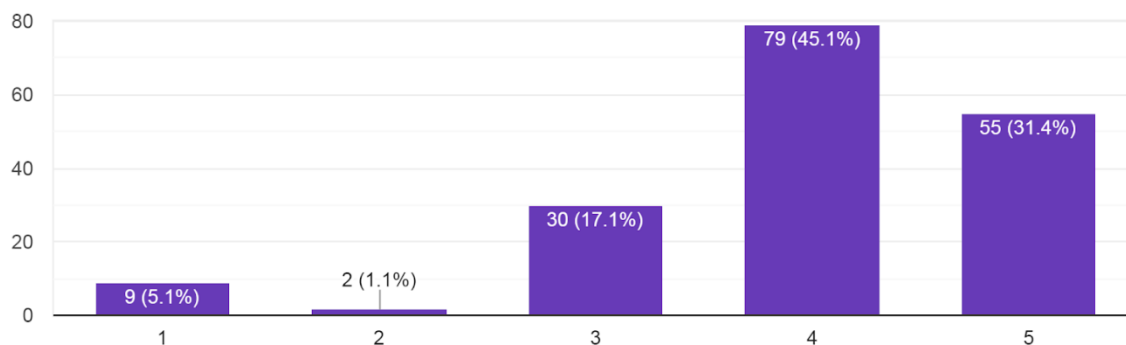
175 responses



Many people say that private sector banks are more technologically advanced and doing good.

Rate the technology adoption by your bank to meet the global standard

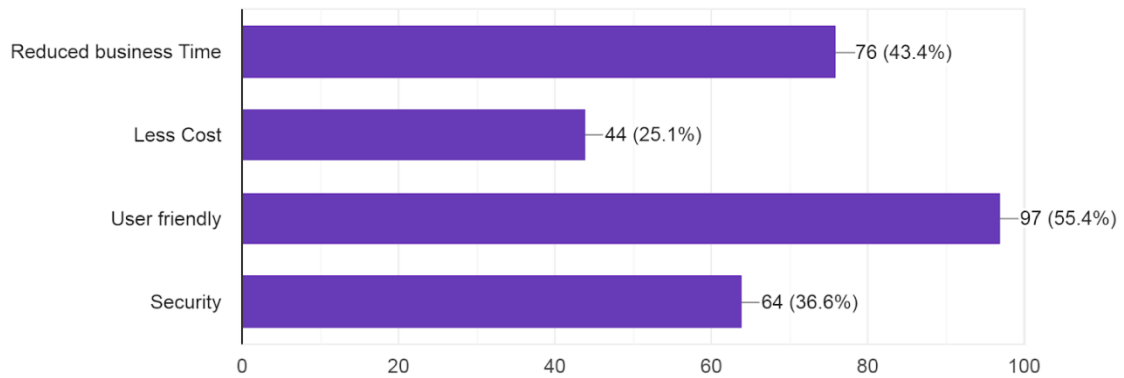
175 responses



45.1% People rated the banks have adopted good global standard.

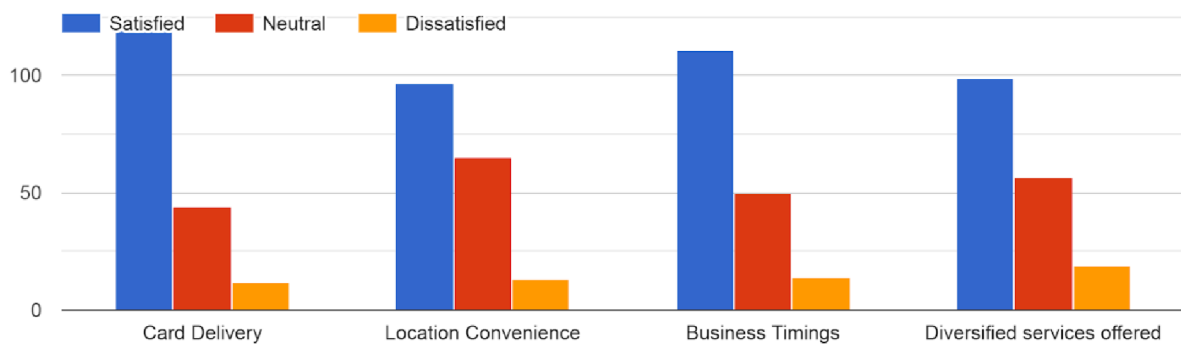
What factors prompt you to adapt to new technology in banking?

175 responses



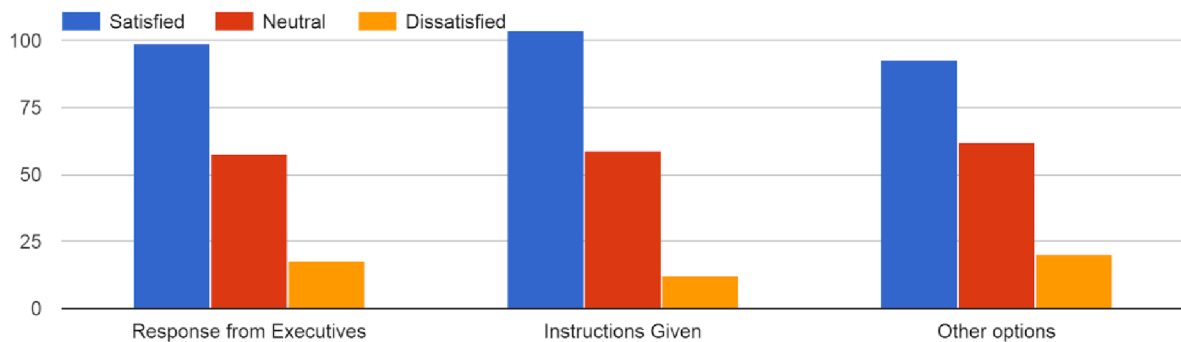
Many of the respondents say that the banking institutions have adopted user friendly technologies.

Rate Your Satisfaction level on the following ATM services



The above graph shows the satisfaction level of various ATM services among the respondents.

Phone Banking Services



The above data shows the respondents satisfaction about the mobile banking service provided by the banking institutions.

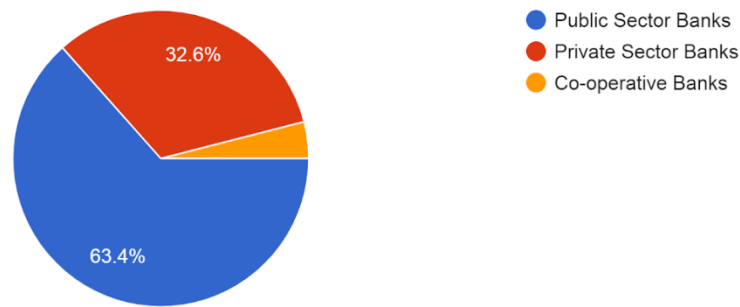
Internet Banking



The above graph shows the satisfaction level of internet banking services among the respondents.

Select the bank in which sector bank you have a Account

175 responses



63% of respondents say that they have bank account in public sector banks as they may perform well than private sector banks.

**VII. Findings**

- Many respondents have opinioned that private sector banks more technologically advanced as compared to public sector and co-operative banks.
- Respondents were rate high for the technology adopted by the banks which meet the global standard.
- Banking customers are satisfied that technologies adopted by the banks are user friendly.
- Many Respondents say that they have account in public sector banks.
- Overall the customers are satisfied about the service provided by banks which meets the global standards.

**VIII. Conclusion**

Overall we can conclude that the customers are happy about the various facilities which is provided by the banking industry. Respondents are also says that technology adopted by the banks which meets the global standard. In today’s competitive world banking industry are facing tough competition. To survive in the industry the banks should adopt the advanced technology and they should provide hassle free services to their customers. The banks are also should concentrate on the user friendly technologies in ATM banking, internet banking and phone banking services.



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## REVIEW ON NANO VACCINE

**S. More, S. Ganguly, A. Mulay and A. Karnavar**  
Modern College of Pharmacy (For Ladies) Moshi, Pune

### ABSTRACT

Looking at the current scenario of COVID-19, there is an emerging need to develop vaccines on large scale. Also to overcome disadvantages of traditional vaccines there is a requirement to develop new methodologies. One such new technique involves formulation of vaccine at nano range. Nano vaccine formulation provides immunity at nano scale. These formulations are based on the concept of Nano technology. This technique is invented to overcome the challenges of traditional vaccines. Nanotechnology involves creation of very small particles, devices or systems. Nano materials are designed for investigation and curing for the benefit of human health and as biomedical device for research. Nanotechnology is now important for medicine due to its small size and targeted effects. Nano materials can be discharged as micro nano projections, microspheres or nanobeads. Nano vaccines are vaccines that mainly consist of nanoparticles which straightly target the location in the body where the infection or disease emerge.

**Keywords:** Nanovaccines, Nano carriers, nano materials, nanotechnology-based vaccines.

### 1. Introduction

Formulation of vaccine is meant to improve immune response of a person for any disease. Normally vaccine consists of agent resembling a disease-leading microorganism, and in weakened forms of the microbe which stimulate immune system of body for identifying some outside agent, leading to its rupture, recollect it and destroy any of these microorganisms. Nanotechnology deals with development of very small particles, devices or systems. Nano materials are majorly designed and used in application for diagnostics, therapeutics for the benefit of human health and as biomedical tools for research. Nanotechnology is gaining importance in medicine due to its small size and targeted effects. Because of several drawbacks of classical vaccines there is demand for growth of novel vaccines.<sup>[1]</sup>

### 2. Definition

Nano vaccines are vaccines that mainly consist of nanoparticles which straightly target the site in the body where the infection or disease appear.

### 3. Active mechanism

Vaccines help to develop immunity by enhancing the antibodies, which reduces the infectivity.<sup>[2]</sup>

### 4. Challenges for traditional vaccines

Traditional vaccines contain live attenuated microbes, killed microbes, or portion of

microbes as adjuvants frequently, due to shortage of appropriate adjuvants there is demand to develop advanced techniques. Many of these vaccines do not provide good protection against disease. Some live vaccines are unsafe for use. Some common adjuvant like Alum used in conventional vaccines, leads to irritation. Use of adjuvant with antigen in vaccines, induced cell mediated immune responses, but not antibodies at high level. Due to limitations of classical vaccines there is need for preparation of novel vaccines.<sup>[3]</sup>

### 5. Types of vaccines

- 5.1. **Killed or inactivated vaccines-** e.g. Cholera, Plague, Whooping cough, Influenza type B
- 5.2. **Live attenuated vaccine -** e.g. Bacillus-calmette.
- 5.3. **Toxoids -** e.g. Tetanus (fluid/adsorbed) Diphtheria(adsorbed)

### 6. Advantages

- Easy, potent and fixed needle-free routes like nasal or oral route, or patches.
- Dose needed as antigen is less.
- Extended stability when stored.
- Steady release of antigen single dose is adequate for effective response.
- As compared to conventional vaccines, these vaccines are more beneficial.<sup>[4]</sup>

## 7. Routes of administration of nano vaccines

### 7.1. Oral route

Nanoparticles which are polymer based are preferred for the delivery of oral DNA vaccines but higher concentration of peptide or protein antigen may be essential for its effectiveness due to dilution when it passes via gastrointestinal tract.

### 7.2. Nasal route

This route is to be non-toxic, pain free and effective. Emulsion of small size particles can be processed using oil, alcohol, water and detergents leading to small particles.

Unit or two dose devices are simple, easily available, supply and scatter adequate quantity of drug. One such device **Flumist** for influenza vaccine has been marketed.

#### The main problems with the nasal delivery of antigens are:

- The free antigen is lost easily.
- Poor absorption by cells.
- Generate low immune response.
- One of the technique used is encapsulation.

### 7.3. Intradermal route

Intradermal route of vaccination is the most common method for administration of drugs and genes. The dose is injected in epidermis of skin which is, immunogenically sensitive layer. The drug is incorporated with excipient to form a store and results in moderate supply of drug for long period. <sup>[5]</sup>

## 8. Nano delivery systems of vaccines

### 8.1. Emulsions

Two or more liquids are used which consist of oil, excipients and emulsifiers. There are two types of emulsions, oil in water and water in oil emulsions. Type of emulsions mostly used are MF59, which possess squalene oil, tweens and spans in citrate buffer and it has capacity to increase the induction of antibodies against meningococcal protein antigen. Molecules of emulsions are observed in figure 1 (B). <sup>[6]</sup>

### 8.2. Liposomes

Liposomes are spherical entities containing a shell with an aqueous core as in figure 1 (A). Antigen can be affiliated either via noncovalent surface attachment encapsulation, pre- or post-vesicle formation, and surface adsorption. These techniques can be selected based upon the complexity of antigen and as the size and complexity of the antigen decreases, surface conjugation becomes more prominent for antibody induction. Immunogenicity of liposomal vaccines is affected by many parameters like vesicle size and bilayer structure, lamellarity, charge, fusogenicity and lipid transition temperature. Large vesicles ranges from 250–700 nm in diameter showed better response. Further, uni-lamellar large vesicles showed more efficiency to induce immune response as compared to multi-lamellar vesicles and also the preparation of multi lamellar vesicle varied as per number of lamellae which faced the reproducibility problem. In terms of charge of liposome, cationic vesicles promote stronger antigen-specific serum antibody responses than equivalent neutral or anionic formulations. <sup>[7]</sup>

**Table 1: Examples of Clinical Trials of Liposomes.** <sup>[6]</sup>

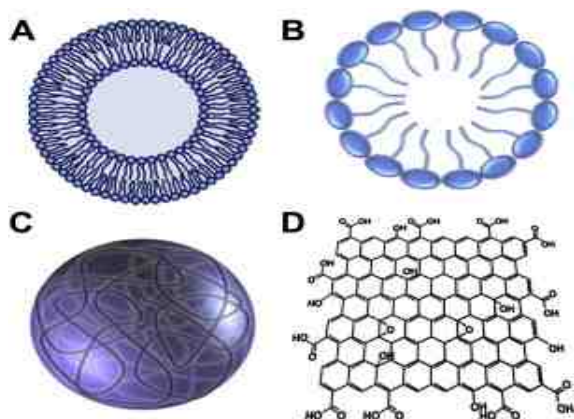
Examples of Clinical Trial	What Condition	Antigen	Adjuvant	Phase of clinical trial	Status
Decitabine, Vaccine Therapy	Cancer	To study the side effects		I	Completed
Trial on the Safety	Tuberculosis	Ag85B-ESAT-6 antigen	Liposomal Adjuvant	I	Completed
A Phase I Safety Study	Cancer	T Helper peptide and 7 tumor-specific HLA-A2restricted peptides	Polynucleotide adjuvant and liposome	I	Completed

### 8.3. Polymer based Nano delivery systems<sup>[7]</sup>

Polymer based nanodelivery system has shown in the figure 1 (C) consisting of two types of polymer which are as follows:

#### 8.3.1. Synthetic polymer

These are used for nano delivery of the vaccines, having hold on release of adjuvants or antigens. Synthetic polymer commonly used is poly (lactic-co-glycolic acid) (PLGA) for nanodelivery systems which is a biodegradable synthetic polymer and acts as nanocarrier in biomedical use. Particle size of PLGA is varied and surface modification is done in vaccine for mutation for use in mucosal, oral and systemic delivery. The surface modification, sizes and release profile of PLGA affects the immunogenicity of entrapped antigens.



**Figure 1: Structures of nanocarriers for vaccine antigen delivery system. A) Liposome B) Emulsion C) Polymeric nanoparticles D) Graphene oxide Nanosheets E) Carbon Nanotube.**

### 8.5. Microneedle Patches

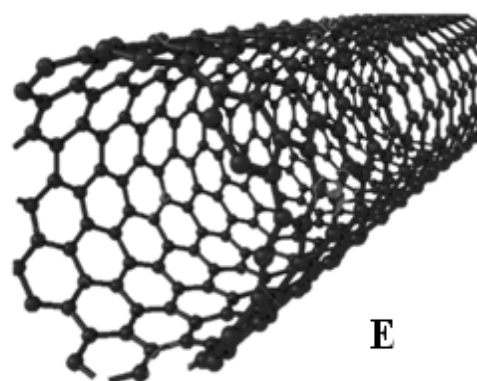
In the traditional methods, the vaccine is given as by injection, of the antigen intradermally which failed the reach of antigen to Langerhans cells of the epidermis for creating immune response. Therefore, vaccine is administered by intramuscular route. Also needle prick can be painful and irritating. Therefore, micro needle patches adhered to the skin is one of the least invasive methods in order to deliver molecules less than 500 Da. A set of needles of are covered with drug such as plasmid DNA or protein, which can be adhered as a small patch on skin which can deliver biomolecules to epidermis efficiently and safely and can be used later for various illness.<sup>[8]</sup>

### 8.3.2. Natural polymer

Chitosan and Pullulan are used as natural polymer for adjuvant and antigen delivery system. Chitosan is non-toxic, biodegradable, biocompatible and provide cationic charge which helps in enhancing endocytosis.

### 8.4. Carbon-based nanodelivery system

Carbon nanotube and carbon nanomaterials are recent advances for antigen delivery. These are nondegradable, insoluble and reduce bacteria. Immunogenicity of carbon nanotubes is not from within but possess capacity to carry multiple antigens and have low toxicity, taken up very quickly by antigen presenting cells. These tubes are seen in Figure 1 (E).



### 8.6. Use of Adjuvants

To improve the immune response, adjuvants are used such as oils (particulate), saponins (non particulate) or immuno-stimulating complexes (ISCOMs, combined compositions). A number of adjuvants have been reported such as polymers, ISCOMs, virus-like particles (VLPs), nano beads and colloidal nanocarriers. Few of the adjuvants are discussed below.

#### 8.6.1. Virus-like particles (VLPs)

Particulate structures are promising for development of cost effective recombinant therapeutic vaccines of particulate structures of various types are developed which depend on the behavior of the pathogen and type of

immune response. VLPs can be introduced with foreign antigen sequences, resulting in chimeric particles delivering the foreign antigen which can trigger immune response.

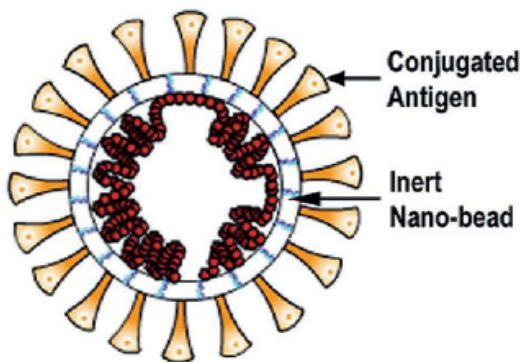
VLPs are ever evolving technique in vaccine as they are safe & can produce strong immune responses.<sup>[9]</sup>

**Table 2: Clinical Trials of VLPs<sup>[6]</sup>**

Clinical Trial	Condition	Antigen	Adjuvant	Phase of clinical trial	Status
Dose-Ranging Study	Papilloma virus Infections	Human Papillomavirus (HPV)	Virus-Like Particle	II	Active
Safety	Norovirus	Norovirus	Monophosphoryl Lipid A, Alum. Hydroxide	II	Completed
Immunogenicity	Respiratory Tract inf.	H5 VLP vaccine	Alhydrogel	I	Completed
A Phase I Safety	HIV Infections Completed	HIV	Alum. Hydroxide	I	Completed

**8.6.2. Nanobeads**

Size of Nanobeads ranges from 20-200nm and are inert in nature. The size of the solid beads are important to increase merge reaction of immune system. When antigens are adhered to surface of bead with a size of ~50 nm which is preferred by dendritic cells for uptake, it will induce humoral and cell-mediated immune responses.<sup>[10]</sup>



**Figure 1. Structure of Nano beads**

**8.6.3. Viral vectored vaccines**

Viruses vary in size range of 250 to 400 nm in diameter. The immune system quickly responds to viruses, which deliver an antigen. Live recombinant viral vector vaccines are constructed by inserting DNA for the desired immunogen into a live, infections but non-pathogenic virus that elicits a known immune response in humans.<sup>[11]</sup>

**8.6.4. ISCOMs**

These are 40 nm nanoparticle for purpose of release of vaccine antigens which consists of saponins and lipids which are compulsory elements and hold the antigens usually by hydrophobic interaction. A large number of ISCOM vaccines have been experimentally tested and protection has been reported with advantage of particulate carrier system having the presence of in-built adjuvant removing its hemolytic producing less toxicity. These vaccines produce strong immune.<sup>[12][13]</sup>

**Table 3: Clinical Trials of ISCOM™**

Clinical Trial	Condition	Antigen	Adjuvant	Phase of clinical trial	Status
Healthy Adults (PANFLUVAC) HealthyH5N1 Influenza antigen	Influenza	Influenza	ISCOM™	I	Ongoing
Study of NY-ESO-1 ISCOMATRIX®	Melanoma	NY-ESO-1	ISCOM™	II	Completed



### 8.6.5. Cochleates

Cochleates are highly stable structure consisting of a large tube, roll or spiral shaped lipid bilayers. Cochleates are derived from the interaction of anionic lipid vesicles with divalent cations ( $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$ ) wherein the

function of cation is to establish an ion bridge between two negative charges of lipids from adjacent membranes to stabilize the structure. Antigens can be trapped while rolling procedure and do not allow them to expose to environment with steady release of antigen. [14]

## 9. Characteristics of nanocarriers as nano vaccines

Few of the characteristics of nanocarriers as nano vaccines are given in table 4.

Table 4: Characteristics of various nanocarriers as nano vaccines [15]

Nanocarrier	Source	Size (nm)	Immune response
Spore	Bacterial	Various	Humoral- Cellular
Proteasome	Membrane protein based	20-800	Humoral- Cellular
Exosome	Cellular	50-100	Cellular
Liposome	Lipid based	Various	Humoral- Cellular
Virosome	Liposome+ viral env proteins	Various	Humoral- Cellular
Super Fluid	Biodegradable polymer	25-250	Humoral- Cellular
Nanobead	Inert Nanomaterial	40	Humoral- Cellular
VLP	Viral	Various	Humoral
Phage	Bacterial	Various	Humoral- Cellular

## 10. Conclusion

Nano vaccines are more efficient than traditional vaccines, which has less adverse effect and more therapeutic effect. It can be introduced through painless mechanisms.

Hence proving to be better option for this COVID era.

## 11. Acknowledgement

We are grateful to college sources for helping us in completing the work.

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**COMPREHENSIVE PHARMACOGNOSTIC STUDY OF *Muntingia Calabura*****M. Upadhye, S. Kadam, P. Gunjal, R. Pujari and A. Dhiman**

Modern College of Pharmacy (For Ladies), Moshi, Pune

**ABSTRACT**

*Muntingia calabura* L. (family *Elaeocarpaceae*) has been traditionally used to relieve various pain-related ailments. ***Muntingia calabura*** is known throughout the world as “Jamaican cherry” and in Malaysia, particularly among the Malay, it is known as “kerukup Siam”. Traditional medicinal uses have been reported for the leaves (headaches, prostate problems, reduce gastric ulcers), bark (antiseptic), flowers (antiseptic, reduce swelling, antispasmodic), and fruits (respiratory problems; antidiarrheal). It is planted as an ornamental species, for shade, and also because the flowers are a source of nectar and pollen for the beekeeping industry. *M. calabura* has a potential as a useful species for restoration of disturbed areas and stopping soil erosion. The fruit possessed potent anti-inflammatory activity. The flowers have antiseptic and antispasmodic qualities, and are made into medicinal teas. The *M. calabura* leaves exhibited potential anti-proliferative and antioxidant activities. The present study on *Muntingia* is to give an overview on traditional uses and pharmacological activity. Pharmacognostical parameters for stem, bark, fruit and leaves were studied with the aim of contributing towards establishing a monograph for the species. In pharmacognostical investigation.

**Introduction**

There has been an increased urgency to discover novel antibiotics/anti-microbial compounds due to emergence of drug resistant microorganisms. Therefore, an infection caused by antibiotic resistant microbes complicates conventional treatment causing prolonged illness and increases the death risks. Many medical practitioners also employ traditional (Ayurvedic) medicine, in Western and other developing nations like India, in complementary to modern medicines. Today also, as a testament to its persistence, over 80% of people in the world still utilize traditional medicine for primary healthcare. Many underdeveloped countries are rich in biodiversity hotspots like Southeast Asia, Africa, Central and Southern America. Among all the natural resources, plants are the single largest source for traditional medicines, accounting for 25% of new drug components being tested for clinical trials (Singh et al., 2017).

Cherry leaves (*Muntingia calabura*) contains antioxidants that generally form by phenolic or polyphenols, the sinamat acid derivatives, flavonoids, tocopherols, coumarin and polifungsional acids. Flavonoids that have an antioxidant activity consist of flavonol, flavanon, flavones, isoflavones, catechins and kalkon. Phenolic compounds that have antioxidant activity can be known through the way of extraction. Extractions are a way to

separate a desired substance when it is mixed with others. The mixture is brought into contact with a solvent in which the substance of interest is soluble, but the other substances present are insoluble. Components of active compounds from plants or animals can be extracted based on “Like Dissolved Like Theory”, compounds will be extracted depends on solubility (Triswaningsih et al., 2017).

Approximately 80% of the people in the developing countries all over the world depend on the traditional medicine for their primary health-care. Interestingly, approximately 85% of traditional medicine involves the use of plant extracts. Interest in phytomedicine started in the last 20 years and with increasing awareness of the health hazards and toxicities associated with unsystematic use of synthetic drugs and antibiotics, interest in the use of plants and plant-based drugs has revived throughout the world. However, a large number of medicinal plants remain to be investigated for their possible pharmacological value. One of the plants that has recently gained a medicinal plant status is *Muntingia calabura* L. (*Elaeocarpaceae*).

**Cultivation**

*M. calabura* can be propagated from seed, seedlings, or cuttings. In Costa Rica, seed set in the wet season, but require condition so flight and temperature found in forest gaps. In a test where seeds were placed in wet paper to 25°C, a total of 44% of seeds germinated in

white light, while none germinated in dark conditions.

## Material and Methods

### Plant material

*Munting iacalabura* Linn is Small sized tree, widely seen on road side and in waste and was procured from local area. The stem, bark, fruit and leaves were separated, dried, coarsely powdered, passed through sieve no 40, and stored in a closed container for further use.

### Processing of plant material

The fresh stem and bark was dried and the powdered and store in air dried containers. For fruit and leaves collect the material, washing, material grinded using menthol solvent, allow incubation for 1 week, filtration, dry the filtrate in room temperature and then collect the sample and store.

### Macroscopic and microscopic analysis

The macroscopic and microscopy of the plant were studied according to the method of Brain and Turner. For the microscopical studies, transverse sections were prepared and stained. The powder microscopy was performed according to the methods of Kokate and Khandelwal.

### Pharmacognostic Evaluation

The stem bark, fruit and leaves of *Muntingia calabura* was studied in the present study for its phytochemical analysis both qualitatively and quantitatively and also the external visible characters such as size, shape, surface fracture and organoleptic properties. The microscopic studies were carried out using simple microscope. The clear section of stem bark fruit and leaves previously soaked in water were boiled in choral hydrate to remove the coloring matter. The sections were stained with phloroglucinol and conc. Hydrochloric acid. The selected section was mounted on clean glass slide using glycerin and covered with coverslip. The section was then viewed under 10x and 45x. Some of the sections were also stained with dilute for starch, with Sudan red for fibers, acetic acid for calcium oxalate.

The powder of stem, bark, fruit and leaves was subjected to powder microscopy. Powder was first cleared with chloral hydrate and then

stained with staining reagents phloroglucinol and concentrated HCL and then viewed under 10X and 45X.

### Organoleptic evaluation

Various sensory parameters of the plant material (such as colour, odour, size, shape, and taste) were studied by organoleptic evaluation.

### Determination of pharmacognostic parameters

Microscopic examination of the powdered samples was carried out using Abbe type camera Lucida (at a magnification of 180×) while the quantitative parameters were determined using standard methods in Pharmacopoeia.

### Phytochemical screening

Preliminary phytochemical screening of various extracts obtained in successive solvent extraction was carried out with different reagents and solvents by performing various qualitative chemical tests.

Phytochemical studies reveal the presence of alkaloid, carbohydrates, tannins and phenolic compound, flavonoids, proteins and amino acids, fixed oils, and fats, gums and mucilage's etc.

### Result and Discussion

The present reports the pharmacognostical characteristics *MUNTINGIA CALABURA* stem, bark, fruit and leaves. For the purposes of quality control, assessment of purity and identification of any sample, standardization is very much essential. In the present research, pharmacognostic study, physiochemical analysis, and evaluation of stem, bark, fruit, and leaves of *Muntingia calabura* were carried out. Pharmacognostical studies and determination of different physiochemical parameters are very much essential for the standardization of drug and establishing its pharmacological efficacy. Hence, these studies help in identification and authentication of the plant material. Despite the modern techniques, identification and evaluation of plant drugs by pharmacognostical studies is still more reliable, means. According to World Health Organization the macroscopic and microscopic description of a medicinal plant is the first step

towards establishing its identity and purity and should be carried out before any tests are undertaken.

### Macroscopical studies

Macroscopic or organoleptic evaluation is a technique of qualitative evaluation based on the study of morphological and sensory profile.

Stem: The color of stem is dark brown with surface and slightly unpleasant smell. Bark

Bark is grey-brown or pale-brown and smooth, on older trees becoming cracked and rough. Pliable bark can be used as rough cordage. Although, silk-like fibre can be obtained from the bark.

Leaves are evergreen, alternate, lanceolate or oblong, long-pointed at the apex, oblique at the base. They are 2 to 5 in (5-12.5) long. Dark green and minutely hairy on the upper surface, grey or brown hairy on the underside and irregularly toothed. Fruit

The fruits of *Muntingia calabura* Linn, showed berry globes, red when ripe, the abundant fruits are round, 1-1.25cm wide, with red or sometimes yellow, smooth, thin, tender skin and light brown, soft, juicy pulp, with very sweet musky, somewhat fig-like flavor.

### Powder microscopy

Powder microscopy of stem shows thin walled, polygonal with yellowish brown matter cork cells, needle shape calcium oxalate crystal. And bark shows cork cell, starch grain and calcium oxalate, phloem fibers are present. In microscopical studies the fruits showed calcium oxalates crystals, starch grain, pollen grains, etc.

### Physiochemical evaluation

Different physiochemical parameters such as total ash value, acid insoluble ash value, water soluble ash value, extractive value, moisture content, swelling index, foaming index were determined and recorded. The above studies enable the identification of plant material for further investigation and forms an important aspects of drug studies. The result of Ash value showed the presence of inorganic matters, which is significant.

Table 1. Physiochemical parameter of *muntingia calabura* stem.

Sr no	Parameter	Values obtained
1	Total ash	3%w/w
2	Acid insoluble ash	1.8%w/w
3	Water soluble ash	2.5%w/w
4	Moisture content	70%w/w
5	Foaming index	<100
6	Swelling index	Nil

Table 2. Physiochemical parameter of *muntingia calabura* bark

Sr no	Parameter	Values obtained
1	Total ash	8.3%w/w
2	Acid insoluble ash	5.7%w/w
3	Water soluble ash	4%w/w
4	Moisture content	47%w/w
5	Foaming index	100
6	Swelling index	Nil

Table 3. Physiochemical parameter of *muntingia calabura* fruit

Sr no	Parameter	Values obtained
1	Total ash	8%w/w
2	Acid insoluble ash	3.3%w/w
3	Water soluble ash	2.6%w/w
4	Moisture content	70%w/w
5	Foaming index	<100
6	Swelling index	Nil

Table 4. Physiochemical parameter of *muntingia calabura* leaf

Sr no	Parameter	Values obtained
1	Total ash	7.5%w/w
2	Acid insoluble ash	3.6%w/w
3	Water soluble ash	8%w/w
4	Moisture content	60%w/w
5	Foaming index	100
6	Swelling index	1

Table 5 extractive values of *muntingia calabura* stem.

Sr. no	Parameter	Values obtained
1	Water soluble extractive value	0.3%w/w
2	Alcohol soluble extractive value	0.46%w/w



Table 6 :extractive values of *muntingia calabura* bark

Sr .no	Parameter	Values obtained
1	Water soluble extractive value	0.4%w/w
2	Alcohol soluble extractive value	0.02%w/w

Table 8 extractive values of *muntingia calabura* leaf

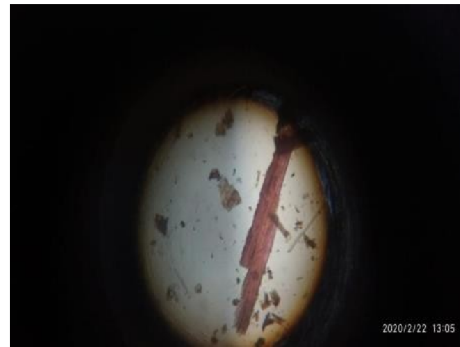
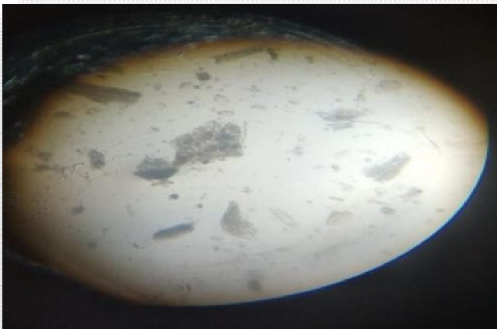
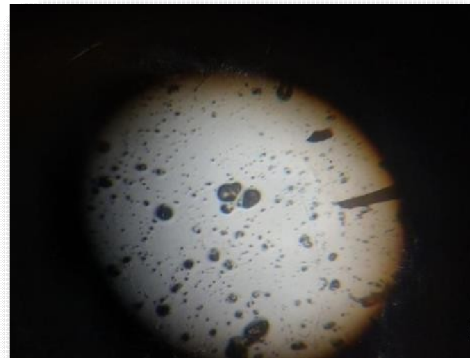
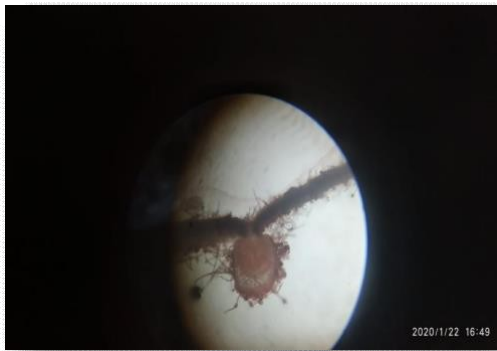
Sr .no	Parameter	Values obtained
1	Water soluble extractive value	2.5%w/w
2	Alcohol soluble extractive value	0.65%w/w

Table 7 extractive value of *muntingia calabura* fruit

Sr. no	Parameter	Values obtained
1	Water soluble extractive value	2.6%w/w
2	Alcohol soluble extractive value	2.4%w/w

Fig.1 Transverse section of leaf

Figure 1: Powder microscopic characteristics of *Muntingia calabura* Linn plant



### Conclusion

*Muntingia calabura* possesses various remarkable medicinal uses which warrant further and in-depth studied. Here it is attempt to help guide, researchers by performing pharmacognostic characteristics of the drug. Various physiological parameter were established which can be important in detecting adulteration and mishandling of the crude drug.

Phytochemical analysis showed the presence of many important classes of phytoconstituents. Such detailed study would be a decisive in performing standardization of the stem, bark, fruit and leaf material, preparation of its monograph, isolation of phytoconstituents, performing further preclinical and clinical investigation and manufacturing of its formulation.

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## A STUDY ON THE IMPACT OF PANDEMIC ON WORKING WOMEN - CHALLENGES AND ISSUES FACED

Haritha M. and Tejaswini S.

Department of Commerce, Acharya Institute of Management and Science

### ABSTRACT

*A commonly spoken communication - "It is tough to be a girl. One should assume sort of a man, act sort of a woman, appear as if a lass and work sort of a horse", states, however, troublesome it's for operating girls to be robust enough in any state of affairs at any purpose in life. Like Melinda Gates aforementioned - "A lady with a voice is by definition a powerful lady. however the search to search out that voice is remarkably difficult", girls have Janus-faced loads of challenges and problems throughout the pandemic. The social and economic impact of COVID-19 has fallen tougher on girls than on men. girls have Janus-faced vital impacts on them through force, restricted and interrupted sexual and procreative health services, destroyed livelihoods, etc. particularly the economic impact is assumed to be large. There are instincts of girls even losing their jobs throughout the pandemic. Hence, this study identifies the numerous challenges and problems Janus-faced by operating girls throughout the pandemic and conjointly highlights some suggestions which will be thought-about to bring forth an amendment within the girls' support on what best is created to assist women in equalisation their life within the post-pandemic amount.*

**Keywords -** Pandemic, COVID-19, Challenges, Issues, Women

### Introduction

Coronavirus is that an ailment brought about by a fresh out of the plastic new COVID alluded to as SARS-CoV-2. United Nations agency first educated of this new infection on 31 December 2019, following a report of a group of instances of 'viral pneumonia' in China. On this note, On 23 March 2020, the Government of India under Prime Minister Narendra Modi requested nationwide lockdown for 21 days, restricting the movement of the total 1.3 billion population of India as a wellbeing measure against the COVID-19 pandemic in India.



### Impact of Covid-19 On Women

During the lockdown, food conveyance administrations were denied by many state governments regardless of the central government's endorsement. A huge number of people emigrated out of significant Indian urban areas, as they became inactive once lockdown started. Following the detainment, India's power request tumbled to a five-month low on 28th March. Numerous countries were enthused about a hole up alcohol outlets all through the lockdown that was at last permitted inside the third stage.

Because of the lockdown, very 350 deaths were to the extent that frequently could, with reasons beginning from starvation, suicides, depletion, street and rail mishaps, police severity and refusal of conventional treatment. Among the concurring deaths, most were among the migrants and labourers. Regardless of these unfriendly consequences for the country, young ladies have conjointly confronted heaps of difficulties and bunches of have even battled for help.

### Domestic Violence

Brutality against ladies stays a significant worldwide general wellbeing and ladies' wellbeing danger during crises. Violence against ladies is profoundly pervasive. Intimate partners' violence is the most well-known type of savagery.

Internationally, 1 of every 3 ladies worldwide has encountered physical or potentially sexual viciousness by a partner or sexual savagery by any other malefactor in the course of their life. The vast majority of this is close partner brutality.



Brutality against ladies has expanded during each sort of crisis, including pandemic. Ladies who are dislodged, evacuees, and living in clash influenced regions were, especially in danger. While information is scant, reports from China, the Unified Kingdown, the US, and different nations recommend an expansion in aggressive behaviour at home cases since the Coronavirus episode.

As per one report, the quantity of aggressive behaviour at home cases answered to a police headquarters in Jingzhou, a city in Hubei Territory, significantly increased in February 2020, contrasted with a similar period the earlier year.

Stress, the disruption of social and protective networks, and decreased access to services all worsened the risk of violence for women.

### Sexual and Reproductive Health

The wellbeing effects of brutality, eminently cosy accomplice/abusive behaviour at home, on young ladies and their children, are fundamental. Brutality against young ladies may bring about wounds and high physical, mental, sexual and procreative medical problems, just as explicitly communicated diseases, HIV, and impromptu pregnancies.

- As distancing measures were set in the city and people were enlivened to stay at the gathering, the risk of cosy partner's violence was increased without a doubt. For instance: The likelihood that young ladies partner face harsh connections and their children presented to savagery was drastically misrepresented, as individuals from the family pay longer in shut contact

and families address further pressure and expected financial or occupation misfortunes.

- Males misused limitations on account of Coronavirus to practice force and the executives over their female partners to any cutback access to services, encourage and psychosocial uphold from every formal and casual network.
- Perpetrators exerted management by spreading information regarding the illness and discredited partners.
- Access to important sexual and procreative health services, as well as for girls subjected to violence, doubtless became a lot restricted.
- Other services, like hotlines, crisis centres, shelters, legal aid, and protection services conjointly scaled back, and reduced access to the few sources of facilitating that girls in abusive relationships may need

### Livelihoods

Coronavirus is destroying occupations across the planet.

- Ladies bore the effect of misrepresented consideration work all through this pandemic. Telecommute demolished this weight and set a great deal of weight on them.
- The interruption of livelihoods and expertise to make money, just as for young ladies (a large number of whom are casual compensation labourers), debilitated access to fundamental needs and services, expanding weight on families, with the possibility of clashes and violence. As assets become a ton scant, young ladies were at a greater danger of encountering financial maltreatment.
- Ladies have even lost their positions. The pandemic and measures to hinder its unfurl drove a lopsided expansion in ladies' state (when contrasted with men) and conjointly debilitated their generally speaking working time.
- Ladies are overrepresented in a few of the enterprises hardest hit by Coronavirus, similar to food services, retail and entertainment.



## Review of Literature

This paper has reviewed several articles and identified the research gap.

1. Wentling (2003) showed that the twin roles of ladies cause strain and strife because of her social construction which is even more predominant. In her investigation on working ladies in Delhi, she has shown that customary tyrant set up of Hindu social construction keeps on being the equivalent fundamentally and henceforth ladies deal with the issue of job strife change in perspectives of people as per the circumstance can assist with defeating their concern.
2. Ronald J. Burke, Mustafa Koyuncu and Lisa Fiksenbaum (2010) examined the relationship of the apparent presence of authoritative practices intended to help ladies' professional success and their work perspectives and fulfilment and their mental prosperity. Information was gathered from 286 ladies in administrative and proficient positions working in an enormous Turkish bank, a 72 per cent reaction rate. Five authoritative encounters were thought of: negative mentalities towards ladies, equivalent treatment, uphold, vocation boundaries and male norms. Ladies announcing more steady authoritative encounters and practices were more occupied with their work, more work and profession fulfilled, and demonstrated more noteworthy degrees of mental prosperity.
3. Sophia J. Ali (2011) investigated the challenges facing women in career development. She found that most of the women employees were dissatisfied with career development programmers and women were discriminated against in career development opportunities. The study recommended that organizations should strive to ensure that career development programmers were set to enhance career development among-st women employees. Top management should also be committed to the career development of women, and organizations should also introduce affirmative action to urgently address the career development of women.

## Statement of Problem

COVID-19 has put the entire world into an economic crisis. The government has been prompt in introducing the women safety reforms for COVID-19 induced issues. But, there are many aspects to be addressed yet. Working women have come up with prompt responses concerning problems posed by them during the pandemic. Keeping this as a subject matter, the current study attempts to present the significant challenges and issues faced by working women during the pandemic and how they overcame such issues.

## Need For the Study

According to UN Ladies Entity Report, 2020 shows that the pandemic will drive 96 million individuals into extraordinary neediness by 2021, 47 million of whom are ladies and young girls. The effects of emergencies are never sexually unbiased, and Coronavirus is no exemption. While men supposedly have a higher casualty rate, ladies and young girls are particularly harmed by the subsequent financial and social aftermath. Effects on ladies and young girls have deteriorated no matter how we look at it. Ladies have lost their vocations quicker in light of the fact that they are more presented to hard-hit financial areas. The pandemic and measures to forestall its spread drove a lopsided expansion in ladies' joblessness (when contrasted with men) and furthermore diminishing their general working time. Given these viewpoints, it is imperative to know the different difficulties and issues looked at by ladies particularly the individuals who are working in various areas during the pandemic and furthermore distinguish the estimates that they embraced to conquer them.

## Objectives of the Study

In the present scenario of the pandemic, it is difficult for working women to survive significantly in their jobs without facing challenges and issues. Women have even tried to adapt to the situation by taking various measures. Keeping this as a major focus, the research is made given the following objectives:

1. To understand the existing impact on working women
2. To understand the issues and challenges



faced by working women during the pandemic

3. To identify the significant measures taken by the government to protect women during the pandemic
4. To identify the impact of measures adopted

**Scope of Study**

The scope of the study may be extended to understand the challenges and issues faced by working women during pandemic only. Further, 50 samples are considered from Bengaluru North in order to collect the information and understand the individual issues and challenges faced and the measures adopted by them.

**Data Collection**

The present study focuses on both primary as well as secondary data. Secondary data has been collected from official websites of the Ministry of Health and Family Welfare, the World Health Health Organization, the UN Women Entity, The Hindu, etc. Primary data

has been collected through samples.

**Population and Sample**

This paper considers women of all age groups who are working as a population. On a random and convenient basis, 50 samples are selected from a heterogeneous mixture of the population.

**Limitations of the Study**

The limitations of this study are as follows:

1. The findings and suggestions are drawn based on 50 samples only.
2. Samples are selected on a convenient basis.
3. The reliability of the analysis depends on the accuracy of the data provided.
4. All the respondents have faced some kind of issue during the pandemic.

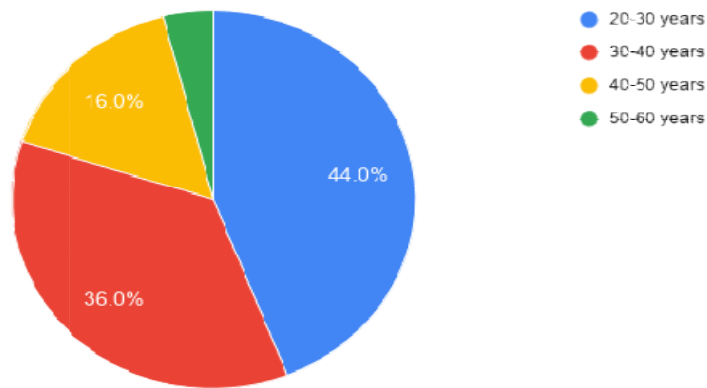
**Analysis**

Based on the results of the questionnaires, a complete summary of data is as below:

**Interpretation**

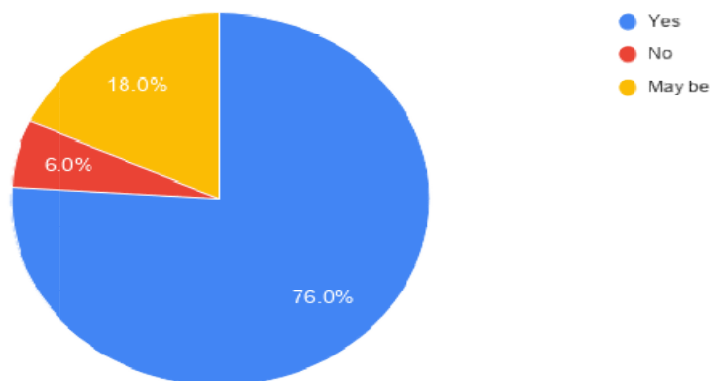
Age

50 Responses



Has COVID-19 posed a challenge in your life?

50 Responses



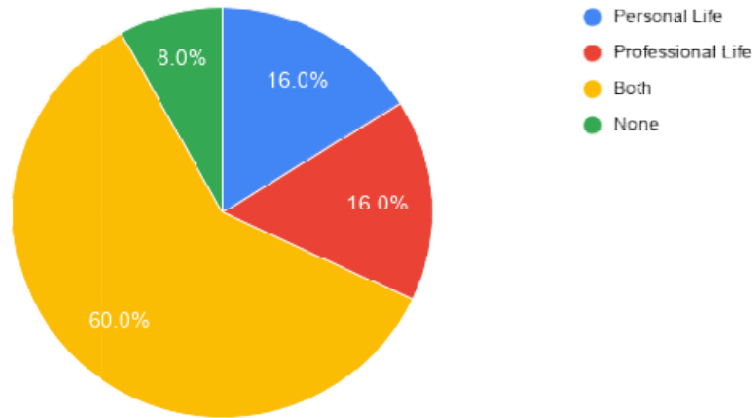
80% of the respondents are from 20-40 years

**Interpretation**

Three fourth of the respondents are having a positive response on the COVID-19 issues.

What did you find challenging during this pandemic?

50 Responses

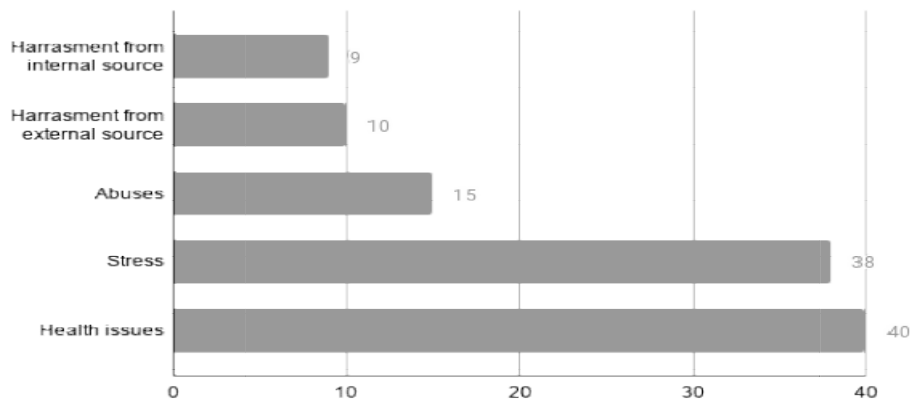


**Interpretation**

The majority of the respondents have found the pandemic challenging

What are the personal issues faced by you during the pandemic?

50 Responses

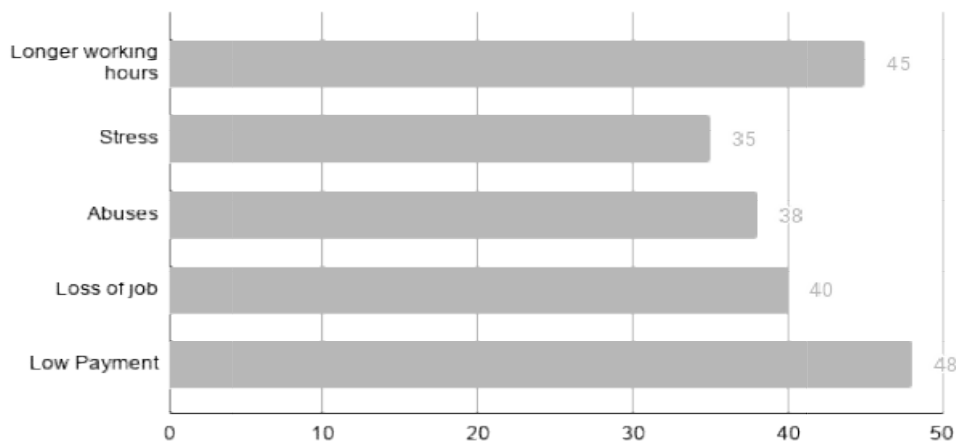


**Interpretation**

The majority of the respondents have faced health issues.

What are the professional issues faced by you during the pandemic?

50 Responses

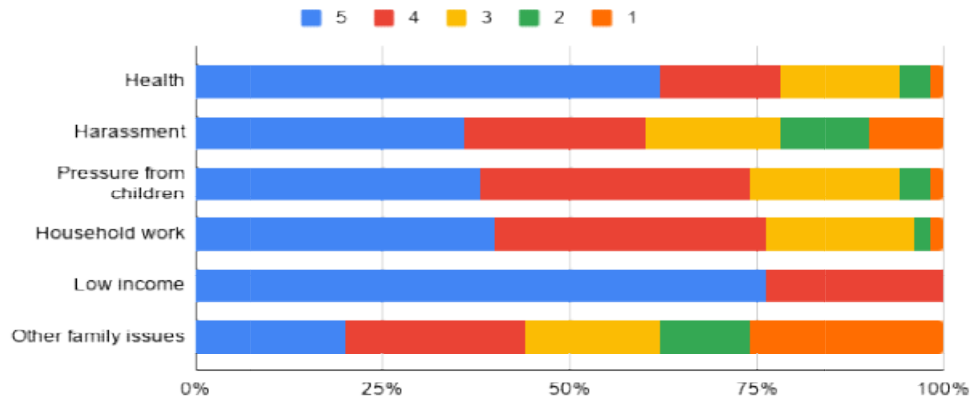


**Interpretation**

More than 90% of the respondents had low payment and longer working hours during the pandemic.

The level of negative impact pandemic has posed on your personal life (5 being the highest impact and 1 being the lowest)

50 Responses

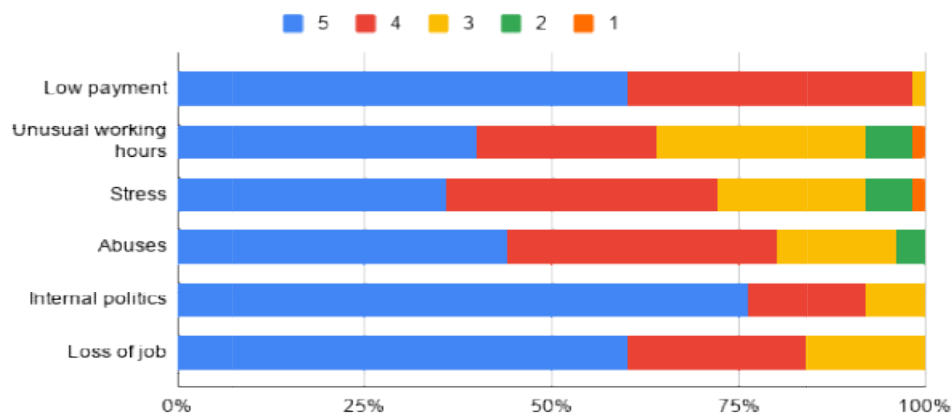


**Interpretation**

The majority of the respondents have a negative impact on all personal factors.

The level of negative impact pandemic has posed on your professional life (5 being the highest impact and 1 being the lowest)

50 Responses

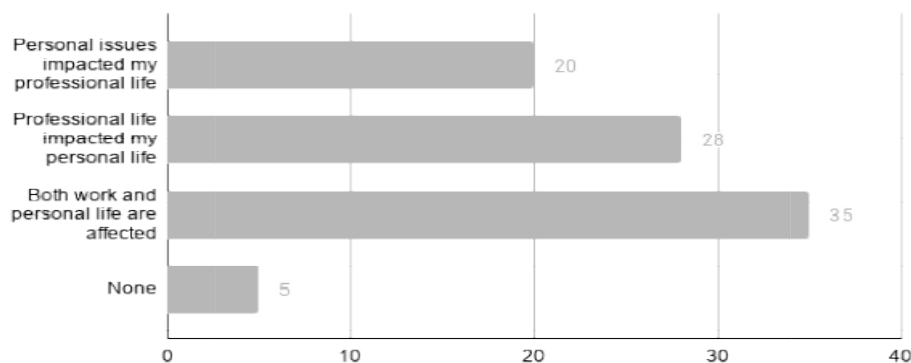


**Interpretation**

The majority of the respondents have a negative impact on all the professional factors.

What is the majors impact of pandemic on your work and personal life?

50 Responses



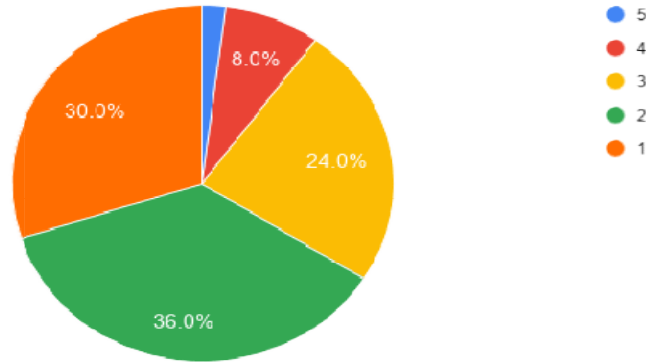
**Interpretation**

The majority of the respondents are affected both personally and professionally due to pandemic.

**Interpretation**

The level of balance between your work and personal life during the pandemic (5 being highly balanced and 1 being low balanced)

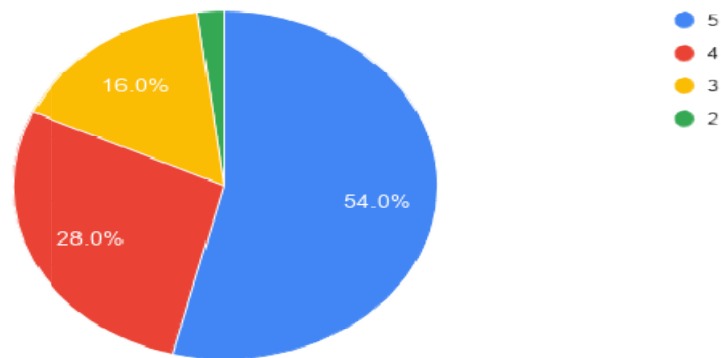
50 Responses



The majority of the respondents didn't have a work-life balance during the pandemic

How was your overall livelihood affected by pandemic? (5 being highly affected and 1 being low affected)

50 Responses



**Interpretation**

The majority of the respondents' livelihoods are affected due to the pandemic.

**Findings**

From the analysis of the responses, the following findings are drawn:

1. Pandemic has most affected on youngsters and middle-aged working women.
2. More than three fourth percentage of working women are facing issues due to pandemic.
3. The issues faced during the pandemic by the majority of working women are both personal and professional.
4. Personal issues include health issues and stress in the majority and other issues are in shade.

5. Longer working hours, abuses, loss of a job, low payment and stress are all professional issues in the same frontline.
6. Health, low income, harassment, household works are the personal challenges faced by working women.
7. Low payment, stress, abuses, internal politics and even loss of the job are the professional challenges faced by women.
8. Due to the pandemic, the personal and professional lives of working women are affected drastically.
9. The level of work-life balance during the pandemic is observed to be very low due to the issues and challenges faced by working women.
10. The overall life of working women has been affected to a greater extent by all the issues and challenges stated above.

### Suggestions

From the findings, the following suggestions are derived:

1. Though the government has taken many measures to protect women against exploitation and empower them through many policies, during the lockdown none of them seemed to be fruitful, as many working women have undergone so many issues. Hence, the government at least during the post-pandemic should focus not only on the health and wellness of the public but also on the implementation of better policies, especially for working women.
2. Employers should be liberal towards women at least during the pandemic period to keep them safe and stress-free.
3. Its high time for working women to know the art of work-life balance during this

pandemic. Though it is difficult in this scenario, yet it is crucial for all.

### Conclusion

To finish up, tending to a portion of the issues that ladies face in flare-ups features a more extensive scene of imbalances. Policymakers should consider and uphold every one of those at the edges. What's more, when the pandemic closures, tending to sex imbalance should be at the core of the more extensive program to 'work back better'. In this male-ruled society, it would be the extraordinary strengthening of ladies if unique arrangements and commitments are made explicitly for ladies through the spending plans and gauges of the country. At long last, whatever measures are taken, it is to be basically actualized atleast for a specific period to see extreme changes

### References

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## AN EMPIRICAL STUDY ON THE IMPACT OF INTERRUPTION MARKETING ON CONSUMERS IN BENGALURU URBAN

N. Sharma<sup>1</sup>, Bindu V.<sup>2</sup> and C. Rane<sup>2</sup>

<sup>1</sup>Mount Carmel College, Bengaluru

<sup>2</sup>St Claret College, Bengaluru

<sup>3</sup>Department of Management, St Claret College, Bengaluru

neelu1705@gmail.com, bindunarayan90@gmail.com, cassandra@claretcollege.edu.in

### ABSTRACT

*If Indian economy is technology driven, then social media marketing has given a new opportunity where brands can broaden their marketing campaigns to a wider consumer base. Social media marketing bridges the gap, creating alliance between upcoming and existing brands with prospective consumers and enhance interaction with the existing. Companies have been utilizing a variety of options that can be incorporated in their business plan to study satisfaction and loyalty. This review examines current scenario that focuses on interruption marketing on social media marketing that explores the advertising intention and its impact on consumer behavior. Whether Un-avoidable ads are creating a long lasting impact and can influence purchase. Since Intents of advertisements have served as a foundation to investigate research questions related to consumers' perceptions towards interruptive method of advertisements.*

**Keywords:** *Virtual Brand community, Customer engagement, Interruption marketing, Disruptive Advertisement, Credibility, Advertising Intent, Target Market*

### Introduction

Marketing has been a dynamic activity and in lieu of the competitive market the old ways have worn themselves out bringing new versions of marketing assisting a smart society via digital platforms. While innovation emerges differently across sectors, innovative marketing methods analyze and unearth motives behind purchase patterns, trigger point, and accelerators in gauging their impact on future market research, practice and policies. “Digital swop and forceful markets exert enormous impact on the shifting concept of “information” around the globe. Radical transformations in customers have seen to value products or services marketing that include elements like familiarity, involvement, co-creations, sharing, and learning.

Digital Marketing has dynamic and content driven sites using methods and tools used by companies to promote their products, services, and brand on the internet. Unlike any other form of advertising interruption marketing interrupts the viewer’s experience and cause regular disruptions degrading the user experience. This meddlesomeness behavior of the ads disturb the experience with uninvited ads that may differ from one individual to the other but research studies prove that majority comment as feedback that such ads are not overwhelming, disturbing and sometimes irrelevant.

The study is been done with a strong interest exploring what are the common challenges since various businesses know, how essential digitally controlled are we today, for acquiring and retaining customers. However firms don't have a composite plan to grow and engage their audiences effectively. In an epoch of plethora of diversity, any consumer can refuses to soak up what they do not ask for. When ads are constantly flooded with unsought proposals this leaves populace with no option of controlled engagement. But it is also witnessed that graphics and attractive visuals add to the experience in attracting customers. The new research study would seek effective proactive steps to assess challenges to interruptive marketing across diverse sectors as recognizing the need for digital marketing show alternatives to provide on how adaption issues can be considered in the investment decision-making it achieve best cost plans. To identify the impact on users of whether selectivity is the need as it offers them power of what to understand, watch, purchase, subscribe to, and network with. Using digital marketing without a strategic approach is still common place just because digital marketing relatively cuts expenditure and having a great commercial impact on the business this is the main reason why revenue goals are not met. But many companies in this category are using digital media effectively and

they could certainly be getting great results from their search for apt social media marketing.

### Literature review

Digital marketing to convey result for businesses, utilizing digital substance incorporating elements resembling ease of understanding, reach, plan, course-plotting and responses are defined as the key characteristics for marketing. Interruption marketing is a variety of marketing strategy wherein the target audience's experience is interrupted to bring forward an unwelcomed promotional message. Interruption marketing facilitates the purpose for companies to market by unaccepted ads throughout their activity. These customary disruptions do not encourage the user experience and may cause exit. So, an increasingly determined segment of the target audience is pushed to block the marketer's ability to earn revenue. The study also speaks for interactivity, personalization and social presence to understand customers.

1. The Internet is a global system of interconnected computer networks. It is a network of networks that consists of millions of private, public, academic, business, and government networks. (Phillips, 2003)
2. Web-based advertisements can be produced in a wide variety of innovative designs and formats, all of which are intended to attract online users' attention and action. However, these specially tailored messages may result in interrupting users' original task performance (Burns & Lutz, 2006; Moe, 2006).
3. Disruptive ads can transmit remarkably high-quality audio and visual content constructed with such software, Unlike banner or side ads, which are placed on a webpage and have little interruptive effects on Web users, pop-up and embedded ads are ingeniously designed to automatically appear and/or linger when Web users get on, move around, or even close a Web page (Edward, Li & Lee, 2002; Shankar & Hollinger, 2007).
4. Web experiences affect the mental process of consumers and enhance their buying decision online (Cetina, Cristiana, Radulescu, 2012).

### Objectives

1. To Study the consumer's perception towards interruption marketing
2. To find out customer reach about new products or services influenced by interruption marketing
3. To examine the interruption marketing influence on consumer's decision making
4. To analyze whether target market audience can be enhanced with interruption marketing

### Research Methodology

The proposed study is a Descriptive Study, based probability sampling technique utilizing simple random method. The study largely depends on primary data. The required primary data have been collected by means of structured Questionnaire administrated to the consumers from various parts of Bengaluru Urban. To clarify certain concepts of the study, secondary data have been collected from published reports, standard text books and reputed journals. The sample size for this study is components consist of consumers from various parts of Bengaluru. The data was collected from the 54 respondents from diverse parts of Bengaluru between 1<sup>st</sup> January to 25<sup>th</sup> February 2021.

### Tools for Data Collection and Analysis

Structured Survey Questionnaire is used for collecting data. Data Analytical software used in this study is Ms Excel and SPSS 24.

### Hypothesis

**H01:** Demography has no significant influence on the consumer's perception towards Interruption Marketing.

**Ha1:** Demography has a significant influence on the consumer's perception towards Interruption Marketing.

**H02:** Interruption Marketing has no significant impact consumer decision making

**Ha2:** Interruption Marketing has a significant impact on consumer decision making

**H03:** Interruption Marketing has no significant influence in enhancing target market audience

**Ha3:** Interruption Marketing has a significant influence in enhancing target market audience

### Data Analysis

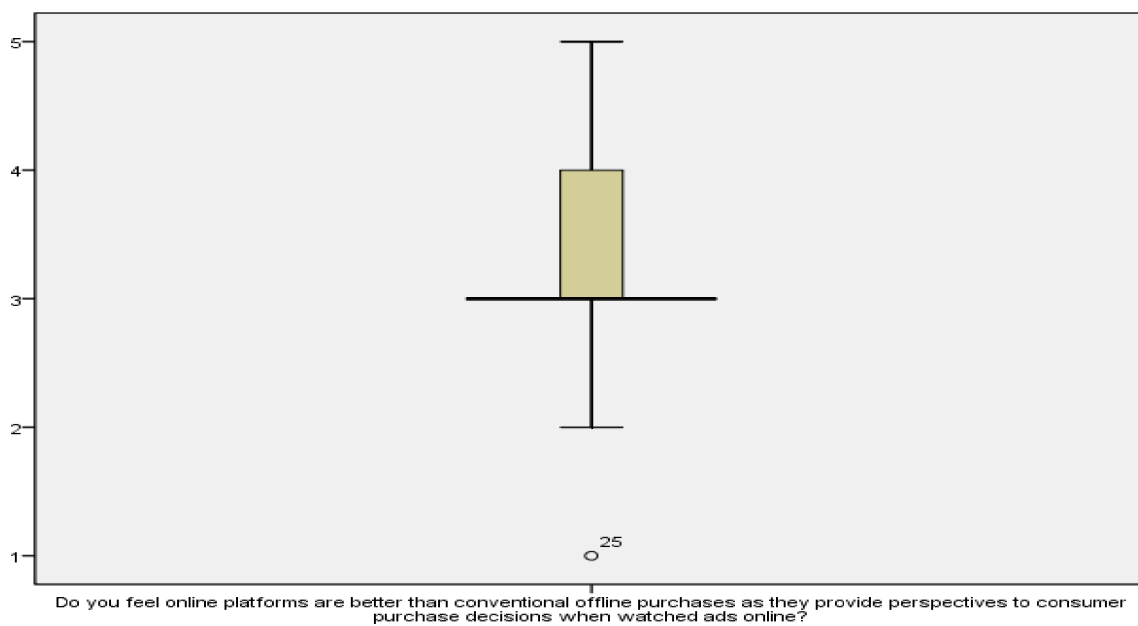
Normality test is conducted for the data in the initial stages, the data found to not normally distributed. The First part of this section will confer the findings about Social media marketing specific to interruption marketing for the same we have conducted survey with questionnaires and tested with Chi Square Analysis to check the influence of demographical factors to influence the perception towards Interruption marketing,

followed by diagrammatical representations (percentages).

The Second part of the section discuss about the factors which influences the consumer decision making followed by diagrammatical representations (percentages).

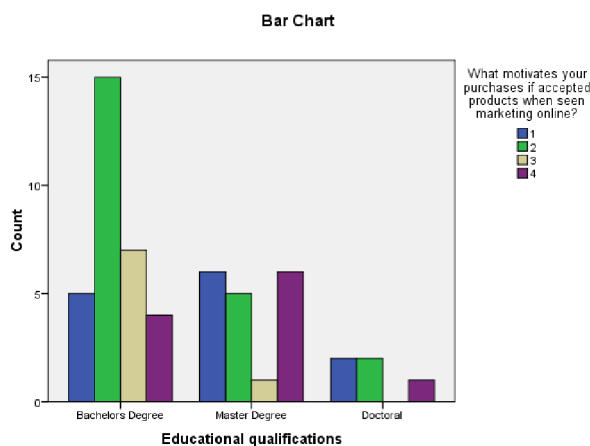
The Third part of the section confer the ANOVA test which conducted to test the consumer influence of Interruption marketing making based on the selected criteria's, followed by diagrammatical representations (percentages).

### Test for Normality



### Chi Square Test

1. What motivates your purchases when products are seen in Online Marketing



Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.547 <sup>a</sup>	6	.201
Likelihood Ratio	9.347	6	.155
N of Valid Cases	54		

**Table 1:**  $P=0.201 > 0.05$ , Non-Significant,  $H_0$ -accepted,  $H_1$ -Rejected, Education qualification has no significant influence on the consumer's perception towards Interruption Marketing.

2. Age \* Have you made any purchase decisions when watched an advertisement online?

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.844E2 <sup>a</sup>	32	.000
Likelihood Ratio	56.233	32	.005
N of Valid Cases	61		

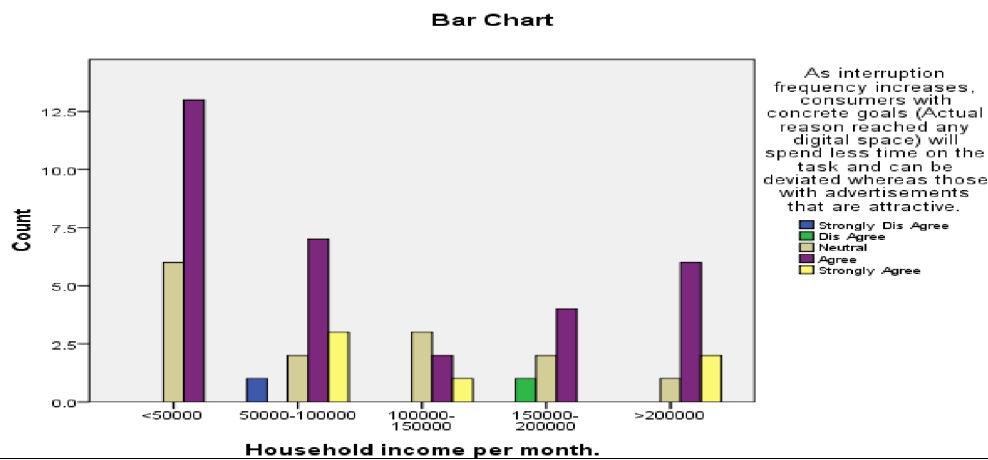
Table2:  $P=0.00 < 0.05$ , Significant Result,  $H_0$ -Rejected,  $H_1$ -Accepted, Age has a significant influence on the consumer's purchase decision towards Interruption Marketing

3. Gender \* Have you made any purchase decisions when watched an advertisement online?

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.832E2 <sup>a</sup>	16	.000
Likelihood Ratio	54.783	16	.000
N of Valid Cases	61		

Table3:  $P=0.00 < 0.05$ , Significant Result,  $H_0$ -Rejected,  $H_1$ -Accepted, Gender Factor has a significant influence on the consumer's purchase decision towards Interruption Marketing

4. Your current employment status \* Do you feel online platforms are better than conventional offline purchases as they provide perspectives to consumer purchase decisions when watched ads online?



Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	11.134 <sup>a</sup>	12	.517	.436 <sup>b</sup>	.305	.567
Likelihood Ratio	12.117	12	.436	.400 <sup>b</sup>	.271	.529
Fisher's Exact Test	14.211			.327 <sup>b</sup>	.203	.451
N of Valid Cases	54					
a. 16 cells (80.0%) have expected count less than 5. The minimum expected count is .04.						
b. Based on 55 sampled tables with starting seed 1993510611.						

Table 4:  $P=0.436 > 0.05$ , Non-Significant Result,  $H_0$ -Accepted,  $H_1$ -Rejected, Employment factor has no significant influence on the consumer's purchase decision towards Interruption Marketing

**5. Gender \* Do you feel online platforms are better than conventional offline purchases as they provide perspectives to consumer purchase decisions when watched ads online?**

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	2.537E2 <sup>a</sup>	48	.000	.000 <sup>b</sup>	.000	.053
Likelihood Ratio	68.973	48	.025	.000 <sup>b</sup>	.000	.053
Fisher's Exact Test	94.459			.000 <sup>b</sup>	.000	.053
N of Valid Cases	61					
a. 59 cells (93.7%) have expected count less than 5. The minimum expected count is .02.						
b. Based on 55 sampled tables with starting seed 957002199.						

**Table 5:**  $P=0.00 < 0.05$ , Significant Results,  $H_0$ -Rejected,  $H_1$ -Accepted, Gender factor has a significant influence on the consumer's purchase decision towards Interruption Marketing

**6. Educational qualifications \* What motivates your purchases if accepted products when seen marketing online?**

Chi-Square Tests						
	Value	Df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	5.418 <sup>a</sup>	4	.247	.200 <sup>b</sup>	.094	.306
Likelihood Ratio	5.096	4	.278	.364 <sup>b</sup>	.237	.491
Fisher's Exact Test	5.268			.182 <sup>b</sup>	.080	.284
N of Valid Cases	54					
a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .28.						
b. Based on 55 sampled tables with starting seed 624387341.						

**Table 6:**  $P=0.200 < 0.05$ , Significant Result,  $H_0$ -Accepted,  $H_1$ -Rejected, Education factor has no significant influence on the consumer's perception towards Interruption Marketing

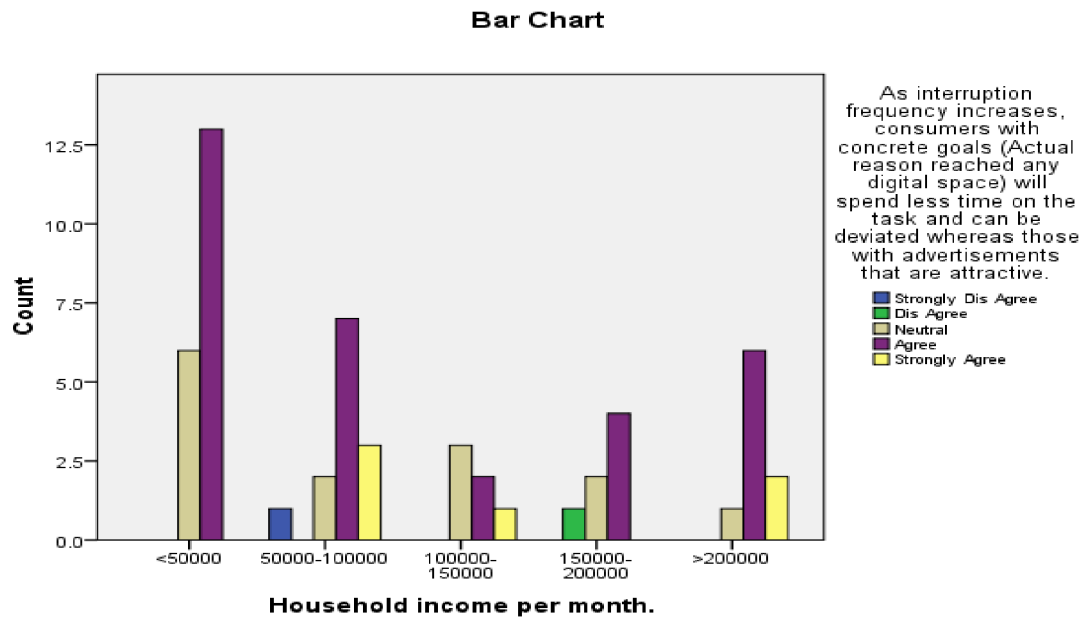
**7. Household income per month. \* What motivates your purchases if accepted products when seen marketing online?**

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	3.087E2 <sup>a</sup>	80	.000	.000 <sup>b</sup>	.000	.053
Likelihood Ratio	67.215	80	.845	.018 <sup>b</sup>	.000	.053
Fisher's Exact Test	124.791			.073 <sup>b</sup>	.004	.141
N of Valid Cases	61					
a. 98 cells (99.0%) have expected count less than 5. The minimum expected count is .02.						
b. Based on 55 sampled tables with starting seed 92208573.						

**Table 7:**  $P=0.00 < 0.05$ ,  $H_0$ -Rejected, Significant Result,  $H_1$ -Accepted, Household income has a significant influence on the consumer's perception towards Interruption Marketing

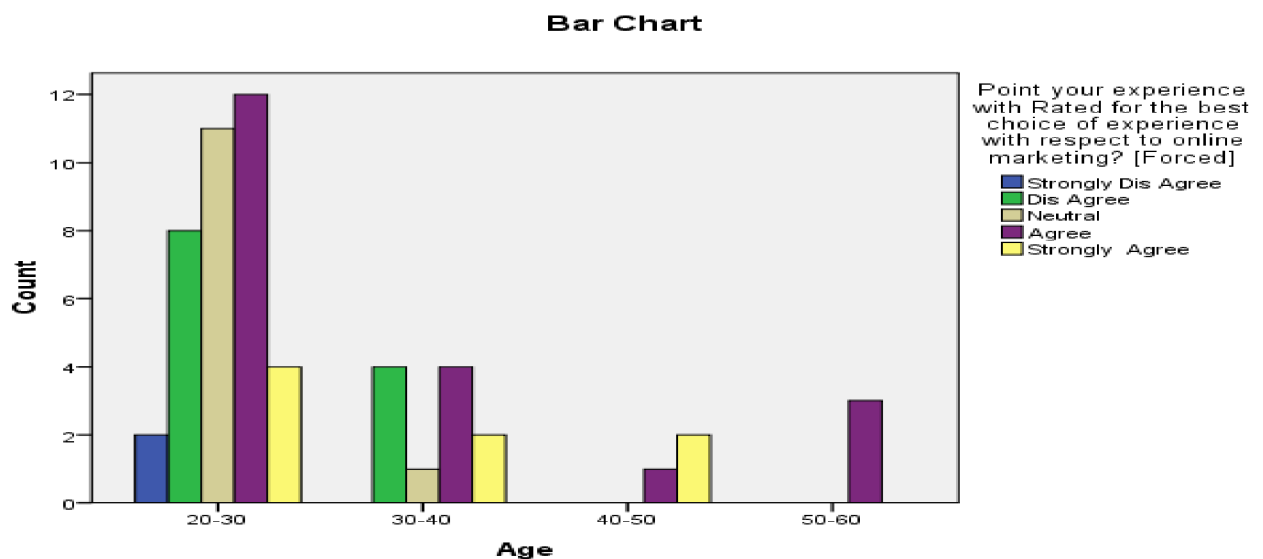


8. As interruption frequency increases, consumers with concrete goals (Actual reason reached any digital space) will spend less time on the task and can be deviated whereas those with advertisements that are attractive.



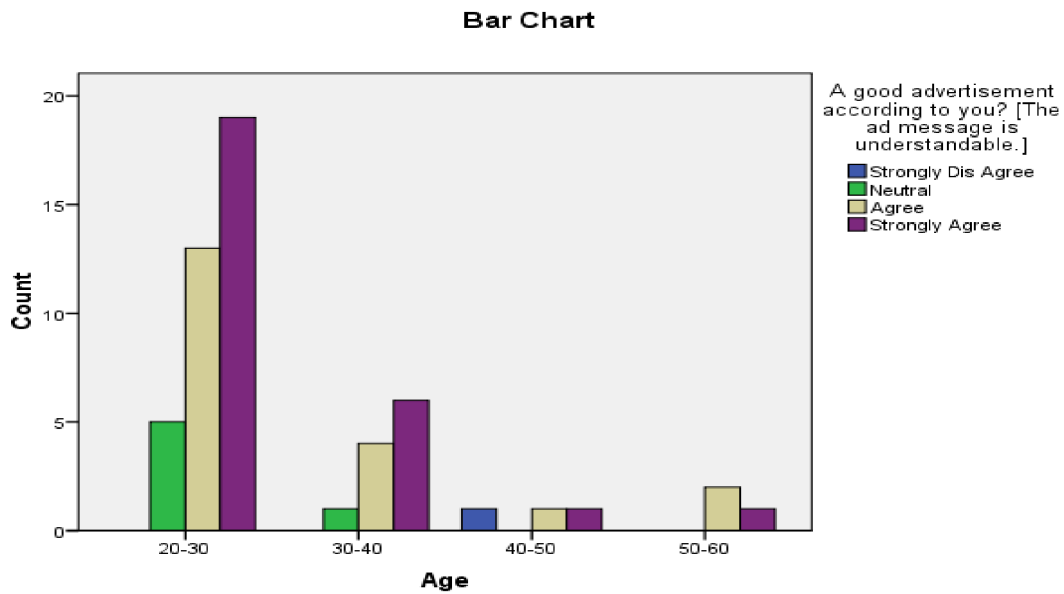
9. Age \* Point your experience with Rated for the best choice of experience with respect to online marketing?

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	16.182 <sup>a</sup>	12	.183	.291 <sup>b</sup>	.171	.411
Likelihood Ratio	16.360	12	.175	.273 <sup>b</sup>	.155	.390
Fisher's Exact Test	12.288			.418 <sup>b</sup>	.288	.549
N of Valid Cases	54					
a. 16 cells (80.0%) have expected count less than 5. The minimum expected count is .11.						
b. Based on 55 sampled tables with starting seed 726961337.						



**Table 9:**  $P=0.291 > 0.05$ , Non-Significant Results,  $H_0$ -Accepted,  $H_1$ -Rejected, Age factor has no significant influence on the consumer's experience towards Interruption Marketing

**10. Age \* A good advertisement according to you? [The ad message is understandable.]**



Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	19.051 <sup>a</sup>	9	.025	.091 <sup>b</sup>	.015	.167
Likelihood Ratio	8.396	9	.495	.491 <sup>b</sup>	.359	.623
Fisher's Exact Test	9.548			.527 <sup>b</sup>	.395	.659
N of Valid Cases	54					
a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is .06.						
b. Based on 55 sampled tables with starting seed 126474071.						

**Table 10:**  $P=0.091 > 0.05$ , Non-Significant Result,  $H_0$ -Accepted,  $H_1$ -Rejected, Age factor has no significant influence on the consumer’s perception towards Interruption Marketing

**Factor Analysis**

Descriptive Statistics			
	Mean	Std. Deviation	Analysis N
Age	1.48	.841	54
Gender	1.72	.452	54
Educational qualifications	1.52	.666	54
Respondents Marital status	1.70	.461	54
Household income per month.	2.52	1.501	54

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.597
Bartlett's Test of Sphericity	Approx. Chi-Square	107.729
	Df	15
	Sig.	.000

**Table 10:**  $P=0.597$  falls between the range 0.50-0.60,  $H_0$ -Rejected,  $H_1$ -Accepted, the demographical factors has a significant influence on the consumer’s decision making towards Interruption Marketing

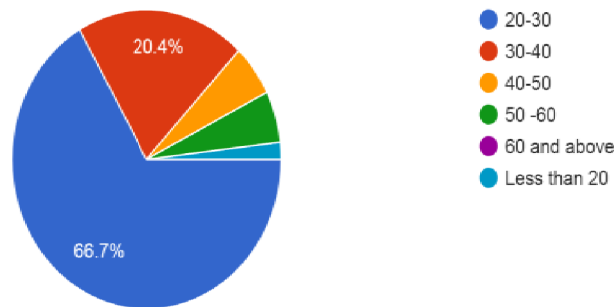
**ANOVA**

Interruption marketing will attract consumers, the ones with more knowledge about the products to spend more time and understanding on the task than those with less knowledge.

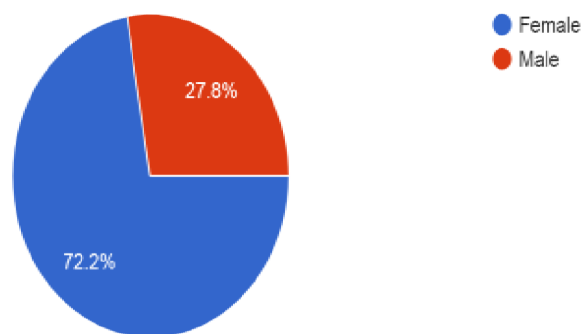
ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Your current employment status	Between Groups	5.104	4	1.276	2.293	.073
	Within Groups	27.266	49	.556		
	Total	32.370	53			
Educational qualifications	Between Groups	.751	4	.188	.405	.804
	Within Groups	22.731	49	.464		
	Total	23.481	53			
Respondents Marital status	Between Groups	.433	4	.108	.490	.743
	Within Groups	10.826	49	.221		
	Total	11.259	53			
Household income per month.	Between Groups	5.822	4	1.456	.628	.645
	Within Groups	113.659	49	2.320		
	Total	119.481	53			
Gender	Between Groups	1.174	4	.294	1.489	.220
	Within Groups	9.659	49	.197		
	Total	10.833	53			
Age	Between Groups	.720	4	.180	.240	.914
	Within Groups	36.762	49	.750		
	Total	37.481	53			

**Table 11:** P value is greater than 0.05, Non-Significant Result, H0-Accepted, H1-Rejected, Interruption Marketing has no significant influence in enhancing target market audience

Age  
54 responses

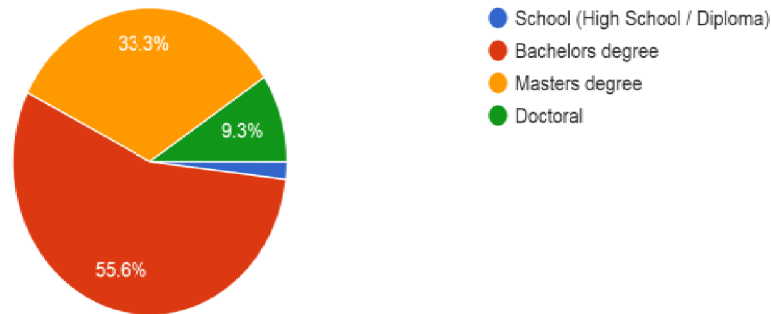


Gender  
54 responses



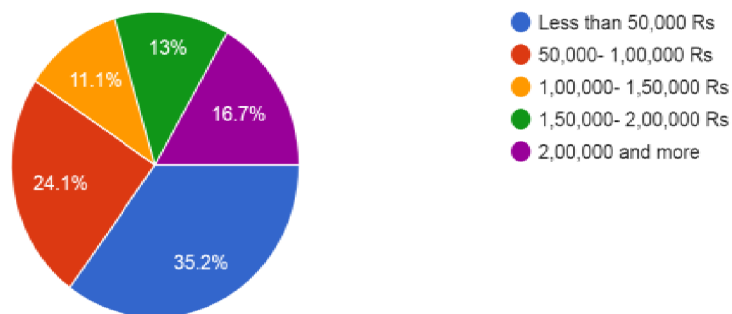
Educational qualifications

54 responses



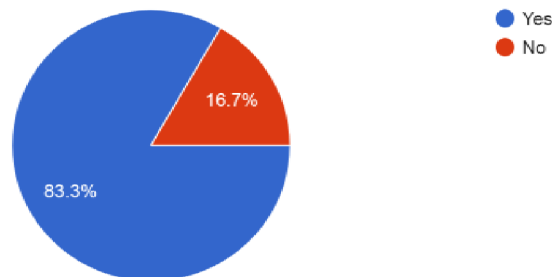
Household income per month.

54 responses



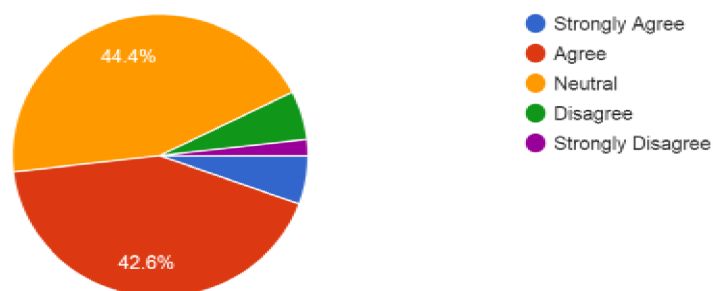
Have you made any purchase decisions when watched an advertisement online?

54 responses



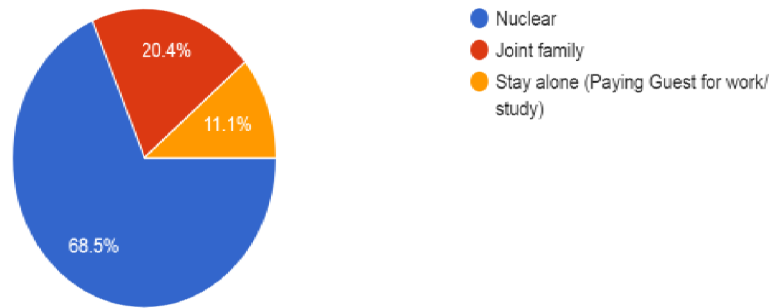
Do you feel online platforms are better than conventional offline purchases as they provide perspectives to consumer purchase decisions when watched ads online?

54 responses



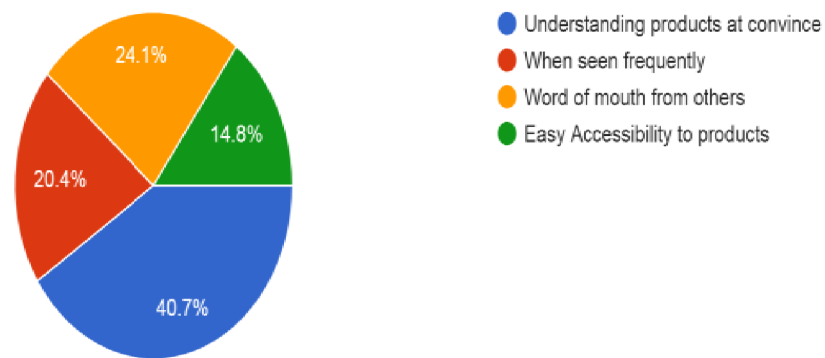
The family type of the respondents includes

54 responses



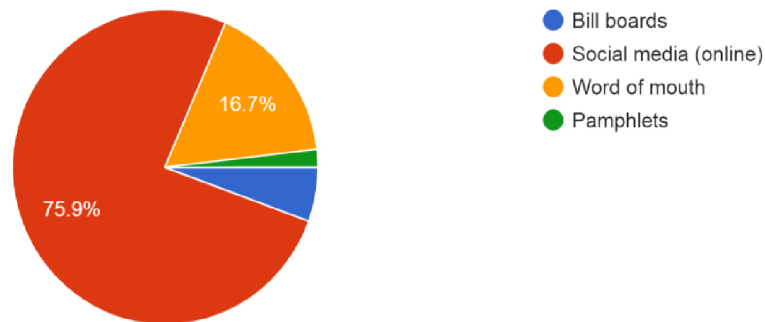
What motivates your purchases if accepted products when seen marketing online?

54 responses



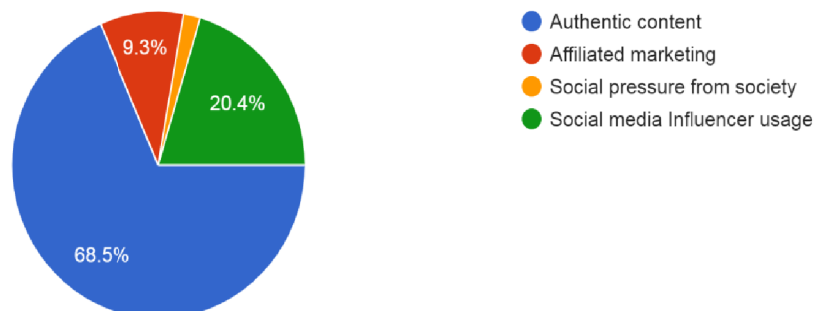
What method makes you BETTER remember about any advertisement?

54 responses



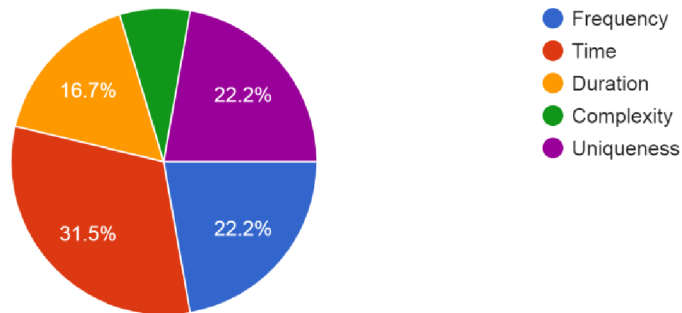
What types of marketing makes you feel more connected and loyal to the brand

54 responses

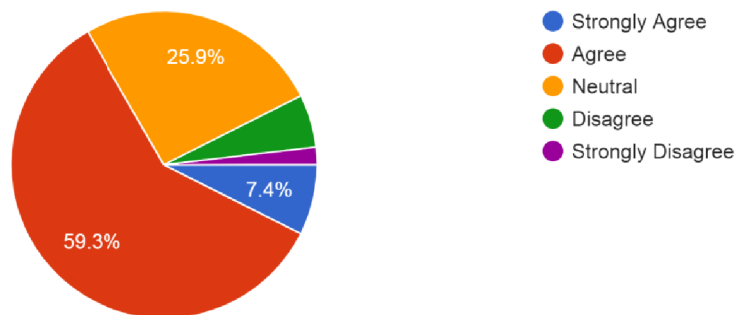




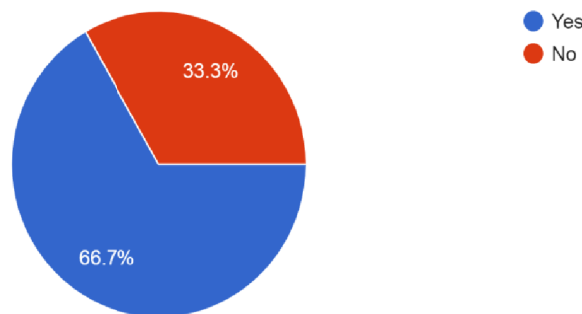
Interruption marketing disturbs audience in their experience online to communicate their brand."What is your opinion makes the experience of interruption marketing comfortable  
54 responses



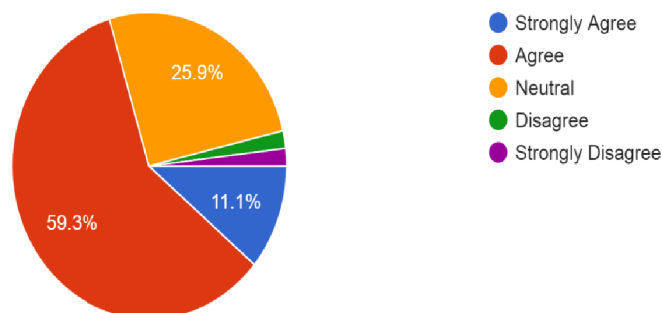
Interruption marketing will attract consumers, the ones with more knowledge about the products to spend more time and understanding on the task than those with less knowledge.  
54 responses



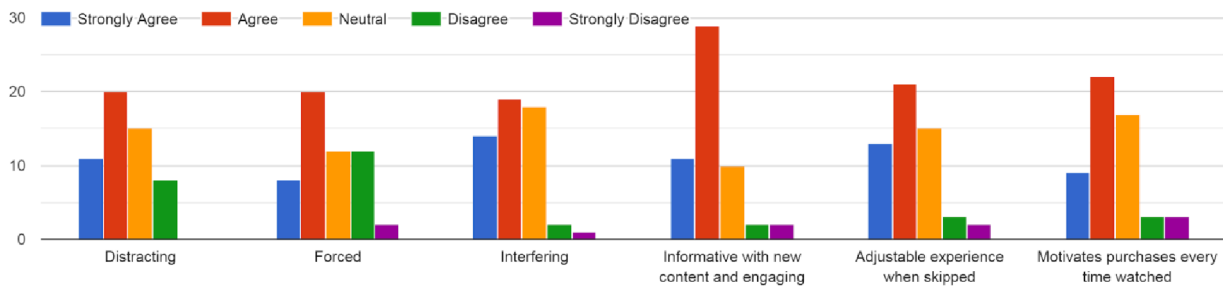
Does your purchase intentions change with the frequency of advertisement watched?  
54 responses



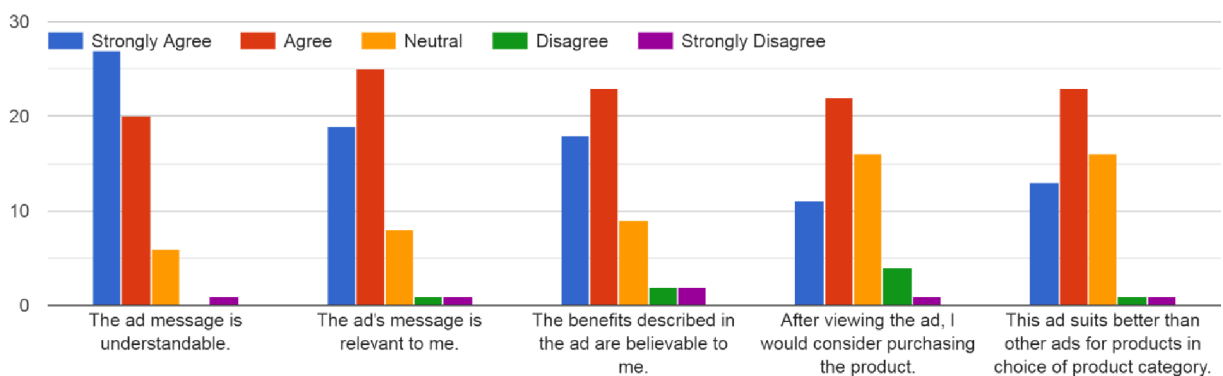
As interruption frequency increases, consumers with concrete goals (Actual reason reached any digital space) will spend less time on the task and ...reas those with advertisements that are attractive.  
54 responses



Point your experience with Rated for the best choice of experience with respect to online marketing?



A good advertisement according to you?



**Findings**

- Among the respondents, females, undergraduates, aged 23-30 are 83.3 % of the population of the data collected chose to purchase and increased frequency when watched online advertisements while this shows that there certainly is an added advantage to ones using digital marketing companies where content works and tool or techniques could be specified to a said demographic factors.
- 42.2% of respondents, previewed online advertisements are more convenient when they educate about new products and services than the conventional mode of advertisements like hoardings, leaflets, or any else.
- Yet some respondents perceived Interruption marketing as time consuming, when frequency is high, Duration could be tapped to reduce disruptions and gives unique choices to stick for a long period of time understanding intentions behind advertisements.
- 59.3 % of the respondents opinion that Interruption marketing will attract new

customer base with creative content and right systems helping people make a decision looking at your marketing message.

- 66.7% responded that purchase intension changes with the increase in frequency of advertisements.
- Respondents agreed that Interruption marketing is informative, motivating, inferring, should be authentic that matches their understanding or are connected to preference.
- Respondent strongly agreed that the good advertisement should be understandable, relevant, believable and considerable in making purchases
- The environment in which consumers expects to quit is when information is misleading which can be avoided by genuine content to build on will power to engage and retain people with intentions to serve better products.

**Suggestions**

- While utilizing interruption marketing method a shorter duration of few seconds is preferred.

- Companies can adopt to the skipped version of advertisement as option that would be more effective to avoid customers deny experience rather exit the platform with shifts to engaging themselves elsewhere.
- There are possibilities where better utilization of SEO and other enhanced software's that gauges the understanding for better advertise and communicate content to their audiences
- Rather drafting new tools and tactics its important in digital marketing to understand human to human in order to connect with their customer which still is challenge in marketing here, changing approaches is what suits the firms in specific that is helping people get results. This can motivate individuals to listen to the ads and further generate interest in purchases
- Multiple ways to reaching the bottom of the funnel can be used like digital affiliates and social media influencers as choosing few methods which are unexploited can be entrusted on to improve on success of digital marketing.

## Conclusions

Digital marketing is the choice commonly accepted among millennial generation where companies can en-cash on this mega trend created in the economy, that visually impacts regulars and is a level where firms can do more for themselves and giving freedom to consumers to choose from.

It is seen when firms are clear cut, precise and focused then digital eco system model drafted concentrating on being particular to the demography, selecting niche and liberty to set goals adds to the advantage in attracting consumers.

Direction and focus while communicating the ideal message is mostly accepted and is the next potential where companies must target on solving problems to attract leads like price points, context, which can help add more consumers in the business funnel.

Best way to learn is to teach, hence when right type of customers are tapped it is important to deliver results the next step is to nurture and build communities in the limited time learn more about what are the expectations today and engage consumers to be committed learners via the building on reducing blocks, while designing bonus factors to increase customer addition.

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## STOCK MARKET VOLATILITY: A SYSTEMATIC LITERATURE REVIEW

L. Shetty<sup>1</sup> and B. Philip<sup>2</sup>

<sup>1</sup>Department of Management, St. Claret College, Bengaluru

<sup>2</sup>Department of Management, Kristu Jayanti College Autonomous, Bengaluru  
lakshmishetty@claretcollege.edu.in, bijinalfy111@gmail.com

### ABSTRACT

*A systematic review is conducted on Stock Market Volatility an emerging area of research. This research exhibit a systematic review applying the database to observe and cross-reference, the paper also reviewed the GARCH family-based model stock market volatility. However, there is no comprehensive overview of the economic literature on this topic. This paper provides an overview of Stock Market Volatility literature, classified in terms of the Univariate GARCH model and Bivariate /Multivariate GARCH model to prevent ambiguity and risk in the stock market, it is vital to measure the efficiency of volatility. The purpose of the study was to conduct a systematic review analysis on volatility from the year 2008-2019 and in 36 different articles and papers. This article provides some rigorous literature reviews and, in the long run, to provide better research. These models are applied to daily stock index data where we assess their performances and conclude.*

**Keywords:** Stock Market, Volatility, GARCH family model

### 1. 1 Introduction

The systematic review is a critical appraisal with an analysis of research literature by adopting systematic and explicit accountable methods<sup>[1]</sup>.

The stock exchange of India has departed through an arrangement of innovative deviations since economic liberalization originated in 1991. The deviations were essential to alter the stock market in India into a more proficient one. Earlier, the stock exchange of a developing country like India was considered by under wide governmental regulation over its financial system and investment activity. Moreover, it was a feeble capital market, which was biased by a constraint on capital structure, fewer instruments and restraint on investment opportunities, below par developed securities market, vagueness in the supply of inputs and composite bureaucracy and regulatory standards.

The wax and wane of the financial markets are persistently in the news. Varied price fluctuations are a daily incidence of India's stock markets as investors react to economic, business, and political procedures. "Volatility" is a vital term accustomed to the stock markets and by many market professionals. Many investors use this term to accomplish their risk. Analysis of the stock market for the estimation of the risk has foreseen greater importance in India after liberalization. The usefulness of a

competent stock market in assembling resources is well-known. Volatility in the prices of the stock undesirably disturbs independent earnings and the health of the economy.

The mawkishness in the stock markets across the world is gloomy. This is replicated in the recurrent crashes in the share markets in all parts of the world. Financial markets in India perceive sharp instability at present as a consequence of the fallout in global markets. The fall is in line with the global benchmark indices as the national market typically footpaths the major global indices and the high Instability is likely to carry in proceeding future. Further, with foreign investors (FPIs) flying to the safety of dollar-backed assets from emerging markets has led to a Down Trend in the stock market of India.

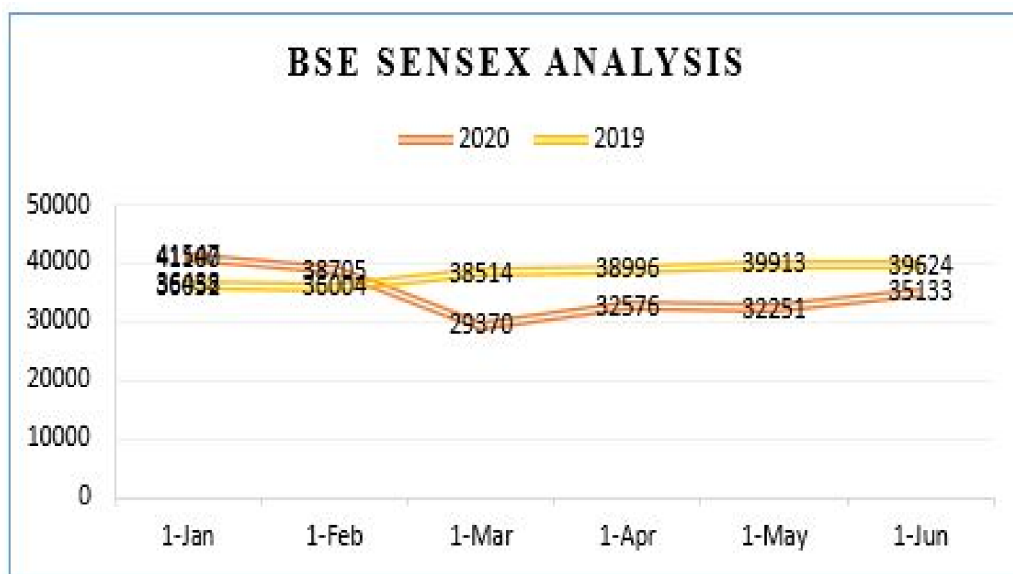
Because of the emergence of economic globalization within the 1980s, the liberalization of commodities, services, and transnational capital flows has integrated the globe as a whole, which ends up in interdependence of various country economies and coordinated development. Financial globalization is one in every of the core components of economic globalization in financial institutions, financial markets, and free capital flow. With the persistent development of technology and therefore the relaxation of economic regulations, international transactions became more



convenient and investment in transnational asset allocation has become more common. The combination deepening of financial markets makes financial markets dependent on various countries and has an impact on one another. On the other hand, financial globalization has promoted the economic cooperation and globalization process of various countries, on the opposite hand, increased the co-movement of monetary markets in various countries.

Volatility may prejudice the smooth operating of the financial system and undesirably affect economic performance. Similarly, stock market volatility also has numerous negative

consequences. One of the methods in which it miseries the economy is through its guidance on customer expenditure (Campbell, 1996; Starr-Mc Cluer, 1998; Ludvigson and Steindel 1999 and Poterba 2000). The influence of stock market volatility on consumer expenditure is related by way of wealth influence. Amplified wealth will drive up consumer spending. Market volatility is the portion of the price instability in the market. The higher the volatility, the more will be the variations in prices, not only in terms of occurrence but also in terms of metamorphosis. Low volatility means a steady and unswerving market.



**1.2 Motivation**

The motive of this paper is to furnish an outline of the academic research on Stock Market Volatility. Volatility is the standard of deviation of a price Sequence over the interval, generally restrained by the standard deviation of logarithmic returns. Even though The Researcher account for the scope of the stock market volatility as well as for the multidisciplinary nature of the subject, our main focus is on the economic literature based on GARCH & its variation Methods. This Systematic literature review is structured according to Econometric. The results of

precursory research are then discussed and open research questions are identified.

**1.3 Methodology**

This article was led by a systematic database search, surveyed by reference, as validated in Figure 1, which was amended from Geissdoerfer et al. [2]. The databases were selected for the literature search: Web-of-Science and Scopus. These databases were chosen as they have some greatest important reservoirs of research and are generally accustomed to literature reviews for business

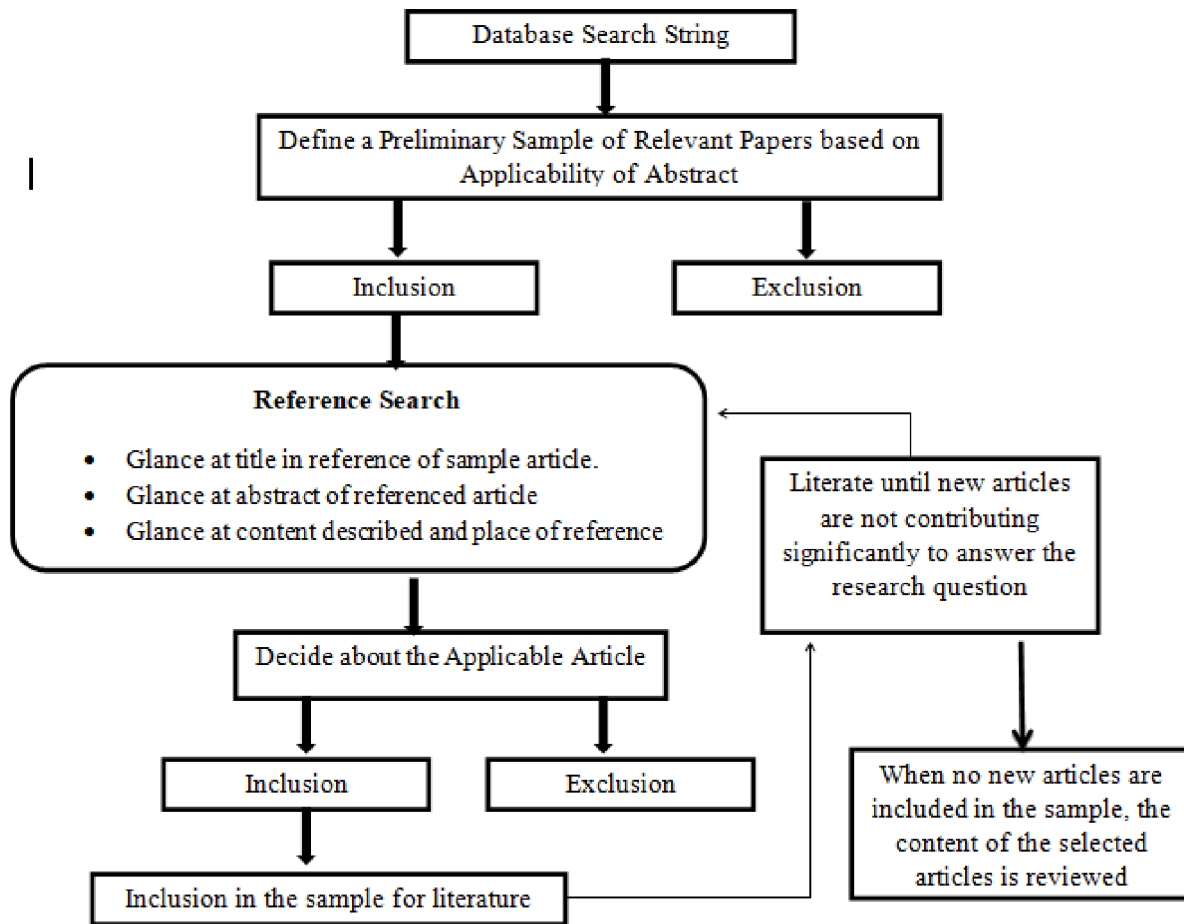


Figure 1: Literature review method.

At the first stage, a systematic literature quest is accomplished. The keywords that were too likely to be known in literature-related keywords with other research areas are acknowledged below. As demonstrated in Table 1 and Table 2, the search word and search string “market volatility”, “stock market volatility”, “GARCH family model\* for stock volatility”, “financial market volatility” in ‘Topic’ distinctly ‘Article title, Abstract, Keywords’ were accustomed to search for reviews of articles in English only and in the Scopus and Web-of-Science databases. The asterisk (\*) is normally accustomed to indicate that widens a search by locating words that initially the similar letters

**Review questions and Methodology**

The review question is what does the Indian and international literature state about the

Econometric Models accustomed to measure Stock Market Instability?

A methodology was using the search terms to find the literature which is demonstrated in the below Table.

Table 1: Search Words

Main Concepts	Search Terms/ Keywords
Stock Market Instability in Indian and International context	Stock Market Volatility, Market Volatility, GARCH & its variation

**Search Strategy**

A detailed search of the published national and international literature was conducted using bibliographic databases, academic journals, and electronic peer-reviewed journals.

Academic journals and books were also referred for relevant studies. Academic journals published from the previous 12 years were studied.

Table 2: Literature search strings for the database.

Search String	Search Field	Scopus	Web-of-Science	Last Updated
Stock market Volatility	Topic/Article title, Abstract, Keywords	6583	7685	30 June 2020
Market volatility	Topic/Article title, Abstract, Keywords	15892	14776	30 June 2020
Financial market volatility	Topic/Article title, Abstract, Keywords	3412	2649	30 June 2020
GARCH family model* for stock volatility	Topic/Article Title, Abstract, Keywords	277	389	30 June 2020

### Study Selection

At the second Stage, The literature collected were inspected to inhibit according to inclusion criteria for review. Ancestry approach of the search was espoused on each selected study by inspection of the cite of reference for the significance of the research.

### Study Selection Process

In the third stage, the ultimate sample was embraced, synthesized, and accumulated into the literature review presented in the consequent section. The method was revised a few days before the submission. The titles and the abstract of studies were assessed concerning the inclusion and exclusion criteria listed below in Table 2.

Table 3: Details of inclusion criteria and exclusion criteria for studies.

Feature	Inclusion Criteria	Exclusion Criteria
Publication Category	Academic journals, thesis, peer-reviewed articles.	Magazines, grey literature, unpublished literature, conference minutes, video transcripts.
Publication Language	English	Other international and regional languages
Publication Period	2008-2019	Before 2010
Literature Subject	Stock Market Volatility, Market Volatility, GARCH, and Stock Return.	Co-movement of shares, Market Return

### Review of Different Studies

In this article, The Researcher evaluates the content of the articles recognized, structured according to the main Econometric model accustomed to determine the volatility in the stock market. Categorized according to the research significances.

GARCH models have a robust background, in recent times obligating pass through 30 years of the firm progress of GARCH-type models for exploring the volatility of market data. The literature of entitled papers were huddled in two classifications, the first classification containing GARCH and its variations model, and the second classification containing bivariate and other multivariate GARCH models, curtailed in the table format for prospective studies.

The symmetry of GARCH Models: In ARCH, GARCH, IGARCH processes, the consequence of errors on the conditional inconsistency is symmetric, i.e., a positive error has the same Sequel as a negative error. However, in finance, positive and negative news have different Sequel on the volatility. The positive shock has a smaller Sequel than the negative shock of a similar magnitude.

EGARCH, for the asymmetric relation between many financial variables and their volatility changes and to relax the restriction on the coefficients in the model, Nelson (1991) proposed the EGARCH process.

### Share Market Volatility With A Focus On Garch & Its Variations Models

GARCH models are premeditated to detention definite features that are usually associated with financial time series: heavy tails, volatility

huddling, and leverage Sequel. Time series that exhibit a fat tail distribution is often referred to as leptokurtic. Also, financial time series generally demonstrate a characteristic known as volatility clustering, in which huge

fluctuations tend to follow huge fluctuations, and minor fluctuations tend to follow minor fluctuations. In either case, the fluctuations from one time to the next are usually unpredictable

Table 4: Literature on Share Market of GARCH & its variations models

Author and Year	Theoretical and conceptual concept	Econometric Models	Result
Alberg, D, Shalit, H, and Yosef(2008) <sup>[4]</sup>	stock market volatility using asymmetric GARCH model	GARCH, EGARCH, and APARCH model	The author concludes that the asymmetric GARCH model with heavy-tailed densities enhances a comprehensive estimation for estimating conditional variance. The EGARCH model using a skewed Student- <i>t</i> distribution is the most booming for forecasting TASE indices.
Girard, E, Omran, M.(2009) <sup>[5]</sup>	trading volume and stock price volatility	TGARCH	The article brings to light the information size and direction have an insignificant Sequel on conditional volatility and, consequently, the presence of noise trading and hypothetical bubbles is suspected. It revealed that the persistence in volatility is not eliminated when lagged or contemporaneous trading volume is incorporated into a GARCH model. It laid out that, when the volume is further broken down into its expected and unexpected components, volatility tenacity drops.
Neokosmidis, I. (2009) <sup>[6]</sup>	Econometric Analysis of Realized Volatility	ARCH; GARCH; EGARCH	The best-tailored model for all the data is the EGARCH(1,1) in comparison with an ARCH(6) or ARCH(4) and a GARCH(1,1). Also, they observed that the periods between (28/07/2002- 01/08/2003) and (11/08/2007-28/07/2008) are characterized by high volatility for all the series. In conclusion, The Researcher formulates and estimates multivariate volatility models, such as DVEC( 1, 1), with a view of how the markets are associate with each other through time-varying covariance coefficients.
Tripathy, T. And Gil-Alana, L.A.(2010) <sup>[7]</sup>	volatility models for forecasting stock market returns	(i)Historical/Rolling Window Moving Average Estimator (ii) Exponentially Weighted Moving Average (EWMA), (iii) GARCH models, (iv) Extreme Value Indicators (EVI) and (v) Volatility Index (VIX).	As other research suggests, the Researcher finds that these models perform best when they are applied to high-frequency data such as daily or intraday data. EVIs give the best forewarning performance accompanied by the GARCH and VIX models.
Liu, H.C. and Hung, J.C.(2010) <sup>[8]</sup>	stock index volatility	(GARCH-N, GARCH-t, GARCH-HT, and GARCH-SGT) and asymmetry-type (GJR-GARCH and EGARCH) volatility models through the superior predictive ability (SPA) test.	GJR-GARCH model achieves the most accurate volatility forecasts, closely accompanied by the EGARCH model. Such proof strongly demonstrates that modeling asymmetric elements is more vital than specifying error distribution for improving volatility prophecies of financial returns in the presence of heavy-tails, leptokurtosis, skewness, and leverage Sequel.

Joshi, P.(2010) <sup>[9]</sup>	Modeling volatility	BDS Test, ARCH-LM test, and GARCH (1,1) model	The article suggests that the persistence of volatility in the Chinese stock market is more than the Indian stock market.
Wong, A and Cheung, K.Y.(2011) <sup>[10]</sup>	asymmetries in stock market volatility	GJR-GARCH model	Empirical results demonstrate that both the EGARCH and AGARCH models can disclose the asymmetric consequences well in response to the one other Positive news and negative news.
Chang, C.H, Cheng, H.I and Huang, I.H.; Huang, H.H. (2011) <sup>[11]</sup>	volatility asymmetry and over reaction circumstance	GJR-GARCH	This article demonstrates that return volatility discloses the asymmetric circumstance, and the holding span returns on US index futures from the opening of the US index futures electronic trading to the opening of the Taiwanese stock market are a vital citation for investors in the Taiwanese stock market. Additionally, the article demonstrates a clutch of the Taiwan Stock Exchange Capitalization Weighted Stock Index to an extreme price surge of E-min NASDAQ 100 Index futures at the opening of the Taiwanese stock market.
Koutmos, D.(2012) <sup>[12]</sup>	stock prices, volatility dynamics and beta risk	Volatility estimation AR (1), EGARCH (1,1)	This paper brings to light the market beta risk is priced in the time-series activities of stock prices and draws positively to surges in non-unsystematic risk. The asset pricing inference here is that investors demand a far up required rate of return during leaps in aggregate stock market volatility. Finally, this article pinpoints which industries manifest the highest degree of volatility tenacity and how this Sequel their particular beta estimates.
Sen and Bandhopadhyay (2012) <sup>[13]</sup>	Dynamic return and volatility spillovers using AR(p)-GARCH(1,1) model	AR(p)-GARCH(1,1) model	Bi-directional concurrent, as well as zestful volatility spillover Sequel between the two markets, is perceived barring in the post-crisis span when no zestful volatility has been reported from the stock market of Indiato stock market of US.
Maheshchandra, J.P. (2012) <sup>[14]</sup>	Long memory property in return and volatility	ARFIMA, FIGARCH models	The result of this article demonstrates an ARFIMA model indicates the truancy of long entitled in return Sequence of the stock market of India. The result of the FIGARCH model suggests strong corroboration of long entitled in the conditional variance of the stock indices. The long memory property of the BSE market is disclosed to be stronger than NSE.
Hou, A.J.(2013) <sup>[15]</sup>	Asymmetry Sequel of shocks and stock markets volatility	GARCH family models.	The article suggests that an asymmetric Sequel of bad news subsists in the Chinese stock markets. Also, contrasted with other parametric models, the generalized additive nonparametric model discloses a better outcome for return volatility augurs, especially for the out-of-sample forecast. The results from this paper have vital inferences in risk management, portfolio selection, and hedging strategy.
Purohit, H, Chhatwal, H and Puri, H.(2014) <sup>[16]</sup>	stock market volatility	Chow test to check structural breakpoints in price data, ADF test to check the stagnant, Johansen's co-integration test for examining the long term relationship, and GARCH(1, 1) model to check the volatility in spot and the future prices of crude oil.	The findings of this article demonstrated that there are systematic conjuncture in the defined data and the Sequence extracted from the fortune prices and cash market prices for crude oil were not stagnant in the level form, but there is proof of stagnant in the first change form. Long duration accord between the spot and future price Sequence is also perceived. Empirical results also discovered that in the span during the crisis and after the crisis there is the tenacity of high volatility. However, the span before the crisis demonstrates less volatility than the other two spans.



Shalini, A.P. (2014) <sup>[17]</sup>	the stock market volatility of sectors	ARMA (1,1), and GARCH (1,1) models	Return of the BSE sectoral indices reveals the features of normality, stationarity, and heteroscedasticity
Gupta, R.K., Jindal, N and Gupta, A. (2014) <sup>[18]</sup>	Conditional volatility and stock market behavior	GARCH, TGARCH, and EGARCH models	The result of this article exhibits that volatility differs over the period and constant variance hypothesis is incompatible. The empirical evidence indicated the presence of time-varying volatility.
Banumathy, K and Azhagaiah, R.(2015) <sup>[19]</sup>	Modeling stock market volatility	Both symmetric and asymmetric models GARCH (1,1)	The asymmetric Sequel (leverage) captured by the criterion of EGARCH (1,1) and TGARCH (1,1) models demonstrates that negative shocks have notable Sequel on conditional variance (volatility).
Jebran, K. and Iqbal, A.(2016) <sup>[20]</sup>	stock volatility	GARCH	This paper demonstrates noteworthy bidirectional volatility scattering between the equity markets of particular countries: Hong Kong and Sri Lanka, China, and Sri Lanka. The noteworthy simplex scattering of stock market volatility is found to be particularly from India to China, Sri Lanka to Japan, Pakistan to Sri Lanka, and Hong Kong to India and Japan.
Yang, J, Feng, Y and Wang, H.(2016) <sup>[21]</sup>	stock market volatility	GARCH, EGARCH, APARCH, and PTTGARCH models	The PTTGARCH models both with a single scheme and Markov scheme switching outshine other models in estimation and prediction of the volatilities of the return strings within the sample and out-of-sample.
Varughese, A and Mathew, T.(2017) <sup>[22]</sup>	Asymmetric volatility and foreign portfolio investments	ARCH family models; GARCH, E-GARCH, and TARCH.	The results of the study committed the extant of volatility clustering and leverage Sequel in the stock market of India. Hence, it was discerned from the study that the investment activities of FPIs have had a noteworthy impact on the volatility of the stock market of India.
Pati, P.C, Barai, P and Rajib, P.(2017) <sup>[23]</sup>	stock market volatility	GARCH family models	The study brings to light the volatility index is a biased predicts but possesses pertinent information in explaining future reap volatility. The results of enclosing regression inference that implied volatility index accommodates additional information pertinent for predicting stock market volatility far off the information accommodated in the GARCH family model forecasts.
Bhowmik, R., Ghulam, A and Wang, S. (2018) <sup>[24]</sup>	stock market volatility	GARCH Model	This paper demonstrates that volatility and returns spillovers acquit very adversely over time, during the pre-crisis, crisis, and post-crisis spans. Critically, Asian emerging stock markets interlinkage is minor before the global financial crisis span. The return and volatility spillover indices touch their particular historical crest during the global financial crisis 2007~2008, nevertheless Bangladeshi market faces this state in 2009~2010.
Kim, M and Lee, S. (2018) <sup>[25]</sup>	conditional volatility	GARCH family models & PTTGARCH mode	To evaluate the method, The Researcher carried out a facsimile study and real data analysis using the return strings of the Google stock price and DowJones index.
Amudha, R and Muthukamu, M.(2018) <sup>[26]</sup>	Modeling symmetric and asymmetric volatility	GARCH family models	This article reported proof of volatility, which demonstrates the clustering and persistence of stocks. The return strings of the stocks selected for the study were found to react to positive and negative news asymmetrically.

Kapusuzoglu, A and Ceylan, N.B.(2018) <sup>[27]</sup>	stock market volatility	GARCH Model	this article exhibits that whenever the trading volume is added to the variance equation, the model demonstrates the extent of a good and statistically noteworthy connection between trading volume and the volatility of the sector indices recommending that the number of information events makes the variability of the sector indices to surge. The volatility persistence also drops in the case that the variance equation covers the volume data.
Dixit, J and Agrawal, V.(2019) <sup>[28]</sup>	stock market volatility	GARCH family models	The study recommends that the P-GARCH model is most suitable to prophesy and foretell the stock market volatility for BSE and NSE markets.

The univariate GARCH model is for a one-time series. Table 4 explains the review of GARCH and its variations models. The univariate GARCH model is for a one-time series.

The term asymmetric volatility arises from the observation that the researcher perceives higher volatilities (higher risk)during the market slump than in the market upsurges. The most collective revealed factors that subsidize such risk actions in increased market leverage that was shaped to be a negative shock. Although, there are also other components, like alleged risk sense of balance in diverse stages of market behavior.An asymmetry waves of a negative shock. For that reason, the GARCH model has been augmented into models for instance the threshold GARCH (TGARCH), the asymmetric GARCH (AGARCH), and the Exponential GARCH (EGARCH).

Though GARCH model is not a comprehensive model and thus could be developed, these developments are perceived in the manifestation of the assortment that uses GARCH as its key element. There are various accompaniments of the standard GARCH family models. Nonlinear GARCH (NGARCH) was proposed by Engle and Ng<sup>[29]</sup>. The conditional covariance equation is in the form:  $\sigma_t^2 = \gamma + \alpha(\varepsilon_{t-1} - \vartheta\sigma_{t-1})^2 + \beta\sigma_{t-1}^2$ , where  $\alpha, \beta, \gamma > 0$ . The integrated GARCH (IGARCH) is a restricted version of the GARCH model, where the sum of the entire parameters sum up to one and this model was coined by Engle and Bollerslev<sup>[30]</sup>. Its spectacle strength is initiated by random level shifts in

volatility. The simple GARCH model stalls in narrating the “leverage Sequel ” which are perceived in the financial time strings data. The exponential GARCH (EGARCH) coined by Nelson<sup>[31]</sup> is to model the logarithm of the variance rather than the level and this model accounts for an asymmetric rejoinder to a shock. The GARCH-in-mean (GARCH-M) model adds a heteroscedasticity phrase into the mean equation and was coined by Engle et al.<sup>[32]</sup>.

The quadratic GARCH (QGARCH) models can knob asymmetric Sequel s of positive and negative shocks and this model was coined by Santana<sup>[33]</sup>. The Glosten-Jagannathan-Runkle GARCH (GJR-GARCH) model was Coined by Glosten et al.<sup>[34]</sup>, its opposite Sequels of yin and yang shocks take into consideration of the leverage fact. The threshold GARCH (TGARCH) model was coined byZakoian<sup>[35]</sup>, this model is also generally accustomed to handling leverage Sequel s of yin and yang news on volatility. The family GARCH (FGARCH) model was coined by Hentschel<sup>[36]</sup> and is an anthology model that is a mix of other symmetric or asymmetric GARCH models. The COGARCH model was Coined by Klüppelberg et al.<sup>[37]</sup> and is essentially the stochastic volatility model, being a delay of the GARCH time strings of conception to continuous time. The power-transformed and threshold GARCH (PTTGARCH) concept was coined by Pan et al.<sup>[38]</sup>, this concept is very lithe and, under certain circumstances, consist of numerous ARCH/GARCH concepts.

## Share Market Volatility With A Focus On bivariate And Multivariate Garch Models

Table 5: Literature on Share Market of Bivariate and Multivariate GARCH models.

Author and Year	Theoretical and conceptual concept	Econometric Models	Result
Rao, A(2008) <sup>[39]</sup>	stock market volatility	MGARCH and VAR methodology to analyze the counteraction and volatility spillover across coming to view AGCC markets and developed markets	This article inferences for security pricing within AGCC markets, for hedging and another trading plan of action, and regulatory policies conducted within financial markets. Originality/value - This paper also provides empirical evidence and arguments for investors, both individual and foreign institutional, to adjust their portfolios through the assortment.
Yong, F.T.; Holmes, M.; Choi, D.(2011) <sup>[40]</sup>	stock market volatility and foreign exchange markets	BEKK-GARCH	This paper revealed that news shocks in the Japanese currency market account for volatility channeling in 8 of the 10 industrial sectors considered. Evidence was also found of noteworthy asymmetric Sequel in 5 of these industries.
Athukoralalage, K.P.I.(2011) <sup>[41]</sup>	stock market volatility	M-GARCH Model, Diagonal BEKK model ARCH, and GARCH techniques	Positive return spillover Sequel is only unidirectional and runs from both US and UK (the bigger markets) to Australia and Singapore (the smaller markets). Shocks come to light from the US market can Sequel on all of the other markets in the sample.
Kouki, I, Harrathi, N and Haque, M.(2011) <sup>[42]</sup>	stock market volatility	VAR Framework one lag, BEKK (1,1) model	International financial markets are not desegregated in all the sectors. Results find that the three highly desegregated sectors are banks, real estate, and oil.
Walid, C, Chaker, A, Masood, O and Fry, J(2011) <sup>[43]</sup>	stock market volatility	Markov-Switching EGARCH model	Results differences between two different mechanisms in both the conditional mean and the conditional variance of stock returns. The first corresponds to a high mean-low variance regime and the second regime is featured by a low mean and high variance. Moreover, The Researcher provides strong proof that the connection between stock and foreign exchange markets is regime dependent and stock-price volatility draws asymmetrically to events in the foreign exchange market.
Al-Zeaud and Al-shbiel (2012) <sup>[44]</sup>	Spillover Sequel through DCC form of EGARCH model	DCC form of EGARCH model	The empirical evidence recommends that there is spillover Sequel from the London market to New York, Paris, and Frankfurt stock markets, Within the Europe Stock Markets there are unidirectional volatility spillover Sequel from Frankfurt to Paris and from Paris to London. Volatility surges induced by negative news are communicated more strongly than volatility drops.
Panda and Deo (2014) <sup>[45]</sup>	Stock market volatility using asymmetric GARCH model & EGARCH Model	GARCH and EGARCH models	This article proves that the post-crisis span has higher asymmetric and volatility spillover as compared to other spans. This result would help the investors, policymakers as well as portfolio managers for making appropriate investment decisions.

Peng, C.L, Chung, C.F, Tsai, C.C and Wang, C.T.(2017) <sup>[46]</sup>	stock market volatility	Bi-EGARCH model	The results revealed integration between the two indices, suggesting a long-term, stable relationship between the two stock markets. An examination of inner-market Sequel demonstrated that the returns on stock indices in the two markets are greatly impacted by the returns of previous periods. Also, a cross-market Sequel investigation demonstrated that past returns on NIKKEI were found to affect the current returns on TAIEX noteworthy, while the past returns on TAIEX had no impact on the current returns on NIKKEI. A volatility analysis revealed the existence of an inner-market leverage Sequel, a bad cross-market volatility spillover Sequel, and a mutual price leading Sequel. According to the relative asymmetry analysis results, the two stock markets are more sensitive to falling than rising trends in the counterpart market.
Matei, M, Rovira, X and Agell, N.(2019) <sup>[47]</sup>	Bivariate volatility modeling	Bi-variate GARCH, CC C-MGARCH model, BEKK-GARCH model DCC-MGARCH model	The result indicates that a forecasting improvement using bivariate models over those that do not include night volatility estimates.
Singh, P, Kumar, B and Pandey, A.(2019) <sup>[48]</sup>	stock market volatility	AR-GARCH	This article exhibits that there is greater regional impact among Asian markets in return and volatility than with European and US. The Japanese market, which is first to open, is the compass by US and European markets only and pompous most of the Asian Markets. Also, a high degree of correlation among European indices namely FTSE, CAC, and DAX is perceived. US market is impacted by both Asian and European markets.

The bivariate model analysis was accustomed to determine if there is any relationship between two different variables. Multivariate GARCH models are accustomed to model/forecast volatility of several time strings of when there are some linkages between them Table 5 explains the analysis of Bivariate and Multivariate GARCH models.

A multivariate model would generate a more dependable model than distinct univariate models. The vector error correction (VEC) models are the first MGARCH model which was coined by Bollerslev et al. <sup>[49]</sup>. This model is typically related to subsequent formulations. The model can be expressed in the following form:  $vech(H_t) = C + \sum_{j=1}^q X_j vech(\epsilon_{t-j} - \epsilon_{t-j}) + \sum_{j=1}^p Y_j vech(H_{t-j})$  where  $vech$  is an operator that stacks the columns of the lower triangular part of its argument square matrix and  $H_t$  is the covariance matrix of the residuals. The structured version of the VEC model is the DVEC model and was also endorsed by Bollerslev et al. <sup>[49]</sup>. Compared to the VEC model, the approximation method continued far additional slickly in the DVEC model. The Baba-Engle-Kraft-Kroner (BEKK) model was

coined by Baba et al. <sup>[50]</sup> and is an innovative parameterization of the conditional variance matrix  $H_t$ . The BEKK model undertakes the positive assurance of the conditional covariance by conveying the model in a way that this property is implied by the model structure. The Constant Conditional Correlation (CCC) model was endorsed by Bollerslev <sup>[51]</sup>, to primarily model the conditional covariance matrix circuitously by estimating the conditional correlation matrix. The Dynamic Conditional Correlation (DCC) model was coined by Engle <sup>[52]</sup> and is a nonlinear mixture of univariate GARCH models and also a comprehensive variety of the CCC model. To astound the inconveniency of a massive number of parameters, the O-GARCH model was endorsed by Alexander and Chibumba <sup>[53]</sup> and consequently evolved by Alexander <sup>[54, 55]</sup>. Furthermore, a multivariate GARCH model GO-GARCH model was coined by Bauwens et al. <sup>[56]</sup>.

**Conclusion**

Looking forward, one should be very open-minded when investigating stock market data,

since it is challenging to identify and model all the factors accountable for market volatility. Maximum of the time, the interaction among actors of volatility makes it challenging to detach their defined impact, while the economic theory may perhaps remain hushed as to why markets have headed for a definite direction.

The univariate models only allow investigating a financial string of at a time. But in the real-life situation, the fact to scrutinize only a Sequence at a time is inefficient. The curiosity for such a model is to inspect and evaluate the numerous relationships that have a different Sequence between them. To estimate more financial Sequence to evaluate their correlations and volatility transfers, it must use the multivariate GARCH. GARCH models are premeditated to seizure certain physiognomies that are commonly accompanying financial time series: heavy tails, volatility huddling, and leverage outcome. Furthermore, financial time Sequence generally reveals a representative known as volatility huddling, in which huge changes incline to follow huge variations, and minor variations tend to follow minor variations. In either case, the variations from one span to the next are characteristic of unpredictable

The Researcher has observed different traditions of calculating volatility and scrutinized some of the empirical results. Our simulations indicate that even though the best suitable model does not all the time provide the best forthcoming volatility estimates the metamorphoses are so inconsequential that the estimates of the best suitable model can be accustomed to assurance. The empirical application to stock markets also point out that a non-normal error distribution tends to improve the volatility forecast of returns

Concluding, there is no homogeneity of the optimal of the “best” model among all the authors, as their studies vary in the optimal of the stock market, chosen length of scrutinized data, and stipulations of preferred forecasting models. This does educate the issue of incapability to specifically say which model is superior. The best model is that minimizes the root mean square error. The volatility forecast estimates of the best suitable model can be unflinching accustomed to volatility forecasting. Moreover, the empirical studies exhibit that a skewed error distribution leaves behind other error distributions with regards to the out-of-sample volatility forecasting.

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## A STUDY ON CLOUD BASED HUMAN RESOURCE MANAGEMENT SYSTEM

**T. Uma Devi**

Dept. of MBA, AMC Engineering College, Bangalore  
dr.umadevi.tumu@gmail.com

### ABSTRACT

*An appropriate HRMS takes care of numerous HR functionalities including recruitment, compensation, attendance, payroll, performance management, succession planning and more. Making it cloud-based is another milestone marked to achieve excellence in terms of more storage, security with anywhere and anytime access. A cloud-based HRM has the ability as it can be accessed from anywhere in the world via a secure sign on process.*

*This explorative paper focuses on to elaborate the importance and application of cloud based HRMS and why to invest in a cloud based HRMS. This paper discussed about the implications of turning to Cloud-based HRMS. Factors contribute to a successful HR Cloud transformation also analysed in this paper. A full-fledged human resource and management system enables seamless workflows within the organization, eliminating the data redundancy issues. This not only eases employees to manage their database, but also gives HR department an improved insight of database. With an end-to-end, cloud HRMS, can boost employee performance while making them the best workforce to reckon with.*

**Keywords:** HRMS; HR functionalities; Cloud based HRM; Data base; and Cloud HRMS

### Introduction

A cloud HR system unifies data for a centralised platform that offers better, quicker and easier HR management.

These systems allow us to manage everything from payroll to training all in one place to help to save time and energy.

**HRMS** stands for Human Resource Management System. HR work has become more complex and involved today than it ever has been. There's so much that goes into the management of employee information, which is used for everything from recruiting and hiring to training, evaluations, and so much more.

This is why many companies are now using an HRMS (Human Resource Management System) a combination of systems and processes that connect human resource management and information technology through HR software. HRMS can be used in candidate recruiting, payroll management, leave approval, succession planning, attendance tracking, career progression, performance reviews, and the overall maintenance of employee information within an organization.

The automation of repetitive and time consuming tasks associated with human resources management frees up some of the companies most valuable employees and allows the focus to shift to culture, retention, and other highly impactful areas.

### Review of literature

- Isaac ODUN AYO, Sanjay Misra (2017), "With the emergence of cloud computing, it has become easy to store large volumes of data in the cloud to enhance human resource management, based on the elasticity and scalability that cloud computing offers."
- Abhishek Upadhyay (2019), "As technology is taking an upward trajectory, access to innovation is getting easier for companies. Irrespective of their size, organizations can make use of cloud HR software without investing heavily in it. Moving the core HR processes to the cloud provides organizations with added agility and flexibility."

### Research questions

The following research questions have been determined based on the literature review:

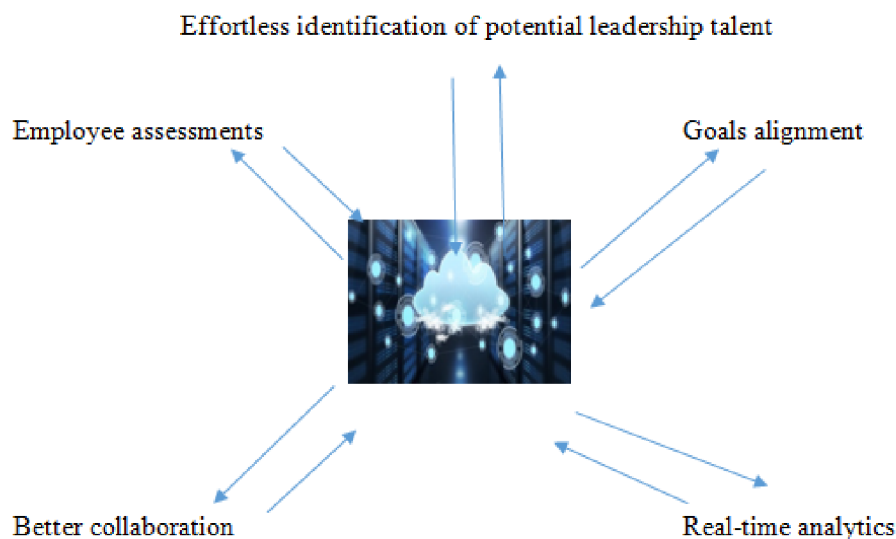
- **Question 1:** Which factors from an HR perspective contribute to a successful HR Cloud transformation?  
Also considered, HR digitization strategies, drivers, and obstacles; Prioritizing HR processes by stakeholders, etc.
- **Question 2:** Do companies use HR key performance indicators for HR process control/optimization

And does the new HR Cloud technology contribute to this by providing new KPIs? HR KPIs

### Objectives of the study

- To know about Why to invest in a cloud based HRMS
- To know the Implications of Turning to Cloud-based HRMS
- To find out factors contribute to a successful HR Cloud transformation

### The following reasons are identified to Invest in a Cloud Based HRMS



Source: Literature review

### Effortless identification of potential leadership talent

Succession planning is the core HR activity that one cannot take as approved easily. The people in leadership roles of the organization propel the forward movement of the organization. Hence choosing the right talent in the right time is the significant first step. HR technology has made this task simple and easy by enhancing HRs ability to collaborate in online workspace wherein they can identify key positions and their requirements.

### Employee assessments

The prominent function that HR of any organization has to serve, is to build a culture and work environment that instils motivation amongst employees and helps to retain the top performers. Likewise, they also need to deal with the employees whose deliverables are not what company expects, ideally with the help of

### Methodology

The nature of this study is scientific based i.e., systematic with the purpose of investigation based on measurable evidence. This paper also an explorative and organized study with logical sequences. Fifteen companies are observed and studied for this paper.

positive approaches like training or performance boosting programs.

### Goals alignment

Managers can define year wise goals for their team members using computerised HRMS software. They can also view difference in 'assigned goals' and 'achieved goals', thereby making performance reviews easier. Present HR solutions allow users to set SMART goals (Specific, Measurable, Assignable, Realistic, Timely goals).

### Better collaboration

Collaboration within an organization can be stabilized with transparency across roles, levels, skills and functions. The most demanded cloud HRMS is the one backed with a centralized database that contains much more than basic information about joining date and pay scale.



HR data with a centralized repository comprises the login credentials of the employees through which they can update their information, make leave requests as per available credits, share their feedback and so on. This allows both employees and HR to go beyond traditional spreadsheets and collaboratively process the related activities like updating tax status, performance review, and compensation management etc.

### Real-time analytics

HR Technology has brought solutions that enhance manager's ability to access reports for identification of trends and analysing them in the organization, be it leave trends or recruitment trends or new development opportunities.

A full-fledged human resource and management system enables seamless workflows within the organization, eliminating the data redundancy issues. This not only eases employees to manage their database, but also gives HR department an improved insight of database

### Implications of Turning to Cloud-based HRMS

- Cost Control
- More Customized
- Portability
- Self-Service
- Intuitive
- Reporting Power
- Integrated

### Factors contribute to a successful HR Cloud transformation

- Companies employing the **talent strategy** typically are focused on investments that can support the organization's talent vision – i.e., the employer's brand in the marketplace – while addressing an array of external forces such as the open talent economy and other mega-, regional, and industry trends that drive decisions across an organization.
- **The core HR strategy** puts the basics first: using effective practices to deliver

core HR functionality to inform business decisions.

- **The transform strategy** is suited to organizations that want to support a new business strategy or transform their HR service delivery model as part of an integrated redesign across processes, operations, and technology.

### Findings of the study

1. A cloud HR system unifies data for a centralised platform that offers better, quicker and easier HR management.
2. Moving the core HR processes to the cloud provides organizations with added agility and flexibility.
3. The reasons identified to Invest in a Cloud Based HRMS are: Effortless identification of potential leadership talent, Employee assessments, Goals alignment, Better collaboration and Real-time analytics.
4. Implications of Turning to Cloud-based HRMS are Cost Control, More Customized, Portability, Self-Service, Intuitive, Reporting Power and Integrated.
5. Factors contribute to a successful HR Cloud transformation are Talent strategy, the core HR strategy and the transformation strategy.

### Conclusion

The digital transformation of companies is progressing, and the digitization of HR processes is a part of it. The HR department itself is the main driver of digitization, with a clear focus on process improvement and harmonization. It can be assumed that the HR department itself will largely prioritize process digitization, especially to increase process efficiency and to shift focus to the more strategic aspects of HR.

New KPIs can be generated from the HR Cloud and can directly contribute to customer satisfaction. These key figures need to be developed conceptually and then implemented.



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## A STUDY OF FACTORS AFFECTING INTERNATIONAL TRADE – DURING PANDEMIC

**R. Singh**

St. Aloysius College Jabalpur, MP, India  
rashmisingh00076@gmail.com

### ABSTRACT

*International trade congregates a comprehensive extraterritorial transaction of merchandise, commodities, services, or resources among nations around Globe. The United Nations Sustainable Goals 10 referenced World Trade Organisation Agreement as an Instrument to curb in-equalities among countries of the world by safeguarding the interest of parent and host countries. Outbreak of Covid -19 Pandemic has outrageously demolished the amplification of international trade with significant economic downturn. Entire world is contemplating the intricate problems of contingent pandemic and trying to augment fresh blood in the economy. The main objective is to evaluate the factors affecting the smooth selling of international trade due to Covid 19 outbreak. The study provides key statistics about tepid economic recovery from the recession and international trade after pandemic. The key unresolved questions for further study and recommendation contemplate to guide researchers consider these questions to construct a more additive body of knowledge that will have significant ramifications for both theory and practice.*

**Keywords** – International business, Globalisation, Pandemic.

### Introduction

International trade is trading of merchandise and services between nations across the world. The significance of international trade was acknowledged initially by political economists Adam Smith and David Ricardo. In 1776, Adam Smith manifested in his book “The Wealth of Nations” the benefits of dousing trade restrictions. He faced criticism and resistance by Economists and businessmen to reduce customs duties and acknowledged to negotiation of trade agreements with foreign powers (Smith, 1776). The World Trade Organization was officially established on 1 January 1995, to promote International Trade by fixation of tariffs for promoting smooth flow of trade among members. Transactions are generally conducted for the purpose of providing a nation with commodities it lacks in exchange for those that it produces in abundance; such transactions, functioning with other economic policies, tend to improve a nation’s standard of living (Dadush and Osakwe, 2015). International Business has augmented cross border trade and Globalisation has increased the mutual understanding among the Nations and World has emerged as a stronger market hub. International Business started flourishing with less complicated Licencing, Franchising, Joint Ventures, Mergers and Wholly Owned Subsidiaries promoting flexible trade tariffs

and growth of Multinational and International firms paved ways for improved employment and healthy competition around the Globe.

Coronavirus disease 2019 (COVID-19) a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case was identified in Wuhan, China, in December 2019. The disease has since spread worldwide, leading to an on-going pandemic (Liu, Kuo and Shih, 2020). Causing serious dent to international trade and creating a precarious situation as the virus moves around the globe. Against this background, there is a clear need to keep trade flowing, to ensure the supply of essential goods and to send a sign of reliance for the global economy. Trade is vital to rescue growth and subsistence.

### Objective

- To understand the origin of International Trade
- To find the role of World Trade Organisation in International Trade
- Benefits of Globalisation
- Factors affecting International Trade during Pandemic
- To study the Economic Growth Pattern and Challenges ahead.

### Research Methodology

This paper is purely based on secondary data which is collected from the necessary

published and unpublished information and from the internet sources wherever necessary. Structured and methodical course of searching, filtering, and studying research papers and after reviewing 50 research papers which were scrutinized via an automated search in prominent databases, the credible sources for gathering the relevant information about the research work are Google Scholar, Books Digital media, Websites and Academic journals.

### Significance

Outbreak of Covid -19 Pandemic has outrageously demolished the amplification of international trade with significant economic downturn. Entire world is contemplating the intricate problems of contingent pandemic and trying to augment fresh blood in the economy. The main objective is to evaluate the factors affecting the smooth selling of international trade due to lockdown.

Global Economy is slowing showing signs of recovery from the recession after contemplating the severe jolt of pandemic. Every emergency is an opportunity. Yet the significance of disruption caused by the current pandemic generates renewed opportunities, for the governments in the interests of their people, to reassess global trade instruments that are conducive to good health. In doing so, they have to recognise a co-relation between trade and health, something that should now be apparent given how the inceptive spread of the disease transpired through established trade routes. It's time to realize the importance of human lives simultaneously promoting safe and healthy sustainable economic growth across the world.

Trouble free trade movement requires mutual alliance and trust – for example, international market will supply consumer goods, in turn host countries will not impose export restraint, confirming to follow health and hygiene components. This is a particular challenge at a time of trade tensions, where the international trading system was already subject to an increased number of new restrictions and distortions, from tariff increases among major traders, to significant government support in key sector (Kituy, 2020). Efforts at dialogue to manage and prevent tensions through on-going

negotiations are now complicated by mobility restrictions. But in the context of the severe economic strain from COVID-19, it is more important than ever to avoid escalation of the current trade tensions (Beazley, I. et al. (2019). Study shows international trade is moving in upward direction showing signs of recovery in near future. Every step is crucial paradigm in developing new policy framework should focus on developing transparent trade agreement policy, innovation and creativity, provisions for free supply of vaccination to underdeveloped nations, changes in labour laws for better production of finished goods, encouragement of safe global green Trade policy.

### Discussion

Globalisation has played a significant role to reinforced development of Information and Technology with catastrophic advancement in transport complemented with Internet Enabled 24/7 global communication. Improvements in communication technology resulted in improved, profitable and well coordinate production activities across different countries, allowing for the inception of global value chains (Assche A V and Lundan S, 2020). With apparent rise of Social-Media – National Boundaries are irrelevant and virtual Global Market was flourishing - Due to availability of cheaper Smart phones, rise of e- Payment modules, E- wallet system stimulating pre-pay modules and mobile pay options, automated E invoice and mobile payment apps facilitated international trade by reaching the consumers globally.

According to database compiled by United Nations Conference on Trade and Development (UNCTD) the Non - Tariff Measures (NTMs) promotes Sustainable Goals which include 'No Poverty', 'Zero Hunger', 'Responsible Consumption and Production' and 'Climate Action' (Mark S, 2020).

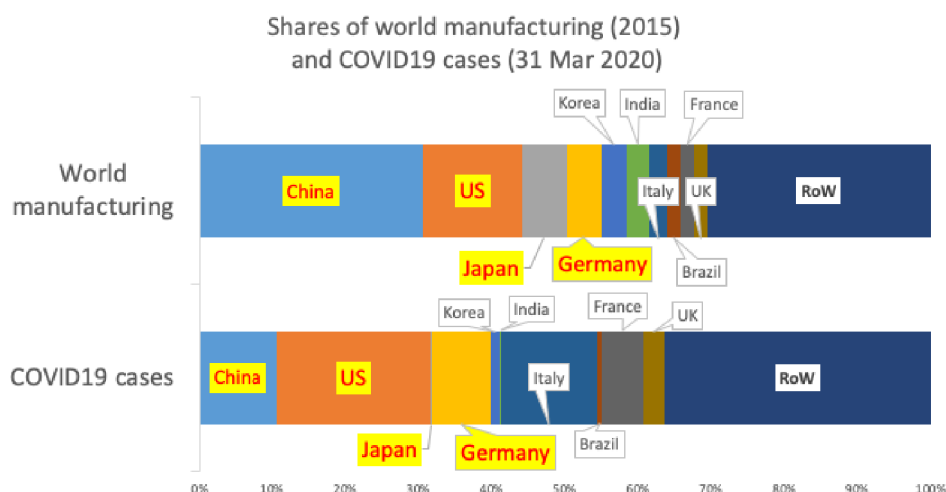
International global health crisis delaying post-pandemic economic recovery since the GDP per capita of least developed countries (LDCs) shrink by 2.6% in 2020 from already low levels, as these countries are forecast to experience their worst economic performance in 30 years. At least 43 out of the 47 LDCs will experience a fall in their average income due to the COVID-19-induced economic crisis (IMF

2017). Effectuating hopes for the 2030 Agenda for Sustainable Development Goals are confronting intricacy as COVID-19 imposes blind alley to trade development aspirations. It is an absolute reminder of shared susceptibility and manifestation for real change. Hence collaboration, coordination and cooperation among public and private stakeholders at all levels will play a significant role in recovery. Nevertheless, it can also be inactivity to alter course and build a more flexible new normal. Growth rate is largely dependent on the policies acquired and capacity to coordinate at the international and national levels (Lee S and Prabhakar D, 2021). It is interesting to find that many businesses are far more vehement and confident that the disruption caused by COVID-19 will not clog the opportunities generated by international expansion. While buoyancy is a “must have” quality for every

business, transformation will lead to retrieval and profitability in post-COVID-19 economies. That comes after specifically scrutinizing where to change—and yes, even exploring to new geographies—will generate positive impact (OECD 2020).

According to WTO database World merchandise trade shrink to 9.2% in 2020. The projected decline is less than the 12.9% drop foreseen in the optimistic scenario from the April trade forecast. Trade volume growth should rebound to 7.2% in 2021 but will remain well below the pre-crisis trend. Global GDP will fall by 4.8% in 2020 before rising by 4.9% in 2021 (WTO, 2021). Global economy is affected along three different channels: (i) decreased labour supply; (ii) shrinking demand and supply in major sectors; (iii) surging trade costs because of strict border controls and legitimate travel restrictions.

Figure (1) - Top 10 manufacturing nations (2015) and COVID cases (31/3/2020) (Baldwin R and Freeman R, 2020)



COVID-19’s impact on world manufacturing is radically different than the impact caused by other pandemics over the last 100 years. This one struck all the largest manufacturing economies in the world (Figure 1). As a result, these nations are entering a very strange type of recession – what might be called the ‘COVID concussion’ (Baldwin R and Freeman R, 2020). Amidst contemplating uncertainty, there are four important parameters to consider -1) Uplift global economic markets by developing transparent trade-policy actions and intentions; 2) Promote un-disturb supply chains flow, especially for essentials such as health supplies

and consumer good; 3) abstain from worsening the situation, through unnecessary export restrictions and other trade tariff barriers; and 4) Circumvent the crisis, think beyond the instant. Government support today needs to be delivered in a way that ensures it serves the public interest, not vested interests, and avoids becoming tomorrow’s market distortions. OECD is working with other IOs to support governments through timely and objective evidence and analysis to inform policy choices (OECD, 2020).

International merchandise and services in the wake of COVID-19 is augmented with new

challenges. Rate of business stagnation is higher as product cycle is affected due to economic downturn, business growth cycle starts with introduction, growth, maturity then if not well managed may decline. The other stagnation has been created because of challenges of globalizations and emergency of COVID 19 (Patricia, 2020).

To understand its impact, Globalization Partners and CFO Research surveyed CFOs in organizations planning for international expansion plans and revenues of more than \$100 million. According to the report pandemic is accelerating creativity and revolution to adopt change everywhere; about 83% of respondents presume they are now looking forward for remote, global workforce model as a substitute to contemplate the pandemic. Big giants in international arena like Twitter, Facebook, Instagram, Discord and others have made long-term agreements to telecommuting, while others like Amazon, Google, Bing, Yahoo and Sales force are confirming to work from home in 2021.

### Conclusion

According to - UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT -Available data for 2020 indicated a sharp decline in trade growth (about 8 per cent), largely due to the COVID-19 pandemic. The sharpest drop in international trade occurred in the second quarter of 2020, with global merchandise trade falling by more than 20 per cent relative to the same quarter of 2019 (UNCTAD, 2020).

Current Trade movements for the next half of 2020 although bending negative on a year-over-year basis, are better than during the first half. Notably, the comparative retrieval in the second half of 2020 was manifested by China. Pandemic of 2020 has gravely inflicted the world economy. World GDP is expected to fall by an unparalleled amount in 2020 about 5 per cent. Resulting to expected downfall in the value of international trade by about 8 per cent. International merchandise can rebound to 2019 levels provided the pandemic is brought under

control, by implementation of successful vaccination drive run under WHO guidance.

Economic progression of majority of the countries in the world is struggling for recovery and recorded double digit drops in September 2020. For example, imports and exports have remained considerably below 2019 levels for Brazil, India, Japan, and the Russian Federation. Similarly, indication of a tepid recovery is seen in the data of the European Union, Republic of Korea, and South Africa.

In order to improve International Trade Government should focus on following -

- Focus on developing transparent trade agreement policy
- Prioritize health and safety measures for smooth trade functioning
- Promote uninterrupted flow of supply chains for health supplies and consumer goods
- Avoid unnecessary export restrictions, by imposing high tariff and other trade barriers
- Amidst crisis focus on innovation and creativity
- Provisions for free supply of vaccination to underdeveloped nations.
- Changes in labour laws for better production of finished goods
- Encourage Global Green Trade
- Paradigm shift for safe trade

The Global Economy is recovering from the recession after contemplating the severe jolt of pandemic. Every emergency is an opportunity. Yet the significance of disruption caused by the current pandemic generates renewed opportunities, for the governments in the interests of their people, to reassess global trade instruments that are conducive to good health. In doing so, they have to recognise a co-relation between trade and health, something that should now be apparent given how the inceptive spread of the disease transpired through established trade routes. It's time to realize the importance of human lives simultaneously promoting safe and healthy economic growth across the world.



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## A STUDY ON THE REAL COVID VIRUS OF THE INDIAN BANKING SYSTEM WITH REFERENCE TO NON-PERFORMING ASSETS

Rudresh S.<sup>1</sup> and Sandhya R.<sup>2</sup>

<sup>1,2</sup>Department of Management, St. Claret College, MES Ring Road, Jalahalli, Bengaluru, India

<sup>1</sup>rudip.b3@gmail.com, <sup>2</sup>sandhya.bc@rediffmail.com

### ABSTRACT

*The Indian Banking system was confined to certain boundaries until the introduction of LPG Act in India. For any developing economy the contribution of its banking system is substantial. It is evident that the failure of the banking system will impact the growth of the industrial and may also halt the growth of other sectors too. Non-Performing Assets (NPA) continues to be a major challenge to the banking sector across the public sector and private sectoral banks in India. The higher the NPA, the over valuation of the bank and its net worth will be affected. At present, NPA in the overseeing on record territory is reasonable conversation topic considering the way that NPA is expanding every financial year. The Reserve Bank of India (RBI) intervention in handling the NPA's and how it still continues to the major area of concern is quite interesting aspect to conduct the research. Though, RBI directs all its banks with their lending activity, the banks must have a proper follow up system in place to check the risk that is involved in the lending huge amounts to various types of borrowers (Retail and Institutional Borrowers). It is to be understand the overall management and follow up are the two of a kind which could possibly help the banks to overcome the alarming issue of growing NPA in the current times. This paper attempts to do discuss the various issues and shed light on the present research work with related to issue of Non-performing assets in Indian Banking system.*

**Keywords:** *Non-Performing Assets (NPA), Public Sector Banks, Private Sector Banks, Retail and Institutional Borrowers, Banking Sector, Twin Balance Sheet.*

### Background Past and Present

The Modern Banking system in india backdates itself to the beginning of 18<sup>th</sup> Century, however as it is evident the sector enjoyed huge success in the light of the advent of digitization and digitalization. With the establishment and nationalizing the Reserve Bank of India in the year 1949 marked a mile stone in the history of Indian Banking system. With the event of 'Nationalization' of Banking in the year (1969) and (1980), the sector became a huge contributor to the Indian economy and there by facilitating the growth of the country in general. The major tosser of all was the 'Liberalization' which led the small number of technically very skilled private banks to come into the main stream. By the year 2000, the amalgamation which took the banking sector by storm and helped to grow leap and bounds. The Industry witnessed a huge change with the adoption of technology in serving its customers. At the same length, number of banks operating in the sector increased at an alarm rate and the amount of NPA and the issues around it started to grow along with.

It is true that the NPA is a result of many events that took place over the span of 20 years in this country. It is around the year 2000, the economy was booming and all the banks were in spree of lending huge amounts of loan to the corporation for the exploration of the business. The availing of the loan became much easier and all the business leveraged on it where in these corporations started to consider the "External Borrowing" to be the best source of financing the project as opposed to raise of capital through equity and debt. At this point, the bank and corporations came under the financial stress where in the banks needs to recover the money that is lent out and the corporations must oblige to discharge their financial obligations which gave a birth to "India's Twin Balance Sheet".

The big mistake from the banking end was to lend more money to these corporation to help them to clear their interest on loans under the "Fresh Loans" Category which pushed the core concept of returning the loan amount within in due date. Now, it was clearly, Indian Banking system was slowly get hacked by the issue part by part and today in the year 2021 it seemed to shadow the growth of the sector and significantly calling for the intervention of the government and RBI to address the issue.

### Critical Review of Literature

**Inchara P.M. Gowda (2020), Priority and Non-Priority Sector Lending and NPAs: A Comparative Study of SCBs,** quotes that there is no substantial evidences to prove that the Scheduled Commercial Banks were solely responsible for the current situation of the rising NPA in the banking Sector. It is also attributed to the fact the majority of loans are granted by the Public sector banks(PSU's) however the author concludes that in the light of NPA's all the three groups( SCB's, PSB's and PVB's have granted huge amount of loans and advances.

**Poonam Devi & Dr. Arati Pant (2018), Impact of NPA on Profitability Performance of Select Public and Private Sector Banks in India,** describes the overall impact of growing NPA and its adverse effect on the profitability of various banks in India where in it the stated the complete elimination of NPA is not possible at all however the effective management of NPA is definitely achievable and will improve the profitability of the banks which is suffering at the moment and in addition the recent government interventions would support the Reserve Bank of India(RBI) to combat the issue gradually.

**Sonal Kapoor (2018), A Study On Analyzing The Trend Of NPA Level In Public Sector Banks,** quoted that the PSB's have been taking corrective measure to tackle the issue of growing NPA's and determined to reduce and place in effective management in terms of treatment of NPA's

#### Objective of the Study

1. To understand the issue of Non-performing assets and the contributions of various forms of banks in the Indian system.
2. The Core objective is to study the trend of NPA's and advances made by all the sectors of banks.
3. To find out the impact of NPA on the bank's profitability.

#### Statement of the Problem

There has been a significant contribution from many researchers towards studying the various facets of Non-Performing Assets and its impact on economy, profitability of all the banks and

its impact of the Indian economy. The Contemporary platform of the research attempts to address the issue of the effective management of NPA's as opposed to the study of factor which created the issue.

#### Findings

1. The Issue of NPA's is not a result of the increasing number of players in the banking sector but it is to be attributed to the lack of assessment of corporation's creditability by these banks.
2. The NPS's is halting the growth of the banking sector and its contribution towards the Indian Economy.
3. The Competition between Public Sectoral and Private Sectoral Banks have aggregated the issue of NPA's in the recent times.
4. The Lack of Government intervention has amplified the issue.
5. The Corporations inability to manage the return on investment on the projects and borrowing fresh loans created the problem of twin balance sheet.

#### Recommendations

1. Assessment of the corporation solvency will help the banks to avoid the issue and effectively avoids the new NPA's.
2. There must stop on fresh NPA recognition till further orders of the highest court of the country.
3. The Strict parameters of one time of restructuring of NPA's will create an effective management.
4. The Government allocation of fresh capital infusion will help to reduce the growing the rate of NPA percentage to a greater extent.
5. Implementation of mitigation measures, end to end use of monitoring funds, cashflow monitoring and the appointment of agencies might breathe a sigh of relief to the banking industry.
6. The Net asset valuation of NPAs will be a solution to consider to combat the NPA issue.
7. The new proposal of establishing an asset reconstruction company (ARC) will resolve the issue.
8. Public Sector Banks can be advised to follow a standard way practice in terms of 'Employee Accountability' for bad loans.

### **Conclusion**

The Indian banking sector may be at new phase of “Non-Performing Assets”(NPA) cycle where in the impact of the NPA will continue to impact the sector in the coming years too however the recent trends and the government

intervention seems to establish a system in place to restructure and curb the adverse impact. The larger Corporations must slowly aim to scale up their business as the generation of cashflows will lead to the payment of loan amounts to the bank.

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## SOCIO-ECONOMIC STATUS AND USES OF DRUGS AMONG RURAL YOUTHS: A SOCIOLOGICAL ANALYSIS

<sup>1</sup>Mr. Yumnam Prashanta and <sup>2</sup>Dr. S. Subramani

<sup>1</sup>Ph. D Research Scholar, Department of Sociology & Social Work, Annamalai University

<sup>2</sup>Assistant Professor, Department of Sociology & Social Work, Annamalai University

### ABSTRACT

*The socio-economic conditions of drug addicts in India are complex and multifaceted, reflecting the broader challenges and inequalities faced by Indian society. Drug addiction is a major public health issue in India, with a large and growing number of individuals affected by substance abuse and addiction. The current study was carried out to gain an understanding of drug addiction among rural youths and their socioeconomic situation in Manipur. The researcher also revealed the discrimination faced by drug addicts, as well as the types of substances they primarily utilised. The snowball sampling technique was used to pick the sample. Researcher met them individually to collect the data by using questionnaire. Youth are the nation's future, and drug addiction will undoubtedly have a negative impact on society. It also has a negative economic, cultural, and moral impact on individuals and families in general.*

**Keywords:** Socio-economic, rural youths, discrimination drug addiction.

### Introduction

Drug addiction is a complicated problem that has an impact on people and communities all over the world. It is a complex issue with wide-ranging repercussions, including harm to drug addicts' socioeconomic circumstances. Drug addicts frequently experience poverty, unemployment, social isolation, and poor health as their socioeconomic conditions. These people frequently experience stigma, discrimination, and restricted access to opportunities and resources, which exacerbates their addiction struggles and makes it challenging for them to recover. Drug abuse can result in a cycle of poverty and unstable finances. Due to a variety of issues, including absenteeism, decreased productivity, and criminal histories, people with addiction may find it difficult to keep a steady job. Additionally, the high cost of medications and related medical costs may be a significant strain on their financial resources. This can then result in housing instability and homelessness, further escalating the socioeconomic difficulties drug addicts already face.

In general, improving the socio-economic circumstances of drug addicts is essential to successfully combating the addiction problem. People can be greatly helped on their path to recovery by policies that work to lower poverty, increase access to education and employment opportunities, and promote social inclusion. Addressing the stigma and

discrimination that addicts experience can also encourage greater social and economic participation and enhance the general wellbeing of those who are impacted as well as communities.

(Hanan et al., 2012) found that the socio-economic implications of drug addiction reveal that addicts behave in a highly reckless manner after they have become addicted to drugs. Their earnings decline, and they make less of an economic contribution to the family's survival. The majority of their earnings are spent on drug purchases; dependent family members are freed from addiction as they begin their own economic activities or the addicts are unable to earn and are thus abandoned. Addicts have a horrible life since they are in debt because they borrow money from friends, and their poor health necessitates expensive expenditures with low economic performance. (Patrick et al., 2012) Young adults from the wealthiest families had the highest rates of alcohol and marijuana use. Due to increased stress and limited access to alternative activities, lower income may be associated with substance use as a coping mechanism. Because it is easier to obtain drugs or buy them and because it is easier to associate with people who have money, a higher family income may be linked to substance abuse. (Mohanty et al., 2013) in his studies found that the majority of male students at professional colleges who are between the ages of 15 and 19 engage in substance misuse involving one or more



substances. Social factors including being away from home and parents, difficult family dynamics (broken and problem families), and the too demanding nature of the curriculum without downtime are mostly responsible for these harmful behaviours. (Fn et al., 2016) analyse that the majority of drug-dependent young men (78.95%) were male, and among them, 21.05 percent were in the 15–17 age range. (28.07%) of the samples had an elementary education, and (36.84%) had a secondary education. In terms of occupation, students (24.56%) made up the majority, followed by the jobless (21.05%) and day labourers (15.79%). In their family, (61.40%) were the only wage earners. The majority of the samples (64.91%) resided in extended families. The majority (75.51%) obtained cash for drugs from family members and stole from homes, with criminal activity (53.06%) coming in second. The majority of drug users (85.96%) began using drugs as a result of peer pressure.

Though Imphal West is a small city, the government of Manipur operates more than 19 drug rehabilitation centres. The majority of patients in these rehabilitation centres are young people. They range in age from 16 to 40. This also indicates the prevalence of young drug addicts in this city. Many illegal operations in this city are said to be carried out by drug addicts in order to obtain funds to purchase drugs. In this region, the youth segment is more involved than others in crimes such as stealing, hijacking, murder, and so on. Family disorganisation, dropout students, health hazards, and other issues are also on the rise in this region. To be free of this burden, it is necessary to determine the cause of the drug addiction, which requires knowledge of the socioeconomic features of the drug users. Despite the presence of a large number of drug addicts in Imphal West District, research on this topic is scarce. As a result, the current study will attempt to fill research gaps concerning the socioeconomic situation of drug users in Manipur's Imphal West area.

The study has been conducted taking the following two objectives:

1. To identify the socio-economic status of young drug addicts in Imphal west district.
2. To find out the principal drugs consumed by the drug addicts

## Materials and Method

Considering the objectives of the present study, Imphal west district area was selected. The study has adopted a descriptive research design. A total of 325 respondents were selected through the snowball sampling method. The data were collected from the rural youth (I.e., ages between 15-29) from five villages for the research study. A well-structured interview schedule was used to gather the information and necessary data and classified for analysis.

## Results and Discussion

**Table: 1 Distribution of the respondents based on Age**

Sl. No.	Age	No. of Respondents (n=325)	Percentage
1	15-19	66	20.3
2	20-24	170	52.3
3	25-29	89	27.4
	<b>Total</b>	325	100

Sources: Primary data

Table 1 reveals data on the age-wise distribution of respondents. It could be noted that out of 325 respondents, majority of the respondents belong to the age group 20 – 24 (52.3%) and more than one fourth (27.4%) of the respondents from age group of 25 – 29 years, 20.3 per cent of the respondents from age group of 15 – 19.

**Table: 2 Distribution of the respondents based on educational qualification**

Sl. No.	Education	No. of Respondents (n=325)	Percentage
1	Primary	22	6.8
2	Secondary	167	51.4
3	Higher Secondary	122	37.5
4	Graduate	14	4.3

Sources: Primary data

Table 2 data indicates the distribution of respondents based on educational qualifications. It is inferred from the above table that, more than half (51.4%) of the respondents have completed secondary school, more than one third (37.5%) of them have completed higher secondary education, furthermore 6.8 per cent and 4.3 per cent of them have completed primary school and graduation each respectively.

**Table: 3 Distribution of the respondents based on Occupation**

Sl. No.	Occupation	No. of Respondents (n=325)	Percentage
1	Agriculture	14	4.3
2	Private Sector	19	5.9
3	Labour	94	28.9
4	Unemployed	198	60.9

Sources: Primary data

Table 3 data exhibits the distribution of respondents based on occupation. It is inferred from above that, more than one fourth (28.9%) of the respondent's occupation is labourers, 5.9 and 4.3 percent of the respondent's occupation is private sector workers and agriculture respectively. More than half (60.9%) of the respondents are unemployed.

**Table: 4 Distribution of the respondents based on Individual Income**

Sl. No.	Income	No. of Respondents (n=325)	Percentage
1	Below 5000	29	8.9
2	5000 to 10000	0	0.0
3	10001 to 15000	93	28.6
4	Above 15000	5	1.5
5	None	198	60.9

Sources: Primary data

Table 4 shows data based on the individual income of the respondents. It is inferred from above table that, 8.9 percent of the respondent's monthly income is below 5000, more than one fourth (28.6%) of the them are earning 10001 to 15000, only 1.5 percent of them are earning above 15000 and more than half (60.9%) of them are not earning.

**Table: 5 Distribution of the respondents based on Family Type**

Sl. No.	Family Type	No. of Respondents (n=325)	Percentage
1	Nuclear	141	43.4
2	Joint	184	56.6

Sources: Primary data

Table 5 data shows the distribution of respondents based on the family type. The above table explained that, more than half (56.6%) of the respondents from joint family and remaining 43.4 percent of them are from nuclear family.

**Table: 6 Distribution of the respondents based on Monthly Family Income**

Sl. No.	Income	No. of Respondents (n=325)	Percentage
1	Below 5000	15	4.6
2	5000 to 10000	26	8.0
3	10001 to 15000	91	28.0
4	15001 to 20000	163	50.2
5	Above 20000	30	9.2

Sources: Primary data

It is inferred from above table that, more than little half (50.2%) of the respondent's monthly family income is 15001 to 20000, more than one fourth (28.0%) of them families are earning 10001 to 15000 income per month and remaining 4.6 percent, 8.0 percent and 9.2 percent of the respondent's families are earning below 5000, 5000 to 10000 and above 20000 each respectively.

**Table: 7 Distribution of the respondents based on Money to buy Drugs**

Sl. No.	Income	No. of Respondents (n=325)	Percentage
1	Family members	78	24.0
2	Friends	87	26.8
3	Self-Earned	122	37.5
4	Any other	38	11.7

Sources: Primary data

Table 7 presents data based on how the respondents get the money for buying drugs. The above table explained that, more than one third (37.5%) of the respondents are buying drugs by their own money, more than one fourth (26.8%) of them are getting money from their friends, less than one fourth (24.0%) of them getting money from their family members and remaining 11.7 percent of them are getting money from others for buy a drugs.

**Table 8 Level of Discrimination faced by Addicts**

Sl. No.	Level	No. of Respondents (n=325)	Percentage
1	Low	169	52.0
2	High	156	48.0

Sources: Primary data

Table 8 presents data on the respondents' level of discrimination faced by addicts. It is inferred from the above table that, more than half (52.0%) of the respondents faced low level of discrimination and remaining 48.0 percent of the addicts faced high level of discrimination.

**Table 9 ‘Z’ Test between Joint and Nuclear family of the respondents with regard to their Discrimination**

Sl. No.	Discrimination	Mean	Standard Deviation	Statistical Inference
1	Family Type Nuclear	6.666	1.112	Z = 3.808 P < 0.01
2	Joint	6.173	1.188	<b>Highly Significant</b>

Sources: Primary data

Table 9 data shows the Z’ Test between Joint and Nuclear family of the respondents with regard to their Discrimination. The researcher applied ‘Z’ test for analyse the difference between nuclear and joint family of the respondents with regard to their discrimination. The result shows that, the Z value is 3.808 and p value is lesser than 0.01 percent level and the

mean value explained that, nuclear family (M=6.666) respondents are experiencing high level of discrimination than the joint family (M=6.173) respondents. So, there is highly significant difference between nuclear and joint family of the respondents with regard to their discrimination.

**Table: 10 Distribution of data on respondents’ opinions about how the drugs are consumed**

Sl. No.	Way	Yes		No		Sometimes		Cannot Say	
		N	%	N	%	N	%	N	%
1	Oral	130	40.0	41	12.6	138	42.5	16	4.9
2	Injection	142	43.7	124	38.2	20	6.2	39	12.0
3	Inhalation	61	18.8	39	12.0	195	60.0	30	9.2
4	Smoking	70	21.5	151	46.5	52	16.0	52	16.0
5	Others	0	0.0	266	81.8	1	0.3	58	17.8

Sources: Primary data

Table 10 data shows the distribution of respondents on how they consumed drugs. The above table explained that, two fifth (40.0%) of the respondents are taking drugs in the way of oral, 12.6 percent of them are not taking in the way of oral, less than half (42.5%) are sometimes taking in oral and remaining 4.9 percent of cannot say the statement. Less than half (43.7%) percent of them are taking drugs through injection, more than one third (38.2%) percent of them are not taking through injection, 6.2 percent of them are sometimes taking and 12.0 percent of them cannot to say any answer. Less than one fifth (18.8%) of

them are taking drugs through inhalation, 12.0 percent of them are not taking through inhalation, more than half (60.0%) of them taking sometimes and 9.2 percent of them cannot to say the answer. More than one fifth (21.5%) of them taking drugs from smoking, nearly half (46.5%) of them are not taking drugs form smoking, 16.0 percent of them taking sometimes and cannot say the answer each respectively. More than three fourth (81.8%) of them are not taking drugs in other ways 0.3 percent of them are taking sometimes and 17.8 percent of them cannot to say the answers.

**Table: 11 Distribution of respondent’s base on the types of drugs they consumed.**

Sl. No.	Drugs	Yes		No		Sometimes	
		N	%	N	%	N	%
1	Heroin	146	44.9	125	38.5	54	16.6
2	Methamphetamine	134	41.2	129	39.7	62	19.1
3	WY tablets	108	33.2	98	30.2	119	36.6
4	Brown sugar	98	30.2	85	26.2	142	43.7
5	Opium	43	13.2	231	71.1	51	15.7
6	Painkiller	22	6.8	258	79.4	45	13.8
7	Alcohol	89	27.4	189	58.2	47	14.5
8	Proxyvon	56	17.2	139	42.8	130	40.0
9	Spasmoproxyvon	108	33.2	84	25.8	133	40.9
10	Ccodeine cough syrup	39	12.0	243	74.8	43	13.2
11	Pseudo-Ephedrine	62	19.1	230	70.7	33	10.2
12	Nitrosun 10	127	39.1	127	39.1	71	21.8

Sources: Primary data

Table 11 data reveals the respondents' opinions about the types of drugs they consumed. It is inferred from the above table that, less than one half (44.9%) of the respondents are taking heroine, more than one third (38.5%) of them not taking heroine and 16.6 percent taking sometimes. The types of methamphetamine drugs are observed that, less than one half (41.2%) of the respondents are taking methamphetamine, more than one third (39.7%) of them not taking methamphetamine and 19.1 percent taking sometimes.

The types of WY tablets are observed that, one third (33.2%) of the respondents are taking WY tablets, less than one third (30.2%) of them not taking WY tablets and 36.6 percent taking sometimes. Moreover, the types of brown sugar drugs are observed that, less than one third (30.2%) of the respondents are taking brown sugar, more than one fourth (26.2%) of them not taking brown sugar and less than half (43.7%) them taking sometimes.

The types of opium drugs are observed that, 13.2 percent of the respondents are taking opium drugs, less than three fourth (71.1%) of them not taking opium drugs and 15.7 percent taking sometimes. The types of painkiller drugs are observed that, 6.8 percent of the respondents are taking painkiller drugs, more than three fourth (79.4%) of them not taking painkiller drugs and 13.8 percent of them taking sometimes. The types of alcohol drugs are observed that, more than one fourth (27.4%) of the respondents are taking alcohol drugs, more than half (58.2%) of them not taking alcohol drugs and 14.5 percent taking sometimes.

The types of proxyvon drugs is observed that, 17.2 percent of the respondents are taking proxyvon drugs, less than half (42.8%) of them not taking proxyvon drugs and 40.0 percent of them taking sometimes. The types of spasmoproxyvon drugs are observed that, one third (33.2%) of the respondents are taking spasmoproxyvon drugs, one fourth (25.8%) of them not taking spasmoproxyvon drugs and 40.9 percent taking sometimes. The types of codeine cough syrup drugs are observed that, 12.0 percent of the respondents are taking codeine cough syrup drugs, nearly three fourth (74.8%) of them not taking codeine cough

syrup drugs and 13.2 percent of them taking sometimes.

The types of Pseudo-Ephedrine drugs are observed that, 19.1 percent of the respondents are taking Pseudo-Ephedrine drugs, more than two third (70.7%) of them not taking Pseudo-Ephedrine drugs and 10.2 percent taking sometimes. The types of nitrosun 10 drugs are observed that, more than one third (39.1%) of the respondents are taking and not taking nitrosun 10 drugs each respectively and 21.8 percent of them taking sometimes.

### Conclusion

In conclusion, the presented findings provide insights into the socio-demographic characteristics, behaviors, and attitudes of the young adult population in the study area. The data highlights aspects such as age distribution, education levels, marital status, occupation, family income, individual income, religious and caste diversity, family structures, drug usage patterns, initiation age for drug habits, awareness of consequences, and family drug habits. These findings collectively offer valuable information for understanding the demographic and social dynamics of the studied population, which can guide the development of targeted interventions, policies, and programs to address specific needs and challenges identified within this demographic group. These youths often grapple with a multitude of challenges, including limited access to quality education, employment opportunities, and healthcare services. The cycle of poverty and lack of social support further exacerbates their vulnerability to substance abuse.

Addressing this issue requires a comprehensive approach that combines targeted interventions, community engagement, and policy changes. By improving access to education, skill development, and mental health support, we can empower rural youth to break free from the grip of addiction and work towards a more promising future. Additionally, fostering collaboration between government agencies, non-profit organizations, and local communities will be crucial in creating sustainable solutions to uplift the socio-economic well-being of rural youth and curbing the prevalence of drug addiction.

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