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Effectiveness of Foreign Aid in India : Comparative Analysis of World Bank and Asian Development Bank

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Abstract

Finance is an indispensable part of any country's economic development. Not only it's mere availability is important, making adequate amount of finance available, at the right time is must for any country to grow and sustain that growth. Developing countries like India, have never been financially self-sufficient. Hence, these countries have constantly been relying upon foreign aid for assistance. One such source of foreign aid is International Financial Institutions (IFI). The present study is an attempt to draw out a comparison in the impact of lending by two of the IFIs, World Bank and Asian Development Bank on India's economic growth. The period of the study is from 1991 to 2018. Results of the regression analysis reveal that World Bank lending has negative impact on India's economic growth, whereas, Asian Development Bank's lending has a positive impact on India's economic growth.

Key Words

Finance, Economic Growth, Development, World Bank, Asian Development Bank

INTRODUCTION

It is rightly said that finance is the life blood for any country's development. Just as the body malfunctions due to lack of adequate amount of blood, the economy also behaves in a similar manner, if satisfactory supply of finance is not maintained. It is herculean task for any country, specially the developing countries, to be able to hold up and bear its process of economic development independently, without any external assistance. Financial aid influences the process of growth by reducing the saving investment gap, increasing productivity and transferring the modern technology (Khan and Ahmed 2007). One widely used source of aid are, International Financial Institutions like The World Bank, IMF and The Asian Development Bank, which provide assistance in different forms to the nations worldwide. These institutions provide assistance in different forms as per the needs of the recipient country and the terms of lending also vary not only from country to country but also from project to project.

India has never been a self-sufficient nation as far as finance is concerned and thus has been taking financial assistance from major international financial institutions for different projects pertaining to different sectors of the economy. This paper is an attempt to study, the relationship between India and the World Bank as well as between India and the Asian Development Bank (ADB). India was one of the founding members of the World Bank and received its first assistance in the year 1948. Since then, India has been one of the largest recipients of the World Bank lending. Further, India was a founding member of ADB in 1966, has been ADB'S top borrower since 2010 and is now the bank's fourth largest shareholder.

RATIONALE OF THE STUDY

With a population of more than 1.2 billion, India is the world's largest democracy. Over the past decade, the country's integration into the global economy has been accompanied by economic growth. India has now emerged as a global player. India's rapid economic growth in recent decades has lifted the country to become the world's third-largest economy (in purchasing power parity terms), while major economic reforms have been helping dramatically reduce poverty since 2004. However, the country is still diseased by poverty, unemployment, increasing environmental pressure, climate change etc. Adding fuel to the fire is the current Covid-19 pandemic, which has aggravated already existing problems for the nation. India is the founding member of the World Bank and the Asian Development Bank and have been depending on foreign assistance from these International Financial Institutions for forever, now is the time than ever to find the answer to the question that what impact does the foreign assistance actually have on the country's economic growth. Hence, the present study is being conducted.

REVIEW OF LITERATURE

Islam (1992) developed a theoretical framework in his paper, specifying the relationship between foreign capital and economic growth in Bangladesh, which was tested empirically by employing time series analysis. Time series data for the period 1972 to 1988 had taken into consideration. The study concluded that foreign capital was instrumental in economic development of Bangladesh. However, not all categories of foreign capital were found to be equally vital. The results showed that loans and food aid had a stronger influence on economic growth as compared to the other categories. Further, it was found that the domestic resources had far greater effect on growth in comparison to foreign resources. The study suggested that in order to trans-figurate Bangladesh economically, mobilization of domestic resources should be the center of attention for the government rather than reliance on foreign resources.

Mallick and Moore (2005) conducted a study to analyze the impact of World Bank lending on the economic growth of 30 countries using the Panel Data approach. Both, concessional and non-concessional loans, for the period from 1970 to 2001, had taken into account. The study concluded that World Bank lending exerted positive impact on the rate of growth of GDP Per Capita in both, the long run as well as short run.

Kargbo (2012) conducted a study for a period 1970-2007 to find out the impact of foreign aid on economic growth in Sierra Leone. The results showed a positive and significant impact of foreign aid on economic growth in non-war times while the impact was found to be weak or non-existent during the time of war, indicating, that the impact of aid may change with time.

Hossain (2014) scrutinized the impact of foreign aid on economic growth in Bangladesh for a period of 33 years, from 1982 to 2012 and found out that although, the proportion of foreign aid has been declining over the period of years in Bangladesh, but it has a positive impact on the economic growth of the country. The author concludes, that, the government should overcome the capacity constraints and ensure political stability in order to gain maximum utilization of aid.

According to the study, carried for the period 1994-2011 by Girma (2015) to find out the impact of foreign aid on economic growth in Ethiopia, foreign aid has positive impact on the economic growth only if it is augmented with stable macroeconomic policy environment. In the absence of the latter, a negative impact of foreign aid was witnessed on economic growth.

Giri, Mohapatra, and Sehrawat (2016) analyzed foreign aid has impact on the economic growth in India. The data was used for the period 1970-2014. The results affirmed that in both, long and short run, foreign aid has positive and significant impact on the economic growth in India. The study also concluded that the effectiveness of foreign aid in economic growth is dependent on macroeconomic policy environment in India.

Kasour and Masood (2017) carried out a study on South Asian economies to investigate the factors, that promote foreign aid dependence and to check their nature of their relationship with foreign aid. A positive and significant relation was found between Gross Domestic Investment and foreign aid, in both, long and short run. The study also revealed that Gross Domestic Savings reduces the dependence on foreign aid.

Sothan (2017) attempted in his study to find out the growth impact of foreign aid in Cambodia. The study was conducted for the period 1980-2014. The results showed that although, aid had a positive impact on growth in the long run, but in the short run, it's impact was found to be negative on both investment and growth. The author suggested a shift from aid contingence to promoting domestic investment for sustainable development.

RESEARCH GAP

Majority of the studies have been conducted to analyze the impact of foreign aid altogether on the economic growth of the countries. However, in this study we have specifically taken loans advanced by the World Bank and Asian Development Bank to India. Further, no study has been conducted for the said time period, from 1991 to 2018 for the said objectives.

OBJECTIVES

The present study was conducted to cover the following objectives :

- To analyze the impact of World Bank lending on economic growth in India
- To analyze the impact of Asian Development Bank lending on economic growth in India

RESEARCH METHODOLOGY

The study is completely secondary in nature. Data for a period of 28 years, from 1991 to 2018, has been taken. The data has been made available from various issues of Asian Development Bank's Key Indicators for Asia, Pacific and World Bank's World Development Indicators. For the purpose of assessing the impact of World Bank lending and Asian Development Bank lending, Correlation and Multiple Linear Regression have been employed, separately for both the banks. GDP per capita has been taken as the proxy of economic growth (GDP) and the dependent variable as well. Aid (Per Capita Aid by World Bank and ADB), Gross Domestic Savings as a % of GDP (GDS) and Consumer Price Index (annual % change) (CPI) has been taken as independent variables. Statistical software, SPSS 16 was used for the purpose of analysis.

ANALYSIS AND FINDINGS

Impact of World Bank Lending on India's Economic Growth

To find out the impact of World Bank lending on India's economic growth correlation and regression analysis was done. the results of the same are given as follows :

Correlation Analysis

Table 1
Results of Correlation between GDP and the Independent Variables

	PCL	GDS	CPI
Pearson Correlation	0.481*	0.669**	0.993**
Sig. Value	0.042	0.000	0.000
N	28	28	28
Result	Positive, Moderate and Significant	Positive, Moderate and Significant	Positive, Strong and Significant

* Correlation Significant at 0.05 Level (2-Tailed)
** Correlation Significant at 0.01 Level (2-Tailed)
Source : Author's Construction from SPSS Software

A correlation analysis was conducted to find the degree of association of GDP per capita with the rest of the independent variables, i.e. Per capita lending by World Bank (PCL), Gross Domestic Saving (GDS) and Consumer Price Index (CPI). The results of the same that have also been tabulated in Table 1, are as follow :

- A Moderate Positive Correlation (r(26) = .481, $p < .001$) was found between GDP and PCL, indicating a Significant Linear Relationship between the two variables.
- There exists a significant linear relationship between GDP and GDS as a Positive Moderate Correlation (r(26) = .669, $p < .005$) was

found between the two.

- A strong Positive Correlation (r(26) = .993, $p < .005$) was found between GDP and CPI, indicating a Significant Linear Relationship between the two variables.

Regression Analysis

To find out the impact of World Bank lending on the economic growth of India a regression analysis was carried out using the following model :

$$Y = c + \beta_1 PCL + \beta_2 GDS + \beta_3 CPI$$

Where,

Y = GDP Per Capita

PCL = Per Capita Lending (by World Bank)

GDS = Gross Domestic Savings (as a % of GDP)

CPI = Consumer Price Index

Table 2

Summary Statistics of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.995[a]	.989	.988	49.9218720

a. Predictors : (Constant), PCL, CPI, GDS

b. Dependent Variable : GDP

Source : Author's Construction from SPSS Software

Table 2, contains the Summary Statistics of the Regression Analysis. R square value is 0.989, meaning thereby, that 98.9% of the variations in the dependent variable (GDP per capita) can be explained by the chosen regression model.

Table 3

Results of ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5460595.379	3	1820198.460	730.360	.000[b]
Residual	59812.639	24	2492.193		
Total	5520408.019	27			

a. Dependent Variable : GDP

b. Predictors : (Constant), PCL, CPI, GDS

Source : Author's Construction from SPSS Software

As depicted by Table 3, the ANOVA resulted in F = 730.360 and F is significant at less than 0.001 level indicating that the relationship between dependent and independent variables as modeled in this paper is statistically significant.

Table 4

Coefficients of the Variables

Model	**Unstandardized Co-efficients**		**Standardized Co-efficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	99.220	75.093	1.321	.199	
GDS	8.810	3.112	.079	2.831	.009
CPI	9.683	.280	.945	34.543	.000
PCL	-2.473	7.858	-.007	-.315	.756

a. Dependent Variable : GDP

b. Predictors : (Constant), PCL, CPI, GDS

Source : Author's Construction from SPSS Software

It can be observed from Table 4, PCL has a negative but statistically insignificant effect on GDP. On the other hand, a positive and statistically significant impact of GDS and PCI can be seen on the economic growth of the country. The results of the estimated model are, thus, as follows :

$$GDP = 99.22 + 9.68(CPI) + 8.81(GDS) - 2.47(PCL)$$

Where,

Y = GDP Per Capita

PCL = Per Capita Lending (by World Bank)

GDS = Gross Domestic Savings (as a % of GDP)

CPI = Consumer Price Index

Impact of Asian Development Bank Lending on India's Economic Growth

To find out the impact of Asian Development Bank lending on India's economic growth, correlation and regression analysis was done. The results of the same are given as follows:

Correlation Analysis

A correlation analysis was conducted to find the degree of association

Table 5
Results of Correlation of Independent variables with GDP

	PCL	GDS	CPI
Pearson Correlation	0.909**	0.669**	0.993**
Sig. Value	0.000	0.000	0.000
N	28	28	28
Result	Positive, Strong and Significant	Positive, Moderate and Significant	Positive, Strong and Significant

** Correlation Significant at 0.01 Level (2-Tailed)
Source : Author's Construction from SPSS Software

of GDP per capita with the rest of the independent variables, i.e. Aid (Per Capita Lending by the Asian Development Bank), Gross Domestic Saving (GDS) and Consumer price index (CPI). The results of the same that have also been tabulated in Table 5, are as follows :

A strong positive correlation ($r(26) = .909$, $p < .005$) was found between GDP and Aid, indicating a significant linear relationship between the two variables.

There exists a significant linear relationship between GDP and GDS, as a positive moderate correlation ($r(26) = .669$, $p < .005$) was found between the two.

A strong positive correlation ($r(26) = .993$, $p < .005$) was found between GDP and CPI, indicating a significant linear relationship between the two variables.

Regression Analysis

To find out the impact of Asian Development Bank lending on the economic growth of India a regression analysis was carried out using the following model:

$$Y = c + \beta_1 PCL + \beta_2 GDS + \beta_3 CPI$$

Where,

Y = GDP Per Capita

PCL = Per Capita Lending by Asian Development Bank to India

GDS = Gross Domestic Savings (as a % of GDP)

CPI = Consumer Price Index

Table 6
Results of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.995[a]	.990	.989	48.12525071

a. Predictors : (Constant), PCL, CPI, GDS
b. Dependent Variable : GDP
Source : Author's Construction from SPSS Software

Table 6, contains the summary statistics of the regression analysis. R square value is 0.990,meaning thereby, that 99% of the variations in the dependent variable (GDP per capita) can be explained by the chosen regression model.

Table 7
Results of ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5464823.065	3	1821607.688	786.518	.000[b]
Residual	55584.954	24	2316.040		
Total	5520408.019	7			

a. Dependent Variable : GDP
b. Predictors : (Constant), PCL, CPI, GDS
Source : Author's Construction from SPSS Software

As depicted by Table 7, the ANOVA resulted in F = 786.518 and F is significant at less than 0.001 level indicating that the relationship between dependent and independent variables as modeled in this paper is statistically significant

Table 8
Coefficients of the Variables

Model	Unstandardized Co-efficients		Standardized Co-efficients	t	Sig.
	B	Std. Error	Beta		
Constant	107.587	72.448		1.485	.151
AID	.30	.021	.066	1.390	.177
CPI	9.083	.505	.886	17.989	.000
GDS	8.302	2.920	.075	2.843	.005

a. Dependent Variable : GDP
b. Predictors : (Constant), PCL, CPI, GDS
Source : Author's Construction from SPSS Software

It can be observed from Table 8, Aid has a positive but statistically insignificant effect on GDP. On the other hand, a positive and statistically significant impact of GDS and CPI can be seen on the economic growth of the country. The results of the estimated model are, thus, as follows :

$$GDP = 107.587 + 0.30(PCL) + 9.083(CPI) + 8.30(GDS)$$

Where,

Y = GDP Per Capita

PCL = Per Capita Lending by Asian Development Bank to India

CPI = Consumer Price Index

GDS = Gross Domestic Savings (as a % of GDP)

CONCLUSION

Whether foreign aid assists or hinders the economic growth contentious matter. In order to get an insight into this disputable matter, the present study was conducted. Effectiveness of aid in the form of lending by the World Bank and Asian Development Bank to India was judged. Data was assessed for a period of 28 years, from 1991 to 2018. A positive, strong and significant correlation was found between India's economic growth and ADB's lending. The results were similar in case of World Bank lending as well.

Further, regression analysis revealed that foreign aid in the form of World Bank lending have a negative impact on India's economic growth, which also coincides with the results of Moyo and Mafuso (2017) and Abouharb and Duchesne (2019). The results however, were different in case of Asian Development Bank's lending as multivariate regression analysis revealed that aid had positive but insignificant effect on economic growth of India. These results were similar to studies conducted by Mallick and Moore (2005) and Giri, Mohapatra, and Sehrawat (2016).

POLICY IMPLICATIONS

In order to ensure maximum utilization of foreign aid, effective policy making and implementation of the same is vital. The government should set up organized committees that not only monitor the amount of loans received but also ensure the application of that loan for the same objective for which it was applied for at the first place. Moreover, keeping the rationale of our Honorable Prime Minister, MR. Narendra Modi in view, if the country really wants to be 'Atma Nirbhar', more focus should be made on reducing the reliance on external funds. This can be done by prioritizing the use of domestic savings and revenue and keeping any sort of foreign assistance as a secondary source of help. Further, the country should address the root of the some of the problems for which the loans have been taken. For instance, instead of taking loan for dealing with the fiscal deficit or the BOP deficit, etc, India should formulate its fiscal and trade policies in a more efficient manner so as to avoid getting trapped in the deficit-debt spiral.

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Impact of Firm-Specific Variables on Capital Structure of Indian Companies : An Empirical Study

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Abstract

This paper identifies the most important variables of capital structure of selected sample industries that are listed at BSE500 INDEX. The companies that are selected for the research paper comprised both private and public sector companies. Four firm-specific variables are considered to determine the impact of firm-specific variables on Capital Structure during Global financial crisis. These variables are Size of Firm, Growth of Assets, Profitability and Tangibility. The study covered the two time periods i.e. Pre-crisis period (2001-2009) and Post-crisis period (2009-2015).

Key Words

Capital Structure, Leverage, Size of Firm, Growth of Assets, Profitability and Tangibility.

INTRODUCTION

An important factor in the success of a firm is its' capital structure or debt-equity mix. In the long run, a planned capital structure enables firms to mobilise additional funds as and when required and helps in increasing the value of a firm. Thus, the mix or the proportion of debt and equity is the capital structure of a firm is an important financial decision as it affects both the return on capital and the risk of stakeholders particularly shareholders. The use of debt in the capital structure introduces financial leverage and improves the return on equity. But excessive use of debt component also increases the risk and therefore, the lenders as well as equity shareholders demand a higher return on their investment in order to compensate for the increased risk. The non-use of debt, on the other hand, keeps the equity return depressed. The financial manager has to design the capital structure or its debt-equity mix in such a manner that it maximises the value of the firm. It is generally understood that the optional capital structure of a firm is that composition of debt and equity which results in the minimum cost of capital. The determination of capital structure in real life is not that simple because it is not an exact science such as the firm's business risk, its financial flexibility, shareholders' wealth maximisation, the nature and degree of competition, survival, assurance of a steady source of funds, operational and financial rating in the market, profitability, growth rate, the state of capital market etc. before taking a decision on the appropriate capital structure which maximizes the value of the firm while minimizes the cost of capital.

SCOPE OF THE STUDY

The scope of the study has been confined to the service sector only. To achieve the objectives of the study, a sample of 87 companies has been selected from Banking, Computer Software and Finance companies forming part of BSE500 Index.

LITERATURE REVIEW

Modigliani, Franco and Miller, Merton H. (1958) in a landmark study examined the relationship between capital structure and the value of the firm. The study indicated that the optional capital structure happens to be a theoretical concept which is in real life, is very difficult to find.

Taub (1975) in a study on "The Determinants of the Firm Capital Structure", examined the major factors influencing the capital structure of the US firms. The researcher investigated a total of 89 firms belonging to a cross-section of industry. The study found mixed results. The rate of return, interest rate and firm size were found to be having a positive relationship with the capital structure of the firms.

Myres, Siddharta (1984) conducted a survey of capital structure decisions by financial executives. He found that the choice of a source of funds at times is inconsistent with the wealth maximization goals as stated in financial theory.

REFERENCE PERIOD

The present study is divided the whole set of data into two periods : Pre-Crisis Period from April 2001 to March 2009, and from April 2009 to March 2015 as Post-Crisis Period. The study comprised the data of 14 years. This study is based on secondary data.

DATA INPUTS

The following data inputs are used. These are explained below :

(a) **Profitability :** For this study, profit before interest and taxes by total assets is used. For this study, profit before interest and taxes by total assets is used. The results are confirmed with the findings given under Pecking-Order Theory (Myers, 1984).

(b) **Growth of Assets :** On the basis of previous studies, the following measure is used for the study :
Growth : Assets at the end of current year - Assets at the end of previous year.

(c) **Tangibility :** The ratio of fixed assets to total assets is used (Titman and Wessels, 1988); Rajan and Zingles (1995); Pandey (2000).

(d) **Size of Firm :** The relationship of size with leverage has been found to be not clear. For determining the size of assets, logarithm of total assets has been used for the study (Rajan and Zingales, 1995); (Titman and Wessels, 1988).

DATA ANALYSIS

The following research techniques are used to analyse the data :

1. Multiple Regression Analysis

The capital structure is measured through debt/ equity ratio and debt/ total assets ratio & these variables are taken as dependent variables. The explanatory variables are tangibility, growth of assets, profitability ratio and size of assets as explained in the methodology. For the data analysis, two regression equations are used :

(a) Regression analysis of debt/total assets ratio with firm specific variable are :

The regression equation is :

$$Y_1 = \alpha + \beta1(X_1) + \beta2(X_2) + \beta3\ (X_3) + \beta4\ (X_4) + e$$

Where, e refers to error terms :

1. X_1 = GrowthA_Total = Growth of Assets
2. X_2 = SizeA_Total = Size of Assets
3. X_3 = Profit_Total = Profitability Ratio
4. X_4 = Tang_Total = Tangibility
5. Y_1 = Debt / Total Assets Ratio

(b) Regression analysis of debt/equity ratio with firm specific variable are :

The regression equation is :

$$Y1 = \alpha + \beta1(X_1) + \beta2(X_2) + \beta3\ (X_3) + \beta4\ (X_4) + e$$

Where, e refers to error terms;

1. X_1 = GrowthA_Total = Growth of Assets
2. X_2 = SizeA_Total = Size of assets
3. X_3 = Profit_Total = Profitability
4. X_4 = Tang_Total = Tangibility
5. Y_1 = Debt/ Equity Ratio

(A) Software Companies

H_{o1} : There is no significant relationship of leverage (debt/total assets) with firm-specific variables in software companies during pre and post-crisis period.

Table 1 depicts the value of R^2=0.102, the predictors or Independent Variables i.e. Tangibility, Growth of assets, Profitability, Size of assets account for 10.2% of variance in debt/ total assets ratio. It is revealed from the above results of software companies that predictors are not significantly affect the debt/total assets ratio (dependent variable). It has been depicted in Anova Table that the overall regression model is not statistically significant, $F(4,14) = 0.398$, $p > 0.05$, $R^2 = 0.102$. Overall, regression results are not statistically significant when four independent variables taken together. They accounted (predicted) for that capital structure not significantly varied during pre and post-crisis period (2001-2009) and (2009-2015) respectively in case of software industry. So, the null hypothesis is accepted. It means that there is no significant relationship of leverage with firm- specific variables in software companies.

Table 1

R		**.320[a]**	
R Square		0.102	
Adjusted R Square		-0.154	
Std. Error of the Estimate		0.61312	
F Change		0.398	
Sign. F Change		0.807	
Annova	F	0.398	
	Sign.	.807[a]	
Cofficients	Beta	t-value	p-value
(Constant)		0.462	0.651
GrowthA_Total	-0.132	-0.486	0.634
SizeA_Total	0.082	0.258	0.800
Profit_Total	-0.253	-0.843	0.413
Tang_Total	0.279	0.927	0.369

Source : Researcher's Own Calculations

a. Dependent Variable : Debt / Total Assets Ratio

Predictors : (Constant), Growth of Assets, Size of Assets, Profitability, Tangibility.

(B) Banking Companies

H_{o2} : There is no significant relationship of leverage (debt/total assets) with firm-specific variables in Banking companies during pre and post-crisis period.

Table 2 depicts the value of $R^2 = 0.490$, the predictors or Independent Variables i.e. Tangibility, Growth of assets, Profitability, Size of assets account for 49% of variance in debt/total assets ratio. It is revealed from the above results of banking companies that predictors (Independent variables) are significantly affect the debt/total assets ratio (dependent variable). It has been depicted in Anova Table that the overall regression model is statistically significant, $F(4,29) = 6.594$, $p < 0.05$, $R^2 = 0.490$. So, the null hypothesis is rejected. It means that there is a significant relationship of leverage with firm-specific variables during pre and post-crisis period (2001-2009 and 2009-2015). They accounted (predicted) for that capital structure significantly varied during pre and post crisis period (2001-2009) and (2009-2015) respectively in case of banking industry. The results revealed that size of assets and profitability are the significant predictors of debt/ total assets with ($p<0.05$). But the growth of assets and tangibility are not the significant predictor of debt / total assets ratio.

Table 2

R		.700a	
R Square		0.49	
Adjusted R Square		0.419	
Std. Error of the Estimate		1.512593	
F Change		6.954	
Sign. F Change		0	
Annova	F	6.954	
	Sign.	.000a	
Cofficients	Beta	t-value	p-value
(Constant)		1.662	0.107
GrowthA_Total	-0.271	-1.784	0.085
SizeA_Total	0.363	2.591	0.015
Profit_Total	0.434	2.942	0.006
Tang_Total	-0.059	-0.43	0.671

Source : Researcher's Own Calculations

a. Dependent Variable : Debt / Total Assets Ratio

Predictors : (Constant), Growth of Assets, Size of Assets, Profitability, Tangibility.

(C) Finance Companies

H_{o3} : There is no significant relationship of leverage (debt / total assets) with firm-specific variables in Finance companies during pre and post-crisis period.

Regression analysis of debt/total assets ratio with firm specific variables are :

Table 3

R		.784a	
R Square		0.615	
Adjusted R Square		0.553	
Std. Error of the Estimate		10.4756	
F Change		9.971	
Sign. F Change		0	
Annova	F	9.971	
	Sign.	.000[a]	
Cofficients	Beta	t-value	p-value
(Constant)		-2.353	0.027
GrowthA_Total	0.133	0.948	0.352
SizeA_Total	0.871	5.312	0.000
Profit_Total	-0.241	-1.457	0.158
Tang_Total	-0.214	-1.588	0.125

Source : Researcher's Own Calculations

a. Dependent Variable : Debt / Total Assets Ratio

Predictors : (Constant), Growth of Assets, Size of Assets, Profitability, Tangibility.

Table 3 depicts the value of $R^2 = 0.784$, the predictors or Independent Variables i.e. Tangibility, Growth of assets, Profitability, Size of assets account for 78.4% of variance in debt / total assets ratio. It is revealed from the above results of finance companies that predictors (Independent variables) are significantly affect the debt / total assets ratio (dependent variable) with ($p<0.05$). It has been depicted in Anova Table that the overall regression model is statistically significant, $F(4,25) = 9.971$, $p < 0.05$, $R^2 = 0.784$. So, the null hypothesis is rejected. It means that there is a significant relationship of leverage with firm-specific variables during pre and post-crisis period (2001-2009 and 2009-2015). But the growth of assets, profitability and tangibility are not the significant predictors of debt / total assets ratio.

Software Companies

H_{o4} : There is no significant relationship of leverage (debt / equity) with firm-specific variables in software companies during pre and post-crisis period.

Table 4

R		0.357	
R Square		0.128	
Adjusted R Square		-0.122	
Std. Error of the Estimate		4.121145	
F Change		0.128	
Sign. F Change		0.728	
Annova	F	0.512	
	Sign.	0.728	
Cofficients	Beta	t-value	p-value
(Constant)		2.813	0.014
GrowthA_Total	-0.256	-0.958	0.354
SizeA_Total	-0.112	-0.356	0.727
Profit_Total	0.245	0.831	0.420
Tang_Total	-0.285	-0.962	0.352

Source : Researcher's Own Calculations

a. Dependent Variable : Debt / Equity Ratio

Predictors : (Constant), Growth of Assets, Size of Assets, Profitability, Tangibility.

Table 4 depicts the value of $R^2 = 0.128$, the predictors or Independent Variables i.e. Tangibility, Growth of assets, Profitability, Size of assets account for 12.8% of variance in debt / equity ratio. It is revealed from the above results of Software Companies that predictors do not significantly affect the debt/equity ratio (dependent variable) Overall, regression results are not statistically significant when four independent variables taken together. They accounted (predicted) for that capital structure not significantly varied during pre and post-crisis period (2001-2009) and (2009-2015) respectively in case of software industry. So, the null hypothesis is accepted. It means that there is no significant relationship of leverage with firm-specific variables in software companies.

Banking Companies

H_{o5} : There is no significant relationship of leverage (debt / equity) with firm-specific variables in Banking companies during pre and post-crisis period.

Table 5

R		.812a	
R Square		0.659	
Adjusted R Square		0.612	
Std. Error of the Estimate		0.428833	
F Change		14.016	
Sign. F Change		0.000	
Annova	F	14.016	
	Sign.	.000[a]	
Cofficients	Beta	t-value	p-value
(Constant)		-2.986	0.006
GrowthA_Total	0.742	5.988	0.000
SizeA_Total	0.067	0.588	0.561
Profit_Total	0.53	4.399	0.000
Tang_Total	0.197	1.741	0.092

Source : Researcher's Own Calculations

a. Dependent Variable : Debt / Equity Ratio

Predictors : (Constant), Growth of Assets, Size of Assets, Profitability, Tangibility.

Table 5 depicts the value of $R^2 = 0.659$, the predictors or Independent Variables i.e. Tangibility, Growth of assets, Profitability, Size of assets account for 65.9 % of variance in debt/ equity ratio. It is revealed from the above results of Banking companies that predictors (Independent variables) significantly affect the debt/equity ratio (dependent variable). The null hypothesis is rejected. It means that there is a significant relationship of leverage with firm- specific variables during pre and post crisis period (2001-2009 and 2009-2015). So, regression is a good fit model for the analysis. Overall, regression results are statistically significant when four independent variables taken together. The size of assets and tangibility are not the significant predictors of debt / equity ratio.

Finance Industry

H_{o6} : There is no significant relationship of leverage (debt/equity) with firm-specific variables in Finance companies during pre and post-crisis period.

Table 6

R		.574a	
R Square		0.330	
Adjusted R Square		0.223	
Std. Error of the Estimate		6.231127	
F Change		3.078	
Sign. F Change		0.034	
Annova	F	3.078	
	Sign.	.034[a]	
Cofficients	Beta	t-value	p-value
(Constant)		3.464	0.002
GrowthA_Total	-0.022	-0.119	0.906
SizeA_Total	-0.698	-3.229	0.003
Profit_Total	0.463	2.123	0.044
Tang_Total	0.003	0.015	0.988

Source : Researcher's Own Calculations

a. Dependent Variable : Debt / Equity Ratio

Predictors : (Constant), Growth of Assets, Size of Assets, Profitability, Tangibility.

As it is seen in Table 6, the valu^{e} = 0.330, the predictors or Independent Variables i.e. Tangibility, Growth of assets, Profitability, Size of assets account for 33% of variance in debt / equity ratio. It has been depicted in Anova Table that the overall regression model is statistically significant, $F(4,25) = 3.078$, $p < 0.05$, $R^2 = 0.330$. So, the null hypothesis is rejected. It means that there is a significant relationship of leverage with firm-specific variables during pre and post crisis period (2001-2009 and 2009-2015). So, regression is a good fit model for the analysis. Overall, regression results are statistically significant when four independent variables taken together. They accounted (predicted) for that capital structure significantly varied during pre and post-crisis period (2001-2009) and (2009-2015) respectively in case of finance industry. But the growth of assets, profitability and tangibility are not the significant predictors of debt / total assets ratio with ($p > 0.05$).

FINDINGS

1. The regression results state that relation of growth of assets has been found to be negative with debt/equity ratio as well as debt/

total assets ratio and statistically insignificant in Software and Banking industry whereas in case of Finance industry relation between debt/equity ratio with growth of assets has been found to be positive and significant. It is observed that in case of Banking industry relationship of debt/equity ratio with growth of assets is found to be positive and significant. Overall, regression results depicted that growth of assets has negative relation with leverage. This finding is consistent with Pecking Order theory. If there is higher degree of growth of assets, the lesser should be the amount of leverage/debt in its capital structure.

2. The regression results depict that relation of first measure of leverage which is taken as debt/total assets ratio with size of assets has been found to be positive and significant in case of banking and finance industry whereas in case of software industry, the relation between them is found to be negative and insignificant. For the second measure of leverage which is observed as debt/equity ratio, the relation is found to be negative and significant in case of finance industry whereas in case of software industry, the relationship of size with leverage found to be negative and insignificant. The negative sign of this effect supports the Pecking Order theory and other researches viz. Rajan and Zingales (1975), Titman and Wessels (1988). The positive relation of size assets with leverage states that if the size of assets is larger than amount of leverage / debt is also larger in its capital structure. This effect supports the Static Trade off theory.

3. The relation of profitability with leverage is found to be positive and statistically significant in case of banking industries when the both measures of leverage taken together. However, in case of first measure of leverage which is taken as debt/ total assets ratio, relation of profitability is found to be negative and insignificant in software and finance industry. But in case of second measure of leverage which is taken as debt/ equity ratio, relation between them is found to be positive and significant in finance industry, insignificant in software industry. The results are consistent with the assumptions of Pecking Order theory. It states that higher profitable companies prefer internal source of financing than using of leverage/ debt in its capital structure.

4. The result from multiple regression states that the relationship among tangibility and leverage is found to be positive and insignificant in case of banking and finance industry when the second measure of leverage which is taken as debt/equity ratio was taken. But in case of first measure of leverage which was calculated with debt/ total assets ratio, the relation of leverage with tangibility was found to be positive and insignificant. The results state that tangibility of assets were found to be negatively related with leverage when the first measure of leverage taken in case of banking and finance industry. The negative sign of relationship with leverage states that firms with larger tangibility will have lower financial leverage. This supports the assumptions given under Pecking Order theory and other researches viz. Pandey *et al.* (2011).

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An Empirical Study of Dividend Behavior : Evidence from Indian Manufacturing Firms

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Abstract

The study aims at examining the determinants of dividend policy of Indian Manufacturing firms that are continuously paying the dividend during the study period that is from 2012-2013 to 2019-2020. The sample firms involve the 30 large cap firms listed on BSE Indian Manufacturing Index. Stepwise regression analysis has been carried out on the secondary data of the sample firms. Results of the study, suggested that among the six selected independent variables, viz. the Profitability, Leverage, Growth, Past Dividends, Liquidity and Size, only the past dividends and growth variables show the significant relation with Dependent Variable (DPS). Past dividend variable in accordance with the literature, have positive significant influence on the dividend policy of the sample firms while growth variable, contrary to the proposed negative relation, provided evidence of positive significant relation with the dividend policy of sample firms.

Key Words

Dividend Payouts, Profitability, Leverage, Growth Prospects, Past Dividends, Liquidity.

INTRODUCTION

Determination of the Dividend Payout policies of the firms is still a crucial and unsolved issue in corporate finance literature. Various empirical studies have been analyzed the dividend decisions of the firms since the last six decades but still the puzzle remained unsolved. Lintner's (1956) work started the never-ending debate on this dividend issue. Even after a tremendous amount of research on dividend policy, it still continues to be a Puzzle with Pieces that Just Don't Fit Together (Black, 1996). The financial economists were involved in modeling and examining the corporate dividend policy of the firms from last several decades. All the competing research over the years resulted in the emergence of various theories such as Bird in the Hand theory, Signaling theory, Catering theory, Life Cycle theory, Agency Cost theory and Tax Clientele effect.

Even after the several decades of research, there is still no consensus on any particular theoretical explanations on the part of dividend decisions taken by the firms. But it is clear to some extent that dividend decisions are important to the firms and plays a conscientious role in firms' financing decisions. Hence, examining action of various factors that led to the determination and concerned changes in dividend decisions gain importance in the eye of investors. These factors can be categorized into three main measures, viz., firm characteristics, market characteristics and substitutions of payouts (Denis *et al.*, 2007). The existing empirical studies in the literature reveal the various firm level characteristics such as size, profitability, leverage, risk and liquidity as major determinants of dividend policies (Labhane, 2016).

Most of the research and models concerning the dividend decisions have been carried out in the developed nations like the USA and the UK. The theories invented from the developed market may have altogether different implications when executed in the emerging and still developing market like India as the financial and regulatory system of developing nations have been in the ongoing phase and have more constraints than the developed nations.

With reference to India, several studies have been conducted like Mahapatra and Sahu (1993) that identified the net earnings and cash flow as key factors in explaining the dividend decisions. Ramachandran and Packkirisamy (2010) identified the level of debt as a major determinant of Indian corporate firms. Labhane (2016) suggested that the size, profitability, leverage, life cycle and liquidity are significant determinants of dividend policies in India.

Even after decade of extensive research in dividend payments, still there is no convincing evidence on factors that explain the dividend policy decisions of Indian firms. This motivates us to examine the determinants of dividend policy of Indian firms.

REVIEW OF LITERATURE

Dividends are basically described as allocation of profits whether past or presents among the shareholders in the proportion of their ownership or stake. Dividend decisions are taken considering the optimization level between the distributed profits and retained earnings which are supposed to be re-investments. During the last six decades, a numerous research has been conducted irrespective of puzzling behaviour of dividend payouts of firms as follows :

The first and foremost study conducted by the Lintner (1956) made a groundbreaking contribution in dividend literature. His study provided that the earnings as a major determinant of dividend decision and firms set a target payout ratio and adjust its dividend payouts accordingly. The study of Anil and Kapoor (2008) investigated that the Indian firms concerning the stability in their dividend payouts and results suggested that profitability is a leading determinant of dividend payouts. Like-wise the study of Bhayani (2009) and Das (2017) provided that profits and liquidity are substantial variables affecting the dividend policies of the firms.Whereas the study of Gupta and Banga (2010) provided that leverage and liquidity are the major determinants behind the dividend policies of the firms.

Saravankumar (2011) after analyzing the NSE firms provided that along with the profits and liquidity, sales and reserve position do have an influential impact on dividend decisions. Adding more visibility to the previous studies, Singhania and Gupta (2012) using the tobit regression model revealed that firm size, growth and investment opportunities have negative significant influence over the dividend policy determination of Indian firms. Warne and Pinki (2013) conducted their study on the dividend behaviour of automobile firms of India found that firms even belonging to the same industry followed the dissimilar dividend policies.

Baker and Kapoor (2015) surveyed the managers of NSE listed firms to learn their views on factors affecting dividend policy and results presented that the earnings and pattern of past dividends are influential variables, thereby provided that the managers have affirmative view-point to the landmark study of Lintner (1956).

Following the above, Mahdzan *et al.*, (2016) in their study examined the dividend determinants of different sectors and revealed that the firm size, leverage and profitability have significant influence over the dividend decisions. Similarly, Labhane and Mahakud (2016) provided that larger, more profitable, highly liquid and mature firms followed the higher dividend payout ratio while the presence of investment opportunity, business risk and financial leverage results in lower dividend payout ratio. While, the study of Yusof and Ismail (2016) in context of the dividend determinants of Malaysian firms concluded that firms with the higher earnings, larger in size and with the investment opportunities go for higher dividend payouts while the firms with higher debt follow lower or restricted dividend policies.

In context of manufacturing firms, Kumar and Ranjani (2018) provided that firm size and cash holdings are having significant positive relation with dividend declarations. Also, Kumar and Sujit (2018) analyzed the determinants and trends of dividend payout policies of Indian firms from different sectors and revealed that firms with higher leverage and growth followed the lower dividend payout policies while firm size, agency costs, liquidity and profitability have positive influence on dividend payout and thus resulted into adoption of higher dividend payout ratios by the firms.Thakur and Kannadhasan (2018) also examined the dividend payouts of Indian manufacturing firms but used a fresh approach of Quantile regression and provided that profitability and growth prospects are having significant impact over dividend payouts.

OBJECTIVE OF THE STUDY

Our study mainly focuses on the manufacturing sector of India as it emerged as a high growth sector in Indian economy. The broad objective of the study is to analyze the determinants of dividend policy of Manufacturing Index of BSE. The study provides whether previously identified determinants have similar or contradicting relation with dividend policy of the selected firms. It benefits the investors and concerned managers in getting an insight into the dividend policy of the manufacturing sector in the current scenario.

MEASURES AND DETERMINANTS OF DIVIDEND POLICY

Dividend Policy

Following the literature, we have used Dividend Per Share (DPS) as a measure for dividend policy of the sample firms.

Profitability

As suggested by signaling theory of dividend policy, there exists a positive relationship between dividend payouts and profits of the firms. As it is assumed that greater the profits more will be funds that can be distributed as the dividends. This relation is also supported by the literature studies Anil & Kapoor (2008), Bhayani (2009), Saravankumar (2011), Patra, Poshakwale and Ow-Yong (2012), Labhane and Mahakud (2016), Das (2017). In this study, we have used the profits after tax as a proxy for the profitability of the firms to examine its relationship with the dividend policy of the sample firms.

H1 : There exists a positive relation between profitability and the dividend policy of the sample firms.

Leverage

The leverage of firms is normally measured by Debt-Equity Ratio which is equal to total debt divided by total equity of the firm. Leverage is an important determinant of dividend policy as highly levered firms will prefer to pay back the principal debt instead of dividends and more the level of debt, more fixed interest charges are standing against profits. Thus, negative relation is expected between leverage and dividend payouts of the sample firms as also supported by studies Patra, Poshakwale and Ow-Yong (2012), Labhane and Mahakud (2016), Bae and Elhusseiny (2017), Kumar and Sujit (2018).

H2 : There exists a negative relation between leverage and dividend policy of the sample firms.

Growth Opportunities

As per the pecking order hypothesis, firms having the growth opportunities like to retain the funds in order to take the advantage of fruit-ful opportunities and accordingly pay the lesser dividends. Hence, we expect a negative or inverse relation of growth with the dividend payouts as evident from the earlier studies Singhania and Gupta (2012), Kumar and Sujit (2018). We have used the market price to book value ratio (P/B) as a proxy for the growth opportunities of the sample firms.

H3 : There exists a negative relation between growth opportunities and dividend policy of the sample firms.

Past Dividends

As evident from Lintner's model (1956), firms used the past year dividends as a target for their current dividend declarations (Baker 2015). The share-holders are assuming that firms distribute dividends more or equal to the last year's payments. Thus, we can expect a positive relation between past dividends and past year dividends.

H4 : There exists a positive relation between past dividends and dividend policy of the sample firms.

Liquidity

It may be possible that firms with growing profitability are lacking in cash in hand which makes dividend payments impossible as dividend payments involve heavy flow of cash from the firms to investors. Thus, liquidity can be assumed as an influencing factor for dividend payments as supported by the earlier studies Labhane and Mahakud (2016), Das (2017), Kumar and Sujit (2018). We have used the Current Ratio (CR) as a proxy for liquidity of the firms.

H5 : There exists a positive relation between liquidity and dividend policy of the sample firms.

Size

Firm's size can be measured as natural log of total assets. Generally, large firms are more diversified along with the low degree of variance in earnings, thus they can accommodate the higher dividend payouts as conveyed from the literature viz. Patra, Poshakwale and Ow-Yong (2012), Labhane and Mahakud (2016), Kumar and Ranjani (2018). Smaller firms,on other hand may find it more relatively more difficult to pay the dividends to the investors. Empirical studies give reflection of positive relationship between the size variable and dividend payouts of the firms.

H6 : There exists a positive relation between size and dividend policy of the sample firms.

METHODOLOGY

Data

This study examines the determinants of dividend policy of Indian Manufacturing firms listed on BSE Manufacturing Index. The data has been taken from annual reports and supplemented websites like *bseindia.com, moneycontrol.com*. The Manufacturing index of BSE involves 30 manufacturing firms. To be part of the sample, the firm must have declared the dividends each year during the period from 2012-13 to 2019-2020. The study involves 235 firm-year observational meetings the said criteria.

Research Model

Since our objective is to analyze the determinants of dividend policy and what are their respective behaviour, whether it is of influential nature or not. Thus, we have used the regression model. In our model, we have used Dividend Per Share (DPS) as a function of six independent variables, viz. profitability, leverage, growth, past dividends, liquidity and size. The following proposed relationship has been analyzed by using the regression model :

$$DPS_{it} = \beta_0 + \beta_1 PAT_{it} + \beta_2 LEV_{it} + \beta_3 GROWTH_{it} + \beta_4 PD_{it} + \beta_5 CR_{it} + \beta_6 SIZE + e_{it}$$

Where, DPS_{it} = dependent variable, dividend per share for firm *i* in the period *t*, PAT_{it} is Profit After Tax for the firm *i* in the period *t*, LEV_{it} is Debt-Equity Ratio for the firm *i* in the period *t*, $GROWTH_{it}$ is growth opportunities for the firm i in the period *t* , PD_{it} is past dividend for the firm *i* in the period *t*, CR_{it} is Current Ratio for the firm *i* in the period *t*, $SIZE_{it}$ is size of the firm *i* in the period *t*, α is a Constant, βs are the slope co-efficients, e_{it} is the error term for firm *i* in period *t*.

For drawing the attention only on the influential determinants, we have used the step-wise regression model on the panel data of the sample firms. The step-wise regression model is basically used in order to draw attention only to the significant variables, ignoring other variables, thereby resulted into a small draw of results from large chunks of data. The step-wise regression model saves both the time and efforts on the part of the executor.

RESULTS AND DISCUSSION

The descriptive statistics of all the variables used in the regression model are provided in Table 1. The Table reports the Mean and Standard Deviation for all the dependent and independent variables.

The Mean value for dependent variable dividend per share (dps) is 26 suggesting that the average dividend per share of Indian manufacturing firms during the study period is 26. The Maximum and Minimum value of dps is 342 and 0.10 respectively with Standard Deviation of 46.28. The mean value of profits after tax is 3413.86 while its Standard Deviation is 5532.26 showing high volatility of profitability among all variables. After the profitability, the past dividend variable comes with the volatility of 39.17, holds second position in volatility among the independent variables.

Table 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Dps	235.00	0.10	342.00	26.00	46.28	2141.50
Pat	235.00	-11906.23	35163.00	3413.86	5532.26	30605915.13
Leverage	235.00	0.00	1.55	0.22	0.31	0.10
Growth	235.00	0.34	63.95	7.95	9.06	82.14
Pastdiv	235.00	0.00	255.62	23.17	39.17	1534.39
Liquidity	235.00	0.33	7.11	1.67	1.06	1.12
Size	235	.00	13.78	9.9518	1.44075	2.076

Source : Compiled in SPSS

Table 2

Correlation Matrix

	Dps	Pat	Leverage	Growth	Pastdiv	Liquidity	Size
Dps	1	–	–	–	–	–	–
Pat	.029	1	–	–	–	–	–
Leverage	-.202**	.086	1	–	–	–	–
Growth	.265**	-.140*	-.361**	1	–	–	–
Pastdiv	.920**	.035	-.197**	.142*	1	–	–
Liquidity	-.068	-.139*	-.404**	.000	-.071	1	–
Size	-.075	.554**	.512**	-.498**	-.040	-.312**	1

Source : Compiled in SPSS

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

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

Table 2 represents the correlation among the dependent and independent variables. As evident from the Table, Profits After Tax (PAT) have a low degree of correlation with dependent variable, dps. Leverage has low negative correlation with dependent variable, dps yet the relation is significant. In the case of growth variable, it has also low correlation with dps but still in a positive and significant manner. Lastly, past dividends have strong significant correlation with dps while size and the liquidity showed a low negative correlation.

Table 3

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.920[a]	.846	.845	18.20602	.846	1278.836	1	233	.000	
2	.930[b]	.864	.863	17.12411	.018	31.372	1	232	.000	1.934

a. Predictors : (Constant), PastDiv

b. Predictors : (Constant), PastDiv, Growth

c. Dependent Variable: DPS

Table 3 indicates the results of the step-wise regression model. From the Table 3, it is seen that among the six independent variables taken above, only past dividend and growth variable have significant influence over the

Dependent Variable (dps). As indicated, both the Models have higher values of Adjusted *r* Square with .845 and .863 which signify that in Model 1, past dividend variable able to explain the 84% variation in dps, dependent variable while in Model 2, past dividend and growth variables jointly explain the 86% variation in dps. With regard to auto correlation of variables, as shown from the Durbin–Watson test with a value of 1.93, we can say that there is no auto correlation between variables past dividend and growth.

Table 4

ANOVA[c]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1.	Regression	423881.852	1	423881.852	1.279E3	.000[a]
	Residual	77229.992	233	331.459		
	Total	501111.844	234			
2.	Regression	433081.259	2	216540.629	738.454	.000[b]
	Residual	68030.586	232	293.235		
	Total	501111.844	234			

a. Predictors : (Constant), PastDiv

b. Predictors : (Constant), PastDiv, Growth

c. Dependent Variable : DPS

Table 4 shows the ANOVA results of both Models. The significance value of F is less than .05 indicating fitness of both Models.

Table 5

Coefficients[a]

Model		Unstandardized Co-efficients		Standardized Co-efficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1.	(Constant)	.826	1.381		.599	.550		
	Pastdiv	1.087	.030	.920	35.761	.000***	1.000	1.000
2	(Constant)	-4.200	1.578		-2.661	.008		
	Pastdiv	1.064	.029	.900	36.842	.000***	.980	1.021
	Growth	.699	.125	.137	5.601	.000***	.980	1.021

a. Dependent Variable : DPS

*** Significance at 1% level.

Table 5 shows co-efficients of regression Models. As seen from the Table there is absence of multicollinearity in variables as value of VIF is less than threshold of 10. With regard to independent variables, we can say that in Model 1, when past dividends show an increasing trend, it brought an increase of 1.087 in dependent variable dps at significance level of 1%. In respect of Model 2, when there is an increase in past dividend and growth opportunities, they brought an increase of 1.064 and .699 in dependent variable respectively along with significant value at 1% level. The regression results provided that among above six hypotheses, only hypothesis H4 is accepted completely as past dividend shows positive and significant results. While with regard to growth variable, we have hypothesized a negative relation with dps. But the results are presenting positive relation yet in a significant manner. Hence, hypothesis H3 cannot be accepted in the whole manner.

CONCLUSION

The present study examines the determinants of dividend policy of Indian manufacturing firms during the study period from 2012-13 to 2019-2020. This eight-year study of manufacturing firms has been carried out using step wise regression model. From the empirical analysis, we have found that firms with better growth opportunities pay dividends more frequently showing contrasting results with proposed hypothesis, akin to the studies Yusof and Ismail (2016) and Thakur and Kannadhasan (2018).

Indian manufacturing firms have also considered their past year dividend payments while formulating the current dividend policies.Results showed that the firms frame their dividend payments similar to past dividends-declared, as recommended by Lintner (1956) and Baker (2015). The other variables, like profitability, leverage, liquidity and size are proposed to have influence on dividend policy of the firms as also indicated from the literature but the overall results of our study brought insignificant influence of these variables on dividend per share, dependent variable.

At last, we can conclude that in Indian manufacturing firms, (concerning the sample taken), the past dividends and growth opportunities are major influencing determinants while framing the dividend payments. The reason might be that Indian firms may be more restricted towards the stability in their dividends and hesitate any undue changes in dividend payments in order to avoid any future payment related threats.

LIMITATIONS AND RESEARCH ISSUES

Our study deals with determinants of dividend policy in Indian Manufacturing sector. But apart from these variables or determinants, there are many more determinants which may have astonishing impact on dividend policies of the Indian firms like cash flow, corporate governance, macro-economic determinants etc. It may be possible that these determinants may have more effect on dividend policy of the Indian firms than the above studied. Also, the data used in study is of secondary in nature, thus, it carries all limitations of secondary data. Short span of the study may also act as a limitation as longer period observations bring more generalizations in the results. Nonetheless, these limiting issues may act as new way for further research.

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Causes of Work Related Stress Among the Management College Faculty

(With reference to Indore city)

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Abstract

Happiness is a choice. You can choose to be happy. There is going to be stress in your life, but it is your choice, whether you let it affect you or not. Adopting the right attitude can convert negative stress into a positive one. Stress, not only affects your ability to work, consequently affecting your business, but more importantly, it affects your health. Causes of workplace stress may be job content and how the work is organized. This research paper throws light on the causes of work related stress, among the management college faculty. The basic aim behind this research is to, analyze the working environment of management college faculty in Indore Region. This paper depicts the study of causes of work related stress and to check its, physical and mental impact on individual's productivity in Indore city.

Key Words

Work Related Stress, Management College Faculty, Working Environment and Individual's Productivity.

INTRODUCTION

Stress can come from any situation. It is a thought, that makes you feel frustrated, angry or anxious. Physicist and engineers refer stress, to a force, that produces deformations. In medical science, it refers to the changes in physiological actions in response to some reactive stimuli. Stress exists, when a force is applied to distort the body. The effect is manifest as elastic or non-elastic distortions are measurable as strain. In a recent Health and Safety Executive Survey (2007), one in six of all working individuals in the UK reported that, their job is very stressful. Work related stress is also one of the biggest causes of sick leave. It is impossible to escape pressure at work altogether, so you need to learn how to manage stress effectively. Stress differs from person to person. What is stressful to one person is not necessarily, stressful to another. Every job has a level of stress associated with it. Workplace stress is usually brought on by unreasonable demands, that are too large or numerous for an employee to overcome. We all get stressed at some time in our working life, some more than others. The way we deal with stress is the main difference. The degree to which we are affected is also a major variable.

SOME TYPICAL CAUSES OF STRESS ARE

Workplace stress is different for everyone, what is stressful for one person may not be stressful for another. What is stressful for you may be different for your friend, spouse and colleagues or even for your boss. But still some of the common causes of stress are related to personal life like relationship with spouse, children, health, marriage, death of family member etc. Sometimes excessive or high workload and unrealistic deadlines makes people feel stressful. One of the reasons for stress is also, a lack of control over work activities and interpersonal support or poor working relationships among the superior and subordinates. Sometimes people feel stressed due to the feeling of job insecurity, lack of career opportunities, or level of pay. In case of woman, a reason for stress is detected sometimes as mental or physical harassment at work place. In some cases multiple reporting and commanding lines for employees, with each manager asking for their work to be prioritized is the reason, to feel people fall in a stressful situation. Some other reasons pointed out by Northern Territory Government report (2003) are failure to keep employees informed about significant changes to the business, causing them uncertainty about their future, a poor physical working environment, longer working hours and participation and non participation from co-workers and superiors.

STRESS AND TEACHER PERFORMANCE

Too much stress can contribute to health problems. Stress can also reduce the ability to perform at the highest levels (Chan, 1998). The negative effects of stress can impact negatively on performance and quality of life. The effects of stress are unmistakably many. They include increase heart rate, rapid breathing or slow and bradypnea breath, muscle tightness to prepare to fight or to flee, circulating blood to the brain and major muscles (away from digestion, hands / feet, Reproductive organs), releases stress hormones like cortisol and adrenaline, slows or stops digestion, causes the brain to be more reactive, less thoughtful, increases perspiration, reduces immune system response (Guglielmi and Tatrow, 1998). Tension headaches, neck / back / shoulder pain, tight jaw, sleeping problems, fatigue, loss of concentration, learning problems can increase, irregular or rapid heart rate, migraine headaches, poor circulation, Raynaud Syndrome, high blood pressure, Sexual Dysfunction (in either sex), digestive problems, upset stomach, ulcers, colitis, hormone imbalances, reduction of immune system function, over reaction by immune system (allergies or autoimmune diseases worse), increased asthma activity, increased aging rate, anxiety, depression, substance abuse, poor habit control, over-eating, low energy, prone to accidents or mistakes, can impair communication, poor performance, among others effects are characteristics of stress (Guglielmi and Tatrow, 1998).

REVIEW OF LITERATURE

R. G. Kennedy (2011) in his article, Stress Management Techniques for Teachers, reveals that the stress can be observed in any kind of job, but due to the unique circumstances, the teachers are involved in, they have to seen an increased level of stress than others. Because of the nature of their job, they are so stressed out daily so that there is a need for them to practice techniques to manage their stress. Techniques relieving stress, not only improve their health but also their careers as well. The teacher must take a quick nap, these techniques for relieving stress can improve the overall health and helps to improve career of the teacher.

Li-fang Zhang have conducted a study on titled Occupational Stress and Teaching Approaches among Chinese Academics (2009). Researcher suggested that, controlling the self-rating abilities of the participants, the Favorable conceptual changes in teaching approach and their role insufficiency predicated that the conceptual change in teaching strategy is negative.

Usman Ali *et al.* (2014) found that workload, role conflict and inadequate monitory rewards are the prime reasons of causing stress in employees that leads to reduced employee's efficiency.

P. S. Swaminathan and Rajkumar S. in their work on, Stress levels in Organizations and Their Impact on Employee's Behavior (2013). They have conducted a study, that focused on the level of stress among the age group, profession, different varieties of jobs, hours of work and the influence of work environment on the degree of stress faced by employees. Stress is an employee's individual in nature. This study indicates that, an optimum level in which every individual can perform with his full capacity and identified three conditions responsible for work stress they are 1. Role overload 2. Role self distance 3. Role stagnation.

Satija S. and Khan W. in their research work titled, Emotional Intelligence as Predictor of Occupational Stress among Working Professionals (2013). According to them Occupational Stress is as same as Job Stress affect that needs to be controlled at the workplace, otherwise, it will negatively affect on employee's work attitudes & behavior. This study investigates that, the relationship between, Emotional Intelligence and Occupational Stress. This study revealed the findings that, Emotional Intelligence is a most significant predictor of Occupational Stress.

Deepa Sikand Kaut S. (2008), in her article, Teaching Stress : An Emerging Area of Research in Teacher Education Constitutions reveals that the teacher is the most important element in any educational program. The daily interaction with pupils, co-workers and the incessant and fragmented demands of the teaching in general, often lead to over whelming perused and challenges which further leads to stress and strain.

Faisal F.; Noor N.; and Khair A. (2019) in their article, Causes and Consequences of Workplace Stress among Pakistan University Teachers have made an attempt to examine the concept of workplace stress and its impact on the performance of faculty members working in Pakistani Universities. Data was collected from five public and private sector universities. The six workplace factors identified as sources of stress for university teachers are, work overload, role ambiguity and role conflict, management ineffectiveness, disparity of rewards and recognition, unsupportive coworkers and lack of career development opportunities. In the survey phase, a questionnaire was developed and distributed among 350 teachers in selected universities. Entrant teachers (Lecturers) were found to be more prone to stress than senior faculty members on higher posts. Excessive workload and role conflict were found to be the highest stress causing factors. Effective and supportive management and career progression opportunities are suggested as means to reduce the stress level and address suboptimal performance of university teachers.

Prasad K. D. V.; Vaidya R.; and Kumar V. A. (2015), in their article, A Study on Causes of Stress among the Employees and Its Effect on the Employee Performance at the Workplace in an International Agricultural Research

Institute, Hyderabad, Telangana, India have focused on widespread issue *Stress* and its impact on employees. A survey of 200 employees of the institute carried out to assess the job related, organization related, individual related and physiological reactions to stress and its effect on employee's performance. Descriptive analysis, correlation techniques and regression analysis were used to arrive the conclusions. The study concluded that, the occupational stress is having moderate impact on the employee's performance of the institute, the job related stress in general and the stress factor job security in particular. The employee's reaction to the stress that physiological factors also has moderate effect the performance of an employee.

Narahari L.; and Koneru K. (2015), in the article, A Study on Stress Management among College Teachers in Andhra Pradesh has discussed that, in the workplace and at home stress and other difficult situation remain all-time high. Factors such as job insecurity, long hours, continuous change and impractical deadlines, can cause serious problem for workers. The aim and goal of the paper is, to know the various factors to stimulate stress level among teachers in college level. Workplace stress occurs, when there is an imbalance the demands and perceived pressures of the work environment and a specific ability to cope. An individual's experience of stress at work is to a large extent affected by the level of control, they have over their working condition, densities, the degree of support, that they receive from others at workplace and the strategies they use to respond to work pressures.

RATIONALE OF THE STUDY

We all need to have some mental pressure in our life which makes our work satisfying and help us to meet deadlines. Too much pressure, without having the chance to recover out of the situation causes stress and it damages our health too. When the demands and pressures placed on individual worker's do not match the resources available or do not meet the individual's needs and motivations, stress can occur and endanger, that person's health and well being. Workplace stress differs from person to person. It can depend on your personality type and how you respond to pressure. Stress is the result of any emotional, physical, social, economic or other factors that require a response or a change. The rationale of the study is to find out various work related causes that lead to stress with respect to work culture in educational institutes. Factor analysis is used to analyze the causes of work related stress. The results show various causes of stress among the management faculty, occurring frequently and occasionally.

OBJECTIVES OF THE STUDY

1. To analyze the working environment of management faculty.
2. To find out major factors causing stress.
3. To check its physical and mental impact on individual's productivity.

RESEARCH METHODOLOGY

Type of Study

The research is descriptive in nature.

Descriptive Research is used to describe characteristics of population or phenomenon being studied, it does not answer question about how, when, why, the characteristics occurred. Descriptive studies, primarily concerned with finding out, what is, might be applied to investing the following question. What are the factor that affect during the work related to the faculties? How can we overcome them?

Population : The study is confined to Indore Management Colleges.

Sampling Techniques : Simple random sampling technique.

Sample Size : Sample size 100 selected randomly

(Professionals of five colleges were considered as respondents)

Methods of Data Collection : The required data is collected through :-

Primary Source : Structured questionnaire

Scaling Technique : 5 pointer likert scale.

The collected data has been analyzed with the help of frequency tables, bar diagrams and pie-charts, and through hypotheses.

LIMITATIONS

As the research is restricted within Indore city, results are not applicable to other areas of India, Limited number of respondents has been taken due to time constraint and this could affect the accuracy of result to certain extent.

DATA ANALYSIS AND INTERPRETATION

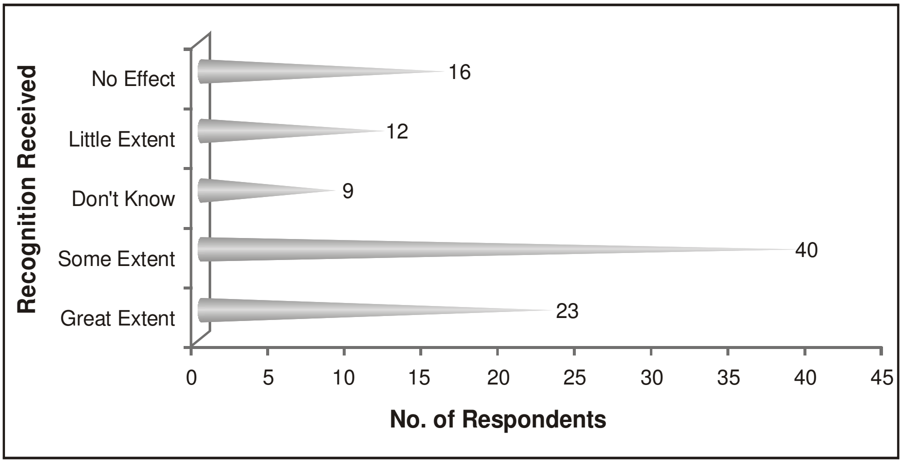
To what extent do you agree, that, the following factors cause work related stress during your regular work performance?

Mark the following factors on bases of :

5-Great Extent, 4-Some Extent, 3-Don't Know, 2-Little Extent, 1-No Effect.

Recognition Received

Recognition Received	No. of Respondents
Great Extent	23
Some Extent	40
Don't Know	9
Little Extent	12
No Effect	16

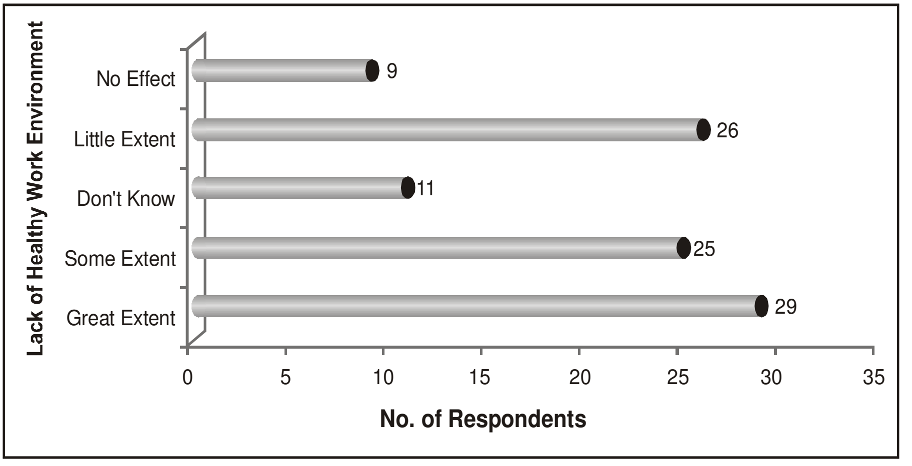


Interpretation

The figure shows that maximum respondents, that is, 40% out of 100 are at Some Extent affected by these stress factor. 23% are affected by Great Extent. 12% are affected by Little Extent and 16% are having No Effect and 9% Don't Know about these factor. It shows that by Some Extent majority of faculties are affected by Recognition Received stress factor.

Lack of Healthy Work Environment

Lack of Healthy Work Environment	No. of Respondents
Great Extent	29
Some Extent	25
Don't Know	11
Little Extent	26
No Effect	9

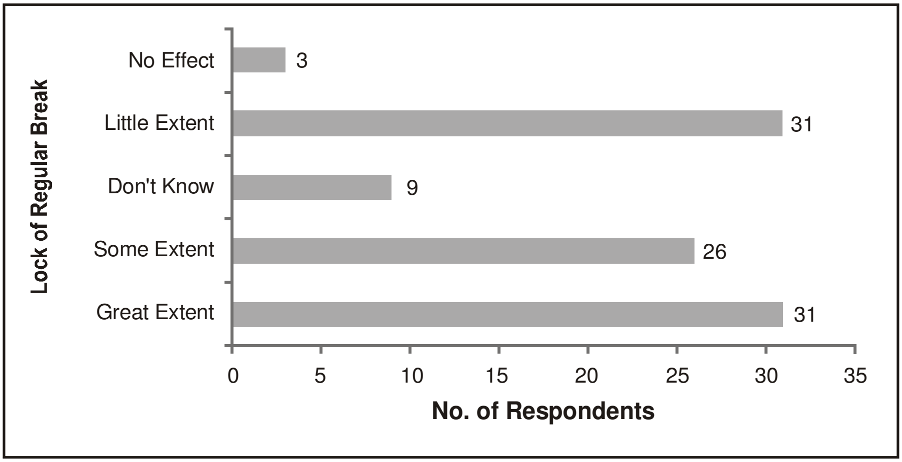


Interpretation

The figure shows that maximum respondents, that is, 29% out of 100 are at Great Extent affected by these stress factor. 25% are affected by Some Extent, 26% are affected by Little Extent and 9% are having No Effect and 11% Don't Know about these factor. It shows that by Great Extent majority of faculties are affected by Lack of Healthy Work Environment stress factor.

Lack of Regular Breaks

Lack of Regular Break	No. of Respondents
Great Extent	31
Some Extent	26
Don't Know	9
Little Extent	31
No Effect	3

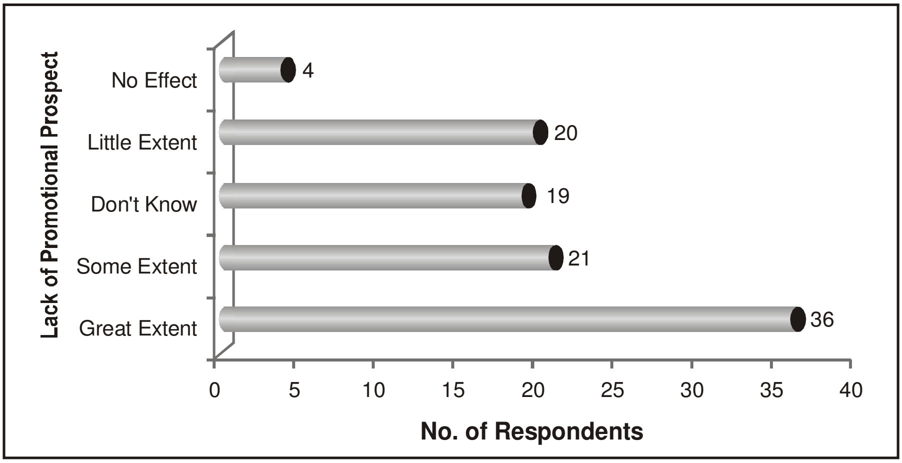


Interpretation

The figure shows that maximum respondents, that is, 31% out of 100 are at Great Extent affected by these stress factor. 26% are affected by Some Extent. 31% are affected by Little Extent, and 3% are having No effect, and 9% Don't Know about these factor. It shows that by Great Extent majority of faculties are affected by Lack of Regular Break stress factor.

Lack of Promotion Prospects

Lack of Promotional Prospect	No. of Respondents
Great Extent	36
Some Extent	21
Don't Know	19
Little Extent	20
No Effect	4



Interpretation

The figure shows that maximum respondents, that is, 36% out of 100 are at Great Extent affected by these stress factor. 21% are affected by Some Extent. 20% are affected by Little Extent, and 4% are having No effect, and 19% Don't Know about these factor. It shows that by Great Extent majority of faculties are affected by Lack of Promotional Prospect stress factor.

Reliability

Case Processing Summary

		N	%
Cases	Valid	100	100.0
	Excluded[a]	0	.0
	Total	100	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.911	.903	41

The reliability of the instrument is calculated by using Reliability statistics on SPSS17. The Cronbach's Alpha value of the instrument has came at .911, i.e., the instrument is 91% reliable.

To calculate the importance of variables we used Factor Analysis with

Rotated component Matrix. The study has extracted 6 factors namely :

1. Academic Factor
2. Role Factor
3. Cooperative Factor
4. Mental Factor
5. Job Description
6. Influencing Factor

Factor Group 1

The details of each factor are as follows :

S. No.	Academic Factor	Eigen Value	Factor Loading
1.	Mental Relaxation	31.094	.852
2.	Healthy Work Environment		.806
3.	Uncertainty due to Merger		.759
4.	Free from Conflict		.737
5.	Authority Granted		.706
6.	New Style of Institutional Management		.684
7.	Recognition Received		.674
8.	Fair Administrative Policy		.670
9.	Problem Sharing		.657
10.	Learning New Things		.648
11.	New Educational Initiative		.611
12.	Work Freedom		.555
13.	Hectic Timing		.555
14.	Personal Problem and Productivity		.515

In Factor 1, which is named as academic factor, mental relaxation is very important for academic factor having highest factor loading with .852, after that, healthy work environment, uncertainty due to merger with factor loading .806 and .759, respectively. Where variable personal problem and productivity is least important with factor loading .515 in academic factor.

Factor Group 2

S. No.	Role Factor	Eigen Value	Factor Loading
1.	Career Development Opportunity	12.712	.854
2.	Promotional Prospect		.833
3.	Uncertainty Due to Restructuring		.808
4.	Uncertainty Due to Merger		.759
5.	Participation in Decision Making		.714
6.	New Educational Initiative		.611
7.	Effort not Valued		.541
8.	Lack of Funds / Resources		.494
9.	Lack of Line Management		.473
10.	Lack of Support in Job Role		.440
11.	Bulling Behavior from Management / Staff / Student		.403

In Factor 2, which is named as role factor, career development opportunity is very important for role factor having highest factor loading with .854, after that promotional prospect, uncertainty due to restructuring with factor loading .833 & .808 respectively. Where variable bulling behavior from management/staff/student is least important with factor loading .403 in role factor.

Factor Group 3

S. No.	Cooperative Factor	Eigen Value	Factor Loading
1.	Mental Effort	7.182	.783
2.	Physical Effort		.738
3.	Helpfulness of People		.659
4.	Dealing with Student Discipline		.557
5.	Routine Decision		.456

In factor 3, which is named as cooperative factor, mental effort is very important for cooperative factor having highest factor loading with .783, after that physical effort, helpfulness of people with factor loading .738 & .659 respectively. Where variable routine decision is least important with factor loading .456 in cooperative factor.

Factor Group 4

S. No.	Mental Factor	Eigen Value	Factor Loading
1.	Teaching New Courses	5.495	.637
2.	Lack of Regular Breaks		.611
3.	Job Insecurity		.574
4.	Large Classes / More Students		.569

In Factor 4, which is named as mental factor, teaching new courses is very important for mental factor having highest factor loading with .637, after that lack of regular breaks, Job insecurity with factor loading .611 & .574, respectively. Where variable large classes/more students is least important with factor loading .569 in mental factor.

Factor Group 5

S. No.	Job Description	Eigen Value	Factor Loading
1.	Unclear Job Description	5.439	.790

In Factor 5, which is named as job description unclear job description is very important for job description factor having highest as well as least factor loading with .790.

Factor Group 6

S. No.	Influencing Factor	Eigen Value	Factor Loading
1.	Work Timing Inflexibility	4.436	.790
2.	Change in Terms and Conditions		.490

In Factor 6, which is named as Influencing factor work timing inflexibility is very important for influencing factor, having highest factor loading with 790. Where, variable change in terms and conditions is least important with factor loading .490 in influencing factor.

HYPOTHESES TESTING

To know the association between demographic factors and other components related to Job satisfaction, we have framed the following hypotheses. One way ANOVA has been applied to test the hypotheses.

Age vs. Overall

$H_0 1$: There is no significant impact of age on overall work related stress variables among management college faculties of Indore.

$H_1 1$: There is a significant impact of age on overall work related stress variables among management college faculties of Indore.

ANOVA

Age	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	53.723	35	1.535	17.184	.000
Within Groups	5.717	64	.089		
Total	59.440	99			

The calculated F value 17.184 of age is significant at 0.000 levels with degree of freedom equals to 35. In light of this, the null hypothesis namely $H_0 1$: There is no significant impact of age on overall work related stress variable among management college faculties of Indore is rejected. Hence, there is a significant impact of age on overall work related stress variables among management college faculties of Indore.

Gender vs. Overall

$H_0 2$: There is no significant impact of gender on overall work related stress variables among management college faculties of Indore.

$H_1 2$: There is a significant impact of gender on overall work related stress variables among management college faculties of Indore.

The calculated F value 17.184 of gender is significant at 0.000 levels with degree of freedom equals to 35. In light of this the null hypothesis namely $H_0 2$: There is no significant impact of gender on overall work related stress variables among management college faculties of Indore is rejected. Hence, there is a significant impact of Gender on overall work related stress variables among management college faculties of Indore.

Academic Qualification vs. Overall

$H_0 3$: There is no significant impact of academic qualification on overall work related stress variables among management college faculties of Indore.

$H_1 3$: There is a significant impact of academic qualification on overall work related stress variables among management college faculties of Indore.

ANOVA

Academic Qualification	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	117.357	35	3.353	13.511	.000
Within Groups	15.883	64	.248		
Total	133.240	99			

The calculated F value 13.511 of academic qualification is significant at 0.000 levels with degree of freedom equals to 35. In light of this, the null hypothesis namely $H_0 3$: There is no significant impact of academic qualification on overall work related stress variable among management college faculties of Indore is rejected. Hence, there is a significant impact of academic qualification on overall work related stress variables among management college faculties of Indore.

Designation vs. Overall

$H_0 4$: There is no significant impact of designation on overall work related stress variables among management college faculties of Indore.

$H_1 4$: There is a significant impact of designation on overall work related stress variables among management college faculties of Indore.

ANOVA

Designation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	47.610	35	1.360	7.704	.000
Within Groups	11.300	64	.177		
Total	58.910	99			

The calculated F value 7.704 of designation is significant at 0.000 levels with degree of freedom equals to 35. In light of this, the null hypothesis namely $H_0$4 : There is no significant impact of designation on overall work related stress variable among management college faculties of Indore is rejected. Hence, there is a significant impact of designation on overall work related stress variables among management college faculties of Indore.

Marital Status vs. Overall

$H_0$5 : There is no significant impact of marital status on overall work related stress variables among management college faculties of Indore.

$H_1$5 : There is a significant impact of marital status on overall work related stress variables among management college faculties of Indore.

ANOVA

Marital Status	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.717	35	.363	7.082	.000
Within Groups	3.283	64	.051		
Total	16.000	99			

The calculated F value 7.082 of Marital status is significant at 0.000 levels with degree of freedom equals to 35. In light of this, the null hypothesis namely $H_0$5: There is no significant impact of marital status on overall work related stress variable among management college faculties of Indore is rejected. Hence, there is a significant impact of marital status on overall work related stress variables among management college faculties of Indore.

Work Experience vs. Overall

$H_0$6 : There is no significant impact of work experience on overall work related stress variables among management college faculties of Indore.

$H_1$6 : There is a significant impact of work experience on overall work related stress variables among management college faculties of Indore.

ANOVA

Work Experience	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	119.200	35	3.406	6.909	.000
Within Groups	31.550	64	.493		
Total	150.750	99			

The calculated F value 6.909 of work experience is significant at 0.000 levels with degree of freedom equals to 35. In light of this, the null hypothesis namely $H_0 6$: There is no significant impact of work experience on overall work related a stress variable among management college faculties of Indore is rejected. Hence, there is a significant impact of work experience on overall work related stress variables among management college faculties of Indore.

List of colleges of which respondents were considered is as follow :

1. IPS Academy, Indore
2. Acropolis Institute of Management Studies & Research, Indore
3. Christian Eminent College, Indore
4. Shri RGP Gujarati Professional Institute, Indore
5. SICA College, Indore

CONCLUSION

The study focuses on the causes of stress at work place among the management college faculties of Indore. The study is on work place and job performance which found that negative implications of work stress are recognized as a challenge to both employers and workers. Work related stress is one of the biggest causes of sick leave. The data is collected through primary data, that is, structured questionnaire with the help of 5 pointer liker scale with the sample size 100. From the above findings, it is clear that the respondents are, though not frequently, into stressful situation. These factors not only lead to reduction in the productivity of the employees, but also affect their physical and mental health. To overcome this problem, proper administrative policies can be framed. Similarly, working environment can be made more flexible, but not on the grounds of output and productivity. The hypothesis where also formed to analyze the overall stress factors of respondents and results were in favorable of overall factors, i.e., these are significant impact of age, gender, academic qualification, designation etc. on overall, work related stress variables among management faculties of Indore.

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Understanding the Consumer Decision-Making Styles for Apparels in Punjab

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Abstract

Apparels are used as symbolic value which reflects the status of the user, personality, education, behavior and the way of thinking of the people. When an individual wear branded and designer apparels, it shows wealthiest of individual. The kind of apparels worn by individual depends on physical, social and geographical considerations. This study tries to understand the consumer decision-making style of Punjab consumers.The research study is based on primary data collected with the help of structured questionnaire. The Data was collected five cities of Punjab and 484 respondents were selected through random sampling technique. The collected data was then analysed using various quantitative tools like Percent, Cumulative Percent, Mean, Standard Deviation, T-test and Analysis of Variance (ANOVA). On the basis of mean, the ranking of Punjab consumer behaviour style is as Price and Value consciousness style at top followed by Perfectionism Consciousness, Brand Consciousness, Novelty and Fashion Consciousness, Impulsiveness and Carelessness, Recreational and Hedonistic Consciousness, Confused by over-choice and Habitual and Brand loyal orientation.

Key Words

Apparels, Decision-Making Styles, Price and Value Consciousness, Brand Consciousness, Novelty and Fashion Consciousness

INTRODUCTION

Bharat is a nation with varied cultures, customs and even in their dressing too i.e. from lungi to dhoti and from salwaar-kameez to sari, the dressing of Indian has been impressive and varied. In 1950s, Liberty was the first company in India to launch the shirt under its brand (Kaur, T. and Ramachandran, S., 2008). After that so many Indian Companies had been entered in the apparel industry under their own brands such as, Raymond, Ventured, Vimal etc. With implementation of LPG policy in 1991 the fashion and apparel industry witnessed great changes. Today apparels industry shift from tailor shops to designer wear boutiques, retailers selling from their shops to the private labels available at shopping malls along with increase in volume, quality and reduction in prices as well.

Since few decades, there is a great change in taste, behavior and the fashion trends of Indian consumers. With the rise in income and salaries, the spending on apparel has increased and becoming more materialistic. Now Indian Consumers prefer to have both local as well as global brands of apparel. The development of Information Technology brings new platform and driving new consumerism in India. The purchasing has shift to online sites, advertisement displays on electronic catalogues, unlimited information and communications through chats and reviews on social media tools have bring drastic changes in taste, habits, behavior and the fashion trends in Indian consumers.

With the relaxation and flexibility in the FDI retailing norms, liberalization policy of the Indian economy by Indian government, increase in consumption of Indian consumer, expansion of urban area, continues growth in the market size of Indian apparel industry all this leads to become a preferred business destination for retailers throughout the world.

Apparel is mainly used for clothing, which mainly includes outerwear garments. Food and shelter are the basic necessities of life, similarly apparels are also a one of the important basic necessities. It's immemorial that, how long, apparels have been necessary part of human lives. Apparels which serve many purposes by covering part of the human body and helps in protecting one's body from harsh weather, insects, harmful ultra violet radiation, etc. it is a social implications to wear apparels and cover the body parts which are socially required to cover.

The main function of apparel is to provide comfort to the wearer. In summer days climate, apparels provides protection from sunburn and winter days apparels become thermal insulation. Apparels also fulfill requirements of social and cultural functions like, occupational, social status and sexual differentiation. With a change in the purpose, apparels also changes. Now apparels are used to show once lifestyles and also shows the economic and social status. Apparels are used as symbolic value which reflects the status of the user, personality, education, behavior and the way of thinking of the people. And when an individual wear branded and designer apparels, it shows wealthiest of individual. The kind of apparels wear by an individual depends on physical, social and geographical considerations.

From so many centuries, societies have different norms about apparels which shows level of modesty, social status, religion and gender. Apparels also perform the function of embellishment and express the person's taste or style. In designing the apparels, human beings have shown the creativity by developing different types of apparels to protect from environmental hazards such as, Beekeeper gear, Space, Diving, Swim Suits and other protective apparels.

CONSUMER DECISION-MAKING STYLES

The interdisciplinary theories related to consumer decision-making like Economic Man, Emotional Man, Cognitive Man, Irrational and Passive Man says that there is a present of different mental orientations for consumers while making buying decisions. According to Bettman (1979) consumer is not rationally go through a complex process at the time of making purchase decisions and support the consumer decision-making style approach. Sproles (1985) defined consumer decision-making styles as a patterned, mental, cognitive direction that regularly governs a consumer to take decision towards shopping and purchasing. Styles are purchasing strategies and rules which guide consumers in making choices. Sproles and Kendall (1986) provided the Consumer Styles Inventory (CSI), which is an early attempt to systematically measure consumer decision making styles of young consumers in United States. In conceptualizing these styles Sproles and Kendall (1986) postulated particular decision-making styles model which consist of eight mental styles of consumer decision-making. These styles were (1) Perfectionism Consciousness, (2) Brand Consciousness, (3) Novelty and Fashion Consciousness, (4) Recreational and Hedonistic Consciousness, (5) Price and Value Consciousness, (6) Impulsiveness and Carelessness, (7) Confused by Over-choice, and (8) Habitual and Brand Loyal Orientation

Perfectionism consciousness style is fit to those consumers who are searching and preferring for quality products. In this style consumers shop more carefully and more rationally. Impulsive and careless–conscious is opposite to Perfectionism consciousness, in on impulsive and careless orientated consumers would not plan and shop carefully and give less importance to the price they spend or value for money. Such consumers have regrets after making purchases. In Brand consciousness, consumers prefer to buy more expensive, reputable brands, best-selling, advertised brands. Consumers believe that higher price represents better quality. On another hand, price and value conscious consumers are generally looking for lower prices. They are more focus on comparison shoppers and often aim to get the best value for money.

In novelty and fashion consciousness style consumer like up-to-date styles, more concerned about the fashion and seem to be variety seekers in their buying decisions. While, in habitual and brand loyal consciousness style, consumers are more likely to be non-variety stick with certain brands and stores, when shopping.

Furthermore, consumers in a category of confused by overchoice style are having too much of market information and facing difficulties while making their buying decisions. The last style i.e. recreational and hedonistic consciousness, consumers with this style take pleasure in shopping and enjoy the stimulation of looking and choosing products.

NEED OF THE STUDY

The main challenge in Indian apparel segment is its large size having diversity in consumer's preferences. These challenges provided a great potential and opportunities for the retailers. In the research report of Mc Kinsey, the size of Indian apparel market is approximately Rs 86,000 crore and readymade garments have 23% share. Out of 23%, 21 % is capture by branded apparel market. We can say the out of Rs.19,000 crore, only Rs 3800 crore is capture by branded apparel and still, Rs.15200 crore markets is untapped.

India is a second largest country in terms of population and having a large consumer segment especially for fashion, lifestyle and luxury products. The existence of a large consumer, who continuously demands for fashion apparels, increases the scope for marketers, designers and manufactures, to expand their businesses and generate high revenues and profits. These opportunities will be tapped by those players of apparel market only, who tries to understand the consumer decision-making style of Indian consumers.

The present study analyses that the decision-making style of Indian consumers. It would add useful knowledge to the Indian apparel industry to help the manufacturers, designers, marketer and retailers to satisfy the apparel needs. The study would also add significant input to the field of knowledge and help developing or testing theories of purchase decision-making styles and may be act as a reference point for future research in fashion design, apparels buying and its related areas.

REVIEW OF RELATED LITERATURE

Dickson and Sawyer (1986) made an attempt to investigate consumers' knowledge and use of price information at the supermarket point of purchase. In this study, Author assesses the time spent by the consumer at the point of purchase. Subjects were observed and interviewed in terms of the number of brands / sizes physically inspected, accuracy of price recall and recall of price specials, comparison shopping, and reasons for price checking. In many cases it was observed that consumers take minimum time for taking decision for selecting the brands. The reason for taking minimum time was found that consumer employing simple rules of thumb, such as 'buy the brand I've heard of'.

Thomas and Forsythe (1988)in their paper identify the relationship between the apparel fiber preference, consumer perception and demographic factors. Three types of fiber were used in the study i.e. synthetic, natural and blended fiber. The research was conducted on female consumers. The finding of study shows that female prefer selected fiber content for some apparels items and there is no relationship between the fiber preference and demographic factors.

Carter A. Mandrik (1996) made a study titled "Consumer Heuristics : The Tradeoff between Processing Effort and Value in Brand Choice". This paper proposes a conceptual framework for understand consumer's use of simplifying heuristics in making choice between national and private label brands. The study suggests that there is a tradeoff between effort minimization and value maximization, consumer's use of heuristics to simplify the decision process between national and private label brands. Consumers may use heuristic cues like price and brand name to infer higher quality for the national brand.

Laferty and Goldsmith (1999) performed a population-based study titled Corporate Credibility's Role in Consumers Attitudes and Purchase Intentions, When a High versus a Low Credibility Endorser Is Used in the Ad. In the study author investigate the two sources of credibility i.e. corporate credibility and endorser credibility and their influence attitude towards the advertisement, attitude towards the brand and purchase intentions by showing of four mock magazines ads to 100 women students. A 2×2 (low versus high endorser credibility and corporate credibility) between-subjects factorial design was used. The study showed that both credibility types influence attitude towards the advertisement and attitude towards the brand, but corporate credibility has a significant influence on purchase intentions and endorser credibility seems to have a great influence on attitude towards the advertisement.

Hsin Kuang Chi (2009) conducted a study to examine the impact of Brand Awareness on Consumer Purchase Intention. 267 cellular phone users living in Chiyi, were selected with the help of convenience sampling method. From the findings, it was clear that while buying a cellular phone, if consumers recognize brand name then that cellular phone brand holds higher brand awareness. Brand awareness, perceived quality and brand loyalty important for increasing purchase intention. The study suggested that manufacturers of cellular should increase brand awareness through sales promotion, advertising, and other marketing activities. As when a product has a well known brand name, it can win consumer's preferences and increase their purchase intention.

W. Glynn Mangold *et al.* (2009) in their study "Social Media : The New Hybrid Element of the Promotion Mix" argues that, Social Media is a hybrid element of the promotion mix because in a traditional sense, it enables companies to talk to their customers, while in a non-traditional sense it enables customers to talk directly to one another. The writers feel that, Social Media being a hybrid element of the promotional mix, should be incorporated as an integral part of the company's Integrated Marketing Communication (IMC). When Procter and Gamble (P & G) or General Electric (GE) entered the arena of Social Media, they carefully framed their communications with the market place in order to consistently reflect their organizational values and they acknowledge the value of incorporating Social Media into their IMC strategies and promotional efforts.

Mustafa Tumer & Milad Dehghani (2015) performed a population-based study, to examine the effectiveness of facebook advertisements. Questionnaire were distributed among 100 students of Cypriot universities. Samples were selected by using a simple random sampling scheme. The study showed that facebook users willingness to buy brands has increased by seeing the most like's and share's for the brands. Facebook advertisement increases the brand image and brand equity, thereby increases consumer's intention to purchase a particular brand.

Mohamed Dawood Shamout (2016) sought to ascertain the impact of the commonly used tools of sales promotion on consumer buying behavior in retail sector. Theoretical model was developed to meet the research question. The model shows the impact of sales promotion tools; coupons, price discount, sample and buy one get one free on consumer buying behavior. Even in the previous studies mention in this research, show the relationship between sales promotion tools and consumer buying behavior. The study revealed that promotional tools such as sample, price discount and buy one get one free from two had significant relationship found between buy one get one free and consumer buying behavior. Where else, in case of coupon there is no significant relationship found with consumer buying behavior.

Zaeema Asrar Mohiuddin (2018) in their research paper have mentioned about the effect of lifestyle on the buying behavior of the customers. The authors have made close ended questionnaires to examine, how female buying decisions effected by lifestyle. While going through the research paper, it was noted that most of the respondents preferred imported clothes or newly launched brand. According to this study demographic, religion and cultural are the three elements of lifestyle and all elements are important factors, that affect the buying behavior of the respondents. Therefore, the producers must understand the lifestyle of the consumers. The study also stated that the majority of respondents prefer to have branded articles and attires and fall in the category of brand conscious people and very few respondents prefer to purchase clothes from sales on discounted prices.

Sunetra Saha & Ashok Sharma (2020) conducted a research, to study the impact of consumer buying decision model on online purchase intention of branded apparels. For the study author collected data through well drafted questionnaire. Regression Analysis was conducted considering how often do the consumer buy branded apparels online and the decision making styles namely, Careless/Impulsive, Perfectionist or Quality Consciousness, Consciousness, Confused by Overchoice Consciousness, Novelty/Fashion Conscious, Recreational Shopping/Hedonistic Shopping Conscious, Price Equals Quality, Price Conscious, Value-for-Money, Brand Consciousand Habitual, Brand-Loyal Consciousness as independent variables. The result showed that all the factors except Novelty/Fashion Conscious are significantly impact purchase intention for branded apparels online.

Bo Zhang *et al.* (2021) have also talked about the consumer's attitude towards sustainability of fast fashion products. The authors have studied wide set of predictors of attitude such as income, culture, price, religion, gender and age etc. Based on this conceptual framework, the authors had designed an online questionnaire and applied descriptive statistics and regression analysis as to compare predictors of attitude. The study stated that, age was never a significant factor, in contrast employment status was significant factor in differentiating the attitude towards sustainability of fast fashion products. Moreover, behavioural and cognitive components tend to same across religions and cultures, but the affective component is still disparate.

Jung, H. J. *et al.* (2021)in their study had explored predictors of behavioral intention towards sustainable apparel products and also focused to examine both consumer characteristics and marketing perspective for encouraging sustainable apparel consumption behaviors. Results indicate that there was no significant effect of social and differential values on behavioral intention, hedonic, utilitarian values strongly affected behavioral intention for sustainable apparel consumption.

OBJECTIVES OF THE STUDY

1. To study the consumer decision-making style for apparel
2. To study the important socio-economic factors influence on the consumer decision-making style for apparel.

HYPOTHESIS OF THE STUDY

H_{01} : There is no significant difference between consumer decision making style and gender

H_{02} : There is no significant difference between consumer decision making style and age

H_{03} : There is no significant difference between consumer decision making style and education

H_{04} : There is no significant difference between consumer decision making style and family income

H_{05} : There is no significant difference between consumer decision making style and marital status

RESEARCH METHODOLOGY

The research study is based on primary data collected with the help of structured questionnaire. The questionnaire consists of two section related to respondent socio-economic information and 35 statements representing different various consumer decision-making style. The Data was collected five cities of Punjab, 484 respondents were selected through random sampling technique. The collected data was then analysed using various quantitative tools like Percent, Cumulative Percent, Mean, Standard Deviation, T-test and Analysis of Variance (ANOVA).

Data Analysis

Socio-Economic Profile of Respondents

Table

Socio-Economic Profile of Respondents

		Frequency	Percent	Cumulative Percent
Gender	Male	274	56.6	56.6
	Female	210	43.4	100.0
Age	25 to 30 years	204	42.1	42.1
	30 to 35 years	176	36.4	78.5
	35 to 40 years	104	21.5	100.0
Qualification	High Secondary School	34	7.0	7.0
	Graduate	278	57.4	64.5
	Postgraduate	172	35.5	100.0
Month Family Income	20000 to 50000	116	24.0	24.0
	50000 to 80000	262	54.1	78.1
	80000 to 110000	86	17.8	95.9
	Above 1.1 lakh	20	4.1	100.0
Marital Status	Unmarried	228	47.1	47.1
	Married	256	52.9	100

Computer from Primary Data

Above Table shows that from the total 484 respondents, 274 were males 56.6% of the total respondents and 210 were females, 43.4% of the total respondents. The age profile of the respondents was divided into three categories, 25-30 years, 30-35 years, and 35-40 years. Nearly 7% of the respondents had completed only high secondary school, nearly 57% of the respondents graduates and 36% were post graduates. 54 % of the respondents were belonging to Rs 50,000-80000. Above 1.1 lakh category had the lowest percentage of respondents, i.e., nearly 4%. 24% and 18% respondents belong to Rs. 20000-50000 and Rs. 80000 to 1.1 lakh respectively. As per marital status of the respondents were concerned, findings show that total 228 (47.1%) of respondents belong to unmarried category and 256 (52.9%) lie under married category.

Respondent's Consumer Decision-Making Style for Apparels

For analyzing the concerned topic, t-test (Univariate Analysis) was used to measure Consumer Decision-Making Style for Apparels among the respondents from various Punjab cities. Eight style were identified from the review of literature, i.e., (1) Perfectionism Consciousness, (2) Brand Consciousness, (3) Novelty and Fashion Consciousness, (4) Recreational and Hedonistic Consciousness, (5) Price and Value Consciousness, (6) Impulsiveness and Carelessness, (7) Confused by Over-choice, and (8) Habitual and Brand Loyal Orientation. To know the Consumer Decision-Making Style for Apparels, 32 statements extracted from previous research and respondent response to agreement or disagreement, on each statement was measured.

Table 2
Means and Test Values for Respondent's Consumer Decision-Making Style for Apparels

S. No.	Item	Mean	Proportional Mean (%)	Test Value	P-value (Sig.)	Rank
1.	Perfectionism Consciousness	4.45	89	4.92	0.000	2
2.	Brand Consciousness	4.25	85	1.49	0.000	3
3.	Novelty And Fashion Consciousness	4.15	83	8.01	0.000	4
4.	Recreational And Hedonistic Consciousness	3.75	75	12.19	0.000	6
5.	Price And Value Consciousness	4.79	95.8	10.28	0.000	1
6.	Impulsiveness And Carelessness	4.00	80	11.94	0.000	5
7.	Confused By Over-Choice	3.42	68.4	12.71	0.000	7
8.	Habitual And Brand Loyal Orientation	3.25	65	8.14	0.000	8

Computer from Primary Data : The Mean is Significantly Different from 3

In the above Table 2 the mean of all consumer decision-making style is above 3, which shows all consumer decision-making style were found among respondents. Price and Value consciousness style had highest mean value i.e. 4.79 followed by perfectionism consciousness, brand consciousness, novelty and fashion consciousness, impulsiveness and carelessness, recreational and hedonistic consciousness, confused by over-choice and habitual and brand loyal orientation with means score 4.45, 4.25, 4.15, 4.00, 3.75, 3.42 and 3.25.

Socio-Economic Factors and Consumer Decision-Making Style for Apparel

Table 3
Socio-Economic Factors and Consumer Decision-Making Style for Apparel

	N	**Mean**	**Std. Deviation**		
Gender				**T**	**Sig. (2-tailed)**
Male	274	12.372	4.4492	4.122	.000
Female	210	10.705	4.3615		
Marital Status				**T**	**Sig. (2-tailed)**
Single	228	13.316	4.0792	8.236	.000
Married	256	10.164	4.3092		
Age				**F**	**Sig.**
25 to 30 years	204	14.853	3.3956	19.943	.000
30 to 35 years	176	8.207	3.5971		
35 to 40 years	104	11.587	4.4923		
Family Monthly Income				**F**	**Sig.**
20000 to 50000	116	12.379	3.9949	5.722	.001
50000 to 80000	262	11.947	4.5255		
80000 to 110000	86	10.093	4.4501		
Above 1.1 lakh	20	10.200	5.1870		
Educational Qualification				**F**	**Sig.**
Secondary School	34	11.765	4.6779	1.436	.239
Graduate	278	11.360	4.5648		
Postgraduate	172	12.093	4.2978		

Computer from Primary Data

The above Table shows the outcomes of analysis of variance (ANOVA) and T-test. The test was conducted to explore the difference of Consumer decision-making style among gender, marital status, age, family monthly income and educational qualification. The findings shows that in case of gender, there is a difference in consumer decision-making style between male and female as p value is less than .05, i.e., .000. Similar difference in consumer decision-making style between single and married is found as p-value is less than .05, i.e., .000.

The respondents of age group 25 to 30 years, 30 to 35 years and 35 to 40 years also have difference in consumer decision-making style as p-value is less than .05, i.e., .001. The difference in consumer decision-making style also found among different family monthly income. But in case of educational qualification no difference in consumer decision-making style among the respondent as p-value is more than .05, i.e., 0.239.

FINDINGS

From the above study findings are as follows :

- The respondents of the study have Price and Value Consciousness Decision-Making Style. Respondents are generally looking for lower prices apparels. They are more focus on comparison shoppers and often aim to get the best value for money.
- The second Decision-Making Style determined among respondents is Perfectionism Consciousness. Respondents consumers are search and prefer for a quality apparels and consumers shop more carefully and more rationally.
- Brand Consciousness is the third Decision-Making Style that found among the Respondents consumers while purchasing apparels. These respondents consumers prefer to buy more expensive, reputable brands, best-selling, advertised brands.
- Habitual And Brand Loyal Orientation Decision-Making Style is found very less among Respondents consumers.They are more likely to be variety seeker and never prefer certain brands and stores while shopping.
- The Respondents consumers belonging to different Gender group, Marital Status, Age group and Family Monthly Income have different Decision-Making Style while purchasing apparels
- The Respondents consumers belonging to different Educational Qualification group have same Decision-Making Style while purchasing apparels.

Following Hypothesis of the Study were rejected :

I. H_{01} : There is no significant difference between consumer decision making style and gender

II. H_{02} : There is no significant difference between consumer decision making style and age

III. H_{04} : There is no significant difference between consumer decision making style and family income

IV. H_{05} : There is no significant difference between consumer decision making style and marital status

Following Hypothesis of the Study was accepted :

I. H_{03} : There is no significant difference between consumer decision making style and education

CONCLUSION

All the eight styles of consumer behavior, brand awareness, perception for brand apparels, effectiveness of marketing strategies and role of social media were studied across demographic variables namely gender, age, education, marital status, and annual family income to find out socio-economic factors impact on consumer buying behavior. On the basis of mean, the ranking of Punjab consumer behaviour style is as price and value consciousness style at top followed by perfectionism consciousness, brand consciousness, novelty and fashion consciousness, impulsiveness and carelessness, recreational and hedonistic consciousness, confused by over-choice and habitual and brand loyal orientation. Marketers should do efforts to understand the consumer behavior. They should have dynamic and flexible approach for understanding the buying behavior of the consumer because trend and fashion cycles changes very fast. The main suggest for marketer is that they should adopt a new business model in which males have equal importance as females i.e. introduction of latest trends, wide range of variety and colours etc. for males also. Males become more conscious for their style, looks and are equally experimental as females.

Thus, it can be concluded that the current study has arrived at a better understanding of Indian consumers make branded apparels buying decisions and what factors influence them.

IMPLICATIONS OF THE STUDY

The research provide valuable suggestion for apparels marketers related to consumer buying decision making process in terms of branded apparels. This study provides severely contributions and implications for theory as well as for practice aspects. The finding of the study contributes to the literature related to consumer buying decision making process, by studying the influence of socio-economic factors on consumer decision-making upon purchase. From a marketing perspective, the study helps the marketers to reach the target consumers more effectively by segmenting the market using eight different consumer buying behaviour styles. Marketers can fulfil the consumer's demands by understanding the profile and characteristics of every consumer buying behaviour styles and enables them to design better marketing mix.

LIMITATION AND FUTURE RESEARCH

This paper of course has some limitations for future studies to overcome. The first is the data coverage, which is limited to five cities and further research can be conduct including more cites.The size of sample was small as compared to the universe size, but enough to draw statistically meaningful conclusions and future study can be made with large number of sample size. Second, while uploading the data, there is a probability of wrong uploading of responses of respondents. The future research on consumer buying behaviour style can consider contingency variables, such as situation and time variables which may or may not affect the consumer buying behaviour style.

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Financial Soundness of Public and Private Sector Banks in India : A Bankometer Analysis

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Abstract

Long term financial position of the banks is very important parameter which is directly concerned with the profitability of the banks. It is the long-term financial position of the bank on the basis of which different decision can be taken by different parties related to the bank. With the help of long term financial position, it can be ascertained that whether the bank is able to pay its obligation in time or not. So, the present study has been conducted to analyze the financial soundness of the "Public Sector Banks" and "Private Sector Banks" in India using "Bankometer Model" considering the time period of five years (2014-2018). The present research is analytical in nature and secondary data have been collected and analyzed for the fulfilling the objectives of the study. In the results of the study, all the selected public and private sector banks have been found as super sound banks as the calculated solvency scores are higher than 70 percent. It indicates that all the selected banks are good in terms of financial soundness and are able to pay their obligations in time. It has also been found that Indian Bank is the top performer bank in terms of financial soundness throughout the study period.

Key Words

Financial Soundness, Bankometer Model, Solvency Score, Public Sector Banks, Private Sector Banks, Ratio Analysis.

INTRODUCTION

Economic development of a country depends largely on the financial sector of the country and the financial sector is normally denominated by the banking sector. The banking sector of country works in various forms of finance, which include cash and credit, as banks are those institutional bodies which accept the surplus money available with the public and grant credit in the form of loan to the entities which are in need of money. In the process of providing service to the society, banks have to face different types of problems. Indian banking sector is facing the biggest problem of non-performing assets. The increased level of non-performing assets reduces the level of profitability and the decreased level of profitability may create problems related to the liquidity and solvency for the banks. Further, the Indian banking industry has faced many scams that resulted in less availability of funds with the banks. It can be said here that the problem of liquidity and solvency for Indian banking industry is a multidimensional problem. Considering all these elements, an attempt has been made in the present study to appraise the solvency position of selected Public sector banks and Private sector banks of India with the help of Bankometer Analysis Model.

REVIEW OF LITERATURE

Chauhan and Kumar (2019) investigated the soundness of Indian commercial banks with the help of Bankometer Model considering 62 banks for the period 2009-2018. In the findings of the study, foreign banks along with new private banks were found to be the best performer banks in terms of solvency computed according to the framework of Bankometer Model. The public sector banks were found at a relatively low performance position among the group of selected commercial banks in India. Further, old private sector banks were found in the category of moderate sound banks.

Abirami (2018) analyzed the soundness of selected public sector and private sector banks in India in terms of solvency considering a period of ten years starting from the year 2005-06 to 2014-15 using secondary data and with the help of Bankometer Analysis Test. In the findings, it was observed that all the selected public sector banks in the study are super sound in their financial position. Further, the highest performers in respect of S-scores computed using Bankometer in case of private sector banks and public sector banks were found as KMB and IDBI respectively. When the performance of public and private sector banks was compared, private sector banks were found at a better place than public sector banks during the period of study.

Onyema *et al.,* (2018) assessed the financial soundness of ten selected commercial banks in Nigeria with the application of Bankometer Model and Friedman Rank Test considering the study period of fifteen years (2000-2015). In the results of the study, out of total ten selected banks only two banks were found in the category of super sound banks as the calculated solvency scores were higher than 70 percent which is the limit provided by Bankometer Model for solvent banks and the rest eight banks were found having the solvency score less than 50 percent. Banks having solvency score less than 50 percent are considered as banks with financial difficulties in terms of solvency. It was suggested that banks should maintain consistent solvency if they want to ensure sound financial system.

Laila and Widihadnanto (2017) analyzed the Financial Distress prediction of Islamic and Conventional Banks using Bankometer Model. Further, the Bankometer scores of four Islamic banks and 10 conventional banks were observed and compared considering the period of 2011-2014. For the study, secondary data were collected from the Annual Reports of the banks. In the findings of the study, both Islamic and conventional banks were found having a superior level of resilience against financial distress. Moreover, no significant difference was found between the financial distress prediction of Islamic banks and conventional banks.

Landjang and Tumiwa (2017) evaluated the Financial Soundness of the selected commercial banks in Indonesia with the help of Bankometer Analysis. In the study total 19 listed private-owned banks in Indonesia were studied with the help of secondary data sources which were publicly available on the websites of the banks.The period of study was three years (2014-2016). The findings of the research observed that the 19 banks were in the category of super sound bank during the study period. The top performing three banks were found as Bank of Tokyo Mitsubishi at the top which was followed by Citibank and BTPN.

Rahman (2017) examined the Financial Soundness of 24 Private Commercial Banks working in Bangladesh with the help of Bankometer Analysis covering a period of 2010 to 2015. It was found that all the banks have maintained the soundness, as the solvency scores of all the banks were found to be much higher than the limit of 70% throughout the period of study. It was concluded that all the selected banks have been financially sound during the period of study. It was suggested that if the banks want to ensure sound financial system in the long-term, banks will have to maintain the consistent level of solvency.

Masud and Haq (2016) measured the Financial Soundness of selected Private Commercial Banks of Bangladesh for the period 2006 to 2014 with the help of Bankometer Model. It was observed that there is upward trend in different financial indicators related to the banks during the period of study. Moreover, it was found that the bank having higher Deposits, Loans & Advances, Investments, Branches and Employees may not be considered as the banks having better profitability performance. It was concluded that private commercial banks were found contributing to a large extent in the economic growth and stability of the country.

Shamanth and Rajgopal (2016) assessed the financial position of selected Private and Foreign Banks in India using Bankometer Model. The study was based on secondary data which were collected from financial statements and Annual Reports published by Reserve Bank of India. The results of the study expressed the selected banks as liquid having a strong capital base. Further, the selected banks were found able in managing their debt well and they were found to be good in terms of profitability. However, the asset quality of the selected banks was lacking as per the results. It was suggested that the Bankometer Model may be used as an Early Warning System for assessing financial soundness of a bank.

Roman and Sargu (2013) comparatively evaluated the Financial soundness of the 15 commercial banks in Romania which were selected on the basis of banking assets size. The study was based on secondary data and the data were analyzed with the help of CAMELS Model. The results of the study high-lighted that the strengths and the weaknesses of the analyzed banks, emphasizing the need to further strengthen the apprehensions of the decision-makers from banks to improve and increase their soundness.

OBJECTIVES OF THE STUDY

The present research is based on the following main objectives :

1. To analyze the Financial Soundness of selected public and private sector banks.
2. To compare the status of Financial Soundness of selected public and private sector

RESEARCH METHODOLOGY

The nature of present research is analytical and it is based on secondary data which have been collected from the reports available on the website of Reserve Bank of India. The collected data have been complied & tabulated and the compiled data have been analyzed with the help of Bankometer Model. The period covered under the present study is 5 years i.e. from 2014 to 2018. In the present study, 21 Public Sector Banks and 19 Private Sector Banks working in the year 2014 have been considered. Following the recommendations of International Monetary Fund (2000), Shar, Shah & Jamali (2010) and Kattle (2014), the following procedure of Bankometer is used to compute the solvency score :

Parameters of Bankometer

The main parameters used in the Bankometer Model are as under :

a. Capital to Assets Ratio $\geq$ 04%
b. Equity to Assets Ratio $\geq$ 02%
c. Capital Adequacy Ratio 40% $\leq$ CAR $\geq$ 8%
d. Non-performing Loans to Loans Ratio $\leq$ 15%
e. Cost to Income Ratio $\leq$ 40%
f. Loans to Assets Ratio $\leq$ 65%

Bankometer Equation

The following equation is used to evaluate the solvency of banks under Bankometer Model :

$$S = 1.5*CA + 1.2*EA + 3.5*CAR + 0.6*NPL + 0.3*CI + 0.4*LA$$

Where :
S = Solvency Score
CA = Capital to Assets Ratio
EA = Equity to Assets Ratio
CAR = Capital Adequacy Ratio
NPL = Non-Performing Loans to Loans Ratio
CI = Cost to Income Ratio
LA = Loans to Assets Ratio

Criteria for Evaluating the Results

The banks with solvency score, which is greater than 70, are solvent banks and termed as Super Sound Banks. On the other hand, banks having the value of solvency score less than 50 are termed as Insolvent and the banks having solvency score between 50 and 70 are in moderate position and those banks are considered into Gray Zone (Shar, Shah and Jamali, 2010). The criteria are also summarized in the following Table :

Range of Solvency Score	**Status of the Bank**
S-Score > 70%	Super Sound Bank
S-Score < 50%	Insolvent Bank
50% < S-Score > 70%	Gray Zone

FINDINGS AND INTERPRETATION

The following discussion is related to the findings and interpretation of present study :

Table 1
Solvency Scores of Public Sector Banks for the Year 2014

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Allahabad Bank	9.96	0.25	10.46	4.15	16.53	62.61	80.27	18
Andhra Bank	10.78	0.35	10.09	3.11	14.78	64.33	82.40	13
Bank of Baroda	12.28	0.07	10.85	1.52	16.44	60.20	86.02	5
Bank of India	9.97	0.11	10.33	2.00	15.87	64.68	79.29	19
Bank of Maharashtra	10.79	1.05	9.76	2.03	18.65	65.23	83.96	10
Canara Bank	10.63	0.09	11.95	1.98	13.99	61.20	81.55	15
Central Bank of India	9.87	1.03	9.88	3.75	19.65	61.25	80.59	17
Corporation Bank	11.65	0.08	9.01	2.32	12.20	61.74	81.44	16
Dena Bank	11.14	0.43	11.01	2.35	15.12	62.11	83.64	11
IDBI Bank Limited	11.68	0.49	13.88	2.48	11.22	60.09	87.16	4
Indian Bank	12.64	0.25	14.57	2.26	17.04	65.27	94.67	1
Indian Overseas Bank	10.78	0.45	11.32	3.20	15.08	63.98	84.02	9
Oriental Bank of Comm.	11.01	0.14	12.06	2.82	13.91	63.13	84.33	8
Punjab & Sind Bank	11.04	0.50	10.10	3.35	14.85	60.56	82.21	14
Punjab National Bank	11.52	0.07	12.98	2.85	19.54	63.46	88.94	3
State Bank of India Group	11.37	0.06	12.65	2.95	21.86	67.48	90.38	2
Syndicate Bank	11.41	0.25	9.16	1.56	16.55	69.05	84.82	7
UCO Bank	12.68	0.42	8.97	2.38	12.48	62.55	85.97	6
Union Bank of India	10.80	0.21	10.23	2.33	17.04	64.76	82.81	12
United Bank of India	9.81	1.08	7.36	7.18	14.47	52.57	74.47	21
Vijaya Bank	10.56	0.63	7.95	1.55	14.80	59.34	76.54	20

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

The above Table is related to the financial soundness of selected public sector banks for the year 2014 and as per the data of the Table, all the selected public sector have been found super sound as the calculated solvency scores are higher than 70 percent. It means the financial soundness of selected public sector banks for the year 2014 is good. The top performing bank among the group has been found as Indian Bank which is followed by State Bank of India Group. The least solvency score has been obtained by United Bank of India.

Table 2

Solvency Scores of Public Sector Banks for the Year 2015

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Allahabad Bank	10.45	0.25	10.88	3.99	17.11	66.00	83.94	11
Andhra Bank	10.63	0.33	10.54	2.93	15.33	68.02	83.91	12
Bank of Baroda	12.61	0.06	11.08	1.89	16.20	59.87	87.47	5
Bank of India	10.73	0.11	10.06	3.36	16.97	64.98	82.88	14
Bank of Maharashtra	11.94	0.73	10.32	4.19	18.48	67.52	90.33	3
Canara Bank	10.56	0.09	11.54	2.65	15.04	60.23	81.13	16
Central Bank of India	10.90	0.53	10.66	3.61	19.72	60.42	83.99	10
Corporation Bank	11.09	0.07	9.20	3.08	12.00	64.19	81.10	17
Dena Bank	10.93	0.43	11.02	3.82	16.01	60.76	83.53	13
IDBI Bank Limited	11.76	0.45	13.21	2.88	12.52	58.51	86.57	6
Indian Bank	12.86	0.25	15.41	2.50	16.33	65.27	96.38	1
Indian Overseas Bank	10.11	0.43	10.52	5.68	16.11	60.13	80.95	18
Oriental Bank of Comm.	11.41	0.13	11.83	3.34	14.76	63.02	85.96	7
Punjab & Sind Bank	11.24	0.41	11.04	3.55	14.78	65.34	85.90	8
Punjab National Bank	12.21	0.06	12.89	4.06	20.10	63.07	91.99	2
State Bank of India Group	11.53	0.05	12.33	2.50	20.93	64.22	88.72	4
Syndicate Bank	10.54	0.22	8.40	1.90	15.27	66.87	79.77	20
UCO Bank	12.17	0.44	9.77	4.30	12.43	59.92	85.25	9
Union Bank of India	10.22	0.17	10.19	2.71	17.25	66.99	81.85	15
United Bank of India	10.57	0.68	8.79	6.22	15.17	54.27	78.56	21
Vijaya Bank	11.43	0.60	8.04	1.92	14.54	60.80	80.39	19

Source : Compiled from Secondary Data (Reserve Bank of India)

*Ratios are in Percentage.

Solvency status of public sector banks for the year 2015 has been shown in the above Table. As per the results of the study, all the selected public sector banks have been found as super sound banks as the solvency scores are higher than 70 percent. It is an indication of good financial position for selected public sector banks. The best performing bank in terms of solvency has been found as Indian Bank and the second top performing bank is Punjab National Bank as the solvency score of these banks is the highest among the group of public sector banks. United Bank of India has been depicted as the bottom performing bank which is followed by Syndicate Bank.

Table 3
Solvency Scores of Public Sector Banks for the Year 2016

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Allahabad Bank	11.02	0.26	11.47	6.76	17.67	63.53	87.49	10
Andhra Bank	11.58	0.34	10.66	4.61	15.24	65.41	87.33	11
Bank of Baroda	13.18	0.07	11.91	5.06	18.19	57.16	91.88	2
Bank of India	12.01	0.13	10.04	7.79	20.55	58.89	88.68	8
Bank of Maharashtra	11.20	0.73	10.19	6.35	18.14	66.83	88.50	9
Canara Bank	11.08	0.10	11.33	6.42	15.32	58.72	84.46	16
Central Bank of India	10.40	0.55	11.02	7.36	23.94	58.93	85.63	13
Corporation Bank	10.56	0.09	9.59	6.53	13.62	59.75	80.50	20
Dena Bank	11.00	0.50	10.20	6.35	19.96	61.70	85.97	12
IDBI Bank Limited	11.67	0.55	14.22	6.78	13.13	57.51	89.74	3
Indian Bank	13.20	0.24	15.73	4.20	17.73	63.35	98.61	1
Indian Overseas Bank	9.67	0.66	10.76	11.89	19.30	58.61	84.11	17
Oriental Bank of Comm.	11.76	0.13	12.33	6.70	15.77	62.09	89.74	4
Punjab & Sind Bank	10.91	0.39	11.25	4.62	15.01	62.31	84.47	15
Punjab National Bank	11.28	0.06	11.42	8.61	18.67	61.78	88.75	7
State Bank of India Group	11.68	0.06	12.14	3.48	20.97	62.44	88.89	6
Syndicate Bank	11.16	0.23	7.78	4.48	20.39	65.39	83.70	18
UCO Bank	9.63	0.44	9.79	9.09	14.09	51.41	76.36	21
Union Bank of India	10.56	0.17	11.14	5.25	17.59	66.06	85.44	14
United Bank of India	10.08	0.65	8.37	9.04	26.07	52.58	80.58	19
Vijaya Bank	12.58	0.64	9.85	4.80	16.10	61.20	89.00	5

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

Table 3 is related to the performance of public sector banks in terms of financial soundness for the year 2016. It can be seen from the results of the Table that all the public sector banks have been found securing solvency score in excess of 70 percent. So, these banks may be considered in the category of super sound banks. It may be said that all the selected public sector banks have sound financial status. In continuation of the year 2015, Indian Bank again has been found as the bank having the highest solvency score among the group in

Table 4
Solvency Scores of Public Sector Banks for the Year 2017

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Allahabad Bank	11.45	0.31	11.75	8.92	20.02	63.60	91.44	3
Andhra Bank	12.38	0.31	9.88	7.57	16.98	61.34	89.82	6
Bank of Baroda	12.24	0.07	11.53	4.72	18.99	55.16	87.37	16
Bank of India	12.14	0.17	9.66	6.90	19.25	58.51	87.65	15
Bank of Maharashtra	11.18	0.73	8.53	11.76	21.04	59.95	87.82	14
Canara Bank	12.86	0.10	11.44	6.33	17.39	58.61	91.36	4
Central Bank of India	10.94	0.57	9.79	10.20	23.10	41.81	80.67	21
Corporation Bank	11.32	0.09	10.16	8.33	13.75	56.62	83.73	18
Dena Bank	11.39	0.61	11.26	10.66	19.85	56.03	89.05	9
IDBI Bank Limited	10.70	0.57	11.90	13.21	16.17	52.73	86.45	17
Indian Bank	13.64	0.22	15.51	4.39	18.39	58.52	98.24	1
Indian Overseas Bank	10.49	0.99	10.13	13.99	21.27	56.83	87.87	11
Oriental Bank of Comm.	11.64	0.14	11.02	8.96	16.54	62.32	89.44	8
Punjab & Sind Bank	11.05	0.41	12.30	7.51	17.09	60.36	87.83	13
Punjab National Bank	11.66	0.06	11.63	7.81	16.68	58.24	87.84	12
State Bank of India Group	11.60	0.12	13.13	11.61	21.85	56.22	92.56	2
Syndicate Bank	12.03	0.30	9.18	5.21	20.79	66.76	89.65	7
UCO Bank	10.93	0.67	10.35	8.94	16.30	51.75	82.64	20
Union Bank of India	11.79	0.15	10.44	6.57	17.11	63.28	88.41	10
United Bank of India	11.14	0.99	9.40	10.02	22.05	46.89	83.14	19
Vijaya Bank	12.73	0.64	9.88	4.36	19.50	61.05	90.27	5

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

the year 2016. This top performance has been followed by Bank of Baroda. The bottom performing bank among the group is UCO Bank which is followed by Corporation Bank. It means that Indian Bank is at the top in terms of solvency and contrarily, UCO Bank is at the bottom.

The above Table 4 shows the performance of selected public sector banks in terms of solvency for the year 2017. According to the results, all the public sector banks may be considered as the super sound banks as the calculated solvency scores exceed 70 percent. It means that all the selected public sector banks are able to pay their long-term financial obligations in time. In terms of bank-wise results, Indian Bank has been depicted as the best performer among the group of selected public sector banks. This performance has been followed by State Bank of India Group. On the other hand, the lowest performing bank has been found as Central Bank of India followed by UCO Bank. In nutshell, Indian Bank is the top performing bank and Central Bank of India is the bottom performing bank in terms of long-term financial soundness for the year 2017.

Table 5
Solvency Scores of Public Sector Banks for the Year 2017

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Allahabad Bank	8.69	0.33	7.79	5.73	20.93	60.17	74.05	21
Andhra Bank	11.00	0.50	8.44	8.04	16.44	61.55	83.75	15
Bank of Baroda	12.13	0.07	11.98	8.48	20.22	59.37	91.84	7
Bank of India	12.94	0.29	11.37	5.49	20.78	56.00	91.30	8
Bank of Maharashtra	11.01	1.66	11.06	8.28	21.46	54.88	87.66	12
Canara Bank	13.22	0.12	11.42	11.24	19.83	61.88	97.60	3
Central Bank of India	9.04	0.80	10.22	7.48	24.03	47.99	76.00	20
Corporation Bank	9.23	0.15	9.63	11.10	16.05	54.02	77.17	19
Dena Bank	11.09	1.87	13.36	11.74	24.45	54.26	93.73	6
IDBI Bank Limited	10.41	0.88	11.23	11.95	15.80	49.02	82.75	16
Indian Bank	12.55	0.19	14.41	16.69	18.79	61.95	101.94	1
Indian Overseas Bank	9.26	1.97	8.73	3.81	25.78	53.43	77.24	18

Contd.

Contd. Table 5

Oriental Bank of Comm.	10.50	0.27	9.83	15.33	17.79	58.44	86.87	13
Punjab & Sind Bank	11.25	0.50	10.37	10.48	19.60	58.52	88.14	11
Punjab National Bank	9.20	0.07	10.65	6.93	23.75	56.64	79.03	17
State Bank of India	12.60	0.03	12.66	11.24	22.61	56.01	95.26	4
Syndicate Bank	12.24	0.44	8.79	6.28	22.35	65.03	90.53	9
UCO Bank	10.94	1.07	12.78	13.10	19.23	49.74	88.75	10
Union Bank of India	11.50	0.24	10.06	8.42	17.90	59.24	86.80	14
United Bank of India	12.62	2.07	9.90	16.49	25.42	43.17	93.94	5
Vijaya Bank	13.90	0.73	11.23	4.32	19.77	65.40	97.91	2

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

Financial soundness of selected public sector banks for the year 2018 has been analyzed in the above Table. As per results of the study, all the selected public sector banks have been found securing the solvency score in excess of 70 percent. On the basis of this score, these banks may be considered as super sound banks and the selected banks are able to pay their long-term obligations on due dates. The highest solvency score has been observed in case of Indian Bank and this top performance has been followed by Vijaya Bank. Contrary to this, the solvency score is the minimum in case of Allahabad Bank among the group of selected public sector banks. This bottom performance has been followed by Central Bank of India.

Table 6
Solvency Scores of Private Sector Banks for the Year 2014

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Axis Bank	16.07	0.12	19.82	0.44	20.77	60.03	110.72	4
Catholic Syrian Bank Ltd.	11.00	0.27	9.78	2.22	24.75	56.85	82.15	18
City Union Bank Ltd.	15.01	0.22	15.99	1.23	16.22	64.40	103.41	10
DCB Bank Ltd.	13.71	1.94	15.92	0.91	25.19	62.99	103.29	11
Dhanlaxmi Bank	8.67	0.86	9.17	3.80	25.45	54.03	74.16	19
Federal Bank	15.14	0.23	18.41	0.74	18.88	58.23	104.82	9
HDFC Bank	16.07	0.10	17.59	0.27	24.55	61.64	109.68	5
ICICI Bank	17.70	0.19	24.43	0.97	18.88	56.96	120.59	2
IndusInd Bank	13.83	0.60	20.18	0.33	21.54	63.32	105.51	8
ING VYSYA Bank	16.76	0.31	23.10	0.28	24.58	59.31	118.11	3
Jammu & Kashmir Bank Ltd.	12.69	0.06	14.50	0.22	16.42	59.00	90.56	15
Karnataka Bank Ltd.	13.20	0.40	12.58	1.91	18.63	60.27	92.74	12
Karur Vysya Bank	12.59	0.21	12.70	0.41	17.79	65.95	91.58	13
Kotak Mahindra Bank Ltd.	18.83	0.44	27.61	1.08	25.01	60.54	132.06	1
Lakshmi Vilas Bank	10.90	0.47	9.73	3.44	17.40	62.41	82.78	17
RBL Bank Ltd.	14.64	1.49	19.22	0.31	26.29	54.04	106.24	7
South Indian Bank	12.42	0.24	12.01	0.78	16.40	65.89	90.00	16
Tamilnad Mercantile Bank Ltd.	15.59	0.00	17.19	1.22	16.74	64.94	106.93	6
Yes Bank Ltd.	14.40	0.33	12.73	0.05	14.95	51.03	91.11	14

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

Table 6 is concerned with the analysis of financial soundness of selected private sector banks for the year 2014. It is clear from the results of the study that all the selected private sector banks have been found in the category of super sound banks as the calculated solvency scores with the help of Bankometer are higher than 70 percent. It is an indication of the higher level of ability of paying long-term obligations in time for private sector banks. As per bank wise discussion, Kotak Mahindra Bank Ltd. has been found securing top position as the solvency score is the highest in case of Kotak Mahindra Bank Ltd. in comparison to the other selected private sector banks. The second top performing bank is ICICI Bank. On the other hand, the bottom performing bank among the selected private sector banks is Dhanlaxmi Bank which is followed by Catholic Syrian Bank Ltd.

Table 7

Solvency Scores of Private Sector Banks for the Year 2015

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Axis Bank	15.09	0.10	19.24	0.46	20.99	60.85	106.97	8
Catholic Syrian Bank Ltd.	11.00	0.38	10.89	3.85	25.91	60.09	86.26	18
City Union Bank Ltd.	16.52	0.21	19.13	1.30	16.37	64.46	112.57	5
DCB Bank Ltd.	14.95	1.75	17.95	1.01	24.97	64.87	110.53	6
Dhanlaxmi Bank	9.59	1.24	8.85	3.29	26.17	53.44	77.24	19
Federal Bank	15.46	0.21	18.47	0.73	19.66	61.90	107.68	7
HDFC Bank	16.79	0.08	20.92	0.25	24.34	61.90	116.20	3
ICICI Bank	17.02	0.18	24.72	1.61	18.76	59.98	120.08	2
IndusInd Bank	12.09	0.47	18.57	0.31	23.45	61.53	97.14	12
ING VYSYA Bank	15.30	0.29	22.98	1.11	24.46	61.03	113.97	4
Jammu & Kashmir Bank Ltd.	12.57	0.06	16.03	2.77	18.41	58.72	94.00	14
Karnataka Bank Ltd.	12.41	0.36	12.71	1.98	17.34	61.12	90.07	15
Karur Vysya Bank	14.62	0.23	15.75	0.78	18.32	67.93	103.55	9
Kotak Mahindra Bank Ltd.	17.17	0.36	26.32	0.92	27.70	62.41	126.05	1
Lakshmi Vilas Bank	11.34	0.73	11.87	1.85	17.70	66.19	87.92	16
RBL Bank Ltd.	13.13	1.08	15.38	0.27	25.45	53.31	95.15	13
South Indian Bank	12.01	0.23	11.92	0.96	16.97	63.25	87.65	17
Tamilnad Mercantile Bank Ltd.	13.89	0.00	17.44	0.67	18.16	65.00	101.39	11
Yes Bank Ltd.	15.60	0.31	16.85	0.12	16.78	55.48	102.58	10

Source : Compiled from Secondary Data (Reserve Bank of India)

*Ratios are in Percentage.

The above Table shows the performance of selected private sector banks in terms of solvency for the year 2015. According to the results, all the selected private sector banks may be considered as the super sound banks as the calculated solvency scores exceed 70 percent. It means that all the selected private sector banks are able to pay their long-term financial obligations whenever they due. In terms of bank-wise results, Kotak Mahindra Bank Ltd. again in this year has been depicted as best performer among the group of selected private sector banks. This top performance has been followed by ICICI Bank. On the other hand, the lowest performing bank has been found as Dhanlaxmi Bank which is followed by Catholic Syrian Bank Ltd. In nutshell, Kotak Mahindra Bank Ltd. is the top performing bank and Dhanlaxmi Bank is the bottom performing bank in terms of long-term financial soundness for the year 2015.

Table 8

Solvency Solvency Scores of Private Sector Banks for the Year 2016

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Axis Bank Ltd.	15.29	0.09	19.61	0.74	20.06	62.76	108.74	5
Catholic Syrian Bank Ltd.	10.55	0.46	10.95	4.40	27.21	50.17	81.62	18
City Union Bank Ltd.	15.58	0.19	19.00	1.53	16.63	66.21	110.01	4
DCB Bank Ltd.	14.11	1.49	17.26	0.75	25.58	67.59	107.49	6
Federal Bank Ltd.	7.51	0.36	16.75	1.64	22.11	61.42	79.11	19
HDFC Bank Ltd.	13.93	0.07	19.55	0.28	23.92	62.72	104.75	11
ICICI Bank Ltd.	15.53	0.16	24.74	2.98	18.64	60.40	115.82	3
IDFC Bank Ltd.	16.64	4.08	28.69	2.39	12.60	54.92	125.96	2
IndusInd Bank Ltd.	22.04	0.42	24.35	0.36	24.21	61.88	139.21	1
Jammu & Kashmir Bank Ltd.	15.50	0.06	15.95	4.31	21.04	62.53	107.39	7
Karnataka Bank Ltd.	11.81	0.33	12.73	2.35	17.91	60.00	87.90	16
Karur Vysya Bank Ltd.	12.03	0.21	15.30	0.55	19.27	66.26	93.39	13

Contd.

Contd. Table 8

Karur Vysya Bank Ltd.	12.03	0.21	15.30	0.55	19.27	66.26	93.39	13
Kotak Mahindra Bank Ltd.	12.17	0.48	24.45	1.06	28.80	61.72	106.62	9
Lakshmi Vilas Bank Ltd.	16.34	0.63	11.68	1.18	18.89	68.52	105.92	10
RBL Bank Ltd.	15.69	0.83	14.44	0.59	23.72	54.21	102.64	12
South Indian Bank Ltd.	12.94	0.21	11.90	2.89	18.90	64.73	93.19	14
Tamilnad Mercantile Bank Ltd.	11.82	0.00	16.68	0.89	17.84	64.02	92.88	15
The Dhanalakshmi Bank Ltd.	12.75	1.42	6.73	2.78	29.73	55.79	87.74	17
Yes Bank Ltd.	16.50	0.25	16.43	0.29	18.32	59.43	107.29	8

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

Solvency status of selected private sector banks for the year 2016 has been expressed in the above Table 8. According to the results of the Table, all the selected private sector bank may be considered as super sound banks as the solvency scores are higher than 70 percent. It is an indication of good financial position of selected private sector banks for the year 2016. The best performing bank in terms of long-term financial soundness has been found as Indusind Bank Ltd. and the second top performing bank is IDFC Bank Ltd. as the solvency score of these banks is the highest among the group of public sector banks. Federal Bank Ltd. has been observed as the bottom performing bank among the group of selected private sector banks which is followed by Catholic Syrian Bank Ltd.

Table 9
Solvency Scores of Private Sector Banks for the Year 2017

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Axis Bank Ltd.	14.95	0.08	18.46	2.27	21.70	62.03	107.28	8
Catholic Syrian Bank Ltd.	12.15	0.50	11.82	5.51	27.39	50.05	89.00	16
City Union Bank Ltd.	15.83	0.17	20.07	1.71	18.84	67.57	113.45	6
DCB Bank Ltd.	13.76	1.19	17.15	0.79	27.00	65.78	105.41	9
Federal Bank Ltd.	12.39	0.30	15.26	1.28	22.64	63.78	95.19	14
HDFC Bank Ltd.	14.55	0.06	20.65	0.33	24.15	64.20	108.92	7
ICICI Bank Ltd.	17.39	0.15	25.75	5.43	20.03	60.15	125.32	1
IDFC Bank Ltd.	18.90	3.03	23.14	1.14	13.38	44.05	120.78	3
IndusInd Bank Ltd.	15.31	0.33	22.78	0.39	25.75	63.30	114.70	5
Jammu & Kashmir Bank Ltd.	10.80	0.06	13.78	4.87	23.83	60.74	88.79	17
Karnataka Bank Ltd.	13.30	0.44	15.62	2.64	21.76	57.65	97.12	13
Karur Vysya Bank Ltd.	12.54	0.20	16.10	2.53	20.06	66.19	97.51	12
Kotak Mahindra Bank Ltd.	16.77	0.43	25.31	1.26	26.53	63.41	123.79	2
Lakshmi Vilas Bank Ltd.	10.38	0.54	11.58	1.76	19.45	67.33	84.86	18
RBL Bank Ltd.	13.72	0.77	17.04	0.64	23.64	60.50	101.31	10
South Indian Bank Ltd.	12.37	0.24	12.81	1.45	17.93	62.43	90.24	15
Tamilnad Mercantile Bank Ltd.	14.02	0.39	17.05	1.74	18.51	59.41	100.47	11
The Dhanalakshmi Bank Ltd.	10.26	1.70	8.91	2.58	29.04	52.27	80.33	19
Yes Bank Ltd.	17.00	0.21	20.30	0.81	20.00	61.50	115.26	4

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

Table 9 is related to the performance of private sector banks in terms of financial soundness for the year 2017. It can be seen from the results of the Table that all the selected private sector banks have been found securing solvency score in excess of 70 percent. On the basis of this result, it can be concluded that all the selected private sector banks are super sound banks.

Further, it may be said that all the selected private sector banks have sound financial position. ICICI Bank Ltd. has been found as the bank having highest solvency score among the group followed by Kotak Mahindra Bank Ltd. The bottom performing bank among the group is The Dhanlaxmi Bank Ltd. which is followed by Luxmi Vilas Bank Ltd. It means that ICICI Bank Ltd. is at the top in terms of solvency and contrarily, The Dhanlaxmi Bank Ltd. is at the bottom.

Table 10
Solvency Scores of Private Sector Banks for the Year 2018

Bank	Capital Adequacy Ratio	Capital to Assets	Equity to Assets	NPA to Loan	Cost to Income	Loans to Assets	S	Rank
Axis Bank Ltd.	16.57	0.07	18.28	3.64	24.65	63.59	115.06	7
Catholic Syrian Bank Ltd.	9.91	0.51	10.69	4.46	30.65	58.84	83.69	19
City Union Bank Ltd.	16.22	0.17	20.68	1.70	19.18	69.74	116.51	4
DCB Bank Ltd.	16.47	1.02	17.56	0.72	28.67	67.29	116.20	5
Federal Bank Ltd.	14.70	0.29	17.37	1.69	22.46	66.48	107.07	12
HDFC Bank Ltd.	14.82	0.05	19.93	0.40	23.77	61.88	107.98	11
ICICI Bank Ltd.	18.42	0.15	23.78	5.43	21.69	58.28	126.30	2
IDFC Bank Ltd.	18.00	2.69	21.43	1.69	16.45	41.23	115.19	6
IndusInd Bank Ltd.	15.03	0.27	21.24	0.51	25.38	65.40	112.59	9
Jammu & Kashmir Bank Ltd.	11.42	0.06	13.68	4.89	27.88	63.46	93.16	17
Karnataka Bank Ltd.	12.04	0.40	14.97	2.96	20.99	67.14	95.64	14
Karur Vysya Bank Ltd.	14.43	0.22	18.50	4.16	21.53	66.94	108.76	10
Kotak Mahindra Bank Ltd.	18.22	0.36	27.94	0.98	27.00	64.06	132.15	1
Lakshmi Vilas Bank Ltd.	9.81	0.63	10.88	5.66	23.08	63.74	84.16	18
RBL Bank Ltd.	15.33	0.68	20.93	0.78	26.96	65.10	114.39	8
South Indian Bank Ltd.	12.70	0.22	12.46	2.60	18.80	65.99	93.33	16
Tamilnad Mercantile Bank Ltd.	14.83	0.38	17.58	2.16	18.90	62.68	105.60	13
The Dhanalakshmi Bank Ltd.	13.87	2.06	10.14	3.19	27.07	49.73	93.73	15
Yes Bank Ltd.	18.40	0.15	16.34	0.64	20.45	65.14	116.81	3

Source : Compiled from Secondary Data (Reserve Bank of India)
*Ratios are in Percentage.

Table 10 is concerned with the analysis of financial soundness of selected private sector banks for the year 2018, and it is found that all the selected private sector banks have been found in the category of super sound banks as the calculated solvency scores with the help of Bankometer are higher than 70 percent. It is an indication of the higher level of ability to pay long-term obligations in time for private sector banks. As per bank-wise results, Kotak Mahindra Bank Ltd. has been found at the top position as the solvency score is the highest in case of Kotak Mahindra Bank Ltd. among the group of selected private sector banks. The second top performing bank is ICICI Bank Ltd. On the other hand, the bottom performing bank among the selected private sector banks is Catholic Syrian Bank Ltd. which is followed by Luxmi Vilas Bank Ltd.

CONCLUSION

The banking sector of a country is the core part of the financial system of the country and the development of banking sector contributes to the economic development of the country upto a large extent. The financial soundness of the bank is an important parameter for banks which is closely related with the profitability. The present study has been conducted to evaluate the financial soundness of the public sector banks and private sector banks. In the results of the study, all the selected public and private sector banks have been found super sound banks as the calculated solvency scores are higher than 70 percent. It indicates that all the selected banks are good in terms of financial soundness and are able to pay their obligations in time. It has also been found that Indian Bank is the top performer throughout the study period among the public sector banks. United Bank has been found as the bottom performer for two years out of five years of the study. On the other hand, in case of private sector banks, Kotak Mahindra Bank Ltd. has been observed as the top performing bank for three years out of five years of study. Further, the solvency scores of private sector banks have been found higher than the solvency scores of public sector banks which is an indication of better solvency position of private sector banks in comparison to the public sector banks.

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Exploring Factors Influencing Customer Usage of Mobile Payments – A Review

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Abstract

Mobile payment is quickly changing consumers' spending patterns and payment habits. Mobile payments are encouraged due to emergence of m-Commerce and digitalisation of financial services and thus have given opportunities of mobile wallets also in the hands of consumers. Many empirical studies have been conducted globally in the last decade about consumers' mobile payment behaviour. To analyse and synthesize the findings, a meta-analysis is conducted to build consensus about what factors significantly affect consumers' mobile payment behaviour.To encourage consumers' adoption of mobile payment, especially in developing countries like India, the factors such as perceived usefulness, perceived risk, social influence, trust and perceived ease of use must be carefully considered and incorporated into mobile payment products and marketing campaigns. We conducted a systematic review of various researches done on mobile payments, to explore this term by collecting, reviewing and synthesizing studies that related to mobile payments published from 2010 to 2020.

Key Words

Mobile Payment, m-Commerce, m-Wallets, Digitalisation of Financial Services

INTRODUCTION

New technologies and digitalization of life are shaping the ways of doing business as well as the behaviours of consumers. Finding opportunities in the dynamic business scape and benefiting from them using new technologies is a major area of focus for organizations in creating value. In this new digital era, mobile devices have become one of the most prominent consumer products ever to be launched. These devices and the services provided by them rapidly became basic necessities of daily life throughout the world. The increasing popularity of the mobile devices around the globe may be attributed to their omni-present access to a wide range of services (communication, access to information, entertainment, or commerce). Mobile devices create value in a multitude of dimensions for their users. Another trend emerged with the increasing mobile device adoption is the move towards mobile devices in accessing the Internet. India has more than 150 million mobile phone users and is expected to grow approximately 3.5 times in next five years. Data also shows that there will be 30% growth in the mobile wallet market in India during 2015-2019 (Bureau, 2016). Mobile payments allow us to perform transactions for goods & services with a mobile device, such as mobile phones, smartphones etc. These wireless communication technologies can be useful to us in a variety of ways like payments, ticketing and paying fees & fares electronically. Mobile wallet is one of the mobile payment instruments available that can be used for various financial transactions. Mobile payment services bring a range of technology innovations and provides multiple offers to users for greater convenience (Price & Pilorge, 2009).

OBJECTIVES OF THE STUDY

(i) To find out various factors affecting the use of mobile payments like m-wallets by consumers

(ii) To analyse various motives for which the mobile payments are used by customers.

BASIC CONCEPTS AND RELATED TERMINOLOGIES

m-Commerce : m-Commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as smartphones and tablets. As a form of e-commerce, m-commerce enables users to access online shopping platforms without needing to use a desktop computer.

Mobile Payments : Mobile payments (which encompass mobile wallets and mobile money transfers) are regulated transactions that take place through the mobile device. That is, instead of paying for anything with cash, cheques, or physical credit cards, mobile payment technology allows you to do so digitally.

m-Wallets : A mobile wallet is a virtual wallet that stores payment card information on a mobile device. Mobile wallets are a convenient way for a user to make in-store payments and can be used at merchants listed with the mobile wallet service provider**.**

RESEARCH METHODOLOGY

A systematic review of various researches done on mobile payments by doing meta-analysis was done by collecting, reviewing and synthesizing studies that related to mobile payments published from 2010 to 2020. To include research studies in this paper, empirical studies on mobile payments were chosen and those papers were having models, hypothesis developed and statistical tools were used. Only those research papers are considered which are published by 5 famous publishers, i.e., Emerald, Elsevier, Sage, Taylor and Francis Group and Springer from 2010 to 2020.

Initially Google scholar was used to identify the papers with key-words of mobile payments and m-payments, then only published papers in the reputed journals were included, books and reports were excluded and 87 papers were shortlisted. After reading the full text of research papers, the empirical papers with good quality, proper research methodology, models, hypothesis, statistical tools, with proper analysis and which are relevant to this study were finally chosen that came out to be 41 in number.

REVIEW OF LITERATURE

Kar, A. K. (2020) investigated the study with an aim to identify the determinants of usage satisfaction of mobile payments and he found out that information privacy, usefulness, trust, cost, credibility and responsiveness are the important factors to increase the usage satisfaction of mobile payments.

Nidhi Singh *et al.* (2019) developed a conceptual model to determine the most significant factors influencing user's intention, perceived satisfaction and recommendation to use mobile wallet and found that ease of use, usefulness, perceived risk, attitude, to have significant effect on user's intention, which further influenced user's perceived satisfaction and recommendation to use mobile wallet services. TAM (Technology Acceptance Model) and UTAUT2 (Unified Theory of Acceptance And Use of Technology) models were used to develop the conceptual framework.

Deepak Chawla and Himanshu Joshi (2019) examined the factors that influence a consumer's attitude and intention to use mobile wallets using a sample representative of Indian users. The results show that factors like perceived ease of use, perceived usefulness, trust, security, facilitating conditions and lifestyle compatibility have a significant impact on the consumer attitude and intention to use mobile wallets. It was also found that security and trust play an important role in determining trust.

Anup Kumar *et al.* (2018) investigated the impact of perceived usefulness, perceived security, perceived ease of use, trust, grievance redressal and satisfaction on young users' intention to continually use m-wallet in India. Expectation–confirmation theory and structural equation modelling was used to analyse the study.

Amit and Biplab (2018) have identified the factors affecting mobile payment (m-payment) adoption intention in India by proposing a conceptual framework based on Technology Acceptance Model (TAM).The results shows that perceived ease of use, perceived usefulness, trust, and self-efficacy have a significant positive impact on m-payment adoption intention. However, subjective norms and personal innovativeness have no significant impact on m-payment adoption intention.

Mona Sinha *et al.* (2018) studied Indian consumers' intention to use mobile payments by examining their adoption readiness in the larger context of their technology readiness and their privacy concerns. The study finds that adoption readiness positively mediates the relationship between technology readiness and intention to adopt mobile payments. More importantly, privacy concerns negatively relates between adoption readiness and intention to adopt.

Abhipsa Pal *et al.* (2018) investigated the factors that accelerated mobile payments over debit/credit cards in the demonetization era.by developing the model of seven constructs from existing technology adoption literature and three moderators.

Bhartendra Pratap Singh *et al.* (2017) intended to analyse the service quality in MPS in light of extant research on Technology Acceptance and Service Quality via construct of behavioural interaction to use and actual usage.

Ainsworth Bailey *et al.* (2017) tested a revised TAM that has taken into consideration variables like individual mobile payment self-efficacy, mobile payment privacy concerns, and technology anxiety in the assessment of mobile payment adoption in the United States and thus observed that individual difference factors such as self-efficacy and privacy concerns have an impact on consumer response to mobile payment adoption in the United States.

Vikas Gupta (2017) made an attempt to understand the consumer adoption status of mobile wallet. The result shows that Personal Innovativeness, Perceived Ease of Use, Perceived Usefulness and Variety of Services are important factors in deciding consumer adoption of mobile wallet.

Nidhi Singh *et al.* (2017) explained the relationship between perception, satisfaction, and preference of north Indian consumers on the use of mobile wallets and it shows a strong correlation between consumers' perception, preferences and satisfaction. Another contribution of this study is to determine the effect of gender on consumers' preferred services like account statement, money transfer, payments, recharge etc.

Khushbu and Rajan (2016) analysed users' acceptance of mobile wallet services and the main factors that have a significant impact on it. The study successfully extended the existing technology adoption frameworks to include two new variables. Results indicated that factors such as performance expectancy, social influence, facilitating conditions, perceived value, perceived trust, perceived regulatory support and promotional benefits had a positive influence on mobile wallet. Whereas, perceived risk was found to have a negative influence, while effort expectancy was found to be insignificant.

Gokhan and Sebnem (2016) carried out a study to understand the factors contributing to consumer attitude development towards and intention to use mobile payment systems using partial least squares structural equation modeling. The findings highlighted the importance of ease of use and usefulness in attitude development. On the other hand, security concerns were found to have low level of effects on attitudes and use intentions. Effect of social influence was found to be insignificant among the users. There were differences between users' and non-users' perceptions and beliefs indicated by significant differences in the majority of the constructs employed in the study.

Jinnan Wu *et al.* (2016) conducted a study with the purpose to understand the differences of consumers' intention to accept an innovative m-payment service, We Chat payment in China, across two different diffusion stages. Findings says that in the market introduction stage, the negative effect of perceived risk is significant. However, this effect is not significant during the market growth stage.

Chanchai Phonthanukitithaworn *et al.* (2016) developed a conceptual model based on elements of innovation diffusion theory and technology acceptance which was empirically validated using structural equation modelling analysis The empirical results indicate that consumer adoption of mobile payment Services in Thailand was determined by four factors compatibility, subjective norm, perceived trust, and perceived risk.

Umesh Chandershekhar *et al.* (2016) explained that for mobile payment success users must find it useful and compatible to their lifestyle/personality and peers also influence its usage intent. Partial least square structural equation modelling (PL-SEM) was used to analyse the constructs.

Tiago Oliveira *et al.* (2016) aims to identify the main determinants of mobile payment adoption and the intention to recommend this technology with the help of two well-known theories; the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) with the innovation characteristics of the diffusion of innovations (DOI), with perceived security and intention to recommend the technology construct. The research model was empirically tested on 301 respondents in a European country, Portugal using the Structured Equation Modeling (SEM). Sumedha Chauhan (2015) investigated the acceptance of mobile-money (m-money) among target populations, i.e. below-poverty-line citizens in India, using the Technology Acceptance Model (TAM). The findings imply that the trust and the core constructs of TAM such as perceived usefulness, trust and attitude towards usage contribute in influencing the intention to accept m-money. Perceived ease of use neither impacts perceived usefulness nor attitude towards usage of m-money. The survey data were collected from 225 actual and prospective m-money users and analysed using partial least square technique.

Tomi Dahlberg *et al.* (2015) assessed the progress of mobile payment research over the last 8 years. The possible reasons for the lack of research diversity and new recommendations to enhance future mobile payment research were also find out.

Aik-ChuanTeo *et al.* (2015) incorporated a research model on the basis of the Unified Theory of Acceptance and Use Technology (UTAUT) with trust (TR), Perceived Financial Cost (PFC), and the Moderating Variable of Experience to understand the adoption intention using Partial Least Squares Structural Equation Modelling (PLS-SEM) approach. The results demonstrated that only Performance Expectancy (PE), Effort Expectancy (EE), Facilitating Conditions (FC), and Trust (TR) are significant with the intention to adopt.

Parijat Upadhyay and Saeed Jahanyan (2015) attempted a study to highlight those factors which have significant impact on the adoption of mobile based payment service so that the adoption rate can be increased. The study finds that factors like perceived usefulness, perceived ease of use, system quality, connectivity, discomfort, task-technology fit and structural assurance have significant impact on the usage intention of mobile money services whereas factors such as perceived monetary value, absorptive capacity and personal innovativeness have been found to be insignificant.

Tao Zhou (2014) carried out the study to identify the factors affecting continuance usage of mobile payment and Structural Equation Modeling (SEM) Technology was employed to examine the research model. Findings indicated that performance expectancy, trust in mobile payment and flow affect continuance usage. Among them, flow has a relatively larger effect. In addition, system quality has strong effects on performance expectancy and flow.

Joa o Porto de *et al.* (2014) contributed to the study with an aim to provide a clear account of the knowledge that exists on mobile payments by providing a comprehensive scoping study of literature published between 2001-2011 and includes a detailed analysis of 12 primary case studies on existing mobile payment schemes.

Emma L. Slade; Michael D. Williams; Yogesh K. Dwivedi (2014) sought to extend an appropriate model of adoption with theoretically grounded constructs. UTAUT2 was developed to translate UTAUT (Unified Theory of Acceptance and Use of Technology) to the consumer context and it was extended with self-efficacy, innovativeness, trialability, perceived risk and trust with regard to m-payments, m-commerce and m-banking.

Emma Slade *et al.* (2014) tried to explore the potential of a new model of consumer technology adoption and its extension with trust and risk constructs, in explaining non-users' adoption of proximity MPs. The study on UK consumers reveals that the extended model explains more variance in behavioural intention, but performance expectancy remains the strongest predictor across both models.

Kawaljeet Kaur Kapoor *et al.* (2014) conducted a study with an aim to examine the set of attributes that predicts the adoption of Interbank Mobile Payment Service (IMPS) in an Indian context and concluded that the diffusion of IMPS in the Indian context is in the progressive stages and the influences of innovation attributes on its use intentions and adoption will differ and vary over time.

Francisco Jose *et al.* (2013) proposed and tested an integrative theoretical model that allows to determine the relative influence of the determining factors (external influences, ease of use, attitude, usefulness, trust and risk) for the acceptance of a new m-payment system and to analyze the effect of the gender of the consumer on its usage.

Emma L. Slade *et al.* (2013) examined the usage of m-payments in UK through the development of a classification framework and studied existing research literature relating to m-payments to provide a contribution to existing knowledge by finding out various gaps.

Niklas Arvidsson (2013) carried out the study to know consumers' attitudes to start using mobile payment services. The study was done in Sweden by using Technology Adoption Models (TAM) and diffusion of innovation theories and found out that the most important factor explaining whether consumers are likely to use a mobile payment service is ease of use. In addition, relative advantage, high trust, low perceived security risks, higher age and lower income were associated with a positive view on adopting the service.

Rakhi Thakur and Mala Srivastava (2013) intended to accomplish two objectives – to test the functional relationship between Adoption Readiness (AR), Perceived Risk (PR) and usage intention for mobile payments in India and to investigate the stability of proposed structural relationships across different customer groups by using Structural Equation Modelling (SEM).The results helped in finding out the role of different factors on the mobile payments usage intention among customers and expanded the knowledge on consumer behaviour towards financial technological innovations.

Shuiqing Yang *et al.* (2012) carried out the study to identify the determinants of pre-adoption of mobile payment services and explore the temporal evolution of these determinants across the pre-adoption and post-adoption stages from a holistic perspective including behavioural beliefs, social influences and personal traits. By using structural equation model they observed that behavioral beliefs in combination with social influences and personal traits are all important determinants for mobile payment services adoption and use, but their impacts on behavioral intention do vary across in different stages.

Rakhi Thakur (2011) investigated the factors involved in adoption of a new innovation by consumers specifically in the mobile payment services context by adopting TAM model. The empirical findings indicate that the constructs of performance expectancy, effort expectancy, social influence and facilitating conditions have significant impact on mobile payment services adoption among the consumers.

Yaobin Lu *et al.* (2011) investigated whether a customer's established trust in Internet payment services is likely to influence his or her initial trust in mobile payment services. It was found by using SEM analysis that trust had a substantial impact on the cross environment relationship and in combination with the positive and negative valence determinants directly and indirectly influenced behavioural intention to use mobile payments.

Changsu Kim *et al.* (2010) attempted to categorize m-payment users into early and late adopters and delineated the different factors for these two types of adopters that affect their intention to use m-payment. Findings indicate that early adopters value ease of use, confidently relying on their own m-payment knowledge, whereas late adopters respond very positively to the usefulness of m-payment, most notably reachability and convenience of usage.

Shalini Chandra *et al.* (2010) examined the role of trust in m-payment adoption systems and simultaneously investigates the facilitators for consumer trust in m-payment systems by conceptualizing two dimensions facilitating consumer trust in contrast with mobile service provider characteristics and mobile technology characteristics.

Paul Gerhardt Schierz *et al.* (2010) developed and tested the conceptual SEM model focusing on factors determining consumers' acceptance of mobile payment services. The empirical results show strong support for the effects of compatibility, individual mobility, and subjective norm and offers several implications for managers in regards to marketing mobile payment solutions to increase consumers' intention to use these services.

Dong-Hee Shin (2009) analysed a comprehensive model of consumer acceptance in the context of mobile payment. It uses the Unified Theory of Acceptance and Use of Technology (UTAUT) model with constructs of security, trust, social influence, and self-efficacy. Structural equation modeling is used to construct a model of attitudes toward the mobile wallet. They observed in their findings that users' attitudes and intentions are influenced by perceived security and trust.

Tomi Dahlberg *et al.* (2007) proposed a framework of four contingency and five competitive force factors to organize the mobile payment research and found that consumer perspective of mobile payments as well as technical security and trust are best covered by contemporary research but the impacts of social and cultural factors on mobile payments, as well as comparisons between mobile and traditional payment services are entirely uninvestigated issues.

Yoris A. Au; and Robert J. Kauffman (2007) carried out the framework that emphasizes the roles of m-payment innovation producers and m-payment services consumers, as well as selling and network intermediaries, and government regulators and standards groups, which are relevant to a variety of issue areas and observed various factors like consumer choice and demand, network externalities, switching cost, IT value, complementary goods and technology adoption and diffusion theory as a means to analyze the issues from the different stakeholders' points of view.

Niina Mallat (2007) carried out exploratory study to examine factors that affect consumer adoption of mobile payments. The findings suggest that the relative advantage of mobile payments is related to the specific benefits provided by the new mobile technology; time and place-independent payments, remote and ubiquitous access to payment services, and the possibility to avoid queuing and to complement cash payments.

Jan Ondrus and Yves Pigneur (2006) discovered what factors have hindered the technical and commercial development by using a DSS based on a multi-criteria decision making method. Classification framework, qualitative analysis and multiple criteria model was used to assess various aspects related to the adoption of mobile payments from a market perspective.

CONCLUSION

Mobile payment Services bring a range of technology innovations and provides multiple offers to users for greater convenience (Price & Pilorge, 2009). The objective of the present paper was to do the review of literature and to find out various factors affecting the use of mobile payments like m-wallets by consumers. After reviewing the forty-one research papers and with the help of meta-analysis it can be analysed that the maximum research is done on the variable 'Perceived Ease of Use' and 'Perceived Usefulness'. Security & trust and social influence is also taken into consideration by maximum researchers. But the least studied variables are aesthetic, information quality, marketing influence, variety of services; peer influence etc. can be taken into consideration for future research. The other objective was to analyse various motives for which the mobile payments are used by customers. It can be concluded from the review that the motives for which the m-payments are done, are for the convenience, ease of doing the transaction etc. Thus it can be concluded that for the future reference of research, the factors which are least explored can be taken by the researchers like the marketing influence and variety of services.

The limitation of the study is that only empirical research papers from the journals are selected, the literature from the reports and books was excluded which should be taken for the more understanding. And another limitation is that basically 5 reputed publishers were taken more international publishers may be taken for selection of journals.

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Financial Literacy and Retirement Planning in Punjab

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Abstract

India is all set to take the advantage of its demographic dividend. The scope of capitalizing the demographic dividend will depend on the extent of job opportunities created by the government for the youth. A bigger challenge awaits the government in the form of mounting old age dependency. This would have a detrimental effect both at the macro and the micro level. With the traditional family system crumbling in India, the government must take rapid steps to tackle the impending crisis of old age dependency before the situation goes out of hand. The government must develop a mechanism to provide old age support (Kulkarni, P.M. 2014). The matter might not appear to be urgent at the moment but, with the life expectancy going up and shifting from Defined Benefit (DB) to Defined Contribution (DC) pension plans the government will soon witness the retirement planning crisis in the country. Policy makers need to be proactive in handling the situation.

Key Words

Financial Literacy, Retirement Planning, Defined Benefits, Defined Contribution, Old Age.

INTRODUCTION

The recent past has witnessed the changing role of governments and employers towards managing investments on behalf of individuals. The social support structures across the world have changed where the role of the employer and government has shrunk, thereby increasing individual's responsibility to manage their own finances and securing their financial future after retirement. During the past decade, the pension fund industry has witnessed a rapid growth in both the developed and emerging markets. Pension funds are ranked among the largest institutional investors in case of developed countries with respect to Asset Under Management (AUM). The concentration of more than 90% of the AUM can be attributed to three countries (Chan-Lau, 2004).

1. United States (75%)
2. United Kingdom (11%)
3. Japan (9 %)

Due to the demographic changes in the developed countries, the pension fund assets are witnessing a rapid growth. Aging of the population at a fast pace in these countries has increased the fiscal burden of national pay as you go system and the support ratio has increased noticeably. As a plausible solution to the problem, many developed nations have shifted from defined benefit to defined contribution pension plans. The importance of having a sound pension system in place cannot be ignored. Internationally pension funds hold a dominating position. To match the pace of growth, India too needs a sound modern pension system in place.

The past decade has witnessed new and complex financial products in the financial markets, which has increased the importance of understanding these complex products for a better future financial planning and to take informed financial decisions. Research around the world has witnessed low level of financial literacy (Agarwalla *et al.,* 2013, Lusardi and Mitchell, 2011). Even in developed nations like Japan, The United States, and Sweden, the level of financial literacy ranges from low to moderate. These Findings have increased the concern related to financial well-being of individuals after they retire.

The research conducted in this regard also provides an evidence that individuals either under-save or fail to invest prudently and mostly indebted (Mitchell 2011, Poterba *et al.* 2007). Due to the dynamic nature of financial products and services, it becomes important to financially educate people of all levels and age groups to cater to the needs of individuals with changing circumstances (Bernanke 2011).

The relevance of financial literacy to emerging economies cannot be undermined. Rather, financial literacy is of paramount importance to the emerging economies as these economies strive to improve the financial situation of their citizens by aiming at higher economic growth rates. Financial literacy enable the individuals to take informed financial decisions thereby, improving the financial well-being of the people through sound financial decision making.

LITERATURE REVIEW

Against the backdrop of the above problem, the author attempts to review the existing literature on financial literacy in an attempt to lay a strong foundation for the future research.

Financial Literacy

The term financial literacy was first defined in a report for the National Foundation for Educational Research (NFER) commissioned by Nat West Bank in the year 1992, which defined financial literacy as the ability to make informed judgments and take effective decisions regarding the use and management of money Noctoret *et al.* (1992). Financial advancement is extensively acknowledged as an important factor of economic growth (Levine, 2005). Literature shows that, the level of numeracy is low even among the developed nations, particularly widespread among some demographic groups like women, elderly and people with lower level of education (Annamaria Lusardi, 2012). Theory also suggests that, high income respondents could calculate savings after retirement on their own as compared to low income respondents (Miller and Devonish, 2009). Previous research also concludes that financial decision making is linked to numeracy (AnnamariaLusardi 2012). In the past decade it has been witnessed that governments around the world are shifting from Defined Benefit (DB) to Defined Contribution (DC) retirement plans (Van Rooij *et al.* 2007)which in turn puts the burden of retirement planning and retirement well-being on the shoulders of the employees. Studies also reveal that the level of financial literacy is low among youth and women (Annamaria Lusardi *et al.* 2010, Lusardi and Mitchell, 2011). Older people nearing retirement were not well aware about the company and national retirement plans (Robert Clark *et al.* 2010). It is also established that education has a positive impact on the financial literacy possessed by the respondents (Lusardi and Mitchell 2010) and mothers' education had a positive impact on the level of financial literacy possessed by the child (Annamaria Lusardi *et al.* 2010). Researchers have explored the important life events, that encouraged people to save and the top three among total twelve events include retirement motive and two other precautionary motives that is, illness and peace of mind (Horioka and Watanabe, 1997). To achieve these motives it becomes imperative for the people to embrace financial literacy and numeracy skills as life time skills to be able to survive in a dynamic financial environment. Research also reveals that respondents with already low wealth and low level of financial and political literacy tend to have less wealth (Lusardi and Mitchell, 2006). Researchers have also observed that consumers who monitor their spending closely were less uncertain about their past spending and that the consumers with relatively more wealth had less incentive to monitor their spending and were considered absent minded consumers who tend to consume more as compared to the active consumers (John Ameriks *et al.* 2004). The authors have also highlighted the importance of financial education seminars. Research shows that the participants revised their financial goals and planned to modify their savings and investment after the seminar (Robert L. Clark *et al.* 2003). Authors have also explored the relationship between poor retirement planning and financial illiteracy. The research revealed that respondents did not understand financial economics concepts, particularly relating to bonds, stocks, mutual funds and compound interest. The results also revealed that even in the educated class only a few were undertaking retirement planning seriously (Lusardi and Mitchell, 2005). Emily Meyers (2020) made an attempt to study the current state of financial education and young adult financial literacy in the United States. The data was collected from the students of Franklin High School, Massachusetts. Assessments were administered to personal finance, business and history students. Most of the students failed the assessment and the author made an attempt to explore the possible reasons for the same. The author analyzed the scores of a personal finance assessment across three groups of students to analyze the differences in those who received formal education, had interest in business-related studies and those who had neither. The result shows that formal education did not guarantee better financial knowledge as there were personal finance students, who had failed and moreover, the personal finance class students were not able to outperform the other classes of students in all the question dimensions. The author advocated the viewpoint that formal education was not the only way to acquire financial knowledge and that all the young adults could use this opportunity to develop their personal financial skills through other means. The above evidence from the existing literature is sufficient to reveal the need to understand, where the people of the country stand, when it comes to financial literacy and numeracy skills. The importance of these concepts cannot be undermined in today's dynamic socio-economic environment.

Retirement Planning

Retirement planning can be described as the process that helps in ascertaining retirement income objectives, the investment decisions necessary to achieve these objectives and to make this income sufficient for continual maintenance of lifestyle and old age needs. Researchers argue that, the definition of retirement needs a wider perspective, where retirement is not just viewed as discontinued work but includes a transition, that includes role expansion, redefinition and change (Thomas J. Calo, 2005). With increased life expectancy and reduced old age Mortality Rates individuals are faced with the challenge of life cycle planning as average age is rising (James M. Poterba, 2014). The past research on the topic views of changed employment relationship as a challenge due to which retirement planning is no longer a long awaited life event. The reason for this alteration, as viewed by the author, is mergers and acquisitions. Due to downsizing and business cycle downturns, many employees in their 40s and late 50s are faced the prospects of retirement. Thus, planning for retirement holds immense importance in every employee's life (Thomas J. Calo (2005). The Researcher's reason is that, increased life expectancy has also increased the retirement planning horizon of the individuals and thus financial planning has become inevitable and more challenging for the older population (James M. Poterba, 2014).

RESEARCH GAPS AND NEED OF THE STUDY

In the wake of the changing socio-economic and demographic profile of India, it becomes imperative to understand the awareness and attitude of it's citizens towards retirement. The social setup of the Indian society has changed over the years. People prefer to have a nuclear family. The traditional joint family system is coming at an end. Earlier, children were considered as the providers for old parents. Due to the altered social setup, where more and more people are shifting towards the nuclear family setup, the present generation may need to take care of themselves in their old age. This is another reason, that makes the study imperative in this area. Punjab is weak on the social security front and people who employed in the informal sector may need to provide for their retirement goals. All these factors when combined together, have a massive impact on the living standard of the people of this area. Punjab is a distressed state with a weak financial position (Economic Survey 2016-17, Government of Punjab). In such a scenario, it is important to investigate, how much the people are versed in terms of financial literacy and to understand their investment preferences.

Financial literacy is increasingly important in case of Punjab due to two major factors. The first factor, relates to the susceptibility of pay-as-you-go pension systems. Like most of the developed nations, India too has shifted from Defined Benefit (DB) pension plans to Defined Contribution (DC) pension plans, thus increasing the responsibility of the employees to plan for their retirement. The second reason relates to the development of financial markets at a rapid pace with new and complex financial products. The above two reasons justify the author's attempt to conduct the study in this direction.

The author specifically selected the state of Punjab due to two main reasons. The first reason relates to the property and land inheritance in the area. Unlike other metro cities, where employees are dependent on their jobs to maintain their living standard, majority of the people in Punjab inherit property and land, thus giving them an additional source of income. Due to this, reason people are less worried about financial planning as compared to other metro cities where the only source of income is the job. The second reason of concern is the bad real estate markets and vulnerable agricultural profile of the state. Traditionally people of the state were never much worried about financial planning for retirement but, due to changed and more exposed situations prevalent in the state, people are losing out money and stability provided by land and real estate property. Thus, it becomes increasingly important to address the current situation in the state, before things go out of hand.

RESEARCH OBJECTIVES

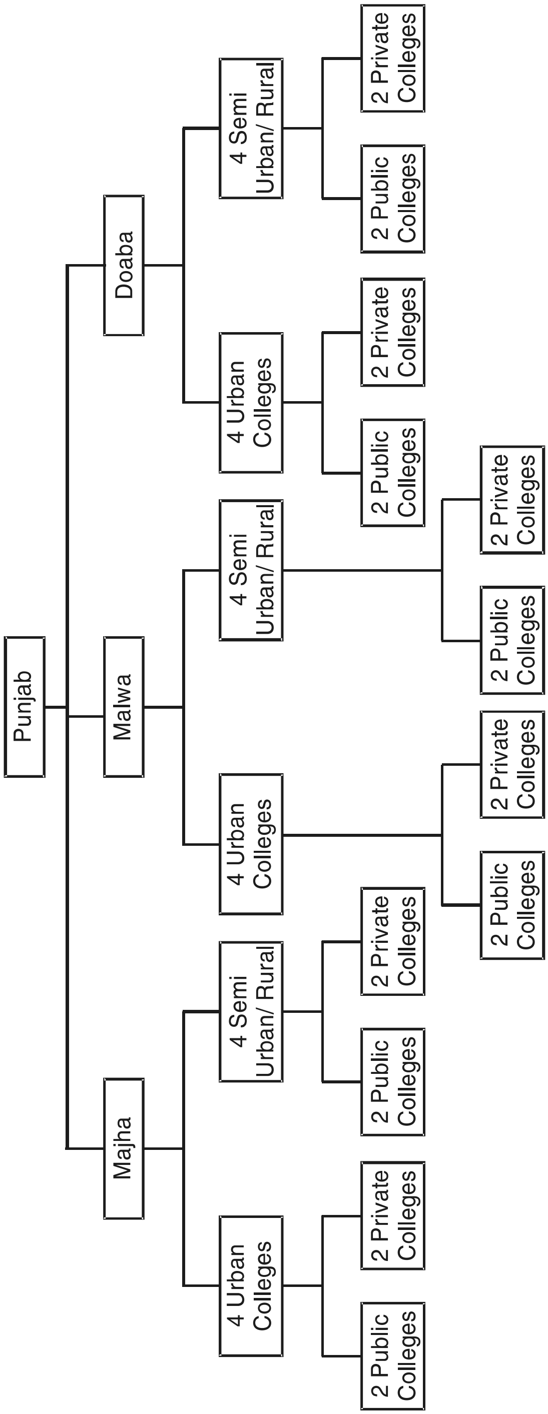
The objective of the current paper is to study the relationship between demographics, academic background and level of financial literacy.

RESEARCH METHODOLOGY

Scope of the Study

The geographical coverage of this study is limited to the colleges of Punjab. The population consists of college educators, who do not have a formal pension plan in place by their institute. Each teacher, who is at-least in the third year of teaching and with no formal pension plans by the institute is considered as a unit. Data was collected using standardized questionnaires. A total of 550 questionnaires were distributed among various colleges, out of which 453 questionnaires were returned back by the respondents. 53 questionnaires were excluded from the study on account of missing values and other response biases. Finally 400 respondents were considered for the study.

Figure 1
Sampling Plan



Source : Created by the Author

Sampling Technique

The stratified quota sampling method and purposive sampling is employed to give equal representation to various strata of teachers. The strata were drawn on basis of academic streams. To bring representativeness to data gender, institute and location representation were considered as the basis for judgment.

RESULTS AND DISCUSSION

This section presents teacher's financial literacy scores. For this, the measurement tool designed by Lusardi and Mitchell (2007) is used to measure both basic and advanced financial literacy. The first Table depicts percentage of 'correct', 'incorrect' and 'do not know' answers for each question of these two segments. The first segment is a basic financial literacy score measured by five questions as shown in Table 1. The second segment is an advanced financial literacy score measured by eight questions shown in Table 2.

Table 1

Percentage of Answers for Basic Literacy Questions

Sr. No.	Variables (Objective 1)	Lusardi & Mitchell (2007)	Correct	Incorrect	Do Not Know
1.	I am aware about the movements in the prevailing interest rates	Numeracy	87	8	5
2.	I am aware about the changes in inflation rate	Inflation	74	24	2
3.	I understand the concept of time value of money	Time Value of Money	67	29	4
4.	I understand the concept of compounding and invest accordingly	Compound Interest	64	33	3
5.	I am aware of all the technological advancements in financial Institutions and I am responsible of making financial decisions in my household	Money Illusion	58	35	7

From above Table 1, it is seen that the first question had the highest score and was answered correctly by 87% of the teachers, followed by question 2, which was answered correctly by 74% of the teachers. The third question was answered correctly by 67% teachers. Question 4 and 5 were less correctly answers as compared to other three questions. It shows that teachers know less about compound interest and money illusion as compared to other variables.

Table 2
Percentage of Answers for Advanced Literacy Questions

Sr. No.	Variables (Objective 1)	Lusardi & Mitchell (2007)	Correct	Incorrect	Do Not Know
6.	I understand the concept of diversification and try to maintain a diversified portfolio	Main Function of the stock market	65	23	12
7.	I am aware about the taxation laws, benefits and exemptions	Knowledge of unit trusts	56	26	18
8.	I keep a close eye on the major economic events	Relation between Interest rate & bond prices	53	21	26
9.	I keep a close eye on the government policies which could possibly affect all my financial decisions	Which is safer : share vs unit trusts	67	22	11
10.	Before taking any financial decision, I gather information from varied sources about various financial products	Which is riskier : share vs bonds	55	34	11
11.	I always consciously do my asset allocation	Highest Return over long period: Saving A/C, Bonds, Shares	68	23	9
12.		Highest Fluctuations: Saving A/C, Bonds, Shares	80	10	10
13.		Risk Diversification	81	12	7

From above Table 2, it is seen that the 13th question has the highest score and was answered correctly by 81% of the teachers followed by question 12th, which was answered correctly by 80% of the teachers. The 11th question was answered correctly by 68% teachers. Question 7 and 8 were less correct answers as compared to other eight questions. It shows that teaches know less about these topics as compared to other variables.

Table 3
Mean and Standard Deviation of Financial Literacy Scores

	N	Mean	SD
Basic Financial Literacy	400	70	22.32
Advanced Financial Literacy	400	65.62	15.43
Total Financial Literacy	400	67.30	17.27

The mean and SD for basic, advanced and total financial literacy is shown in Table 3. The average score for basic literacy came out to be 70% and for advanced literacy, it was 65.62 %. The average total financial literacy score for all 13 questions was 67.30 %.

Kolmogorov-Smirnov (K-S)

The assessment of normality made use of significant test, namely the Kolmogorov-Smirnov (K-S) test. This test aims to understand, whether the scores differ significantly from a normal distribution. If the test is significant, $p < 0.05$, then the distribution is significantly different from a normal distribution. The result is shown in Table 4.

Table 4
Test of Normality for Financial Literacy Scores

	Statistic	Df	Significance
Basic Financial Literacy	0.21	400	0.001
Advanced Financial Literacy	0.18	400	0.001
Total Financial Literacy	0.11	400	0.001

Above Table shows that basic financial literacy, $D(400) = 0.21$, $p = .001$, advanced financial literacy, $D(400) = 0.18$, $p = .001$, and total financial literacy, $D(400) = 0.11$, $p = .001$, scores are significantly non-normal.

It can be concluded that for all levels of financial literacy, the distribution of scores was significantly different from a normal distribution. Thus, appropriate non-parametric tests were used in the univariate analysis.

Univariate Analysis

This is used to determine the role that each demographic variable has in the financial literacy of teachers. Appropriate non-parametric tests were used to assess the significance, at a 5% significance level, of each predictor variable against the continuous outcome variable, i.e., financial literacy.

Gender

This includes statistical tests of two variables i.e. males and females.

$H_0 1$: Financial Literacy scores do not differ between male and female teachers.

Table 5
Mann-Whitney U Test Mean Rank Scores for Gender and Financial Literacy Scores

Gender	N	Basic Financial Literacy	Advanced Financial Literacy	Total Financial Literacy
Male	159	197.22	201.21	204.32
Female	241	184.23	182.12	172.98

Table 6
Mann-Whitney U Test Statistic for Variable Gender

Gender	Basic Financial Literacy	Advanced Financial Literacy	Total Financial Literacy
Mann-Whitney U	13542.500	12754.000	12534.000
Z	-2.426	-2.987	-3.124
Asymp. Sig. (2-tailed)	.001	.000	.000

The Mann-Whitney U Test is used to compare the predictor variable (gender) and the outcome variable (financial literacy scores) at a basic, advanced and total level. The results show that female teacher's basic financial literacy scores are significantly lower than the male teacher's scores, Mann-Whitney U = 13542.500, z-Score = -2.426, p-value = 0.001 and r = -0.143 which represents a small effect size. Also, the female teacher's advanced financial literacy scores are significantly lower than the male teacher's scores, Mann-Whitney U = 12754.000, z-Score = -2.987, p-value = 0.000 and r = -0.157 which represents a small effect size. After combining both basic and advanced financial literacy, the female teacher's combined financial literacy scores are significantly lower than the male teacher's scores, Mann-Whitney U = 12534.000, z-score = -3.124, p-value = 0.000 and r = -0.167 which also represents a small effect size. Therefore, the null hypothesis is rejected for basic, advanced and total financial literacy. It indicates that female teachers showed significantly lower basic, advanced and total financial literacy scores as compared to male teachers.

Academic Background

This includes statistical tests of four variables i.e. Science, Commerce/ Management, Humanities/ Arts and Vocational.

$H_0 2$: Financial Literacy Scores do not differ based on Academic Background.

Table 7
Kruskal-Wallis Mean Rank Scores for Academic Background and Financial Literacy Scores

Academic Background	N	Basic Financial Literacy	Advanced Financial Literacy	Total Financial Literacy
Science	86	201.27	195.23	199.92
Commerce/Management	130	205.82	203.12	202.01
Humanities/Arts	100	196.26	187.76	186.83
Vocational	84	178.93	162.52	166.08

Table 8
Kruskal-Wallis Test Statistic for Academic Background and Financial Literacy Scores

	Basic Financial Literacy	Advanced Financial Literacy	Total Financial Literacy
Chi-square	21.825	15.365	17.253
Df	4	4	4
Asymp. Sig. (2-tailed)	.001	.002	.000

The Kruskal-Wallis Test shows that there is a significant difference between academic background and basic financial literacy scores (21.825), p = .001, and advanced financial literacy scores (15.365), p = .002. Significant difference was also found between Academic Background and total financial literacy scores (17.253), p = .000. Therefore, the null hypothesis is rejected and it shows that basic financial literacy, advanced financial literacy and total financial literacy scores differs across academic background level.

$H_0 3$: Financial Literacy Scores do not differ by Age.

Table 9
Spearman's Correlation Coefficient of Age and Financial Literacy Scores

		Basic Financial Literacy	Advanced Financial Literacy	Total Financial Literacy
Age	Spearman's Correlation	-.028	-0.24	-0.26
	Sig. (2-tailed)	.543	.553	.534

The above Table shows the correlation of the continuous variable, age and financial literacy scores. It was seen that the age is not significantly correlated with the basic financial literacy (-.028) and p = .543, advanced financial literacy (-.024) and p = .553 and total financial literacy (-.026) and p = .534. Therefore, the null hypothesis is accepted and it shows that basic financial literacy, advanced financial literacy and total financial literacy scores do not have a relationship with age.

The results show that female teacher's basic financial literacy scores are significantly lower than the male teacher's scores, Mann-Whitney U = 13542.500, z-score = –2.426, p-value = 0.001 and r = –0.143, which represents a small effect size. Also, the female teacher's Advanced Financial Literacy scores are significantly lower than the male teacher's scores, Mann-Whitney U = 12754.000, z-score = -2.987, p-value = 0.000 and r = -0.157 which represents a small effect size. After combining both basic and advanced financial literacy, the female teacher's combined financial literacy scores are significantly lower than the male teacher's scores, Mann-Whitney U = 12534.000, z-score = -3.124, p-value = 0.000 and r = -0.167 which also represents a small effect size. Therefore, the null hypothesis is rejected for basic, advanced and total financial literacy. It indicates that female teachers showed significantly lower basic, advanced and total financial literacy scores as compared to male teachers.

The Kruskal-Wallis Test shows that there is a significant difference between academic background and basic financial literacy scores (21.825), p = .001, and advanced financial literacy scores (15.365), p = .002. Significant difference was also found between Academic Background and total financial literacy scores (17.253), p = .000. Therefore, the null hypothesis is rejected and it shows that basic financial literacy, advanced financial literacy and total financial literacy scores differs across academic background level.

Using Spearman's Correlation Coefficient of Age and financial literacy scores, it was seen that the age is not significantly correlated with the basic financial literacy (-.028) and p = .543, advanced financial literacy (-.024) and p = .553 and total financial literacy (-.026) and p = .534. Therefore, the null hypothesis is accepted and it shows that basic financial literacy, advanced financial literacy and total financial literacy scores do not have a relationship with age.

CONCLUSION

Financial literacy is the main concern in retirement planning in the developed economies. Understanding the needs of each and every employ, can greatly aid in preparing individuals for retirement. Retirement planning can begin at any time and thus, must be the main priority. Financial know, how is an issue that every individual is facing. However, we must remember that it is essential to have sufficient financial knowledge to successfully plan for retirement. Through our research, we have found many differences among individuals that can be addressed through proper awareness. Nevertheless, it is very important to increase financial education through workshops and seminars.

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The Measurement Model Assessing Factor Examining the Working Environment of Private University of Punjab Via CFA Approach

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Abstract

This research tries to show the present working environment of the private universities of Punjab and tries to assess the opinion of the faculty about their universities. Faculty of private university has so many responsibilities in addition to teaching activities. Most of the time, faculty is occupied with work assignments, curriculum changes, co-curricular activities, office work, etc. This heavy workload leads to generation of stress. To make this workload a comfortable job, the working environment of the work area plays a relevant role. This study aims to examine the working environment of private universities. The sample unit constitutes the staff from the fifteen private universities of Punjab state. The data has been collected from 496 staff members via random probability method. The exploratory factor analysis is used to extract the desired factors constituting the working environment. The findings obtained after using exploratory factor analysis shows that social, physical and psychological environment is three important aspects which impacts the mindset of faculty members.

Key Words

Working Environment, Social, Psychological, Physical, Factor Analysis.

INTRODUCTION

Stress is best depicted as a situation where normal requirements exceed the limit concerning the prevailing response by a person and might per-chance have physical and mental results (Rout & Rout, 1993). Teachers experienced high level of stress due to changes, learning ability of the students and environment (Jenitta, J. N.; and Mangaleswaran, T., 2016). The main factor which has a direct influence on the teachers or faculty are the working conditions, personal problems, workload, curriculum, demands, control, relationships, roles, changes and support and their relationship with demographic and job characteristics (Demjaha, T. A.; Minov, J. *et al.*, 2015). Burden on faculty in private universities has expanded, positions are not any more secure, the innovative multi-faceted nature has made issues for instructor and consistent weight originates from college organization on educators as to every day exercises, thus universities are going under cycle of progress.

The present research paper aims to examine the different factors which combines a forms a working environment of private university. Working conditions has direct impact on job satisfaction of employees which is resulted into the job involvement, employees commitment towards achievement of organizational goal (Shravasti, Raju, R.; and Bhola, Sarang, S., 2015) .

REVIEW OF LITERATURE

Studies on the physical and social characteristics of the workplace have been conducted to provide evidence for the role of specific workplace factors on health. However, the study suggests that social, psychological, and physical aspects of the work environment could contribute to a substantial proportion of hypertension prevalence. These attributes of the workplace could thus be a useful target for improving workforce health. The current workplace regulation has focused primarily on physical hazards and less so on the social aspects and psychological hazards of the workplace, despite substantial evidence in each of these areas demonstrating their influence on workplace health (Rehkopf *et al.*, 2017).

The literature suggests that Work environment has a direct impact on work commitment (Oludeyi, 2015). Oludeyii in his paper has provided a framework about workplace environmental factors and job commitments especially among staff in the ivory towers. The study elaborated that there is a need to make vast changes in human behaviour and it is not enough to use technology with a deeper understanding of human issues or dedicate technology to man's spiritual needs.

Further this studies points towards the requirement of technology that will reshape behaviour and commitment towards advancement of mankind. R. Shravasti and Sarang S. Bhola (2015) in their study "Working Environment and Job Satisfaction of Employees in Respect to Service Sector : An Analysis" has grouped the working environment into four different categories namely Physical Environment, Social Environment, Psychological Environment and Job Related Issues. Butt, Khan, Rasli and Iqbal (2012) in a study has found that work and physical environment of hospitals significantly influence nurses commitment to work.

However, Briner, (2000) has provided as a very broad category of factors that encompasses the physical environment (like heat or light) characteristics of the job (complexity of task, workload etc.), organizational features (like culture and history etc.) and aspects of the extra organizational setting (like industry sector, work-home relationships etc.).

The discussion pinpoints that work environment is the sum total of the interrelationship that exists among the employees and the employers. Also the work environment in which the employees work includes the technical, the human and the organisational environment pays a big role in affecting the bonding between the two (employees and the employers.)

This discussion concludes that there is a direct relation between working environment and job performance of employees. It becomes legitimate to study the various factors of working environment in which the employees works into. The literature helps to select the relevant factors from where the final variables can be selected.

OBJECTIVE OF THE RESEARCH

- To study the demographic profile of the faculty of Private universities of Punjab.
- To identify the various factor affecting the working environment of Private Universities.
- To analyse the opinion of private university faculty regarding the working environment of their respective universities.

RESEARCH METHODOLOGY

The present research is descriptive in nature involves descriptive analysis. Simple random sampling is used to collect sample across different private university. The stratified sampling is adopted for the selection of the final data. The first stage includes the strata which are based on the criterion of designation of the employees.

Three strata's are made like Professors, Associate professors and Assistant professors. Further the sub strata are framed on the basis of experience. The professors with experience more than 12 years, associate professors with experience more than 9 years and assistant professor with experience of above two years are targeted. This obtained response is expected to be in same proportion like 33.3% respondents from each stratum. But it is observed that due to more experience and higher designation the sample respondent's number with higher rank are low. Also the professor and associate professor are more engaged into higher and multiple duties. Further such people have more confidential information's about the universities too. It was not easy to target these rank respondents. To provide a complete representation of the population , the maximum respondents comes from the assistant professor strata approx eighty percent whereas approx ten percent each comes professor and associate professor strata group.

The scope of the data collection is limited to the private universities of Punjab. A suitable questionnaire has been draft on the basis of the objectives of the study. Standardized scale has been used for the study. The statistical tools used in the study are Factor analysis, KMO and Bartlett's test.

DATA ANALYSIS

Demographic Details

The demographic analysis starts with the analysis of the type of department the employees are working into. There are various streams running in the different private universities. Almost researchers have tried to gather data from the all streams or department in the universities. Questionnaire has been distributed to all departments of private universities. As per the survey conducted, total 496 respondents from 15 different private universities have participated in this research who works across 45 different departments. Maximum streams are same in all universities.

Table 1
University Details

University	Frequency	Percent
CU	95	19%
DAV	35	7%
DBU	50	10%
GNA	44	9%
Guru Kashi University	38	8%
LPU	5	1%
RBU	40	8%
RIMT	47	9%
SGGSWU	42	8%
CT University	8	2%
Sant Baba Bhag University	20	4%
Chitkara University	14	3%
Adesh University	10	2%
Akal University	11	2%
SRRDU	37	7%
Total	496	100%

The analysis of the above data it is found that there are total 496 respondents who participated in the study. 95 are from Chandigarh University (Gharuan, Mohali), followed by 50 from DeshBhagat University (Mandi Gobindgarh), 35 from DAV University, (Jallandar,) 44 from GNA University (Phagwara), 47 from RIMT University, 38 from Guru Kashi University (Talwandi Sabo, Bathinda), 40 from RBU (Mohali), 42 from SGGGSWU (Fategarh Sahib), 20 from Sant Baba Bhag Singh (Padhiana, Jalandhar), 14 from Chitkara University, Rajpura, 10 from Adesh University (Bathinda), 11 from Akal University from Bathinda, 37 from Sri Guru Ramdas University of Health Sciences (Amritsar), 8 from CT University (Ludhiana), and 5 from LPU, Phagwara.

After analysing the total teacher's participant across different private universities it is desirable to analyse the demographic details of these respondent teachers. The total respondents 68% are the female employees i.e. 337 and 32% are male employees i.e. 159 who participated in the survey. An educated person can understand the things going around quickly and easily. There are 283 employees who are postgraduate, 184 are doctorates and reaming 29 have done M.phil. From the age analysis it has been observed that 204 respondents working in the universities are below the age of 30 years, 195 respondents are in age group of 31 to 40 years, 75 respondents are in age of 41 to 50 years, 17 lies in age group of 51 to 60 years and only 5 lies in age group of above 60 years.

Besides it is found that, out of the total employee respondents, 289 are married and 203 are unmarried. Total 398 Assistant Professor have participated in the survey followed by 49 Associate Professor and 49 Professors. From monthly income analysis it has been observed that 272 respondent employees have salary between Rs.21000 to Rs. 40000 per month, followed by 55 respondents with salary between Rs.41000 to Rs.60000. Besides 77 have monthly income above Rs. 60000 per month. Only 92 employees earn income less than Rs. 21000 per month.

Factors Examining Working Environment

Five point Likert scale is used to record the response regarding factors examining working environment. Factor analysis reduces the variables into fewer factors. These can be termed as beneficial factors.

Table 2
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	3644.522
	Df	66
	Sig.	0.000

The value of KMO test is .867 and significance value less than 0.05. Bartlett's test of sphericity tests the hypothesis and its results indicate that variables are related or unrelated. So, factor analysis is being useful for data.

Table 3
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.208	51.730	51.730	6.208	51.730	51.730	3.031	25.260	25.260
2	1.230	10.249	61.980	1.230	10.249	61.980	2.983	24.855	50.116
3	1.121	9.339	71.319	1.121	9.339	71.319	2.544	21.204	71.319
4	.629	5.243	76.562						
5	.583	4.862	81.424						
6	.556	4.629	86.053						
7	.411	3.424	89.478						
8	.375	3.122	92.600						
9	.287	2.393	94.993						
10	.252	2.104	97.096						
11	.181	1.508	98.605						
12	.167	1.395	100.000						

The three factors have been extracted on the basis of the association or correlation of the variables. The extracted factor represents the total of 71.31% variance. The variance for first factors is 51.730%, Second factor is 10.249% and for third factor is 9.339%.

The results of rotated Component Matrix represent the coefficients for the factor loadings which represent the correlation between three factors and the ten variables. On the basis of the association of the various variables with the factors, it has been clubbed together and named accordingly. These are social environment, physical environment and third are psychological environment.

Table 4
Rotated Component Matrix[a]

	Component		
	1	**2**	**3**
Communication plays a vital role in maintaining healthy social environment	.854		
I receive respect at work	.801		
Friendly and supportive faculty members	.752		
Experiencing good relationship with colleagues	.710		
There are ample number of staff members to maintain the cleanliness of the campus		.773	
Teaching faculty has accessibility to computers labs any time between working hours		.744	
Hygiene factors are being taken care of at my work place		.727	
Proper staff rooms and seating arrangement has been provided to staff members of different department		.680	
I receive appreciation or reward when I perform excellent			.767
I have flexibility in my working hours			.752
My Head and senior faculty members give me freedom work independently.			.727
My senior or other faculty do not criticize me when I implement new skills			.639

Extraction Method : Principal Component Analysis.
Rotation Method : Varimax with Kaiser Normalization.
a. Rotation Converged in 5 Iterations.

The factor loading for first factors Communication plays a vital role in maintaining healthy social environment is .854, I receive respect at work is .801, Friendly and supportive faculty members is .752, Experiencing good relationship with colleagues is .710. It is named as social environment.

Moving next, the factor loadings for second factor variable there are ample number of staff members to maintain the cleanliness of the campus is .773. The cleanliness maintained (not which is maintained by non teaching staff) here indicates that staff members keep their things in sequence and maintain cleanliness of their stuff like organised table, properly arranged books or study material (covers or using folders), well set lockers or Elmira. Teaching faculty has accessibility to computers labs any time between working hours is .744, Hygiene factors are being taken care of at my work place is .727, and Proper staff rooms and seating arrangement has been provided to staff members of different department is .680. It is named as physical environment.

Lastly, the factors loadings for third factor variable I receive appreciation or reward when I perform excellent is .767, I have flexibility in my working hours is .752, My Head and senior faculty members give me freedom work independently is .727, and My senior or other faculty do not criticize me when I implement new skills is .639. It is named as psychological environment.

Table 5
Descriptive Statistics

	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
Social Environment	1.25	5.00	4.0212	.89106
Physical Environment	1.50	5.00	3.9456	.83790
Psychological Environment	1.25	5.00	3.3332	.95928

The mean value for the environment factors has been calculated. The mean value for social environment is 4.02, physical environment is 3.9, and psychological environment is 3.3. It shows that teachers are happy with their social, physical and psychological environment since the mean value is more than average score. This reflects the agreement and satisfaction of teachers towards social, physical and psychological environment of their respective universities.

RATIONALE BEHIND SELECTION OF SCALE

The factor loading obtained during the factor analysis technique has clearly stated that the obtained values are much above than the requires threshold i.e. 0.6 Hair *et al.* (2010). This builds the ground for the acceptability of the variables items and the respective factors. The items constituting the social, physical and psychological environment are fair enough to explain the impact on the stress level of private universities employees. Further this is supported by the results of the reliability statistics.

Table 6
Reliability Statistics for the Environment Factors

Factors	Cronbach's Alpha Value
Physical Environment	0.834
Psychological Environment	0.804
Social Environment	0.891

This Table highlights the reliability statistics for the extracted environment factors. Cronbach's alpha value is calculated to measure the reliability of the factors. The acceptable value of Cronbach's alpha value should be more than 0.6 (Taber, 2018; Griethuijsen *et al.*, 2015).The Cronbach's alpha value for physical environment is 0.834, psychological environment is 0.804, and social environment is 0.891. The value for all three factors is above 0.8, indicating that the all the extracted factors are highly reliable. Hence it is proved that the extracted factors are reliable because the Cronbach's alpha value is very high and hence these are acceptable. So the final scale selected is reliable.

RESULTS DISCUSSION

The finding of the study indicates the social environment; physical environment and psychological environment are the important factors which constitutes a healthy work environment in private university. The results of the demographic analysis has highlighted maximum faculty working in the universities are below the age of thirty years. Most of the respondent faculty is married. Maximum faculty working in private universities are females. Most of the respondent faculty in private universities are postgraduate and most of them have doctorates degree. The study shows that maximum respondents in the study hold the ranks of Assistant Professor. The income profile of the faculty shows that most of the faculty have salary ranges between rupees twenty one thousand to forty thousand.

The results of the reliability statistics for the extracted environment factors indicate that the Cronbach's alpha value for physical environment is 0.834, psychological environment is 0.804, and social environment is 0.891. The value Cronbach's alpha for all three factors is above 0.8, indicating that the all the extracted factors are highly reliable. From the study it is concluded that for all extracted factors the communality value is above 0.6. So, all extracted factors correlates with each other to great extent.

MANAGERIAL IMPLICATIONS OF THE RESEARCH

Communication plays a vital role in maintaining healthy social environment. Respect at work, friendly supportive faculty members and a good relationship with colleagues represents a sound social environment. It is necessary to maintain a positive atmosphere to raise the productivity of the faculty. Hygiene factors, cleanliness of the campus, proper staff rooms, seating arrangement for staff members of different department, accessibility to computers labs any time between working hours should be taken care at faculty's work place. This create an additional positive impression on the staff mind which is quite helpful maintain a profound physical environment in university campus.

There is still much to understand about physical working conditions in campus communities and level of job commitment of staff therein. The findings of study also imply that appreciation or reward for excellent performance satisfy the faculty members to great level. Further flexibility in working hours and freedom to work independently adds to a healthy psychological environment. Besides, lesser criticism, support of seniors and management while implementing new skills enhances the confidence of the faculty members.

CONCLUSION

This is concluded from this research that teachers are happy with their social, physical and psychological environment. Private university management has set up huge infrastructure to provide the education facility to the society. The management must make available the required materials, methods and tools for their staff. Besides, university management must make sure to design and build a classy infrastructure which creates a positive impact of the faulty and faculty will work smoothly without any unnecessary stress. Hence their productivity will increase. The results of EFA have proven that social, physical and psychological environment is three important aspects which impacts the mindset of faculty members. This reflects the agreement and satisfaction of teachers towards social, physical and psychological environment of their respective universities.

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