



SCMS JOURNAL OF INDIAN MANAGEMENT

ISSN 0973 - 3167

Volume XV Number 3
July - September 2018

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Role of Transformational and Transactional Leaderships in Job Satisfaction in a Select Public Sector Organisation

S. Narendra Rathnaraj and A. Vimala

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Chairman's Overview

Policy makers have differing opinions as to whether government expenses help or hamper economic growth. Almost every economist would agree that there are circumstances in which lower levels of government spending would enhance economic growth and other circumstances in which higher levels of government spending would be desirable.

In any case, if government spending is almost nil, apparently there will be very little economic growth because certain amount of government spending is essential for the successful operation of the rule of law. The absence of a well organised legal and political system can lead to uncertainty in the economy. At the same time, it is widely accepted that the government has a huge role to play in stimulating the economy. With this background, we hope, our lead article "Government Expenditure and Economic Growth: A Case of US Fiscal Policy Making," will be of significance to our readers.

The dividend policy is one of the most complex aspects in finance. Dividend decisions are recognised as centrally important because of increasingly vital role of the finances in the firm's overall growth strategy. The objective of the finance manager should be to find out the optimal dividend policy that will enhance value of the firm. Our second lead article deals with this topic," Impact of Dividend Policy on Value of Indian Banks."

We also feature in this issue a number of learned articles on a variety of topics such as Non-performing Assets and Profitability, Redefining Brand-Consumer Relationship, Sentiment Analysis of Tweets, Transformational and Transactional Leaderships, Story Telling - An Effective Pedagogy, and the like.

I am confident that this issue will be truly informative and educative to our readers.

Dr. G. P. C. NAYAR

Chairman, SCMS Group of Educational Institutions.

SCMS Journal of Indian Management

A Quarterly Publication of
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Editorial

Myth and Management



Memory is the Mother of the Muses. Mythology draws on our old memories. Mythology has always fascinated the common man. Mythology has lured the attention of the artist, the writer, and the thinker. Myth touches on man's basic relation to his world and to his fellowmen. Myth touches on his original roots. Myth touches on his future possibilities and destiny.

Myth has cast a spell on the very ages which denied it. Like the severed head of Orpheus, it goes on singing even in death. The myth has perennial appeal. It has vitality of mythical thinking. It makes us feel that in all civilizations men face similar situations, similar experiences. Myth therefore makes for One World. Myth supplies "a symbolic memory and a symbolic hope, and an allegorical account of the perils of the way."

Myth unfolds the living chain. This chain connects the recurrent recognition scenes of the human drama. They assure that we are not strangers in the world. We are not alone in the world.

George Santayana says: "a country without a memory is a country of mad men. Those who cannot learn from history are doomed to repeat it."

A study of myths provides, to a great extent, the origins of ideas and approaches. It traces the development of ideas. It provides a conceptual framework that will enhance the process of integration. It contributes to a more logical, coherent picture of the present. It should therefore equip the perceptive person with additional alternatives answer to build into his decision-making model. It facilitates intellectual flexibility and a mental set for the inevitability of change through the study of myths.

Present management pedagogy can be improved. Knowledge can be expanded. insights are gained by examining the lives and labours of management's intellectual forefathers. Theory is a legitimate goal in any discipline. It is based on the warp and woof of men's ideas in the fabric of management as given by myths.

Dr. D. Radhakrishnan Nair

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Government Expenditure and Economic Growth: US Fiscal Policy Making

Layn Hyer and Kishore G. Kulkarni

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This paper analyzes whether and how total government expenditure influences macroeconomic factors. One observation is that in recent years there is a tremendous fiscal stimulus in US economy, and President Obama's administration could have been the most "Keynesian" in its behavior. The paper is divided into 6 sections, with subsections for the different dependent variables. The review of relevant literature is Section 2 exploring what other contributors used in their study. Section 3 simply explores the econometric model and what the variables are and why they have been chosen. The exploration of the raw data in Section 4 with the analysis of reasons and explanation for possible variances in the data. The results and exploration of the possibilities are in section 5. The main conclusions are presented in Section 6, stating what the results mean to the original hypothesis, setting the precedent of where the possible avenues for new research can go in determining what aspects effect GDP, GDI and Unemployment. Ultimately, it has been concluded that it has a statistically small impact on everything besides GDP.

Key words: Fiscal Policy, US Economy, Government Total Expenditure (GTE)



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Fiscal policy changes in general and changes in Government Total Expenditure (GTE hereafter) in particular, have been long debated in political circles and economic communities as to what effect they have on the economy as it relates to Gross Domestic Product (GDP), Gross Domestic Investment (GDI) formation, and unemployment rate. The question that this paper intends to answer is whether GTE has a production value to it. Our second aim in this paper is to explore if politics can be used as binary control to see if political parties have any effect on the macroeconomic factors mentioned above. The paper is organized as follows:

The literature review (section 2) will analyze how different economic factors are affected by the GTE and Deficit/Surplus. Most of the literature suggested that contractionary GTE caused economic negatives except Taylor and Klingler (2016) which showed that in certain economic crisis a GTE reduction possibly helped the macroeconomic factors. Similar point that was made by Neto and Porcile (2017) was

that when in an economic downturn gains little benefit from expansionary fiscal policy, but in economic booms, fiscal policy can be more effective in producing gains. The overall literature typically showed that Democrats in the White House had better economic gains, while conservative ideals and Republican Presidents in the White House only had better return in fewer cases.

The model is simple, using five binary variables and GTE and deficit/surplus, to determine what effect GTE has on GDP, GDI, and unemployment. The explanation of variables is done in Section 3 which also uses the model for estimation. Since the models use quarterly data, we had six models to account for 8 quarterly lags and 16 quarterly lags. Analysis such as this naturally suffers from the omission of some variables. There are some factors left out that could have played a role such as trade balance, median income, and state politics to gain a better grasp of the totality of GDP, but we consider them out of our focus and relatively less important.

The statistical data are reviewed in section 4 and section 5. Our econometric analysis has an intent of showing how much fluctuation in the variable we have, giving a basis for how the variables stand up to econometric testing. The results show that political influence has some contribution to how macroeconomic factors behave.

Thus the important hypothesis of this paper is that higher or lower GTE is not producing any better economic performance because government's main expenditures are on military, welfare, and interest payment on the principal of debt which are not very production oriented activities. However, this point will be covered in the conclusion portion of this paper (section 6) showing how accurate the hypothesis is about the non-relevance of government expenditure to the GDP growth.

Literature Review

The topic of government expenditure making major difference in economic growth has been widely discussed in economic literature. An effect of government expenditures on output in three Central and Eastern European (CE3) countries which are Poland, Czech Republic and Hungary was looked at by Mirdala and Kamenik (2017). Their research looked at fiscal policy as shock effects on output, specifically when there is economic up or downturns. They used a four and six quarter data lag to show that during downturns expansionary fiscal policy actions were less

effective than in economic booms. This is probably because increased government expenditure caused a revenue shock, which would result in more fiscal shocks. They concluded that the rate at which fiscal policy produced higher positive gains existed when the economy was already doing well. The results of our paper also show how a reactionary fiscal policy could have negative effects on an economy. This conclusion is more evident in case of the lag of sixteen quarters.

A study of the contraction on the government budget was conducted by Taylor and Klingler (2016) in comparing the post-World War II era with the results after the sequester in 2013. With a decrease in government spending, they showed that GDP continued to rise, unemployment dropped, then they come to an incomplete conclusion that lower spending increases economic growth. The paper was ultimately intended to debunk Keynesian theory and the authors may have a bias towards that. The data they used were limited by the time frame making the robustness of data questionable, and deserving more statistical accuracy. In relation to our paper, Taylor and Klinger show that government total expenditure has a lower effect on the economic production than Keynes had predicted in 1936.

Neto and Porcile (2017) portend a view of austerity in fiscal policies. This study gathers data on developing countries rather than developed countries which may garner insight certain factors being removed to make conclusions from some different perspectives than from typically developed nations. Their study shows that fiscal austerity may increase destabilization in the economic markets. Another aspect they considered was exchange rate and its effects on protecting the economy from external factors. The Balance of Payments (BOP) was examined, specifically to substantiate whether foreign inflows of capital help with external shocks for reducing disequilibrium in the country. Their focus on specialization and macroeconomic policies is a way to look beyond the Keynesian model. The conclusion centralizes on three points: First, fiscal policy action usually is the main response to external shocks, second, fiscal austerity can lead to a lack of public investment, and finally that there is a lack of evidence of public investment serving as a complement to other forms of investments such as private investments. This conclusion results in the new infrastructure and investment not coming into place which would influence growth. This brings us to another point, what really causes fiscal policy to be effective and not effective? Our paper tries to show that fiscal policy is best used to build foundations for private sector to take the next step.

A question that seems to drift about among the economic theories is whether the debt and deficit affect economic factors. Laubach (2009) delves into this with an examination of the data concerning the deficit and debt in its relation to interest rate and GDP ratio. The paper uses eight quarter lags to consider the nature of the GDP from a “long horizon” perspective. Interest rate is another variable that the study looks at to determine investment gains. This study summarizes that there can be a rise in GDP in a five or more years process basis on Deficit to GDP ratio. Laubach (2009) does not explain why the deficit would have that effect, just that there is an effect.

Gross Domestic Investment is a highly volatile variable. Lensink and Murinde (2006) explore if foreign banks and their entry into the domestic system increases GDI. Main concern they had, was that opening markets can cause a negative effect on domestic banking systems. Their data set is cross sectional over 54 different countries. A kind of “U-curve” was found when analyzing the data. They showed through their robust data foreign banks must research a certain size in the host market before it affects GDI.

State and Presidential politics were examined by Cahan and Potrafke (2017), resulting in higher GDP growth from Democratic control of party leadership. This study again focused on both Federal and State level economics trying to create a sensible articulation of the data. It examined state governors and analyzed how Republican state governments influenced the economic factors. This brought into question whether state expansionary budgets, often supported by Democrats, had any effect on an overall GDP gain. This approach shows why a national budget and monetary policy did not have a standard effect on the economy. Republican controlled states that focused on energy reportedly had higher gains in state GDP than Democrat dominated states. Cahan and Potrafke further considered that unified party structures of states allowed for policy to be more easily adopted in the states. Presidents may have shown a difference in their policy directives because they would often lose state control which influenced their policy implementation, implying that party's state retention under incumbent presidents is highly important. This was also attributed to the fact that top 10 populated states accounted for 54% of the expenditure. Therefore, a Democratic President on average has 1.8% increase in government expenditure than a Republican President. It resulted in the Democrats having a statistical advantage in economic growth with only a few possible explanations as to why. The theorized reasons are better foreign relations, consumer perception, and shocks to productivity.

In Blinder and Watson (2014) one can see one of the most comprehensive studies on this subject of party affiliation of the president making a difference in government expenditure level. They also try to find an answer to the question whether partisan presidency affects macroeconomic factors. Their paper shows that democratic presidents traditionally provide a greater boost to economic events, and that the greatest gain happens in the first two years of a democratic president. They further argue that it matters from what party, the president comes from rather than how the party in general is doing. This study shows that election of a Democrat usually results in an immediate uptick in the economic growth, implying that the public votes for a Democrat president on the brink the economic boom, while a Republican president is voted in at the beginning of a recession. The case becomes that of reverse causality concerning the parties in this economic structure and lags. The forecastable data goes against what we expect to happen, which is, that partisan politics has near to nothing effect on macroeconomic factors. This paper also dives into gubernatorial instances to verify the effect politics has on state economies. The conclusion of this paper is that the Republican party has a negative effect on the economy. The “why?” is not clear though, is it their fiscal policies or other indeterminate factors such as foreign relations that may produce better foreign investments or possibly labor laws that may create higher productivity?

Boushey (2016) made an argument that Democrats view, as a representation of the presidential candidate of the party, wanted to move government spending into more of a production style of government spending. The current spending of the Government budget focuses on three different budgetary measures: military, paying the principle of the debt, and welfare. Boushey (2016) also suggested that inequity was a negative factor on economic growth through Piketti theory. This is explained in the paper to suggest that infrastructure and the wealthy paying more for the services benefit the economy more profoundly than tax cuts. The argument though is how the expenditure is used for what fields. This article brings in the question, “what is the best way to lower inequity,” and is the answer to this is through government expenditure increases.

The question of whether the presidential election cycle (PEC) hypothesis affects investment and financial markets is explored by Kraussl, Rijsbergen, van der Sluis, and Vrugt (2014). With statistical and economic confidence, they found that there is indeed an effect on the stock market through the PEC hypothesis showing that four-year presidential gains are determined by stability in the market, and that when a

president comes into office the uncertainty creates a market where short terms gains can be made with the fluctuations. This shows that there is a psychological component to the Presidency on economics. The barebones of this article come to just one quote “there is little to no financial, inflation, at fiscal or macroeconomic evidence for any economic manipulation by an incumbent president” (Kraussl et al. pg 67). In this paper, the four-year lag will be used to compensate for major fluctuations. The expression that the PEC hypothesis in this paper is still undetermined as to what causes it, it calls for more study to determine what may cause the cyclical nature of these bumps and divots seen in the data.

One point of focus is how economics affects politics, creating fiscal policy effective for economic results. Castro and Martins (2017) present how this cyclical manifestation happens and how government behavior is driven by the voters in a European setting. Their concern about where government expenditure goes is important, that most literature focuses on large aggregates, when the reality is that fiscal policy developed to gather key voting blocks. This suggests that the more in the public eye the fiscal policies are, the more likely they are adopted for visibility. The paper determines that there is a political business cycle that focuses on visible outcomes such as education and social programs and services. Positive impacts, where relative prices show no relevance, are propagated by a better economic environment while demographics have a negative relation to economies of scale.

The literature brings many factors into account, making a strong argument that government expenditure is only as useful as the other policies around it. Another coherent view starts to present itself that even though conservative policies may be theoretically sound and logical, they may not be effective in implementation for economic gains.

Economic Model to Test the Hypothesis

The model we use here is simple, using five binary variables to account for policies that are outside of the variable of percentage changes in total government expenditure and outside of percentage changes in deficit/surplus.

- x1 = Whether the President is Republican, (1) being a Republican in office
- x2 = Whether the House of Representatives is Republican controlled, (1) signifying a Republican controlled House of Representatives

- x3 = Whether the Senate is Republican controlled, (1) signifying a Republican controlled Senate
- x4 = This is if the Senate and the House of Representatives chambers are controlled by opposite parties, 1= split Congress
- x5 = Is whether the Congress, this include whether Congress there is partisan split from the President, this includes if congress is split, because both chambers are required for fiscal policy changes. This is the most nebulous of variables in the data set due to them that a split in Congress results in a split from the President. x5=1 if either chamber is opposite the President.
- x6 = Is the %change in total government expenditure
- x7 = Is the %change in deficit/surplus
- y = Would be % Change in Gross Domestic Product, % Change in Gross Domestic Investment, or Unemployment Rate (%)

This results in the 8-quarter mode of

$$Y = \alpha + \beta_1 x_1^{t-8} + \beta_2 x_2^{t-8} + \beta_3 x_3^{t-8} + \beta_4 x_4^{t-8} + \beta_5 x_5^{t-8} + \beta_6 x_6^{t-8} + \beta_7 x_7^{t-8}$$

and respectively the 16-quarter model of

$$y = \alpha + \beta_1 x_1^{t-16} + \beta_2 x_2^{t-16} + \beta_3 x_3^{t-16} + \beta_4 x_4^{t-16} + \beta_5 x_5^{t-16} + \beta_6 x_6^{t-16} + \beta_7 x_7^{t-16}$$

Data and Sources

The data were chosen to decipher two very distinct points, does political parties choice on fiscal policy effect economic growth and does an expansionary fiscal policy affect economic growth factors. The three dependent variables are percentage changes in gross domestic product(GDP), percentage changes in gross domestic investment(GDI), and unemployment rate. These variables were chosen because of their visibility to the public as well as their production value. Two independent variables are percentage changes in government total expenditure and deficit/surplus to account for lack of taxation data. In the Appendix will be a data table available to view the data presented.

% Change in Gross Domestic Product

Mean	1.5858
Median	1.4705
Minimum	-1.9742
Maximum	5.7896
Standard deviation	0.97018
No. of Observations	225

The % change in gross domestic product shows that the GDP has steady growth throughout the years. The outliers of the data skew the data towards a higher mean than is to be expected. This puts into question an annual growth of about 3% to 4% expected by monetarists. There is sufficient data to suggest that there are booms, and busts based on technological advance as seen with the dot com boom.

% Change in Gross Domestic Investment

Mean	1.5366
Median	1.5832
Minimum	-9.5737
Maximum	10.922
Standard deviation	3.2078
No. of Observations	225

The GDI is so volatile that one could not be sure what major factors would account for its gains or whether it is a psychological anomaly that cannot be predicted by economic factors. The overall range of the data shows this volatility, as the mean and median show, it is steadily growing despite most economic shocks.

Unemployment Rate (%)

Mean	6.0831
Median	5.7000
Minimum	3.4000
Maximum	10.700
Standard deviation	1.5841
No. of Observations	225

Unemployment rate is one of the variables that has an overall steady nature to its form. The Unemployment rate continues at a near steady pace with only a 1.5% variance usually during economic spikes.

Some shortcomings of the data were that there was not any state control in the data to account for how state governments effect GDP, GDI, and unemployment. Another data set that could have been helpful is foreign investment and BOP to determine what effects a global perspective play on the increases or decreases of macroeconomic factors.

4.2 The independent variables are

% Change in Government Total Expenditure

Mean	1.6969
Median	1.6388
Minimum	-2.9106
Maximum	7.8008
Standard deviation	1.3938
No. of Observations	225

Change in Government expenditure is shown throughout both parties control of Congress and the presidency. This too has a typically steady upward tick. The standard deviation shows the variance that this data set goes through.

% Change in Federal Government Deficit/Surplus

Mean	-90.907
Median	-19.125
Minimum	-5579.2
Maximum	2580.5
Standard deviation	636.39
No. of Observations	225

The overall volatility of the deficit/surplus on a quarterly basis is shown in as standard deviation. The minimum and maximum show this as well, its kurtosis level is high meaning that its peaks a sharper than almost any of the other data. This was the one variable that seemed to play little part in any of the macroeconomic factors, which makes me wonder how we can anticipate what the national debt and the deficit role will be in the future as it continues to sky rocket.

Results and Interpretation

In the form of several tables that follow, we present our statistical results for these models and their determinants.

8 Quarter lags	coefficient	std. error	t-ratio	p-value
const	1.65809	0.147210	11.26	2.63e-023 ***
PresidentR_8	0.0575870	0.139983	0.4114	0.6812
HouseR_8	-0.740834	0.196550	-3.769	0.0002 ***
SenateR_8	0.163341	0.186548	0.8756	0.3823
Congresssplit1_8	-0.0613277	0.176165	-0.3481	0.7281
Congressplitf~_8	0.0716267	0.0758438	0.9444	0.3461
DeficitorSurpl~_8	0.000117170	9.73806e-05	1.203	0.2303
Governmenttota~_8	0.0265680	0.0491367	0.5407	0.5893

With an 8-Quarter lag in the data to allow for policies to take effect in two years, we see a statistically accrual of about %-.74 that happens if the House of Representatives is controlled by a Republican majority. This could be that the date is not lagged far enough for conservative policies to take effect. The other possibility is that the economic shocks that usually lead to republican control have not worn off yet

and still pose a long-term lag on the economy. It is also difficult to determine due to recent anti-globalist sentiment if this result is not due to a long occurring foreign policy issue that creates and lower growth in the GDP. This shows that nearly none of the independent variables have a statistical significance on the growth rate of GDP.

16 Quarter lags	coefficient	std. error	t-ratio	p-value
const	1.56868	0.134172	11.69	2.10e-024 ***
PresidentR_16	-0.113601	0.133911	-0.8483	0.3973
HouseR_16	-0.833280	0.240734	-3.461	0.0007 ***
SenateR_16	0.0372510	0.237941	0.1566	0.8758
Congresssplit1_16	-0.315695	0.230461	-1.370	0.1723
Congresssplit~_16	0.0938165	0.0732037	1.282	0.2015
DeficitorSurplus~	-5.71379e-05	9.53592e-05	-0.5992	0.5497
Governmenttota~	0.164825	0.0433115	3.806	0.0002 ***

The 16-quarter lagged results show an added factor to the GDP growth, that is government total expenditure. The house again loses about -0.83% of growth if the Republicans control it. This begs the quest that after a four-year lag, there continues to be a decline in GDP growth if Republicans are in office. The study Blinder and Watson (2014) did suggest that there is no much expenditure change, yet this could be the cause of how fiscal policy is implemented. I tend to think that there is a subtle shift when republicans are in office to courting domestic private investment to increase GDP, while Democrats to have a more globalist perspective and try and get the best rates with foreign powers, which could show the variance in this statistic. This shows a GDP Growth of .16% is due to the government expenditure, which you would think would be more due to it being a large part of the standard measurement of GDP (with usual notations as C = Consumption expenditure, I = Gross domestic

Investment expenditures, G = Government Total Expenditures, X = Exports of the economy and M = Imports) as the

$$Y = C + I + G + (X - M).$$

This observation suggests that how the expenditure is used make more of a difference to GDP than does simply spending more. This shows that Keynesian theory needs a more tactical approach in its application. In the long run, there needs to be further analysis on why a Republican controlled house tends to have a lower GDP growth. The 99% significance of both variables does give us some pause, because our original hypothesis suggests that there will be little to no effect on economic factors based on which party is in Congressional control since expenditure is shown to be at about the same level of government expenditure.

% Change in Gross Domestic Investment as the dependent variable

8 Quarter lags	coefficient	std. error	t-ratio	p-value
const	1.67160	0.501482	3.333	0.0010 ***
PresidentR_8	0.264354	0.476863	0.5544	0.5799
HouseR_8	-0.953547	0.669565	-1.424	0.1559
SenateR_8	0.181279	0.635493	0.2853	0.7757
Congresssplit1_8	0.238735	0.600122	0.3978	0.6912
Congresssplitf~_8	0.176720	0.258368	0.6840	0.4947
DeficitorSurpl~_8	0.000292454	0.000331735	0.8816	0.3790
Governmenttota~_8	-0.0973320	0.167388	0.5815	0.5615

The GDI had the least statistically significant data, and we could not reject the null hypothesis with its data. However, when you look at it, there seems to be again a skew towards Republicans, it is evident here tending to lower the growth of Gross Domestic Investment. It is hard to guess consistent causes for this phenomenon, but one reason could be that despite their rhetoric that smaller government is beneficial for economic growth. their actions, epically after Reagan administration have consistently allowed a larger role for

the government sector. This includes the George Bush Senior as well as junior) periods.

We think this result also shows that there are some psychologically significant determinants (such as technological innovations) in the economy rather than the policies influencing its growth. Since major GDI growth comes from the private sector, this suggests that most of its growth is already subject to the whims of private sources rather than the public sources the government produces.

16 Quarter lags	coefficient	std. error	ratio-	p-value
const	1.83559	0.498488	3.682	0.0003 ***
PresidentR_16	-0.574372	0.471641	-1.218	0.2247
HouseR_16	-1.06253	0.820129	-1.296	0.1966
SenateR_16	-0.342705	0.789988	-0.4338	0.6649
Congresssplit1_16	-0.886087	0.762735	-1.162	0.2467
Congresssplit~_16	0.278274	0.255546	1.089	0.2775
DeficitorSurpl~_16	1.86965e-05	0.000328581	0.05690	0.9547
Governmenttot~_16	0.219475	0.167405	1.311	0.1913

The 16-Quarter lag shows the p-values continue to push away from any statistical confidence. Results further show that GDI is negatively affected by having Republican controlled forms of government. The question then becomes again “why”? Only consolation is that since the results do not produce statistically significant outcomes, we could just table the answer as unknown. We find that to be an ill choice, again we explore what the literature review had to say.

Neto and Porcile (2017) suggested that developing nations that suffer from fiscal austerity suffer from a decrease in private investment due to the lack of support needed to start new ventures and get them to economies of scale. Interesting question is “Could this be happening in a developed country also?”. We do not have studies to justify one way or the other.

8 Quarter lags	coefficient	std. error	t-ratio	p-value
const	5.70476	0.231078	24.69	7.09e-064 ***
PresidentR_8	0.746904	0.219733	3.399	0.0008 ***
HouseR_8	-0.703045	0.308529	-2.279	0.0237 **
SenateR_8	-0.549671	0.292829	-1.877	0.0619 *
Congresssplit1_8	0.981412	0.276530	3.549	0.0005 ***
Congresssplitf~_8	0.0769295	0.119053	0.6462	0.5189
DeficitorSurpl~_8	0.000177562	0.000152860	1.162	0.2467
Governmenttota~_8	0.0906838	0.0771308	1.176	0.2410

The eight quarter lag in this case seemed to present the most statistically significant results, but highly questionable as to what it means. This is the first time that congress being split in the issue of who controls either chamber had any statistical relevance at 99% level. The impact is that there is an increase on the unemployment rate if congress is split, which would expound on that uncertainty causes an unstable job market in favor of short term gains.

Kraussl et al. (2014) showed that the first two years of the PEC with uncertainty, that short term gains boost economic factors but could also in turn cause volatility in the labor market creating unemployment, this would explain why a Republican president had the negative effect it created by increasing unemployment rates.

16 Quarter lags	coefficient	std. error	t-ratio	p-value
const	5.53273	0.251569	21.99	2.13e-055 ***
PresidentR_16	1.04470	0.238021	4.389	1.84e-05 ***
HouseR_16	-0.0109615	0.413891	-0.02648	0.9789
SenateR_16	-0.351834	0.398680	-0.8825	0.3786
Congresssplit1_16	-0.262049	0.384926	-0.6808	0.4968
Congresssplit~_16	-0.122071	0.128965	-0.9465	0.3450
DeficitorSurp~_16	1.31510e-07	0.000165823	0.0007931	0.9994
Governmenttot~_16	0.128001	0.0844836	1.515	0.1313

This was by far the statistically significant result for the 16-quarter lag on unemployment. With the deficit/surplus receiving the lowest statistical rating and the President being a Republican had the high statistical correlation, this shows that it is perception and policy implementation rather than simply increasing government expenditure. A few other explanations could be in play though, for instance that the Federal Government is the largest employer, a President with an eye for leaner government may not place it as a directive to expand its employee base or even shrink it. Another alternative is that a Republican President may have other focuses, and that the lack of focus on employment alone causes the numbers to increase.

Conclusion and Summary

Keynes strongly made an argument for GTE expansion is the only way to increase GDP. This leads into the purpose of this paper to make an analysis of data to determine whether GTE is a producing factor in the economy. This brings into question whether Keynes view of GDP was accurate concerning GTE. Production value is the key to almost macroeconomic figures, which GTE has shown only through an equation which includes it in its structure.

International Monetary Fund(2017) suggests that developing new markets is the only way to use GTE to increase production value. This suggests that economists must create a better interpretation of GTE in terms of G in

$Y=C+I+G(x-M)$, in which G is only used to account for actual production value.

Politics in the long run shows in the United States that there is a correlation between Republican control of positions in government. The political structure defines a certain level of how the fiscal policy is implemented. In the end, Republican apparently creates a negative effect on macroeconomic behaviors.

In the data we are exposed to the fact of how volatile the data can be, specifically the GDI. We also see that the data is statistically strong enough to guide our thoughts towards the conclusion that GDP is affected by variables which intrinsically create a basis for new investments.

In the long run, we have seen that that GDP change is only generated in positive manner. The general expectation of the political matter shows that Republicans typically have a worse go on macroeconomic factors. In the long run it all comes down to how the GTE is used rather than how much is used. It is important that we look to future studies which incorporate state and foreign data to properly account for GDP growth.

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Impact of Dividend Policy on the Value of Indian Banks

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A b s t r a c t

Dividend policy has always remained one of the most debated issues in the area of corporate finance. Dividend policy relevance has been researched extensively, but researchers have failed to build any consensus on it. Dividend policy is influenced by a number of factors such as firms risk, cash flow situation, leverage, agency cost etc. Dividend decision of a firm can be seen as a source of signal which shows that profitable firms with good project investment opportunities will pay higher dividends to present themselves distinct from other firms which are having projects with lesser profits. However relationship between dividend policy and value of firm is an issue which has attracted attention of both the researchers and academicians. There are divergent views about the impact of dividend policy on the value of the firm. The aim of the paper is to investigate the impact of dividend policy on value of Indian Banks. The sample consists of 16 banks listed on the National Stock Exchange over a period of 2007 - 17. Firm value is taken as dependent variable whereas dividend payout is taken as independent variable. The study uses profitability, firm size, financial leverage and liquidity as control variables. Regression analysis is used for the purpose of data analysis in this research.

Key words: *Dividend policy Indian Banks value of firm.*



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Dividend refers to the corporate net profits distributed among shareholders. The dividend policy of a firm determines what proportion of earnings is to be paid to the shareholders and what proportions is to be retained back by the firm for reinvestment purposes. Retained Earnings are an easily accessible important source of long term funds for any organization. However there is an inverse relationship between retained earnings and cash dividends. If a firm's capital investment decision is independent of its dividend policy a higher dividend payment will result into greater dependence of the firm on external source of financing. Thus dividend policy has a bearing on the choice of financing. Returns associated with the shareholders comprise cash dividends and capital gains.

According to Miller and Modigliani (1961) if a company retaining earnings rather than giving to shareholders, then shareholders enjoy capital appreciation equal to the amount

of earnings retained. But if it distributes earnings by way of dividends instead of retaining it, then shareholders enjoy dividends equal in value to the amount by which his capital would have appreciated had the company chosen to retain its earnings. The dividend payout decision of a company has got a direct influence on both cash dividend and capital gains. So, for management it is very important to decide upon whether to pay the dividends or to invest the money back into the company to exploit on other opportunities which result in capital gains.

The exact proportion of earnings that the company should pay as cash dividends to shareholders is a very crucial decision. Firms always try to make an optimal dividend decision which leads them to the maximization of the shareholders' wealth through the increased share prices in the market. The relationship between payout ratio and retention ratio become more complex in case of banking sector which is a high debt sector. The capital structure of banks primarily contains equity shares and long term debt. Equity accounts for payment of dividends to the shareholder which is not mandatory. But in the absence of payment of dividends to the shareholders the bank will have to face a decrease in the reputation, fall in the share price and market capitalization. On the other hand long term debt obligations account for periodic payments of fixed charges in terms of interest and principal. In this study an attempt is made but with focus on Indian banking sector. The paper examines the impact of Dividend Policy on the value of Indian Banks.

Literature Review

According to the dividend irrelevance theory in perfect capital markets (no taxes, no transactions costs, and no other market imperfections), dividend policy does not affect firm value Miller and Modigliani (1961). The role of dividend policy has been reconsidered in imperfect capital markets.

According to the residual theory, dividends are paid by a firm only after all acceptable investment opportunities have been undertaken Gordon (1963) and Lintner (1962) In the dividend relevance theory, they suggest a direct relationship between a firm's dividend policy and its market value. Their "bird-in-the-hand" argument states that existing and potential investors consider current dividends less risky than future dividends or capital gains.

Black and Scholes (1974) carried out their research on firms listed on the New York Stock Exchange for the period between 1931 and 1966, and results suggested that there is no correlation between dividend and market value.

Bhattacharya (1979) and Miller (1985) suggested that dividend announcements convey information about the future prospects of the firms. Due to the information content in dividends, dividend announcements are taken as a signal of the companies' good position that will raise the stock prices and vice versa. Investors with imperfect information about company conditions would use dividends as a clue to the prospects of the companies.

Hakansson (1982) suggested that dividends, whether informative or not, give no value role when investors have homogeneous beliefs and time-additive utility as well as a market which is entirely efficient.

Ohlson (1995) assumed that dividend payouts only decrease current book value and future earnings, but it do not affect current earnings which is, to some extent, consistent with the assumptions of Miller and Modigliani.

Baker & Wurgler (2004) argue for a "catering theory of dividends" in which firms cater to the preferences of investors, initiating or increasing dividend payment in periods when the exogenous demand for dividends is high.

Dragotă et al. (2009) focused on the effect of corporate taxation on dividend policy for the Romanian listed firms over the period 1998-2005. Using a sample of 65 firms, the authors found that corporate tax burden does not play a major role in the dividend decision making process. However, the authors highlighted that Romanian listed firms changed the dividend policy in 2005, after Romania introduced a flat tax system.

Hussainey et al. (2011) examined the relationship between dividends policy and share price changes in the British Stock Market, and the evidence showed that the dividend payout ratio and security price changes have a negative correlation.

Barbuta-Misu (2013) analyzed the dividend policy of five Romanian Financial Invest Companies (FICs) over the period 2006-2012 and found that the financial crisis affected the dividend distribution rate in 2008 and 2009. Similar results have been obtained by Berceanu et al. (2012) on the same sample of FICs. To the best of our knowledge, there is no paper on the effect of dividend policy on firm value.

Profilet and Bacon (2013) investigated the impact of selected financial factors on overall securities, price volatility, using the ordinary least squares regression model. They determined that among other factors, dividend payment has a positive impact on share price volatility.

Objectives of the Study

- The paper focuses on analyzing the impact of Dividend Policy on the value of Indian Banks.

Research Methodology

Study Period and Sample Selection

For the purpose of this study financial data of Indian Banks [public and private] from 2007—17 was taken. This period included recession and post recession period.

8 Public and 8 Private sector Banks listed on NSE were taken for the study on the basis of following criteria's:

- Availability of data for continuous period of 10 years
- Continuous dividend payments for 10 years

The banks finally considered for the study are State Bank of India (SBI), Bank of Baroda (BoB), Union Bank of India (UBI), Punjab National Bank (PNB), Allahabad Bank (AL), ICICI Bank (ICICI), HDFC Bank (HDFC), Axis Bank (AB), Indusend Bank (IB), Federal Bank (FB).

CMIE Prowess online database has been also used for the purpose of collecting data

Defining Variables

Variables and model used by earlier researchers Rehman [2016], Kalay and Lemmon [2008] and Lewellen and Badrinath [1997] have been considered in this paper too.

Dependent Variable:

- Firm Value (FV): Tobin's q, is the most commonly used proxy for Firm Value. The book value of assets is a proxy for assets in place, whereas the market value of assets is a proxy for both assets in place and investment opportunities. Thus, a high MBA ratio indicates that a firm has many investment opportunities relative to its assets in place. Tobin's q is defined by the ratio of the market value of assets over the replacement value of assets. Perfect and Wiles (1994) showed that Tobin's q and the MBA ratio are highly correlated (the correlation coefficient is about 0.96). For this study Natural Logarithm of market value of firm over replacement value of its asset is considered as proxy of Firm Value.

Independent Variable:

- Dividend Payout (DP): Standard measure for dividend payout i.e. DPS / EPS is used in this study.

Studies conducted earlier have shown that Leverage, Firm Size, Profitability and Liquidity are some other variables that have an impact on the value of the firm. In this study these variables have been considered as control variables and are kept constant for the study period in order to test the relative relationship between the dependent and independent variables.

Control Variables:

- Profitability (PR): Titman and Wessels (1988) used EBIT/ ASSETS as a measure of profitability. Other measures include return on assets and return on sales (profit margin). For this study ROA i.e Return of Assets is used as proxy for profitability.
- Firm Size (FS): Size is measured by the natural logarithm of sales or the natural logarithm of total assets. For the purpose of this study natural logarithm of assets is used as proxy of firm size.
- Financial Leverage (FL): For this study EBIT / (EBIT—Interest) is used as a proxy of Financial Leverage
- Liquidity (LQ): In this study Current Ratio [Current Assets / Current Liabilities] is used as a proxy for Liquidity.

Hypothesis Formation:

Ho: There is a significant effect of Dividend Policy on the Firm Value.

Model Selection

Taking into consideration the objective of the study, regression analysis is best suited for the analysis and the same is used for data analysis. Normalization of the data was done before using the regression model. Ordinary Least Square Method is better suited for this purpose (Shah and Hijari, 2004) hence the same has been used for this research. The regression equation used is as follows.

$$FV_{it} = \beta_0 + \beta_1 DP_{it} + \beta_2 FL_{it} + \beta_3 FS_{it} + \beta_4 PR_{it} + \beta_5 Lq_{it} + \epsilon_1$$

With the help of White test and Breusch–Pagan test Autocorrelation and Heteroscedasticity from the data was removed respectively. Variance Inflation Factor test was carried out which showed that there is no Multicollinearity. Having ensured the normality of data, regression analysis was carried out. Data Analysis and Interpretation.

Table I : Descriptive Statistics

Variable Name	Mean	Standard Deviation	Min.	Max.
Firm Value -- FV	0.199	0.581	1.013	2.386
Dividend Payout –DP	0.293	0.394	1.00	3.401
Financial Leverage – FL	0.193	0.241	0.873	1.641
Firm Size -- FS	10.81	1.46	6.098	17.035
Profitability -- PR	0.193	0.121	0.874	1.173
Liquidity -- LQ	2.164	1.318	1.013	6.417

Table number I above depicts descriptive statistics of all the variables used in the study. Mean value of Dividend Payout is 0.293 which means that the average dividend payout of the banks under consideration is 29.3%. Moreover looking at the minimum and maximum values of dividend payout it can be further inferred that there is significant difference across banks. The table also depicts that the average of

financial leverage is 0.193 which indicates that the average debt component in the capital structure of banks during the study period was 19.3%. Moreover the debt proportion in the capital structure of banks during the study period also varied a lot. This is inferred from the maximum and minimum values of financial leverage.

Table II: Correlation between Variables

	FV	DP	FL	FS	PR	LQ
FV	1					
DP	0.074	1				
FL	0.291	-0.198	1			
FS	0.210	0.193	0.199	1		
PR	-0.011	0.195	-0.371	0.173	1	
LQ	-0.057	0.016	-0.374	-0.154	0.147	1

Table number II above depicts the Correlation between variables used in the study. Looking at the values above it, can be stated that there exists a positive correlation between dividend payout and firm value which is in line with many earlier studies. Further it is observed that the firm size and degree of financial leverage also has a positive correlation with the firm value. However there is

a negative relationship between financial leverage and dividend payout which means that firms with high amount of debt tend to pay less dividends and vice versa.

Further Ordinary Least Square Regression model was used to identify the influence that independent variables have on dependant variables (refer table III)

**Table III
Impact of Dividend Payout on Firm Value**

Variables	Coefficient
Constant	-1.9729
DP	0.10963*
FL	1.3056*
FS	0.1539*
PR	0.2164*
LQ	--0.0049

* Significant at 0.01 and 0.05 level

$R^2 = 0.797$

Adjusted $R^2 = 0.627$

F Value = 11.153

From the above table following inferences can be drawn

- Since the value of $R^2 = 0.797$ it can be inferred that the independent variables have an impact on the capital structure of manufacturing firms to the extent of 79%.
- The F Value of 11.153 and P Value of 0.000 lead us to the inference that the model is statistically significant.
- Dividend policy has a positive impact on the value of the bank. This is in line with the study conducted by Rehman [2016] and Traditional Approach of dividend payment. Banks which pay more dividends are valued more by investors as compared to banks which pay less dividends.
- The study also reveals that leverage, profitability and firm size also have a positive impact on the value of the firms. This is similar to the results of study conducted by [Masulis, 1983; Martinez Sola et al. 2013]
- Liquidity statistically does not have any significant influence on the value of the firm.

Conclusion

This paper focused on analyzing the impact of Dividend Policy on the value of Indian Banks. For this purpose 8 Public and 8 Private sector Banks listed on NSE were taken for the study. Financial data of Indian Banks [public and private] from 2007-17 was taken. This period included recession and post recession period. Dividend Payout (DP) was taken as independent variable and firm value was taken as dependent variable. Profitability, Firm Size, Leverage, Liquidity were taken as controlled variables. Regression model was used for the purpose of data analysis. The results indicated that Dividend policy has a positive impact on the value of the banks. Leverage, profitability and firm size also have a positive impact on the value of the firms however liquidity did not have any significant influence on the value of the firm. The results of this study were in line with earlier studies conducted by Rehman [2016]; Masulis, [1983]; Martinez Sola et. al. [2013].

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Financing Decision as a Determinant of Firms' Performance: Indian Pharmaceutical Industry

Jay Desai and Rajesh Desai

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Finance is considered as backbone of any business or economic activity. Designing Capital Structure (CS) i.e. deciding the source of fund (borrowed or owned) is one of most controversial and complicated issues faced by managers. Current study is based on panel data of Indian Pharma companies for 10 years (2007-08 to 2016-17). Financial performance is taken as dependent variable and measured with ROE, ROA, EPS and Tobin's Q (TQ). Ratio of Long-term debt to total asset (LDR) and Short-term debt to total asset (SDR) are considered as proxy for financing decision. The data is analyzed using correlation and multiple regression model. The result of the study concludes that borrowed funds affect the financial performance adversely but statistically insignificant. Both debt ratios have negative and significant effect on ROA only.

Key words: Long Term Debt Ratio (LDR), Short Term Debt Ratio (SDR), Financial Performance, Tobin's Q.



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Under the ambit of CS, researchers have contributed in form of theories and empirical studies. Modigliani and Miller, MM (1958) has come up with theory of irrelevance in their research paper titled “The Cost of Capital, Corporation Finance and the Theory of Investment.” They concluded that value of the firm is affected by its operating income and not by the source of financing. A similar argument is given by David Durand in the “Net Operating Income” approach. Another school of thought has focused on relevance of capital structure and value of the firm. Theories like “Net Income” and “Traditional Approach” have argued that financial leverage has impact on firm value. Net Income approach concludes that cost of debt is substantially less than cost of equity hence a firm can maximize its value by substituting equity for debt. Traditional approach does not define a clear optimal capital structure unlike NOI and NI approach but suggests that an optimal CS exist where “real marginal cost of debt and equity is the same” Chakra (2011). MM (1963) have incorporated the effect of corporate taxes as a determinant of CS. They

concluded that value of levered firm is higher than that of unlevered firm to the tune of tax benefit on interest expenses.

Agency cost theory, propounded by Jensen and Meckling (1976), signifies the qualitative impact of CS which is not represented in the financial reports completely. It mainly encompasses the conflicts arising due to raising debt and outside equity because of their interests. Myers (1983), in "Pecking Order Theory," has analyzed that firms behave in a sequential manner while raising funds. Myers, in his research paper "The Capital Structure Puzzle," stated that managers usually prefer internal sources of fund i.e. reserves and for external sources debt is more preferable to equity.

Industry at a Glance

Pharma industry in India is made up of 4 segments including Final drugs, Active Ingredients, manufacturing and research services and Biosimilars. Pharma industry contributes 10% of total global production in terms of volume and 2.4% in terms of value as per the CARE report (July, 2017). This industry earns around 70% of its total revenue through generic drugs and about 50% through exports as reported by CARE. Indian pharma industry is one of the low-cost producers due to scientifically and technically skilled human resource. The industry was growing at 14% on y-o-y basis till 2016 but it reduced drastically to 1% in 2017. Pharma industry is required to comply with both domestic as well as international regulatory norms. Due to multiple regulations from both international and domestic authorities, the industry has experienced hard time during the last fiscal year.

Objectives

The primary objective of the study is to determine the effect of financing decision on financial performance of pharmaceutical company. Financial performance has been categorized as profitability and value of the company. Following objectives are intended to be fulfilled through the research work.

1. Analyze the effect of financing decision variables on profitability of the Pharmaceutical Company.
2. Analyze the effect of financing decision variables on value of the Pharmaceutical Company.

Hypothesis

Following null hypotheses are formulated and eventually tested under the study. H1:LDR and SDR do not have

significant impact on ROE of Pharmaceutical companies. H2:LDR and SDR do not have significant impact on ROA of Pharmaceutical companies. H3:LDR and SDR do not have significant impact on EPS of Pharmaceutical companies. H4:LDR and SDR do not have significant impact on Tobin's Q ratio of Pharmaceutical companies.

Literature Review

Bhayani (2009) has assessed how financial leverage and the cost of capital and value of the firm are correlated. He has used 9 cement companies based on their turnover for a period of 8 years (2000-01 to 2007-08). Descriptive statistics and correlation have been used for analyzing the data. Researcher has concluded that cost of capital and value of the firm are not correlated with capital structure significantly i.e. leverage does not affect cost of capital and firm value significantly.

Pouraghajan and Malekian (2012) have analyzed the effect of debt ratio on financial performance of the companies listed on Tehran Stock Exchange. They have studied 80 firms from 12 different sectors for a reference period of 5 years (2006-2010). Variables like ROE, ROA (dependent), and debt ratio (independent), and asset turnover, tangibility, growth opportunities (control) are considered. Based on correlation and regression analysis, it is concluded that debt ratio affects the performance adversely.

Thomas (2013) in her research paper titled "Capital Structure and Financial Performance of Indian Cement Industry" has studied 21 cement companies for 5 years (2003-04 to 2007-08). Ratio analysis, charts and descriptive statistics are used for analysis. She summarized that high profitability induces the companies to rely on internal reserves and reduce the level debt.

Adewale and Ajibola (2013) have examined the effect of funding decision on performance of manufacturing companies using panel data for 11 years (2002-2012). They have used Debt Ratio, Asset Turnover, Size, Tangibility and Growth as independent variables and variables of financial performance i.e. ROE and ROI are used as dependent. Statistical tests like Unit – Root test of stationarity, descriptive statistics, correlation and partial least square (PLS) regression has been used. The research reveals that debt ratio has positive and significant effect on profitability measures.

Ramaratnam and Jayaraman (2013) have selected 24 pharmaceutical companies to determine the factors which affects the design of CS. Leverage i.e. total debt to total asset ratio has been used as dependent variable whereas tangibility ratio, ROA, Accumulated depreciation to total asset and net profit margin are used as independent variables. Researchers have concluded that all factors affect the leverage ratio significantly. Tangibility and Net Profit margin has positive effect on level of debt ratio whereas ROA, Non-Debt Tax Shield are having negative relationship with level of debt.

Banerjee and De (2014) have studied the determinants of company's financial performance. They have selected 130 Iron and Steel companies listed on BSE and NSE for the purpose of study. Multiple regression is used to study the data and factors like business risk, size, age, financial leverage, operating leverage, growth rate, and debt service capacity are analyzed. Authors have also analyzed the performance of Iron and Steel companies for pre and post-recession period. The study concludes that financial leverage is the most important and strongest determinant of financial performance followed by debt service capacity and size.

Gupta (2015) has analyzed companies with major holding (more than 75%) of foreign promoters to assess the effect of financing decision on profit. 45 companies listed on BSE are studied for 5 years (2008-09 to 2012-13) using multi-stage sampling. Financing decision is represented by ratios like Debt-Asset, Debt-Equity, Interest Coverage Ratio, whereas profitability is shown using ROA, ROE and EPS. Statistical tools like correlation and multiple regression are applied for data analysis. She concludes a significant negative effect of debt on profitability i.e. lesser the debt higher will be the profitability.

Chadha and Sharma (2015), in their research work, has taken 422 listed companies from different industries and used panel data for 10 years. D/E ratio has been taken as proxy of leverage and to consider industry wide differences control factors like size, age, tangibility, sales growth, asset turnover and ownership structures are considered. Firms' performance is measured by ROA, ROE and Tobin's Q ratio. They found that leverage has negative and significant relation with ROE whereas ROA and Tobin's Q are not affected by it.

Research methodology

Sampling Plan

This study is focused on Indian Pharmaceutical Industry. All listed pharmaceutical companies are forming part of population of the study. Constituents of NIFTY PHARMA index are considered as sample. NIFTY PHARMA is a leading index that portrays the behavior and performance of pharma industry in India. NIFTY PHARMA represents 80% (appx.) of the market capitalization of the industry. Based on above reasons, the selected sample will represent the population to a large extent. Data collection is based on annual reports of the companies for a period of 10 years i.e. 2007-08 to 2016-17. Following are constituents of NIFTY PHARMA taken for study.

1. Aurobindo Pharma
2. Cadila Healthcare
3. Cipla
4. Divi's Laboratory
5. Dr. Reddy's Laboratories
6. GlaxoSmithKline Pharmaceuticals
7. Glenmark Pharmaceuticals
8. Lupin
9. Piramal Enterprise
10. Sun Pharmaceutical

Variables of Study

Following variables are identified based on the existing literature. Financial Performance is represented by variables like ROA, ROE, EPS and Tobin's Q (Chadha and Sharma (2015), Gupta (2015), Adewale and Ajibola (2013)). Long – term Debt Ratio (LDR) and Short – Term Debt Ratio (SDR) are used as proxy for financing policy of company (Abor (2005), Goyal (2013), Nirajini and Priya (2013)). As company's performance gets affected multiple factors, Size (Adewale and Ajibola (2013), Chadha and Sharma (2015)) and Asset Turnover Ratio (Pouraghajan and Malekian (2012), Adewale and Ajibola (2013), Chadha and Sharma (2015)) are taken as control variables. Following table depicts the summary of variables taken for study.

Table 1: Variables of Study

Nature of Variable	Name	Symbol	Formula
Dependent Variable	Return on Asset	ROA	$\frac{\text{EBIT}}{\text{Total Asset}}$
	Return on Equity	ROE	$\frac{\text{PAT}}{\text{Shareholders' Equity}} \times 100$
	Earnings Per Share	EPS	$\frac{\text{PAT}}{\text{Outstanding Equity Shares}}$
	Tobin's Q	TQ	$\frac{\text{Market Capitalization} + \text{Debt value}}{\text{Total Assets}}$
Explanatory Variables	Long Term Debt Ratio	LDR	$\frac{\text{Long Term Debt}}{\text{Total Asset}}$
	Short Term Debt Ratio	SDR	$\frac{\text{Short Term Debt}}{\text{Total Asset}}$
Control Variables	Size	Sz	Log (Total Assets)
	Asset Turnover	AT	$\frac{\text{Sales}}{\text{Total Asset}}$

Techniques of Data Analysis

For the research purpose, 10 pharmaceutical companies have been studied for 10 years making 100 firm-year observations and the collected data is a balanced panel data. Descriptive statistics like average, range and standard deviation is used for understanding the nature of the data. As the study is to check dependency of one variable on another, Pearson Correlation and Multiple Regression has been used. As the data contains multiple independent variables, VIF is used to check multicollinearity and Durbin-Watson (D-W) Statistics is used to test presence of autocorrelation. A general regression model is stated as follows:

$$Y = a + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \epsilon_{it}$$

Where,

Y = Financial Performance

a = Constant

β = Regression Co-efficient

X1, X2, X3, X4 = Independent Variables (LDR, SDR, Size, Asset Turnover)

ϵ = Error Term

i = Number of companies (1 to 10)

t = Time Period (2007-08 to 2016-17)

Model 1 is using ROE as dependent variable and debt ratio (both long term and short term) as explanatory variables. The net income attributable to shareholders of the company is shown by ROE.

$$ROE = a + \beta_1 LDR_{it} + \beta_2 SDR_{it} + \beta_3 Sz_{it} + \beta_4 AT_{it} + \epsilon_{it}$$

Model 2 is constructed using ROA as dependent variable and financing decision as explanatory variables. ROA indicates the utilization of earning capacity of a company as percentage of its total assets.

$$ROA = a + \beta_1 LDR_{it} + \beta_2 SDR_{it} + \beta_3 Sz_{it} + \beta_4 AT_{it} + \epsilon_{it}$$

Model 3 shows that how financing decision affects the earning of shareholders in absolute terms. It uses EPS as dependent variable and capital structure variables as independent.

$$EPS = a + \beta_1 LDR_{it} + \beta_2 SDR_{it} + \beta_3 Sz_{it} + \beta_4 AT_{it} + \epsilon_{it}$$

Model 4 is based on Tobin's Q ratio as an indicator of financial performance and regressed against LDR and SDR to know how choice of debt fund or owned fund affects the ratio. Tobin's Q mainly portrays the total market value of a company as compared to its replacement cost .

$$TQ = a + \beta_1 LDR_{it} + \beta_2 SDR_{it} + \beta_3 Sz_{it} + \beta_4 AT_{it} + \epsilon_{it}$$

Data analysis, Results and Findings

The collected data has been analyzed using descriptive statistics, correlation and regression analysis. Table – 2 shows the descriptive analysis of the data. The average ROE and ROA are 19% and 12% respectively depicting that performance of the industry is satisfactory. The average value of EPS is Rs.32.93 and Tobin's Q is 2.75 showing that most of the shares are overvalued. The average LDR is 8.87% which shows that pharma companies are more dependent on owner's fund. The proportion of short-term debt is 12.66% of company's total assets which is more than that of long-term debt. The mean value of ATR is 0.63 signifying that utilization of asset is not up to the mark.

Correlation Analysis

Correlation analysis of variables is shown in table – 3. It shows that financial performance is negatively related with debt funds in pharmaceutical industry. Long term debt has significant (at 5% level) negative relation with ROA and Tobin's Q whereas insignificant negative relation is found with ROE and EPS. Short term debt ratio has significant (at 1% level) negative relation with all parameters of financial performance except EPS (insignificant negative). Analyzing the control variables, LDR is negatively related with size which shows that bigger firms are relying more on equity funds for their long-term requirements. Asset turnover has positive but insignificant relation with LDR whereas it negatively correlated with SDR which supports that efficient firms can manage their funds for short term requirement from the operating activities. SDR and size are positively correlated which is significant at 1% level that suggests larger firms tend to borrow short term funds as increased scale of operation needs more funds as working capital.

Capital Structure and ROE:

Table – 4 shows the regression line of ROE as dependent variable and financing decision as independent one. The result shows regression coefficients -0.103 and -0.114 for long term and short-term debt respectively. But the regression is not statistically significant (p – values > 0.05). The R² value of the model is 0.601 which shows that 60% of

the variation in ROE are explained by the model. The ANOVA test of model fit is also showing significant result with F – value 35.811 (Sign. Value = 0.000).

Capital Structure and ROA:

Impact of financing decision on ROA is portrayed in Table – 5. ROA is negatively affected by debt financing both long term and short term. Their regression coefficient is -0.253 and -0.227 respectively which is highly significant (p – value < 0.05). Size affects the ROA negatively whereas asset turnover affects the ROA in positive way which supports that efficient firms can generate more profits. The model explains 64.5% of the variations in ROA as shown by R². The significant value of the model is less than 0.05 showing that model is highly significant.

Capital Structure and EPS:

Regression output of EPS and capital structure is shown in Table – 4. LDR and SDR has negative impact on EPS but it is not significant as p – values are more than 0.05. The overall model is significant as the significant value of model fit is 0.005. The R² value is 0.14 which signifies that model explains only 14% of the changes in EPS and rest 86% are explained by other factors not included in model.

Capital Structure and Tobin's Q:

Table – 7 represents the regression outcome of model – 4 which shows the effect of LDR and SDR on Tobin's Q. Both debt ratios have negative impact on Q ratio but it is not significant at 5% level. Overall model is fit as the significance value is 0.001 (< 0.05). The model explains 17% (appx.) of changes in Tobin's Q. Size and ATR have positive impact on Tobin's Q but only ATR has significant one.

Multicollinearity and Autocorrelation:

As the study is based on multiple dependent and independent variables, the problem of multicollinearity may arise. VIF is used for checking multicollinearity. The highest value of VIF is 1.618 which is within the control. Usually the VIF more than 10 is matter of concern as referred by scholar. D-W statistics is used to check presence of autocorrelation in standard errors of regression line. The highest value of D-W statistics is 1.320 which is within the acceptable limit.

Hypothesis Testing

Hypothesis	Description	Status
H ₁	LDR and SDR do not have significant impact on ROE of Pharmaceutical companies	Not Rejected
H ₂	LDR and SDR do not have significant impact on ROA of Pharmaceutical companies	Rejected
H ₃	LDR and SDR do not have significant impact on EPS of Pharmaceutical companies	Not Rejected
H ₄	LDR and SDR do not have significant impact on Tobin's Q of Pharmaceutical companies	Not Rejected

Conclusion

The research work is aimed to provide insights on the question that how the choice of debt funds affects the performance of a company. Indian Pharma Industry is an indispensable part of the economy which contributes a considerable part of GDP through its exports. It secures 4th rank into the international context and supplies 10% of volume of global production. The study is based on 10 pharma companies representing 80% of market value of the industry and balanced panel data for 10 years is considered. LDR and SDR are used as proxy variables for financing decision whereas financial performance is measured using ROA, ROE, EPS and Tobin's Q. The paper concludes that debt finance, both long term as well as short term has negative impact on the financial performance on the Indian Pharmaceutical Sector. It is important to note that the relation is not statistically significant except in case of ROA. The study supports the argument laid in the 'Agency Theory' i.e. increased debt adversely affects the performance of the firm. The study will help finance managers while designing the capital structure of the company.

The study will provide a ground for deciding sources of funds and their implication on various profitability measures. The findings suggest that profitability in pharmaceutical industry is negatively affected by debt fund so firms are suggested to rely more on equity funds and retained earnings.

Scope for Further Research

Facts highlighted in the study are confronted with few limitations which can be viewed as scope for future research. Current study is based on Indian pharmaceutical industry only which can be explored to other sectors as well as other countries. The findings and results are based on secondary financial data collected from 2007-08 to 2016-17. A similar study can be done by taking different time span. Firms behave differently with reference to financing decision based on the stage of industry life cycle hence one can use companies at different stages of life cycle, and study their financing pattern

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return on Equity	100	-0.3818	0.4045	0.1875	0.1151
Return on Asset	100	-0.2044	0.2954	0.1227	0.0762
Earnings Per Share	100	-21.40	113.67	32.9281	26.4435
Tobin's Q	100	0.4245	10.0509	2.7469	1.9616
Long Term Debt Ratio	100	0.0050	0.3654	0.0887	0.0805
Short Term Debt Ratio	100	0.0087	0.3515	0.1266	0.0942
Size	100	10.0780	11.5734	10.8033	0.3313
Asset Turnover Ratio	100	0.0854	1.0377	0.6337	0.2333

Extracted from SPSS

Table 3: Correlation

	ROE	ROA	EPS	TQ	LDR	SDR	Sz	ATR
ROE	1							
ROA	0.927**	1						
EPS	0.460**	0.476**	1					
TQ	-0.056	0.027	0.151	1				
LDR	-0.024	-0.241*	-0.110	-0.247*	1			
SDR	-0.357**	-0.561**	-0.170	-0.260**	0.276**	1		
Sz	-0.615**	-0.535**	-0.067	0.021	-0.259**	0.327**	1	
ATR	0.698**	0.622**	0.334**	0.245*	0.059	-0.254*	-0.493**	1
	**. Significance 0.01 level (2-tailed).							
	*. Significance 0.05 level (2-tailed).							
Extracted from SPSS								

Table 4: Regression Output of Model -1

$ROE = \alpha + \beta_1 LDR_{it} + \beta_2 SDR_{it} + \beta_3 Sz_{it} + \beta_4 AT_{it} + \varepsilon_{it}$				
$R^2 = 0.601$	Adj. $R^2 = 0.584$	F – Value = 35.811	Sign. Value = 0.000	D – W = 1.320 VIF = 1.618
Parameters	Coefficients	Standard Error	t – Value	Sig. Value
Constant	1.385	0.320	4.328	0.000
LDR	-0.103	0.104	-0.988	0.326
SDR	-0.114	0.092	-1.242	0.217
Sz	-0.123	0.029	-4.303	0.000
AT	0.249	0.037	6.714	0.000
Extracted from SPSS				

Table 5: Regression Output of Model – 2

$ROA = \alpha + \beta_1 LDR_{it} + \beta_2 SDR_{it} + \beta_3 Sz_{it} + \beta_4 AT_{it} + \varepsilon_{it}$				
$R^2 = 0.645$	Adj. $R^2 = 0.630$	F – Value = 43.168	Sign. Value = 0.000	D – W = 1.011 VIF = 1.618
Parameters	Coefficients	Standard Error	t – Value	Sig. Value
Constant	0.854	0.200	4.274	0.000
LDR	-0.253	0.065	-3.884	0.000
SDR	-0.227	0.057	-3.963	0.000
Sz	-0.071	0.018	-3.965	0.000
AT	0.136	0.023	5.863	0.000
Extracted from SPSS				

Table 6: Regression Output of Model - 3

EPS = $\alpha + \beta_1LDR_{it} + \beta_2SDR_{it} + \beta_3Sz_{it} + \beta_4AT_{it} + \varepsilon_{it}$				
R ² = 0.142		Adj. R ² = 0.106		F – Value = 3.933
			Sign. Value = 0.005	D – W = 0.561 VIF = 1.618
Parameters	Coefficients	Standard Error	t – Value	Sig. Value
Constant	-103.868	107.802	-0.964	0.338
LDR	-23.212	35.197	-0.659	0.511
SDR	-27.415	30.846	-0.889	0.376
Sz	-10.654	9.648	1.104	0.272
AT	42.970	12.470	3.446	0.001
Extracted from SPSS				

Table 7: Regression Output of Model - 4

TQ = $\alpha + \beta_1LDR_{it} + \beta_2SDR_{it} + \beta_3Sz_{it} + \beta_4AT_{it} + \varepsilon_{it}$				
R ² = 0.169		Adj. R ² = 0.134		F – Value = 4.833
			Sign. Value = 0.001	D – W = 0.400 VIF = 1.618
Parameters	Coefficients	Standard Error	t – Value	Sig. Value
Constant	-10.316	7.870	-1.311	0.193
LDR	-3.853	2.570	-1.499	0.137
SDR	-4.245	2.252	-1.885	0.062
Sz	1.144	0.704	1.624	0.108
AT	2.503	0.910	2.749	0.007
Extracted from SPSS				

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National Diversity on Board and Firm Performance- Evidence from India

Manjula Shukla

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The present study examines the effect of national diversity on firm performance of Indian companies. It also examines the moderating effect of higher proportion of independent foreign directors on firm performance. The study has been conducted on BSE 100 companies for a period of 9 years. ROA and ROCE have been used as proxy for firm performance. National diversity has been measured by Blau's index and as proportion of foreign directors on board. Various other variables viz. age, CEO duality, leverage, size, etc. which may have an effect on performance have been used as control variables. Panel data regression analysis on the data reveals that national diversity positively and significantly affects firm performance of Indian companies. Firms having higher proportion of independent foreign directors as compared to non-independent foreign directors do not earn significantly higher returns. Higher proportion of independent foreign directors insignificantly but positively moderates the effect of national diversity on firm performance.

Key words: *National Diversity, Foreign Directors, Independent Foreign Directors, Firm Performance*



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Board of directors of a firm form the top most level of the management of a corporation. They act as a link between the management and the shareholders of the firm. As per agency theory of corporate governance, board of directors are the agents of the shareholders i.e. the principle. Their role is to safeguard the interests of the shareholders of the company. In the current open market economy structure with international share markets and multinational corporations, shareholders of a company comprise investors from different countries and regions. This structure of stock ownership calls for a suitable structure of management, fit for managing and safeguarding the interests of not only the domestic investors, but foreign investors as well. Homogeneity in board composition in terms of gender, ethnicity, age, nationality, etc. is regarded as an ineffectual board composition in modern day corporations. The board of directors of a corporation are

expected to perform the following four most important functions: monitoring and governing the functions and activities of the top management of the company, extending advice and information to the management, overseeing the effective implementation of the rules and regulations applicable to the corporation and acting as a link between the corporation and the stakeholders. It is believed and has been proved by a number of studies that the composition of the board of directors directly or indirectly determines the effectiveness of the board functioning and therefore ultimately affects the effectiveness, productivity and performance of the corporation (Carter, D'Souza, Simkins, & Simpson, 2010). The importance of effective and efficient governance of a corporation has been well recognized in literature as well as by the regulatory authorities of countries. One of the most vital governance issues being faced at present by the management of the companies as well as the investors and regulators, is the diversity of board composition, most important being the demographic diversity of the board members (Carter, Simkins, & Simpson, 2003).

According to Karen J. Curtin, executive vice-president of Bank of America, there could be two perspectives to the board diversity, "There is real debate between those who think we should be more diverse because it is the right thing to do and those who think we should be more diverse because it actually enhances shareholder value. Unless we get the second point across, and people believe it, we're only going to have tokenism" (Brancato & Patterson, 1999; Carter, Simkins, & Simpson, 2003).

Previous studies done on board diversity could be categorised into two viz. the studies that have examined the observable diversity on board (also called demographic diversity) and the studies that have examined the non-observable diversity on board (also called cognitive diversity). Observable or demographic diversity relates to the board diversity in terms of gender of the members, age, nationality, ethnicity, race, etc. (Erhardt, Werbel, & Shrader, 2003) Whereas, non-observable or cognitive diversity refers to the educational qualifications, personality traits, values, perceptual qualities of board members, etc. (Maznevski, 1994; Milliken & Martins, 1996; Pelled, 1996; Erhardt,

Werbel, & Shrader, 2003) majority of the studies done on board diversity have limited themselves to the observable diversity on board. Amongst the various types of observable board diversity, gender diversity on board has been the prime focus of the studies (Darmadi, 2011). However, limited number of studies have focused on national diversity and presence of foreign directors on board (Diepen, 2015). Moreover, extensive literature on board diversity can be found for developed countries. There is still dearth of studies done on developing and transitional economies related to board diversity and its effect on performance of the firms.

The present study examines the status of national diversity on the boards of Indian corporations, the independent status of these foreign directors on board and the manner in which the foreign directors have an effect on firm performance. Moreover, the study also analyses whether the 'independent' position of foreign directors on board plays a significant role in determining firm performance.

Position of Foreign Directors in Indian Companies

Figure 1 depicts the status of foreign directors on the boards of Indian companies. No definite trend could be found in the number of foreign directors over the years. Primary reason behind this could be the fact that in India, appointment of foreign directors on the boards is not backed by any regulatory criteria and completely depends on the discretion of the management of the companies. Although an overall decline can be seen in the number of foreign directors on boards from the year 2006-07 (106) to 2014-15 (76) women directors form a negligible portion of the total number of foreign directors on board, though the number has increased over the years from one foreign women director in year 2006-07 to five foreign women directors in the year 2014-15. As the data reveals, majority of the foreign directors over the years are non-independent in nature. However, the proportion of independent foreign directors has increased over the years from 11.32 percent in the year 2006-07 to 25 percent in the year 2014-15. There were a maximum of four cases where a foreign director formed the CEO of the company and a maximum of two cases where a foreign director occupied the position of chairperson of the company.

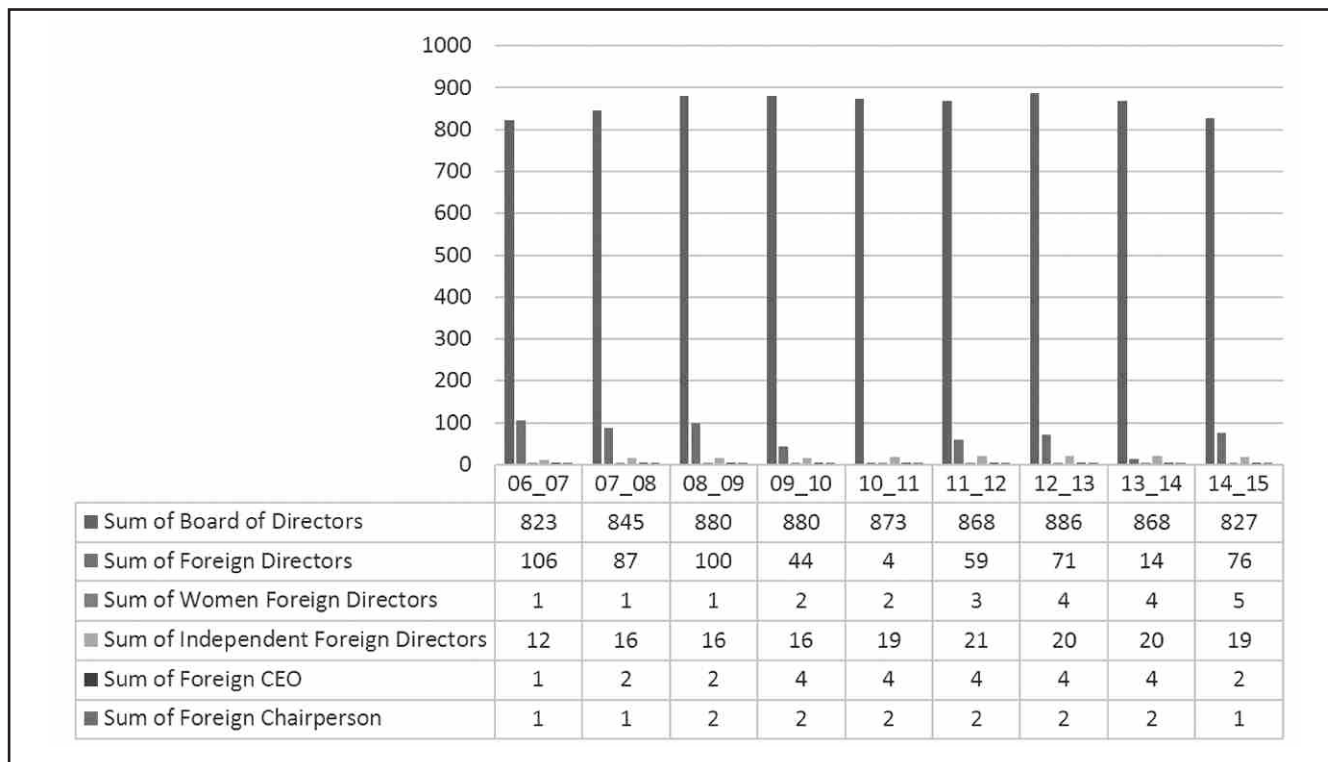


Figure 1: Foreign directors in BSE 100 companies

Review of Literature

Various aspects of corporate governance can be effectively explained with the help of agency theory proposed by Berle & Means (1932) and Jensen & Meckling (1976). The agency theory of corporate governance postulates that the directors and the managerial personnel of a corporation act as agents to the principal i.e. the shareholders. However, due to separation of ownership and management in corporate form of business, the interests and motives of the management of a corporation may not be in conjunction with the interests and motives of the owners or the shareholders of the company. In such a case, the managers may take decisions and actions that may fulfil their concerns at the expense of the interests of the shareholders. This would lead to a conflict between the management of the corporation and the owners. The cost or losses that the owners bear due to this conflict of interests is known as the agency cost. As Adam Smith (1776) explained in his masterpiece *The Wealth of Nations*, “a manager with no direct ownership of a company would not make the same decisions, nor exercise the same care as would an owner of that company.” The agency problem in a corporation can be of two different kinds viz. 'adverse selection' and 'moral hazard' (Eisenhardt, 1989;

Ujunwa, Okoyeuzu, & Nwakoby, 2012). The case of adverse selection occurs when an individual gets wrongly chosen as an agent of the shareholders though he/she is incompetent to perform her/his functions diligently. Moral hazard refers to the case when an individual who is chosen as an agent has the necessary expertise to perform his duties, but he/she does not fulfill his/her responsibility due to lack of dedication towards the job (Ujunwa, Okoyeuzu, & Nwakoby, 2012). This leads to higher agency cost and deterioration in firm performance. In order to mitigate this agency cost, the owners are expected to take measures like stricter control, better reporting stipulations, regular and transparent evaluation of performance of the directors and managers, etc. One of the highly suggested and effective measure to control agency problem is to maintain sufficient level of independence on board.

Another theory that explains the role of directors of a company in a different perspective is the resource dependence theory. The resource dependence theory considers the directors on board as a resource to the company (Johnson, Daily, & Ellstrand, 1996). As the directors on board hold multiple directorships, they are expected to act as a link between two such companies, which may provide

resources to each other. Moreover, as a result of working on more than one board, these directors gain wider experience and therefore can make effective decisions for different corporate issues. The directors act as a link between the company and external environment of the company. This leads to successful operation of business. Resource dependence theory supports the concept of board diversity. According to the theory if a board is comprised of a mix of directors coming from different cultural backgrounds, different gender, different age group, etc. such directors would bring with them different set of skills, experiences and connections, thereby resulting in better operation of the firm and therefore better firm performance (Ujunwa, Okoyezu, & Nwakoby, 2012).

Various benefits of board diversity have been suggested by previous studies. The board members of different race, gender and ethnicity are said to have different concepts, preconceptions, beliefs, and standards about varied issues (Distefano & Maznevski, 2000). As they belong to different cultures, they have different values and experiences. This leads to a better and wider perspective on management decisions and therefore, they can generate better and more efficient alternatives as compared to a homogenous board. They bring more innovative ideas and creative thinking. (Ely & Thomas, 2001) Diversity in a group also leads to reduction of groupthink (Cox & Blake, 1991; Watson, Kumar, & Michaelsen, 1993; Andrevski, Richard, Shaw, & Ferrier, 2014).

Carter, Simkins, & Simpson (2003) proposed five different reasons for diversity having a positive effect on performance of the firms. First, as multinational culture of the corporations has taken root in the modern market, diversity of the market and the customers has increased. Therefore, board diversity helps to better understand the needs and demands of the diverse market. This may further help in market penetration and expansion. Second, diversity is said to bring innovation and creativity. According to Robinson & Dechant (1997), "attitudes, cognitive functioning, and beliefs are not randomly distributed in the population, but tend to vary systematically with demographic variables such as age, race, and gender." The third reason is that diversity helps in bringing out more alternative solutions to a problem. Though it may also result in conflict in process of decision making, variety of alternative solutions helps in choosing out the best one and also helps in evaluating the pros and cons of each and every alternative. Fourth, diversity reduces cases of narrow

perspective on the top management level. Fifth, diversity helps in promoting better global relationships, especially cultural and ethnic diversity enhances the cultural sensitivity of the management.

However, arguments against board diversity state that diversity on board may not be very fruitful in case a quick decision is to be made and when the company is susceptible to quick market changes. Diversity on board may lead to delayed decision making. Board diversity may also lead to formation of a less cooperative group of intellectuals and an increase in emotional disagreement. This may lead to a new form of agency conflict, thereby negatively affecting firm performance (Smith, Smith, & Verner, 2005).

National Diversity on Board

National diversity on board is one of the important forms of board diversity. The advantages of national diversity has resulted in increasing importance being given to such diversity by the management of the companies worldwide (Marimuthu & Kolandaisamy, 2009; Griscombe & Mattis, 2002). The presence of national diversity on the board or in other words, when foreign nationals form the directors of the board of a company, they are said to enhance competitive advantage of the firm, brings advantages of international linkages, avoids managerial entrenchment, protects shareholder rights, etc. (Oxelheim & Randøy, 2003). Also known as citizenship heterogeneity, national diversity on board has been rarely studied by researchers (Darmadi, 2011).

Foreign directors are able to provide valuable expertise and information to the companies, especially to the ones that are involved in foreign operations or are planning for expansion of business in other countries. However, there are several limitations to the inclusion of foreign nationals on board. The factor of geographical location plays a vital role in determining how a foreign national would be able to affect the decision making process of the company in a positive way. Due to high oversight cost and cost of visiting the headquarters of the company for general meetings, national diversity tends to become an impeding factor in firm growth. Moreover, it is rather difficult for these foreign directors to understand the working structure of the company based in another country with different legal structure, political structure, consumer demands, needs and perceptions, cultural factors, etc. Therefore, a lack of total understanding of these factors undermines their ability to provide efficient and effective advice, and solutions.

However, as theories suggest that diversity on board brings positive effect on performance, the legal system of various countries also emphasize better diversity on boards of the companies, and previous researches also find evidence for positive effect of diversity on performance, the first hypothesis of the study states that an increase in the proportion of foreign nationals on the boards of the companies, has significant positive impact on firm performance.

H1: An increase in the proportion of foreign nationals on the boards of the companies has significant positive impact on firm performance.

One of the major concerns and recommendations of the corporate governance codes, principles, and policies has been the independence of the board members of the corporate entities. As per the agency theory of corporate governance, the independent directors on the boards of the companies do not have any direct stake in the affairs of the company, except receiving their sitting fee. Therefore, their decisions would not be tainted by the otherwise self-serving interests as in the case of the executive directors of the company. The impartial and unbiased decisions of the independent directors would reduce agency cost for the firm and therefore, enhance firm performance. The resource dependence perspective of corporate governance states that as the independent directors sit on more than one board, they would bring with them the benefit of diversified expertise and would act as a link between two companies. Therefore, the second hypothesis of the study states that higher proportion of independent foreign directors on board positively moderates the effect of national diversity on firm performance.

H2: Higher proportion of independent foreign directors on board positively moderates the effect of national diversity on firm performance.

Data

Sample

The companies listed in BSE 100 as on March 31, 2017 form the sample for the present study. The BSE 100 index is composed of 100 mid cap and large cap companies who represent 15 different industries of the economy of India. The period of the study ranges for 9 years from financial year 2006-07 to financial year 2014-15. Data for the study has been collected from the Annual Reports of the companies. A total of 33 companies were eliminated from the study for the lack of availability of annual reports for the

period of the study or due to lack of relevant information in the reports. A total of 67 companies form the sample for the study with a total of 612 firm year observations.

Variables

Dependent Variables

Two accounting-based profit measures viz. Return on Assets (ROA) and Return on Capital Employed (ROCE) has been used as a proxy for firm performance in order to bring robustness to the results. Return on Assets being calculated as a ratio of company's net profits and its total assets indicates the efficiency of usage of the assets of the firm and their profit earning capacity. Whereas, Return on Capital Employed (ROCE), indicates the efficient usage of the capital of the company and is calculated by dividing Earnings before Interest and Tax (EBIT) by capital employed.

Independent Variables

National diversity on board has been used as the primary independent variable in the study. As the proportion of foreign directors on the boards of Indian companies does not exceed 50 percent for the period under study, Blau's index (Blau) has been used to measure national diversity on board along with the proportion of foreign directors on board (ForeignR) which has been calculated as a ratio of total number of foreign directors on board in a particular year for a company and the total number of directors present on board in a particular year for a company. Blau's Index works similar to Herfindahl Index, which increases as the level of diversity on the board increases. Blau's Index is computed as $1 - \sum p_i^2$, where p represents the proportion of members in a particular group i . The index can take values ranging from 0 (when all the members belong to one group i.e. when only Indian directors are present on board) to 0.5 (when both groups have equal number of members i.e. when both Indian and foreign directors are equally represented on board).

Control Variables

A number of variables that may have an effect on the financial performance of the company have been used as a control variable in the study. The selection of variables has been done on the basis of their usage in previous studies. The control variables for the present study include size of the firm, firm age, CEO duality, financial leverage, proportion of independent directors on board, proportion of women directors on board and independent foreign directors. Size of the firm (FSize) has been calculated as the logarithm of the total assets of the firm in a particular year. Similarly, firm age

(Fage) has been calculated as the logarithm of the total number of years the firm has been in operation since its inception. Logarithm of the firm size and firm age has been taken to reduce heterogeneity of the variable as well as the factor of heteroscedasticity in the regression equation as the variables may have extreme deviations between firms. (citation) As explained by Jaisinghani and Tondon (2016), 'taking the natural log reduces the scale factor and hence the heterogeneity is avoided to a large extent.' Proportion of independent directors on board (PropIND) has been calculated as a ratio of total number of independent directors present on board for a particular year and the total number of directors on the board. CEO duality (Duality) has been calculated with a nominal dummy variable which takes the value 1 when CEO duality is present, otherwise takes the value 0. Financial leverage (LEVER) has been calculated as book value of the total debt of the company divided by book value of its total assets. Financial leverage measures the risk aspect of the firm. Proportion of women directors on board (PropWOMEN) has been calculated as a ratio of total number of women directors on board of a particular firm for a particular year, divided by the total number of directors present on board for the same year for the particular firm. The variable independent foreign directors (ForIND) is a dummy variable that takes the value 1 when the proportion of independent foreign directors out of the total number of foreign directors on board is more than 0.5, otherwise 0. The variable has been used to study whether how majority independent foreign directors moderate the effect of national diversity on firm performance.

Method

The hypotheses of the study regarding the effect of gender diversity on firm performance after controlling for various factors and the moderation effect of independent women directors have been studied with the help of regression analysis. Due to the longitudinal nature of the data, panel data estimation technique has been applied in the study. Panel data estimation techniques include both the individual aspect and the time aspect of the data. By doing so, it takes into account the heterogeneity factor of the data thus 'allowing for individual-specific variables' (Gujarati, 2004). Two of the most important and basic panel data estimation techniques are the fixed-effects estimation technique (FE) and the random-effects estimation technique (RE). However, as fixed effects estimator applies the time demeaning process, the variables having low or no 'within-subject variability' over-time do not work well with the fixed

effect estimator (Battaglia & Gallo, 2015; Williams, 2017). Generally, and as seen in the present study, the corporate governance variables do not show much variability over time. (Kumar & Singh, 2014; Battaglia & Gallo, 2015). Therefore, we do not apply fixed effects estimator for regression analysis in the present study. Moreover, as we do not concentrate on individual specific effect and rather aim to draw a general inference for the study population, we estimate the regression equation with random effects estimator (Schaeck & Cihak, 2007). The random effects estimator also tends to reduce the problem of endogeneity in the model to some extent (De, 2003). In order to apply panel data estimators, stationarity of data is a necessity. Therefore, in order to check for stationarity of the data, Levin-Lin-Chu test of stationarity has been applied. Cluster-robust standard errors have been used in the model in order to control for the possible effects of heteroscedasticity and autocorrelation in the model. Companies have been used as the cluster variable in the model.

As firm performance could be significantly affected by various other year-specific and time-invariant unobserved variables like changes in political scenarios, government policies, technological changes, etc., time-dummy variables have been used in the model to control for them (Dewan & Kraemar, 1998; Gil-Pareja, Llorca-Vivero, & Martínez-Serrano, 2008).

Model Specification

The effect of national diversity on board and firm performance has been studied with the help of two regression models, wherein the two variables measuring firm performance viz. ROA and ROCE have been regressed on the two variables measuring national diversity viz. Blau and ForeignR, along with other control variables.

$$P_{it} = \alpha_i + \sum \beta_k \text{National Diversity}_{k_{it}} + \sum \beta_k \text{CV}_{k_{it}} + \psi_i + \epsilon_{it}$$

P is the performance variable viz. ROA or ROCE. National diversity represents the proportion of foreign directors on board (ForeignR) or the Blau's Index measuring national diversity. CV represents the group of all the control variables used in the model viz. firm size, firm age, CEO duality, leverage, proportion of independent directors and women directors on board, etc. The unobserved heterogeneity in the model is represented by the symbol ψ_i and the error term of the model is depicted by the symbol ϵ_{it} .

The interaction effect of ForIND on the relationship between national diversity on board and firm performance has been

studied with the help of two regression models, which have been estimated as:

$$P_{it} = \alpha_i + \sum \beta_k \text{National Diversity}_{kit} + \sum \beta_k \text{CV}_{kit} + \sum \beta_k (\text{National Diversity} * \text{ForIND})_{kit} + \psi_i + \varepsilon_{it}$$

Where National Diversity*ForIND is the interaction term between the variables measuring national diversity on board (ForeignR and Blau) and ForIND.

National diversity may have a positive significant effect on firm performance due to increase in innovative capacity of the board, better decision making and a holistic view of the global market. However, it may also have a significant negative effect on performance due to the extra cost borne by the management in arranging board meetings with foreign members, due to conflict in ideas between foreign directors and Indian directors. Moreover, the foreign members may not have a complete understanding of the working of a corporation which functions in a different cultural, political and economic environment. Also national diversity may have an overall insignificant effect on performance. Firm size is expected to have a negative effect on firm performance as with increase in size, the firm would face the problem of coordination of activities (Rashid et. al., 2010; Williamson, 1967). Firm age is expected to positively affect firm performance, as with increase in age, the firm gains strong footing in the market and is able to optimise its operations and bring efficiency (Ang, Cole, & Lin, 2000). Leverage is expected to have a positive influence on firm performance as debt acts as a mechanism to reduce agency conflict in the organisation (Campbell & Minguez-Vera, 2007). CEO duality is supposed to have a negative influence on firm performance due to concentration of power in a single person when both the positions of CEO and chairman of the board is held by the same individual (Lam & Lee, 2012). As the independent directors are expected to deliver their expertise independent of any motive in relation to the firm, they are supposed to have a positive effect on firm performance. Similarly, as the previous studies have suggested, higher proportion of women directors are supposed to have a positive effect on firm performance.

Results and Discussion

The descriptive statistics of the variables used in the study, along with the correlation matrix and VIF values have been shown in Table 1. The mean of variable ForeignR shows that on an average the mean proportion of foreign directors on boards of Indian companies is 7 percent. The low mean value of ForeignR also depicts that majority of the firms did

not appoint foreign directors on board. If the antilog of the variable Fage is calculated, it will reveal that majority of the firms in the sample are less than 40 years in age. The mean value of ProIND shows that independent directors held approximately 53 percent of board seats in the sample companies, whereas women directors held around 6 percent of board seats. CEO duality existed in around 225 observations out of total 612 observations meaning in around 36.76 percent of cases, CEO duality existed on board. As can be seen from the correlation matrix, the correlation coefficient between the independent variables is not more than 0.8 in any case. Moreover, the VIF values for the variables is more than 1 and less than 10, signifying absence of multicollinearity in the model (Cho & Kim, 2007; Jackling & Johl, 2009; O'Connell, 2010). Table 2 presents the results of the Levin-Lin-Chu test of unit root stationarity, wherein all the variables are stationary at base level.

National Diversity

Table 3 shows the result of regression analysis of national diversity on board and firm financial performance. According to hypothesis 1, a firm with higher ratio of foreign directors on board will show higher firm performance. The values of the co-efficient for the variables Blau and ForeignR are significant at 0.05 significance level for both ROA and ROCE and the as dependent variable. Moreover, all the co-efficient are positive numbers meaning thereby that an increase in the proportion of independent directors on board would result in a significant increase in ROA and ROCE of the company. Therefore, the first null hypothesis of the study is rejected. If a foreign director is added to the board of 10 directors, it would result in an increase in ROA of the company by 10 percent of 81.31 i.e. by 8.131 and would increase ROCE by 10 percent of 18.15 i.e. by 1.815 (Dezso & Ross, 2012). However, the co-efficient for the variable ForIND is not significant for either of the dependent variables ROA or ROCE. Thereby meaning that firms having higher proportion of independent foreign directors would not earn significantly more than the firms having lower proportion of independent foreign directors. Although the coefficient for the variable ForIND is not significant, it still has a positive effect on firm performance measured through ROA and ROCE. Therefore, a firm with higher proportion of independent foreign directors would earn approximately 0.77 more ROA and 0.04 more ROCE than the firm having lower proportion of independent foreign directors as compared to non-independent foreign directors.

Table 1: Descriptive Statistics and Correlation Matrix

Variable	Mean	S.D	VIF	3	4	5	6	7	8	9	10
1. ROA	0.15	0.27	-								
2. ROCE	0.18	0.20	-								
3. ForeignR	0.07	0.14	1.13	1							
4. Blau	0.09	0.15	1.15	0.87**	1						
5. LEVER	2.58	4.75	1.13	-0.21**	-0.24**	1					
6. FSize	2.49	0.31	1.25	-0.02	0.05	0.09*	1				
7. Fage	3.68	0.81	1.26	-0.17**	0.23**	0.08*	0.399**	1			
8. ProIND	0.53	0.11	1.03	0.01	0.00	0.00	-0.01	0.06	1		
9. ProWOMEN	0.06	0.06	1.02	0.02	0.03	-0.00	-0.02	-0.03	0.13**	1	
10. Duality	-	-	1.12	-0.08*	0.00	-0.21**	-0.20**	-0.08*	0.08*	-0.00	1
11. ForIND	-	-	-								

As expected, FAge has a positive and significant effect on firm performance. Therefore as the age of an enterprise increases, it enjoys higher returns. This may be due to the experience the company gains during the years, increase in customer loyalty, market expansion, reaching optimum capacity of operations, etc. FSize which is a proxy for the size of the firm has a significant negative impact on ROA and ROCE. This provides evidence that as the size of the firm

increases, an adverse effect on performance can be noticed. The reason behind this can be the increase in inefficiency to handle the increasing work-load and coordination problems. The significant negative co-efficient on the variable Duality proves that when CEO duality exists on board i.e. the position of chairperson is held by the CEO of the company, firm performance declines significantly.

Table 2: Levin-Lin-Chu Test of Stationarity

Variable	t	p-value
1. ROA	-58.06	0.0000
2. ROCE	-13.27	0.0000
3. ForeignR	-18.05	0.0000
4. Blau	-20.44	0.0000
5. LEVER	17.14	0.0000
6. FSize	-8.93	0.0000
7. FAge	39.52	0.0000
8. ProIND	-11.02	0.0000
9. ProWOMEN	-9.99	0.0000

Table 3: National Diversity and Firm Performance

	ROA		ROCE	
	(1)	(2)	(3)	(4)
Blau	83.50* (34.89)	-	4.217* (1.647)	-
ForeignR	-	81.31* (38.50)	-	18.15* (8.38)
LEVER	-1.216 (1.148)	-1.341 (1.144)	0.052 (0.526)	0.116 (0.524)
Duality	-19.468* (7.962)	-16.918* (6.880)	-11.32* (4.79)	-10.35* (2.22)
FAge	12.357* (5.859)	13.448* (6.761)	7.00** (2.35)	7.06** (2.35)
FSize	-26.68* (10.40)	-23.84* (11.91)	-9.23** (3.47)	-6.65* (3.33)
ProIND	54.64* (23.42)	56.35* (18.88)	0.312 (3.44)	0.211 (3.45)
ProWOMEN	33.48 (80.47)	36.137 (80.52)	10.03 (6.13)	10.32 (6.41)
ForIND	7.710 (16.042)	7.652 (16.960)	0.470 (2.55)	0.49 (2.55)
Intercept	70.89 (49.21)	61.283 (49.40)	29.66* (11.70)	27.55* (12.55)
N	612	612	612	612
R ²	0.297	0.278	0.479	0.468
LM test	0.3343	0.3342	1372.01**	1389.16**
F-value	2.47*	2.64*	-	-
Wald Test	-	-	105.56**	112.44**
OLS / RE	OLS	OLS	RE	RE

Table 4: Independent Foreign Directors and Firm Performance

	ROA		ROCE	
	(1)	(2)	(3)	(4)
Blau	83.41* (34.92)	-	4.313* (1.529)	-
ForeignR	-	81.65* (38.54)	-	18.20* (8.66)
LEVER	-1.22 (1.11)	-1.34 (1.14)	0.051 (0.527)	0.115 (0.525)
Duality	-19.48* (7.59)	-16.92* (7.88)	-11.34* (4.80)	-10.37* (4.02)
FAge	12.51* (5.86)	13.60* (6.55)	7.66** (2.35)	7.09** (2.43)
FSize	-27.36* (10.98)	-24.49* (11.86)	-9.56** (3.48)	-9.98* (3.34)
ProIND	55.10 (44.58)	56.80* (44.62)	0.329 (3.43)	0.231 (3.44)
ProWOMEN	36.04 (80.80)	38.61 (80.85)	10.26 (6.17)	10.57 (6.44)
ForIND	7.55 (15.92)	7.89 (17.55)	0.58 (3.99)	0.74 (2.89)
Interaction	44.57 (115.49)	42.97 (115.60)	3.83 (10.03)	4.01 (9.74)
Intercept	72.68 (49.47)	62.97 (49.64)	29.82* (11.73)	27.71* (11.38)
N	612	612	612	612
R ²	0.300	0.280	0.409	0.420
LM test	0.3392	0.3568	1369.03**	1386.19**
F-value	2.17*	2.33*	-	-
Wald Test	-	-	115.86**	129.54**
OLS / RE	OLS	OLS	RE	RE

Independent Foreign Directors

According to hypothesis 2 of the study, a higher proportion of independent foreign directors among the foreign directors on board as compared to non-independent foreign directors would have a positive moderating effect on the firm performance. Table 4 presents the results of the regression analysis of the effect of national diversity on firm performance and the interaction effect of proportion of foreign directors on board and ForIND.

The main effect of national diversity on firm performance is unchanged i.e. national diversity has significant positive impact on firm performance measured in terms of both ROA and ROCE. However, the co-efficient for the interaction term Interaction is insignificant, meaning thereby that

presence of higher proportion of independent foreign directors amongst the foreign directors on board does not significantly moderate the effect of national diversity on firm performance. Therefore, the second null hypothesis is not rejected. Although, the interaction term is not significant, the positive coefficients show that a higher proportion of independent foreign directors would positively affect the firm performance. If a foreign director is added to the board of 10 members, where the proportion of independent foreign directors is more than the proportion of non-independent foreign directors, it would result in an increase in ROA by 10 percent of 44.57 i.e. approximately by 4.457 and ROCE by 10 percent of 4.83 i.e. by approximately 0.483. However, conclusive evidence for the same could not be provided. The

effect of age of the firm and the proportion of independent directors on firm performance is positive and significant. The size of the firm has a significant negative impact on firm performance, similar to the effect of CEO duality on firm performance.

Conclusion

The present study analyses the relationship between the proportion of foreign directors on board and firm performance of Indian companies. The findings of the study conclude that (a) national diversity on board has a positive and significant effect on firm financial performance. (b) Higher proportion of independent foreign directors on board among the foreign directors on board has a positive but insignificant effect on firm performance. (c) Higher proportion of independent foreign directors among the foreign directors on board does not significantly moderate the effect of national diversity on firm financial performance.

National diversity having a significant positive effect on firm performance can be explained with the fact that diversity among the directors brings wider perspective to the decisions of the board and helps in generating more alternative decisions. More creativity and innovation capacity, better understanding of market demand, reduction in groupthink, etc. enhances firm performance. However, independent foreign directors not having a significant effect on performance could be explained with the fact that only a few companies appointed independent foreign directors on board. Moreover, low proportion of independent foreign directors on board would have been the reason for them not having a significant effect on firm financial performance. In India, there does not exist at present any regulation regarding the proportion of seats held by foreign directors on Indian boards. However, witnessing the positive impact of national diversity on board on firm performance, regulations regarding inclusion of national diversity on board could be framed. Independence of foreign directors must be given attention so as to combine the benefits derived from national diversity and independence of directors. However, the present study suffers from the following limitations. A linear relationship between national diversity and firm performance has been assumed in the study whereas there could also exist a curvilinear relationship between the variables which could better explain the relationship between the two variables. The study uses financial performance measures as a proxy of firm performance. However, use of other performance measures

like productivity measures and market measures could provide a clearer view on the subject. Quantitative aspect of national diversity has been analysed in the study. Qualitative aspects of national diversity could also be studied. Lastly, an increase in the sample and the time period under study may bring out different and more consistent results.

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Non-Performing Assets and Profitability: Commercial Banks in India

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The paper examines the Non-Performing Assets and their impact on the profitability of commercial banks viz. public banks, private banks and foreign banks in India. The data collected from RBI database, for the period of eleven years from 1st April 2006 to 31st March 2017. Regression analysis has been used in the study where; return on assets and return on equity have been used as proxy variables for profitability of the banks while Gross NPA to Gross advances ratio and Net NPA to Net advances ratio has been used as independent variables to denote the non-performing assets of the banks. It was found that NPA has an adverse impact on the profitability of the banks. Furthermore, the results demonstrate that the profitability of the foreign banks is least affected by the NPAs compared to public and private banks.

Keywords: Banks, Non-performing assets, Profitability, Return on Assets, Return on Equity



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The viability of Indian banking is prodigious as tested during toughest times, but the fact is Indian Banking industry is seriously affected by Non-Performing Assets (NPA). The NPA problem in India is worst when comparing other emerging economies in BRICS. This bad performance is not a good sign and can result in crashing of banks as happened in the sub-prime crisis of 2008 in the United States of America. To tackle the situation, Government of India has taken the steps to counter the situation of rising NPA due to borrowing party defaults. Among them recent being the Bad Banks in the year 2017, Public Asset Reconstruction Companies vs. Private Asset Reconstruction Companies in the year 2017, Insolvency and Bankruptcy code Act-2016, and Sustainable structuring of stressed assets in the year 2016 etc.

The principal purpose of this paper is to explore the impact of non-performing assets on the profitability of commercial banks viz. public banks, private banks and foreign banks in India. Specifically, Net Non-Performing Assets to Net Advance and Gross Non Performing Assets to Gross Advance. How these Non-performing asset indicators

influence the profitability of banks measured by ROA and ROE. The research first reviews the studies conducted so far, which explain attribute compatibility. The research methodology is framed to describe the experiment conducted to test them. The penultimate section deals with results and discussions.

Literature Review

While non-performing asset is an asset, when it ceases to generate income (Reserve Bank of India), widely accepted as a major threat for banks, if not early identified and prevented from becoming stressed by taking appropriate action.

Given the growing importance of management of NPAs, investigation into whether NPAs affect the profitability of the banks has been drawing broad research interest. Kiran and Jones (2016), measured the impact of Non-performing asset on the profitability of the five public sector banks for the period 2004 to 2015. The results showed that there is a significant negative correlation between net profits and NPA of the banks. The author demonstrated that SBI is continuously improving in net profits even after increasing trend of NPA.

Sharma and Rathore (2016) measured the impact of non-performing assets on the profitability of the Indian scheduled commercial banks for the period 2004-05 to 2014-15. Their results showed that currently there is an increasing trend of non-performing assets in Indian scheduled commercial banks. It was also found from the study that NPA has an adverse impact on the profitability of the banks.

Balasubramaniam (2012) studied the association between non-performing asset and profitability of the commercial banks. The study was conducted on scheduled commercial banks of India during 2001 to 2010. The results indicated that the performance of the banks get affected by the non-performing assets. The findings also suggested that due to global recession the scheduled banks were permitted to restructure their loans and advances on the basis of their asset quality that resulted an increase in ratio of GNPA.

Laveena and Kumar (2016) conducted a comparative study of management of non-performing assets of the public and private sector banks of India for the period 2001 to 2010. They indicated that the profitability of the banks get affected by the non-performing assets where in Public banks are more affected by the poor management of NPA results in higher NPA than private sector banks. It was also suggested that the credit evaluation policy of the banks should be improved to reduce the level of NPA in the banks.

Singh (2016) observed the financial health of the banks can be improved by reducing the amount of NPA in the banks.

NPAs not only affect the profitability but also the liquidity of the banks and the asset quality of the banks and creates problem to the survival of the banks.

Rajput et al. (2012) measured the relationship between NPA and return on asset of public sector banks of India. They concluded that NPA is a burden and affects the profitability of the banks. It should be within the tolerance level and managed effectively to improve the profitability of the banks. The only way is to follow legal reforms and effective monitoring and credit policy of the banks.

Srinivas (2012) examined the non-performing assets of the commercial banks of India for the period of 1996 to 2012. The study showed an increasing trend in the level of NPAs and decreasing level of profits of the banks. It was suggested that by following a strict credit policy and by conducting a complete inquiry about the creditworthiness of the customers before approval of loans can help in reducing the NPAs in the banks.

Yadav (2011) analyzed the magnitude and impact of Non-performing assets on profitability of public sector for the period of 1994-95 to 2005-06. It was found that profitability of all public sector banks affected at very large extent when non-performing assets (NPAs) work with other banking strategic variables and also affect productivity and efficiency. One fourth credit of total advances was in the form of doubtful asset in the initial year of the nineties and has an adverse impact on profitability of public banks at aggregate or sectoral level indicating high degree of riskiness in credit portfolio and raising question mark on the credit appraisal.

In summary, all literature documented that NPA has a significant negative effect on performance of the banks. Kiran and Jones (2016) only considered five public sector banks for the period 2004 to 2015. Sharma and Rathore (2016) conducted the study on Indian scheduled commercial banks for the period 2004-05 to 2014-15. Singh (2016) only studied profitability of public bank for the period of 1994-95 to 2005-06.

The authors extend from Sharma and Rathore (2016) and Kiran and Jones (2016) by making comparative analysis of banks based on ownership as pointed out by Sharma and Rathore (2016). The main objective of this study is to empirically examine the association between non-performing assets and profitability performance of commercial banks viz. public banks, private banks and foreign banks in India.

Following Sharma and Rathore (2016) and Kiran and Jones (2016), this study also uses Net Non-Performing Assets to Net Advances and Gross Non-Performing Assets to Gross

Advances as a measure of non-performing asset. However, the study made comparative analysis of public banks, private banks and foreign banks to gauge the impact of non-performing assets on profitability performance of banks.

Research Methodology

Data and Sample selection

Data were collected from Commercial banks in India including public, private and foreign banks. The banking industry is a context that meets the requirements where non-performing assets are in abundance. The data gathered from RBI database, for the period of eleven years from 1st April 2006 to 31st March 2017, the rationale for choosing this period was the availability of required data. While selecting the data, it was decided to select all the 94 commercial banks, but due to inconsistency in data set banks removed, and the final sample of 66 companies (Public Banks 26, Private Banks 16 and Foreign banks 24) are selected for final analysis.

Variable definitions

Independent variables:

ROA: Return on total assets (ROA) reflects the profitability of firm. It is an indicator to measure whether the firm has been performing profitably as compared to the previous year or not. ROA reflects firms' efficiency in utilising total assets, holding constant firms' financing policy.

ROE: Return on Equity (ROE) reveals the firm's profitability by revealing how much profit a company generates with the money shareholders have invested.

Dependent variables:

Net NPA to Net Advance (NNPA/NADV): It is the ratio of Net Non-Performing Assets to Net Advance of banks which reflects the overall quality of the bank's loan.

Gross NPA to Gross Advance (GNPA/GADV): It is the ratio of Gross Non-Performing Assets to Gross Advance also reflects the quality of the loans made by banks.

Regression Models

The statistical methods used in the research are descriptive statistics and simple linear regression analysis. Different regression models framed for the study to gauge the relationship between Net NPA to Net Advance and Gross NPA and Gross Advance with profitability (ROA and ROE).

$$\text{Model 1: ROA} = \alpha + \beta_1 \text{ NNPA/NADV} + \varepsilon \quad (1)$$

$$\text{Model 2: ROA} = \alpha + \beta_1 \text{ GNPA/GADV} + \varepsilon \quad (2)$$

$$\text{Model 3: ROE} = \alpha + \beta_1 \text{ NNPA/NADV} + \varepsilon \quad (3)$$

$$\text{Model 4: ROE} = \alpha + \beta_1 \text{ GNPA/GADV} + \varepsilon \quad (4)$$

Results and discussions

In this section, the results are given for non-performing assets and profitability performance. The results for all

variables between 2006 and 2017 by using mean and Standard deviation are first given. Subsequently, using Regression techniques the study analyzes the results for the implications of various non-performing assets indicators on profitability performance.

To know the numeric data, the basic descriptive statistics has been applied. Table 1 shows mean and standard deviation of all dependent and independent variables. The overall mean of all banks ROA is 1.172 with the standard deviation of 1.386, for another variable of profitability an average of all banks ROE is 10.351 with the standard deviation of 9.423, Net Non-Performing Assets to Net Advances mean is 1.745 with the standard deviation of 2.427 and Gross Non-Performing Assets to Gross Advances mean is 3.663 with the standard deviation of 4.345 for all banks.

The empirical findings reported in Table 2 presents the regression results for Profitability (ROA) and independent variable Net NPA to Net Advances of public banks, private banks, foreign banks and finally of all banks together. Assessment of the table reveals that adjusted R^2 of public banks, private banks, foreign banks and finally of all banks are 77.3 per cent, 44.7 per cent, 5.1 per cent and 18.1 per cent, which explains model explanatory power is good enough in public and private banks and too small in foreign banks and a bit good in all banks. The F-value in all the four categories is statistically significant at the 1 per cent level implying that the regression models are reliable for prediction. The results indicate that in all the cases there shows the significant but negative relationship between return on assets and net NPA to net advances. Thus, the results corroborate with the theory that the profitability and NPA have an inverse relationship. If the amount of net non-performing asset increases then it will have an adverse impact on the profitability of the banks, Sharma and Rathore (2016).

Table 3 exhibits the results for Profitability (ROA) and independent variable gross NPA to gross Advance of public banks, private banks, foreign banks and finally of all banks together. The results show that gross NPA to gross Advances have a significant negative relationship with Profitability (ROA), indicating that an increase in non-performing asset decreases profitability of the banks. The adjusted R^2 is 0.110 for the all the banks, 0.764 for the public banks, 0.401 for the private banks and 0.024 for the foreign banks. These numbers indicate that the model is able to explain about 11 per cent of the variance in the dependent variable for the whole banks, 76.4 per cent for the public banks, 40.1 per cent for the private banks and 2.4 per cent for the foreign banks. The F-value also signifies that in all the four categories the model is statistically significant at the 1 per cent level implying that the regression models are reliable for

prediction.

anks. The adjusted R^2 is 0.110 for the all the banks, 0.764 for the public banks, 0.401 for the private banks and 0.024 for the foreign banks. These numbers indicate that the model is able to explain about 11 per cent of the variance in the dependent variable for the whole banks, 76.4 per cent for the public banks, 40.1 per cent for the private banks and 2.4 per cent for the foreign banks. The F-value also signifies that in all the four categories the model is statistically significant at the 1 per cent level implying that the regression models are reliable for prediction.

Table 4 shows the regression results, which bring out the impact of net NPA to net Advance on Profitability (ROE). It can be seen that net NPA to net Advance and Profitability (ROE) have a significant relationship that too found to be negative, indicating the inverse relationship. The results also show that the foreign banks profitability (ROE) is less affected by the NPAs (net NPA to net Advance) compared to public and private banks. The explanatory power of the model i.e., adjusted R^2 of public banks, private banks, foreign banks and finally of all banks are 0.803 per cent, 0.464 per cent, 0.082 per cent and 0.411 per cent. The F-value in all the four categories is statistically significant at the 1 per cent level implying that the regression models are reliable for prediction.

Table 5 presents the results for Profitability (ROE) and independent variable gross NPA to gross Advance of public banks, private banks, foreign banks and finally of whole sample of banks together. The results indicate that in all the cases there shows the significant but negative relationship between return on equity and gross NPA to gross advances in all category of banks. The results also demonstrate that the foreign banks profitability (ROE) are less affected by the NPAs (gross NPA to gross Advance) compared to public and private banks. The results signify that increasing NPA adversely affect the profitability performance of banks. The adjusted R^2 indicate that the model is able to explain about 30.2 percent of the variance in the dependent variable for the whole banks, 70.3 per cent for the public banks, 49.4 per cent for the private banks and 2.8 per cent for the foreign banks. The F-value also signifies that in all the four categories the model is statistically significant at the 1 per cent level implying that the regression models are reliable for prediction.

Conclusions

The results provide empirical evidence that in all the cases, there shows the significant but negative relationship between return on assets and net NPA to net advances. Thus, the results corroborate with the theory that the profitability

and NPA have an inverse relationship. If the amount of net non-performing asset increases then it will have an adverse impact on the profitability of the banks, Sharma and Rathore, (2016). Furthermore, the results demonstrate that the foreign banks profitability is less affected by the NPAs compared to public and private banks.

In general, it may be concluded that commercial banks in India need to place an urgent and immediate emphasis to take up the remedial measure to deal with the issue by setting the proper mechanism for recognizing the hidden NPAs, developing internal skills for credit valuation, technology and data analytics to identify the early warning signals.

From the foregoing discussion, it may be concluded that non-performing assets having adverse impact on the profitability of the banks. Therefore, findings of the study may be exercised by the managers to organize NPA to have a better yield in profitability.

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Table 1. Descriptive Statistics for Selected Variables

		ROA	ROE	NNPA/NADV	GNPA/GADV
Public Banks	Mean	0.604	10.791	2.621	4.543
	Std. Dev.	0.643	11.716	2.874	4.311
Private Banks	Mean	1.125	12.881	1.118	2.723
	Std. Dev.	0.618	7.307	1.050	1.783
Foreign Banks	Mean	1.819	8.187	1.216	3.335
	Std. Dev.	1.955	7.162	2.275	5.316
All Banks	Mean	1.172	10.351	1.745	3.663
	Std. Dev.	1.386	9.423	2.427	4.345

Table 2. Regression Results for Profitability (ROA) and independent variable-NNPA/NADV

Model 1: ROA = $\alpha + \beta_1$ NNPA/NADV + ϵ								
	Public Banks		Private Banks		Foreign Banks		All Banks	
	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat
Intercept	1.120	45.666**	1.566	30.899**	2.063	15.514**	1.597	27.843**
NNPA/NADV	0.197	31.197**	0.395	11.927**	0.200	3.881**	0.244	12.684**
Adjusted R ²	0.773		0.447		0.051		0.181	
F-Value	973.240**		142.258**		15.063**		160.888**	

Notes: **Significant at $\alpha = 0.01$ level; *Significant at $\alpha = 0.05$ level.

Table 3. Regression Results for Profitability (ROA) and independent variable - GNPA/GADV

Model 2: ROA = $\alpha + \beta_1$ GNPA/GADV + ϵ								
	Public Banks		Private Banks		Foreign Banks		All Banks	
	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat
Intercept	1.197	44.577**	1.725	26.151**	2.022	14.404**	1.562	24.611**
GNPA/GADV	-0.131	-30.417**	-0.220	-10.864**	-0.061	-2.720**	-0.106	-9.531**
Adjusted R ²	0.764		0.401		0.024		0.110	
F-Value	925.222**		118.035**		7.398**		90.838**	

Notes: **Significant at $\alpha = 0.01$ level; *Significant at $\alpha = 0.05$ level.

Table 4. Regression Results for Profitability (ROE) and independent variable – NNPA/NADV

Model 3: ROE = $\alpha + \beta_1$ NNPA/NADV + ϵ								
	Public Banks		Private Banks		Foreign Banks		All Banks	
	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat
Intercept	20.367	48.863**	18.196	30.841**	9.304	19.414**	14.698	44.434**
NNPA/NADV	-3.654	-34.062**	-4.756	-12.344**	-0.918	-4.935**	-2.491	-22.497**
Adjusted R ²	0.803		0.464		0.082		0.411	
F-Value	1160.222**		152.372**		24.358**		506.108**	

Notes: **Significant at $\alpha = 0.01$ level; *Significant at $\alpha = 0.05$ level.

Table 5. Regression Results for Profitability (ROE) and independent variable – GNPA/GADV

Model 4: ROE = $\alpha + \beta_1$ GNPA/GADV + ϵ								
	Public Banks		Private Banks		Foreign Banks		All Banks	
	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat	Coefficients	t-Stat
Intercept	21.792	47.557**	18.196	30.841**	8.992	17.519**	14.725	38.535**
GNPA/GADV	-2.421	-33.067**	-4.756	-12.344**	-0.241	-2.945**	-1.194	-17.755**
Adjusted R ²	0.793		0.464		0.028		0.302	
F-Value	1093.415**		152.372**		8.674**		315.232**	

Notes: **Significant at $\alpha = 0.01$ level; *Significant at $\alpha = 0.05$ level.

Redefining Brand-consumer relationship through Anthropomorphisation: Moderating Impacts of Self-brand integration and Brand attitude, Personal Care Brands

Arup Kumar Baksi and Tapan K. Panda

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Marketers impregnate brands with human interface (brand personification) to stimulate consumers' thinking about brands in human terms, a phenomenon nomenclated as anthropomorphism. Based on the literature focusing brand-consumer relationship and the prevailing theory of anthropomorphism, this paper aims to examine the impact of anthropomorphism on brand-consumer relationship under the probable moderation of self-brand integration and brand attitude. Literature revealed anthropomorphism to have an antecedent impact on brand love, a psychosomatic explanation to brand-consumer relationship. Self-brand integration and brand attitude is also likely to influence the impact of anthropomorphism on brand-consumer relationship and hence shall be studied. Findings from the empirical study conducted on 385 consumers demonstrated that anthropomorphisation has significant impact on brand-consumer relationship, while self-brand integration and brand attitude were found to moderate the link between anthropomorphism and brand-consumer relationship. The findings reinforce the existing theory of anthropomorphism in consumer-psychology literature, and the theoretical framework lends support to literature pertaining to brand-consumer relationship. The research illuminates marketers' branding strategies that target consumers with different dispositions in making anthropomorphic inferences across situations. An empirical investigation of anthropomorphism effects offers managerial implications for sustainable brand-consumer relationship.

Key words: *Anthropomorphism, brand love, self-brand integration, brand attitude, moderating*



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The brand-consumer relationship has been studied by the academia as consumers accepting brands as partners (McAlexander et al. 2002). Marketers encode brands with human-personification to stimulate consumers' perception about brands in human terms. Personification of brands has been conceptualized as a metaphorical representation of an inanimate brand in human form (Cohen, 2014; Brown, 2011; Delbaere et al., 2011). The endowed humanlike characteristics for brand personification could encompass an extensive psychosomatic stretch capturing the human attributes (Landwehr et al., 2011; Aggarwal & McGill, 2007). The marketers of brands desire a prolonged relationship between the consumers and their loved brands. Fournier, in his study in 1998, explained this prolonged relationship as brand love. Fournier and Mick, in their study in 1999, observed that the pinnacle of consumer satisfaction with a brand emanates love. Brand love represents the emotional bond between the brand and

consumer (Robert, 2005). However, the theory of brand-consumer relationship, deriving out of the interpersonal theory of love in psychology, fails to provide inadequate explanation of love between an animated object (consumer) and an inanimate one (brand). To have an understanding of this grey area researchers explored the aspiration of consumer to assign human like characteristics, both in physical and emotional forms, in non-human objects. This tendency is known as anthropomorphism (Epley et al., 2007). Delbaere et al. (2011) noted the fundamental difference between brand personification and anthropomorphism and stated that while personification of brands is propagated through brand messages, anthropomorphism provides a cognitive view of the audience towards perceiving the brand message. Rauschnabel and Ahuvia (2014) provided theoretical realm to relate anthropomorphism to brand-consumer relationship expressed through different dimensions of brand love, although, the dimensions of brand love are too dispersed to be integrated into a single influential variable in explaining anthropomorphism.

Literature review

Previous research has observed that brand personification could trigger anthropomorphism which subsequently influences consumers' attitude towards brands (Landwehr et al., 2011; Delbaere et al. 2011; Aggarwal & McGill, 2007 ;), intention to replace product (Chandler & Schwarz, 2010), uninhibited behaviour (Aggarwal & McGill, 2012), and perceived risk (Kim & Kramer, 2015). Anthropomorphism lends explanation to brand personality (Aaker, 1997), brand-consumer relationship (Landwehr et al., 2011) and brands as perceptual elements (Fournier & Alvarez, 2012). However, the process through which consumers exhibit anthropomorphism and draw anthropomorphic inferences about brand personification in advertising has not yet been fully studied. The overarching questions are how the process of anthropomorphism leads to consumer responses and what antecedents can influence consumers' tendency of anthropomorphizing a brand.

According to Epley et al. (2007), anthropomorphism, primarily incorporates, the process to perceive non-human objects to behave like human beings based on human-like emotions and characteristics. Anthropomorphism refers to a cognitive process which stimulates human minds to synthesize a human physiognomy based on anthropomorphized products, namely, car headlights and grills resembling human facial lineaments (Landwehr et al.

2011). Anthropomorphism, although having a broad array of interpretation and application, has often featured in consumer psychology (Waytz et al. 2010b) which refers to anthropomorphic perception of a product or a brand to have human attributes (Waytz et al. 2010a). The researchers not only focused on assigning human-like characteristics to inanimate objects, but also assessed the process of assigning human cognition to inanimate objects (Kervyn et al. 2012). This has been termed as mentalizing (Waytz et al. 2010b; Willard and Norenzayan, 2013). Literature revealed consumers inclination towards anthropomorphic thought process or mentalizing products and brands (Kiesler, 2006; Aggarwal and McGill, 2007; Ahuvia, 2005; Landwehr et al. 2011; Delbaere et al. 2011; Kervyn et al. 2012; Hart et al. 2013; Puzakova et al. 2013).

Delgado-Ballester et al. (2017) provided a more detailed understanding about the impact of anthropomorphism and self-brand integration. They examined relationships between anthropomorphism and dimensions of brand love as identified by Batra et al. (2012), but did not explore the impact of these dimensions in emanating brand love. As Rauschnabel and Ahuvia (2014) posited, brand love can be explained with a number of differentiated dimensions. Then, a more precise understanding of how anthropomorphism influences brand love through these dimensions, is needed, because thinking in the brand like a person may not influence all the dimensions of brand love in the same way. For example, Rauschnabel and Ahuvia (2014) did not find a significant influence of anthropomorphism on all the sub-dimensions of passion-driven behaviours and positive emotional connection and other dimensions such as brand attitude on brand-consumer relationship. Among the different dimensions of the brand-consumer relationship, the concept that loves critical as brand becomes significant part of the consumers' identity (Ahuvia et al., 2005, 2005b).

Therefore, analyzing how anthropomorphism could influence this dimension of brand-consumer relationship, integration of the brand into consumers' self and probable changes in the relationship due to intervention of consumers' attitude towards the brand. The nature of anthropomorphic thinking may lead us to perceive that self-brand integration may play significant role in this process. This study empirically explores the relationships among anthropomorphism, self-brand integration, brand attitude and brand-consumer relationship. The probable moderating effects of self-brand integration and brand attitude on the relationship between anthropomorphism and brand-consumer relationship were also analyzed.

Hypotheses

Literature allowed the researcher to frame an understanding that consumers and brands are more likely to be partners when consumers attribute human-like characters to the brands and are perceived as purchase motivators. Therefore it is hypothesized that:

H1: Anthropomorphism influences brand-consumer relationship.

Self-expansion theory (Aron & Aron, 1986) may be expanded to understand the integration of consumers' self with brands (Escalas & Bettman, 2003). Self-brand integration occurs when a brand is integrated into the consumers' desired self-identity (Batra et al., 2012). Anthropomorphism is likely to facilitate self-brand integration by cognitive incorporation and hence brands will be more important for individuals and they will incorporate some characteristics of the humanized brand into their self-image. Anthropomorphism may generate brand-consumer relationship through self-brand integration and hence hypothesized as:

H2: Anthropomorphism influences brand-consumer relationship through self-brand integration.

Consumers integrate brand with their self, depending on the degree of attitude (positive or negative) evoked by the brand

offers. With the same notion it can be apprehended that brand-consumer relationship may likely to be influenced by anthropomorphism under the moderation from brand attitude.

H3: Anthropomorphism influences brand-consumer relationship through brand attitude.

The probability that consumers integrate anthropomorphized brands with their self will be higher if the brands evoke a positive attitude for the consumers. It was also posited that self-brand integration influences brand-consumer relationship. Therefore it was hypothesized that:

H4: The indirect effect of anthropomorphism on brand-consumer relationship through self-brand integration is likely to be more for consumers with a better attitude towards the brand.

It is also proposed that individuals having positive attitude towards a brand are more likely to enter into relationship when they anthropomorphize it compared to other brands that evoke less favourable attitudes. Therefore:

The hypothesized relationships constitute the theoretical model (Fig.1) given below:

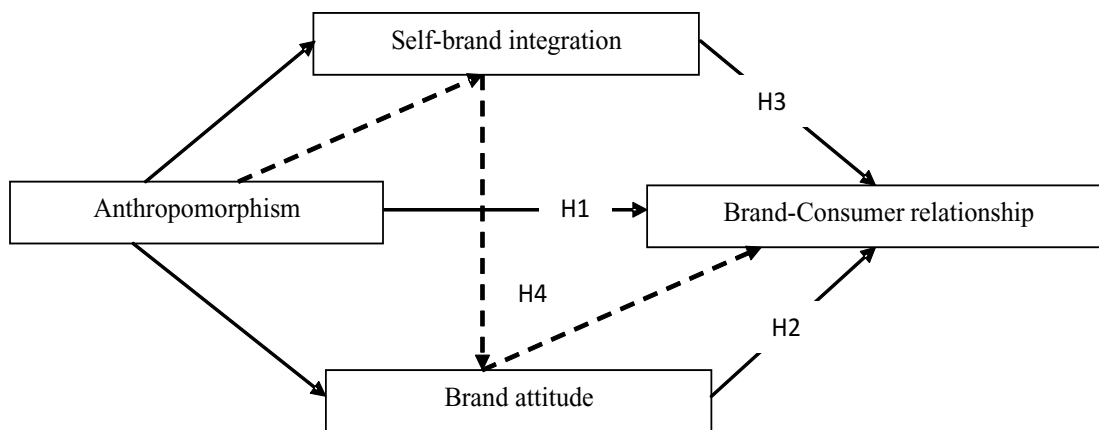


Fig.1: Hypothesized model

Methodology

The study was descriptive in nature and used cross-sectional data. Considering the experiential nature of the study and the mobility of the customers; convenience sampling technique

was adopted. To determine the sample size confidence interval approach was used (Burns and Bush, 1995). The formula for obtaining 95% accuracy at the 95% confidence level is:

$$n = \frac{z^2 pq}{e^2} = \frac{1.96^2 (0.5 * 0.5)}{0.05^2} = 385$$

Where: n = sample size

z = standard error associated with chosen level of confidence (95%)

p = estimated variability in the population 50%*

q = (1 - p)

e = acceptable error + 5% (desired accuracy 95%)

The amount of variability in the population is estimated to be 50%, which is widely used in social research. From a practical standpoint, most researchers will choose the 50% level of p because it results in the most conservative sample size (Burns and Bush, 1995). Applying this formula, the sample size was set at 385 at 95% confidence level with 95% desired accuracy. Given that on site survey generally obtains a relatively higher response rate than mail survey, the expected response rate was minimum 50%. Assuming a response rate of 50% or above and an unusable rate of 10%, a total of 963 (385/0.4) people was approached to participate in the survey. The survey was carried out with a self-administered structured questionnaire in the form of retail intercept. The study was carried out in two phases: January, 2017 to June, 2017 and July, 2017-December, 2017 and data was collected from the sample visiting 25 selected retail outlets covering the geographical locations of Durgapur, Asansol, Bolpur, Suri and Burdwan of the state of West Bengal. The retail outlets were selected on the basis of their stock-profile of the brands chosen for the study, their location (for accessibility) and customer traffic.

A focal product category namely 'personal care' was identified primarily because of the fact that personal care products are likely to have more anthropomorphic qualities compared to other products namely consumer electronics. A specific brand was randomly assigned to each participant from a pool of 10 personal care brands. The researcher tried to ensure that these brands evoke a minimum familiarity and awareness among the respondents to negotiate with pre-aligned biasness and simultaneously also ensured that the product category is well represented by the inclusion of the most prominent brands of the category.

Anthropomorphism was captured with the scale developed by Guido (2015) with adequate modification to fit the study. A pool of 15 items was used to measure anthropomorphism. Brand attitude was measured with a three item scale developed from the studies of MacKenzie et al. (1986) and Yoo and Donthu (2000). Self-brand integration was

measured with a 12-item scale adopted from the studies of Escalas and Bettman (2003) and Batra et al. (2012). Brand-consumer relationship was measured with 42 items adopted from studies conducted by Hendrick and Hendrick (1986); Perse and Rubin (1989); Quester and Lim (2003); Kumar et al. (2009) and Carroll and Ahuvia (2006). Exploratory factor analysis was used to validate the scales measuring the variables. A 7 point Likert scale (Alkibisi and Lind, 2011) was used to generate response across the items measuring the variables under study. The survey instrument, a structured questionnaire, was put to a pilot test for negotiating with question ambiguity, duplicity and refinement of survey protocol.

Measurement of reliability and validity of the model

Firstly, exploratory factor analysis (EFA) was deployed using orthogonal varimax rotation with Kaiser normalization to identify data reduction and significant factor loading for each variable under study. Cronbach's alpha was calculated (ranged from .893 to .948) to assess the internal reliability and those factors loaded on values >.70 (Nunally, 1978) were accepted. According to the results of EFA (Table-1) the final measurement scale had 11 items significantly loaded for anthropomorphism which are clubbed into 3 factors namely animacy and human body lineaments (4 items), human facial physiognomy (3 items) and self-brand congruity (4 items). Brand-consumer relationship measurement was loaded on 21 items and was dimensionalized into interpersonal relationship (5 items), para-social relationship (7 items), brand loyalty (4 items), purchase intention (2 items) and word-of-mouth (3 items). Brand attitude and self-brand integration were loaded significantly on 3 and 7 items respectively. The cumulative variance explained by the significantly loaded items was consistently > 65% for all the variables. Table-2 summarizes the results of Bartlett's test of sphericity (a statistical test for the presence of correlations among the variables) and the KMO (Kaisere Meyere Olkin) measure of sampling adequacy to assess the factorability of the data. The KMO value at .886 exceeds the acceptable minimum value which is .6 (Hair et al., 2006). Larger the value of Bartlett's test indicates greater likelihood the correlation matrix is not an identity matrix and null hypothesis will be rejected. In case of the present study the Bartlett's test value (Chi-square-954.309, df = 59, .000 p < .00) is significant (i.e. a significance value of less than 0.01) which allowed the researcher to reject the null hypothesis and to conclude that the variables are correlated highly enough to provide a reasonable basis for factor analysis. To achieve a more meaningful and interpretable solution, some items which loaded on more than one factor were deleted.

Table-1: Results of Exploratory Factor Analysis

Dimensions assigned		Scale items	Cum. variance	Factor loading	α			
	<i>Animacy and Human Body Lineaments</i>	The brand resembles a human	67.82	.654	.923			
		The brand resembles an animal		.679				
		The brand seems to represent human body parts		.621				
		Physical ambience of the premise of the tourism service providers are great		.609				
	<i>Human Facial Physiognomy</i>	The brand seems to have a human face		.632				
		The brand seems to have a human facial expression		.618				
		The brand seems to have human facial topography		.642				
	<i>Self-Brand Congruity</i>	This branded product is congruent with the image I hold of myself		.619				
		This branded product is congruent with the image I would like to hold of myself		.627				
		This branded product is congruent with the image others hold of myself		.662				
		This branded product is congruent with the image I would like others to hold of myself		.609				
	BRAND-CONSUMER RELATIONSHIP	<i>Inter-personal relationship</i>		I expect to always be in a relationship with this personal care brand		65.83	.761	.909
				The love I have for this personal care brand is the best kind because it grew out of a long friendship			.742	
The relationship with the personal care brand merged gradually into love over time			.699					
The relationship with this personal care brand is really a deep friendship, not a mysterious, mystical emotion			.701					
The relationship with this personal care brand is the most satisfying because it developed from a good friendship			.730					
<i>Parasocial love</i>		I feel sorry for this personal care brand when there is negative news about it	.678					
		This personal care brand makes me feel comfortable	.652					
		I'm looking forward to using this personal care brand	.621					
		I miss seeing this personal care brand when it's not available at a retail outlet	.681					
		This personal care brand seems to understand the kind of things I want	.627					
		I find this personal care brand attractive	.611					
		If there were a story about this personal care brand in a newspaper or magazine, I would read it	.641					

<i>Brand loyalty</i>	I am committed to this personal care brand		.709	
	I pay more attention to this personal care brand compared to others		.711	
	It is very important for me to buy this personal care brand rather than others		.697	
	I always buy the same personal care brand because I really like it		.682	
<i>Purchase intention</i>	I intend to buy this personal care brand		.713	
	I plan to buy this personal care brand		.728	
<i>Word-of-mouth</i>	I have recommended this personal care brand to lots of people		.659	
	I try to spread the good word about this personal care brand		.718	
	I give this personal care brand tons of positive word of mouth advertising		.693	
	I do like this personal care brand	69.13	.781	.893
	To me this is an attractive personal care brand		.759	
	To me this is a good personal care brand		.738	
	This personal care brand suits me well	65.44%	.711	.948
	This personal care brand reflects who I am		.678	
	I can identify with this personal care brand		.698	
	I consider this personal care brand to be “me” (it reflects who I consider myself to be or the way I want to present myself to others)		.709	
	I (can) use this personal care brand to communicate who I am to others		.721	
	I think this personal care brand (could) help(s) me to become the type of person I want to be		.648	
	I feel personal connection to this personal care brand		.672	

Table-2: KMO and Barlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.886
Bartlett's Test of Sphericity	Approx. Chi-Square	954.309
	df	59
	Sig.	.000

Secondly, confirmatory factor analysis (CFA) (Table-3) was used to test the goodness-of-fit of the model. The Chi-square was found to be 482.345 with 167 df and the ratio of Chi-square/df was 2.88. The comparative fit index (CFI) was found to be .93 and Tucker-Lewis Index (TLI) as .95 which are higher than the threshold value of .9. The RMSEA (.07) was also significant (threshold = .09). The validity of each construct of the measurement model was assessed (Table-

4). The nomological validity was established as the estimated correlations between the measurement constructs were found to be positive. The reliability of the measurement constructs was checked by the values of Cronbach's alpha and were found to be significant. Discriminant validity was established as the average variance extracted surpassed the accepted value of $\geq .50$.

Table -3: Goodness-of-fit results

Measures	CFA results	Threshold value
Chi square	482.345	
df	167	
Chi-square/ df	2.88	$\leq .50$
CFI	.93	$\geq .90$
TLI	.95	$\geq .90$
RMSEA	.07	$\leq .09$

Table-4: Construct validity results

Measures	Anthropomorphism	Brand attitude	Self-brand integration	Brand-consumer relationship	Threshold value
Average variance extracted (AVE)	.78	.64	.72	.86	$\geq .50$
Cronbach's alpha	.91	.89	.88	.82	$\geq .70$
Discriminant validity	Established	Established	Established	Established	AVE > squared correlations

Data analysis and findings

The respondents were tapped at the various retail premises and a self-administered survey instruments were distributed. The sample was conveniently selected, although, a quota system was deployed to ensure that the sample represented gender and age groups. Following this procedure, a total of 385 individuals were taken for the study with complete response to the survey instrument. The mean

age of the respondents was 37.70 years with SD = 11.4. There was 52% female and 48% male response. The demographic profile presented in Table-5 revealed that gender and all age groups between 18 and ≥ 55 years were adequately represented. The occupation were also found to have a good spread covering both the employed and the unemployed. Percentages of the frequency of personal care product purchase were also reported.

Table-5: Demographic profile of the respondents

Age		Gender		Purchase frequency of personal care products	
Mean age: 37.70, SD: 11.4		Male	48% (185)	Weekly	3.41% (13)
≥18 < 25	16.62% (64)	Female	52% (00)	Monthly	9.88% (38)
≥25 < 35	24.15% (93)	Occupation		Quarterly	44.78% (172)
≥35 < 45	25.45% (98)			Student	15.21% (58)
≥45 < 55	18.96% (73)	Housewife	31.29% (120)	Annually	1.81% (8)
≥55	14.82% (57)	Employed (including self-employment)	53.50% (207)		

To test whether there is a direct effect of anthropomorphism on brand-consumer relationship (H1) and an indirect effect through self-brand integration (H2), bootstrapping procedure (Preacher and Hayes 2008) was used. Bootstrapping was used to compute a confidence interval (CI) around the indirect effect. A bootstrap CI that does not include zero provides evidence of a significant indirect effect of anthropomorphism on brand-consumer relationship through self-brand integration. The moderation analysis was performed by applying Hayes' PROCESS SPSS macro, using 5.000 bootstrapped samples to

estimate the indirect effect. The results (Table-6) revealed that anthropomorphism has a significant positive effect on self-brand integration (b = 0.4507, t = 8.7271, p = 0.001), indicating that the tendency of integrating the brand with self will increase with the degree to which the consumer anthropomorphize the brand. Significant effect of self-brand integration on brand-consumer relationship (b = 0.7241, t = 12.3622, p = 0.000) was also found. Anthropomorphism was found to have a significant positive impact on brand-consumer relationship (b = 0.3783, t = 6.1872, p = 0.001). H1 is accepted.

Table-6: Direct and indirect effect of anthropomorphism on brand-consumer relationship

Independent variables	Outcome variables					
	Z : SBI			Y : CONBREL		
	Coeff.	t	p	Coeff.	t	p
X: Anthropomorphism	0.4507	8.7271	.002	0.3783	6.1872	.001
M: Self-brand integration				0.7241	12.3622	.000
R square	.38			.43		
R square change	.04			.08		

SBI: Self-brand integration
 CONBREL: Consumer-brand relationship

To test the moderating effect of anthropomorphism on brand-consumer relationship by self-brand integration (SBI) and by brand attitude (BRNDAT), a regression was performed on SBI and BRNDAT with independent variables namely mean-centered anthropomorphism. As predicted, the results (Table-7) showed a significant binary interaction between anthropomorphism and self-brand integration ($b =$

$0.23, se = .35, t = 7.53, p = 0.000$) to have a positive impact on brand-consumer relationship. Thus, H2 was supported. Further, significant binary interaction (Table-8) between anthropomorphism and brand attitude ($b = 0.18, se = .25, t = 5.81, p = 0.001$) to have a positive impact on brand-consumer relationship. Thus, H3 was supported.

Table-7: Conditional effects of the focal predictor on dependent variable at values of the moderator(s):

Focal predictor: Anthropomorphism (X)
 Moderating variable: Self-brand integration (W)
 Dependent variable: Brand-consumer relationship (Y)

SBI	Effect	se	t	p	LLCI	ULCI
2.00	.23	.35	7.53	.000	.24	.47
3.00	.19	.21	6.00	.001	.14	.61
5.00	.33	.44	8.90	.000	.36	.41

SBI: Self-brand integration

Table-8: Conditional effects of the focal predictor on dependent variable at values of the moderator(s):

Focal predictor: Anthropomorphism (X)
 Moderating variable: Brand attitude (W)
 Dependent variable: Brand-consumer relationship (Y)

BRNDAT	Effect	se	t	p	LLCI	ULCI
2.00	.18	.25	5.81	.001	.20	.55
3.00	.49	.33	10.00	.000	.37	.72
5.00	.27	.28	8.08	.000	.18	.48

BRNDAT: Brand attitude

To test the indirect effect of anthropomorphism on brand-consumer relationship through self-brand integration and dependent on brand attitude (H4), the researcher used the estimation of conditional indirect effects and testing whether these indirect effects differ from zero at specific value of the moderator (e.g. attitude towards the brand) using a bootstrap Confidence Interval (CI) as recommended by Preacher et al. (2007).

To examine H4, we examined the conditional indirect effect of the interaction between anthropomorphism and brand attitude on brand-consumer relationship through self-brand integration. The indirect effect was found to be consistently positive and increased with the level of brand attitude (Table-9). The effect was significantly different from zero among those who have low (95% CI = 0.0652 to 0.1983), moderate (95% CI = 0.1265 to 0.2439), and high levels (95%CI = 0.2093 to 0.4012) of brand attitude. Table 7 provides a summary of all the results.

Table-9: Conditional indirect effects of anthropomorphism on brand-consumer relationship through self-brand integration at different levels of brand attitude

Brand attitude	Indirect effect	
	Effect (Boot SE)	95% Bias corrected bootstrap CI
Low: -1.3427	0.1753 (0.0512)	0.0652 to 0.1983
Moderate: 0.000	0.2319 (0.0499)	0.1265 to 0.2439
High: 1.3986	0.3124 (0.0562)	0.2093 to 0.4012

Brand attitude	Indirect effect	
	Effect (Boot SE)	95% Bias corrected bootstrap CI
Low: -1.3427	0.1753 (0.0512)	0.0652 to 0.1983
Moderate: 0.000	0.2319 (0.0499)	0.1265 to 0.2439
High: 1.3986	0.3124 (0.0562)	0.2093 to 0.4012

** values of brand attitude were taken at the mean and ± 1 from standard deviation

Structural equation modeling (SEM) was conducted to further assess and estimate the indirect effects on the independent variables. SEM was performed using LISREL based on the variables generated out of EFA and CFA. The SEM hypothesized model is presented in Figure 1. The results of SEM are summarized in Table-10 and Table-11. The ANOVA results (Table-10) revealed significant major effects of all the predictor variables on the dependent variable. Anthropomorphism (F=10.239, p<.01), brand

attitude (F=14.097, p<.01) and self-brand integration (F=18.723, p<.01). The model summary (Table-11) exhibited adequate variance explanation by the predictor variables in the dependent variable. The indirect effects (Table-11) were significant establishing a strong mediation by brand attitude and self-brand integration in the relationship between anthropomorphism and brand-consumer relationship.

Table-10: ANOVA results

Predictor variables	Model summary	Dependent variable
		<i>Model 1 (R square)</i>
	Anthropomorphism	0.646 (64.6 % of variance explanation)
	Brand attitude	0.497 (49.7% variance explanation)
	Self-brand integration	0.482 (48.2% variance explanation)
<i>Hypothesis testing</i>		
H1: Anthropomorphism	→ Brand-consumer relationship	.37**
H2: Anthropomorphism	→ Brand attitude → Brand-consumer relationship	.52***
H3: Anthropomorphism	→ Self-brand integration → Brand-consumer relationship	.48***
H4: Anthropomorphism	→ Self-brand integration → Brand attitude → Brand-consumer relationship	.61***

***p<.01, ** p<.05, * p<.10

The final model is depicted in Fig.2.

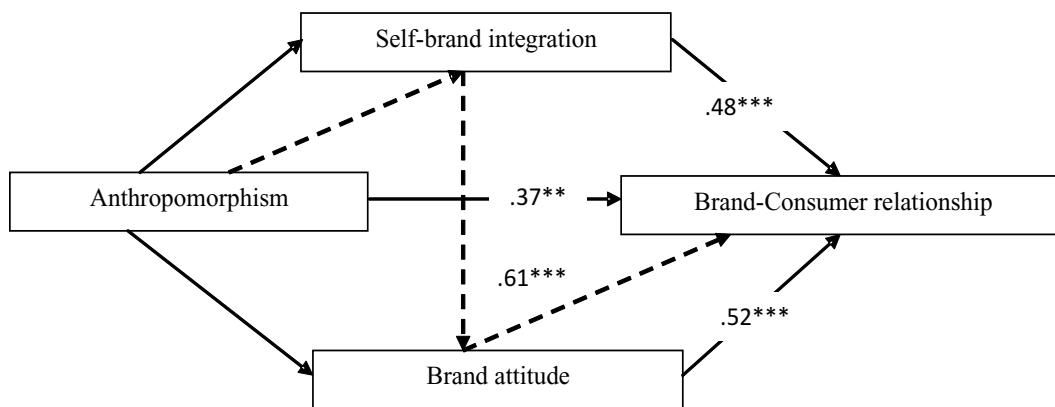


Fig.2: Final Model

Conclusion

The present study reinforces the body of literature pertaining to brand-consumer relationship. The study does so by establishing the antecedent effects of anthropomorphism on brand-consumer relationship. The major contributions of this study are the analysis of the complex nature of self-brand integration which was found to be influenced by anthropomorphism and simultaneously was found to increase the impact of anthropomorphism on brand-consumer relationship. This result is also in line with Rauschnabel and Ahuvia (2014) who found a positive effect of anthropomorphism on different dimensions of brand love. This new insight captured by this paper has to do with the effect exerted by self-brand integration in the relationship between anthropomorphism and brand-consumer relationship. Brand-consumer relationship may emerge due to a direct effect of anthropomorphism. In line with the theoretical propositions of category level evaluation and cognitive consistency, the consumer can enter into a relationship with anthropomorphised brands on the basis of (a) human-brand interface and (b) non-objectification of brands. Therefore, the brand-consumer relationship could be established without integrating the brand in the consumers' self and, indirectly, through an integration of the anthropomorphized brand in the consumers' self. The integration of the anthropomorphized brand in the self is conducted because (a) consumers may incorporate some characteristics of the humanized brand into their self (cognitive incorporation) and (b) the humanized brand has a social identity that may define their self (social meaning).

The study further revealed that previous attitude towards the brand moderates the impact of anthropomorphism on brand-consumer relationship. The positive effect on brand-consumer relationship is higher for those individuals with a better attitude towards the brand. This finding supports the past studies on anthropomorphism that concluded that anthropomorphic thinking may lead to more positive evaluations only when the type of person brought to mind is associated with positive feelings (Aggarwal and McGill, 2007). Fournier and Alvarez (2012) also posited that all brands do not evoke human feeling. Thus, the positive impacts of anthropomorphism on brand-consumer relationship are conditioned by a positive or negative attitude towards the brand.

Brand managers may look up to this study to get an insight into the intricate relationship between the brands and their consumers and the governing dynamics. Non-objectifying brands would be a suggestive strategy for the brand

managers. The brand managers must also focus on the marketing communication tools which could support the transmission of the human characteristics of the brand as advertising has been used to stimulate the anthropomorphic thinking. However social-networking sites e.g. Facebook may provide the brand managers with a more flexible medium to put forward anthropomorphic motives. Managers may improve the anthropomorphic thinking by effective design of the branding elements (e.g., logo, colours, forms, slogan) which facilitates humanizing of brands.

The study had a few limitations. It has focused on one product category (personal care products) while selecting brands. Future extrapolations can be done by considering different levels of anthropomorphism, namely partial, literal and accidental (Guthrie, 1993), and its impact on brand-consumer relationship.

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Productivity Analysis of Agro-Food Processing Firms: Hill States of India

Abid Sultan

Abstract

The present study has measured TFP using Malmquist Productivity Index (MPI) technique. The TFP change measured is divided into two mutually exclusive & exhaustive components i.e. efficiency changes over the period (catching up) and technical/technology change over the period (innovation). The analysis of data using MPI reveals productivity regress in both the studied states during the 2008-09 to 2014-15. Highest productivity regress of (-) 27 per cent has been observed in Himachal Pradesh. Jammu and Kashmir state has productivity regress of (-) 21 per cent during the study period. The primary reason for this regress in both the States is technical change rather than the efficiency change. The study bridges a gap in the literature related to the TFP measurement of the hill states of India. The study measures productivity of agro-food processing firms of two hill prominent states of India i.e. Jammu and Kashmir and Himachal Pradesh. The study also examines the reasons for productivity regress in these agriculture & horticulture resource-rich states. The present study offers significant insights to the entrepreneurs and policymakers in terms of understanding the performance of the studied firms through productivity measurement as well as identifying the causes of the productivity regress.

Key words: *Productivity, Malmquist Productivity Index, Total Factor Productivity, Himachal Pradesh, Jammu and Kashmir, Agro-Food Processing Industry*



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India being an agriculture & horticulture based economy offers an immense potential for agro-food processing entrepreneurs. Indian states with diverse climatic conditions and rich soil fertility favors the cultivation/production of produce, which is rich in taste and quality. Indian states like Jammu & Kashmir (J&K) and Himachal Pradesh (H.P.) offer rich economic opportunities for agro-food processing industry and generation of streams of revenues. The total land under food crop cultivation in H.P. is 764854 hectares, producing 1634066 metric tonnes of produce. H.P. has 226799 hectares of land under horticulture cultivation which produces 611877 metric tonnes of produce (H.P. statistical yearbook, 2016-17). The state of Jammu & Kashmir is the northernmost state of India with 1037100 hectares producing 17408 metric tonnes of agriculture produce. The total land under horticulture cultivation in J&K

is 336784 hectares producing 2487429 metric tonnes of horticulture produce (J&K statistical yearbook, 2015-16). Both the states have resource advantage in terms of availability in primary production inputs such as availability of raw material and labour. The states need to encourage the processing of agriculture & horticulture produces, thus favor agro-food processing entrepreneurship for leveraging upon the benefits of the natural endowments. Both J&K & H.P. have a potential for creating a niche for their agro-food processing industry at the national and international levels. The states need to focus on their agro-food processing firms in a comprehensive and strategic manner as well as boost agro-food processing activities, promotion of exports of the processed food and increasing productivity of the agro-food processing units.

Agro-food processing industry is a promising sector of Indian food processing industry. As per National Industry

Classification (NIC) 2008, agro-food processing industry of India is defined by four segments Processing and preserving of fruits and vegetables (103), Manufacture of vegetable and animal oils and fats (104), Manufacture of grain mill products, starches and starch products (106) and Manufacture of other food products (107). During 2014-15, there have been 33129 agro-food processing manufacturing units in India with the fixed capital investment of Rs. 12813414 (lakhs). The gross value added by these units has been Rs. 5627846 (lakhs). They provide employment to 1321655 persons and generated income & profit of Rs. Rs. 3111875 (Lakhs) and Rs. 1021414 (lakhs). The growth of agro-food processing in India from 2008-09 to 2014-15 is given in table 1. The share of agro-food processing of Industry of H.P & J.K in the agro-food processing industry of India on the selected parameters is given in table 2 & 3.

Table No 1: Performance of Indian Agro- Food Processing Industry on selected parameters

Parameters	2008-09	2014-15
Number of Factories (no.)	23767	33129
Fixed Capital*	5971193	12813414
Gross Value Added*	3057048	5627846
Income*	1705326	3111875
Profit*	796522	1021414
Employment(no.)	1261373	1321655
<i>*(Value in Rs. Lakh)</i>		
<i>Source: ASI data for year 2014-15</i>		

Table No 2: Share of H.P agro - food processing industry on selected parameters

Parameters	2014-15 India	2014-15 H.P	Percentage share of H.P
Number of Factories (no.)	33129	135	0.41
Fixed Capital*	12813414	214646	1.68
Gross Value Added*	5627846	214781	3.82
Income*	3111875	77443	2.49
Profit*	1021414	46414	4.54
Employment(no.)	1321655	10134	0.77
<i>*(Value in Rs. Lakh)</i>			
<i>Source: ASI data for year 2014-15</i>			

The agro-food processing industry in these two states is a promising industry but has largely remained underperformed. There is a dearth need of developing the agro-food processing firms in these two states strategically with special interventions in terms of improving the competitive performance of the agro-food processing firms. Competitiveness is an essential requirement for every business firm for sustaining in a competitive and dynamic market. Productivity is a primary proxy for improving the competitiveness of the firms in an industry. Productivity is an input-output ratio and contributes towards bringing robustness and competitive capabilities among the firms. Improving competitiveness of the industrial firms has been a thrust area for every industrial policy & scheme related to the growth & development of an Industry. Increasing productivity ensures survival of a firm in growing

competitive markets & helps in managing the changes in the dynamic business environment. Productivity measurement helps in measuring the efficiency and effectiveness of resource utilization and production process. In the developing economies, particularly at the regional levels, productivity measurement has contributed towards improving the performance of the firms and also in drafting the specific interventions for improving productivity. The present study aims at measuring the productivity of agro-food processing firms of two states of India i.e. J & K and H.P. The study ahead is divided into four sections i.e. first section deals with review of literature on productivity measurement, second section with methodology, productivity measurement technique & variables used in the study followed by the analysis & discussion and conclusion.

Table No 3: Share of J&K agro -food processing industry on selected parameters

Parameters	2014-15 India	2014-15 J&K	Percentage share of J&K
Number of Factories (no.)	33129	126	0.38
Fixed Capital*	12813414	26199	0.2
Gross Value Added*	5627846	32248	0.57
Income*	3111875	25169	0.81
Profit*	1021414	19518	1.91
Employment(no.)	1321655	4886	0.37
*(Value in Rs. Lakh)			

Source: ASI data for year 2014 -15

Literature Review:

The primary aim of this paper is to measure the productivity of the agro-food processing firms in J&K and H.P. states at the firm level. Therefore, the literature review has been conducted in context of productivity measurement in Indian scenario. Productivity measurement is a widely used proxy in the literature for understanding performance of the firms and as well exploring their competitiveness levels (Sultan et al., 2016). In the developing economies, such as India, increasing productivity of the manufacturing establishments has been thrust area of every economic policy and schemes. This is mainly due to the availability of limited input production factors and having thrust for optimal utilization of resources (Goldar, 2004; Kathuria, 2013). Productivity measurement explores the efficiency levels of

the production process of a firm (Stainer, 1997). Literature broadly measures productivity through two approaches i.e. Partial Factor Productivity (PP) and Total Factor Productivity (TFP). Partial productivity measures production efficiency of a firm in terms of single factors of production like labour productivity. Partial productivity explains efficiency of a production process in a limited manner and explains efficiency in terms of single factor. In comparison to the partial productivity, TFP measures productivity through multiple factors on input production factors. Therefore, provides a holistic description of the production process. As per literature review, TFP measurement can be conducted through two methods i.e. parametric and non-parametric (Balakrishnan and Pushpangadan, 1998). Parametric method of measuring productivity through functional forms like Cobb-Douglas

require multiple assumptions. In comparison to the parametric, Non parametric method uses empirically constructed functional form and does not need any supposition of functional forms like Cobb-Douglas. Total factor productivity based on non-parametric methods can be measured through various indexes such as Fischer index, Tornquist index and Malmquist productivity index (MPI). MPI is commonly cited technique in the literature for measuring productivity of a firm. This technique was given by Caves et al. (1982) and attained its fame through the work of Fare et al. (1992). MPI is a distance based function and can be input and output oriented. The output orientation is preferred over the input as firms inherently aims to maximize their output level with given levels of the inputs (Singh, 2012). MPI value should be above unitary. The value of MPI below unitary connotes productivity regress and the value above one means productivity progress. Productivity regress suggests the lack of the competitiveness and productivity progress suggests competitiveness (Golejewska, 2014). MPI splits TFP change of a firm into two mutually and exhaustive components i.e. efficiency change (catching up) and technical/technology change (innovation).

Ahluwalia (1991), Goldar (1983), Dholakia & Dholakia (1994), Balakrishnan & Pushpangadan (1998); Ray (2009); Gupta (1993); Balakrishnan (2004); Madheswaran et al.(2007); Sehgal & Sharma (2011); Arora & Singh (2008) and others have studied productivity of Indian manufacturing. These studies contribute towards understanding Indian manufacturing sector and its productivity in a comprehensive manner. Most of these studies have understood productivity of Indian manufacturing sector using TFP. Goldar (2004) measured TFP of Indian manufacturing and compared TFP growth of manufacturing sector of India between two time periods i.e. 1979-80 to 1990-91 & 1991-1992 to 1997-98 and observed the decrease in TFP growth in 1991-1992 to 1997-98 in contrast to 1979-80 to 1990-91. The decrease is primarily due to the technical inefficiency. TFP growth comparison between pre and post economic reforms of 1991 has been studied by Singh (2012). The study measured the productivity of Indian manufacturing from 1979-80 to 2007-08 and divided the time frame into pre and post-reforms period. The analysis of the data revealed fall in the TFP in comparison to the pre-reform period, mainly due to the technical inefficiency. TFP of both organized and unorganized manufacturing sector has been studied by has been Unni et al. (2001). The research observed fall in TFP growth during the period 1978-95 in both organized and

unorganized sectors of India. Mukherjee & Ray (2005) measured the efficiency of the manufacturing at the state level for the period 1986-87 to 1999-00 and concluded technical inefficiency hampering the growth of Indian manufacturing sector. Kumar (2006) & Trivedi (2004) studied TFP of various states of India between 1982-1983 to 2000-2001 and 1980-81 to 2000-01 respectively and concluded there is an immediate need for improving the technical infrastructure among the manufacturing firms of the studied states.

The review of the literature on the Indian manufacturing sector reveals that most of the research has been conducted for measuring productivity at the national levels at aggregate levels. Productivity measurements at the regional levels have been left unmapped, particularly in those states which have geographical and political disadvantages like J&K. Furthermore, productivity measurement of the specific industries such agro-food processing is an unexplored area of research in Indian manufacturing sector. Most of the studies have analyzed the productivity of Food processing industry of Indian manufacturing sector in totality. While as agro-food processing forms a dominant segment of Indian food processing industry with around 90 per cent share and therefore specific analysis of this industry is very much needed. Within these gaps, the present study has been conducted for understanding the performance of the agro-food processing industry in the two regional economies i.e. H.P. & J&K. Both the states are rich in agriculture and horticulture resource bases. The paper will be helpful in measuring the TFP change in these states over the period of time and also towards understanding the reasons of TFP change. The methodology used for measuring the productivity of agro-food processing industry in these two states has been discussed in detail in the next section.

Methodology For Measuring TFP

The productivity of the agro-food processing firms of H.P. and J.K has been measured on the basis TFP using Malmquist Productivity Index (MPI). MPI has been preferred over other techniques such as Fischer Index, Tornquist Index etc. because it does not require any optimization assumptions and allows use of multiple inputs and outputs without causing any aggregation as well as allows decomposition of the productivity into two components (Singh, 2012 and Deb & Ray, 2013). MPI in the present study is output oriented as firms mostly want to increase their output levels with the fixed input levels (Singh, 2012). MPI is represented as below:

$$d_0(M, N) = \min\{\delta: (Y/\delta) \in P(M)\} \dots \dots \dots (I)$$

Where,

M= input vector

N=output vector

P(M)= production technology [P(M)= {N: M can produce N}]

The output-oriented Malmquist total factor productivity change index between two periods say "u" and "v" is given by

$$m_0(N_u, M_u, N_v, M_v) = \left[\frac{d_0^u(N_v, M_v)}{d_0^u(N_u, M_u)} \times \frac{d_0^v(N_v, M_v)}{d_0^v(N_u, M_u)} \right]^{1/2} \dots \dots \dots (II)$$

The notion $d_0^u(N_v, M_v)$ represents a distance function is a distance function from the time period "v" observation to the period "u" technology. A value of m_0 greater than one will indicate

positive TFP growth from the period "u" to period "v" and vice-versa. MPI can also be rewritten as

$$m_0(N_u, M_u, N_v, M_v) = \left[\frac{d_0^u(N_v, M_v)}{d_0^v(N_v, M_v)} \times \frac{d_0^v(N_u, M_u)}{d_0^u(N_u, M_u)} \right]^{1/2} \dots \dots \dots (III)$$

The ratio outside the square bracket represents efficiency and is referred to technical change. Thus,

$$Technical\ change = \left[\frac{d_0^u(N_v, M_v)}{d_0^v(N_v, M_v)} \times \frac{d_0^u(N_u, M_u)}{d_0^v(N_u, M_u)} \right]^{1/2} \dots \dots \dots (IV)$$

$$Efficiency\ change = \frac{d_0^v(N_v, M_v)}{d_0^u(N_u, M_u)} \dots \dots \dots (V)$$

MPI measures TFP through TFP change and for understanding the sources of productivity progress and regress divides index into two indexes i.e. efficiency and technical change. MPI is a distance based function and is based on input and output data. Therefore, variable selection is a crucial aspect in measuring TFP using MPI.

Variables for Measuring TFP:

The annual survey of Industries (ASI) is a frequently used database for measuring TFP of Indian manufacturing sector (Pal & Das, 2014; Ray, 2009; Goldar, 2004 and Unni et al., 2001). In the present study, one variable i.e. Gross value added (GVA) has been used as an output variable (Ahluwalia, 1991; Madheswaran et al., 2007 and Sehgal & Sharma, 2011). The GVA has been preferred over other output variables such as net value added because depreciation in Indian manufacturing is highly arbitrary

fixed by the income tax authorities and seldom represent actual capital consumption (Sehgal & Sharma, 2011). GVA obtained from ASI is converted into real data using deflation because ASI provides GVA as a nominal data and commonly used index for deflation is wholesale price index (Unni et al., 2001). The study has used two input variables for measuring TFP of agro-food industry in H.P. & J.K i.e. fixed capital and labor. Labour is a crucial input factor of production (Dias, 1991; Ali et al., 2009; Sehgal & Sharma, 2011; Goldar, 1983; Trivedi, 2004 and Pal & Das 2014). The total number of persons engaged, both workers and supervisory staff have been taken as a variable for labour factor (Trivedi, 2004). Fixed capital is another important variable for measuring productivity (Sehgal & Sharma, 2011; Mitra, 1999; Goldar, 1983; Trivedi, 2004). Using perpetual inventory method (PIM) fixed capital given converted into capital stock series at the constant price by (Dias, 1991; Madheswaran et al., 2007). The formula used for calculating capital series is

$$Capital\ Stock = K_0 + \frac{(K_t - K_{t-1})}{P} \dots\dots\dots (VI)$$

Where, K0 represents fixed capital in the base year (2008-09) and Kt is the fixed capital at time t, Kt-1 is fixed capital at time period t-1 and P represents wholesale price index measured at 2004-05 prices.

Analysis & Discussion:

Agro-food processing industry is a promising segment of Indian food processing industry. Defined mainly by four segments i.e. Processing and preserving of fruits and vegetables (103), Manufacture of vegetable and animal oils and fats (104), Manufacture of grain mill products, starches and starch products (106) and Manufacture of other food products (107) holds around 91 per cent share in the food processing industry of India. During 2014-15, around 36390 manufacturing units have been involved in food processing activities in India. Out of which 33129 have been involved in

agro-food processing activities. The share of income, profit, and employment generation of agro-food processing industry in food processing industry stand around 68, 58 and 81 per cent respectively. Therefore, making the agro-food processing industry a dominant segment of Indian food processing industry. The number agro-food processing factories in India report a CAGR of 5.69 during 2008-09 to 2014-15. The fixed capital investment, GVA, income, profit increased with CAGR of 13.57, 10.71, 10.54 and 4.23 respectively (refer to table 4). The employment generation in the agro-food processing industry of India reported CAGR of 0.78, which is low in comparison with other studied parameters. The positive CAGR reflects the growing increase in the agro-food processing activities across the Indian states as well as the growing acceptability & demand of the agro-food processing products in the Indian societies.

Table No 4: Performance of Indian Agro-Food Processing Industry on Selected Parameters

Parameters	2008-09	2014-15	CAGR
Number of Factories (no.)	23767	33129	5.69
Fixed Capital*	5971193	12813414	13.57
Gross Value Added*	3057048	5627846	10.71
Income*	1705326	3111875	10.54
Profit*	796522	1021414	4.23
Employment(no.)	1261373	1321655	0.78
*(Value in Rs. Lakh)			
Source: Author's Calculation based on ASI data for year 2008-09 & 2014-15			

H.P. and J&K states being agriculture and horticultural rich states creates an advantageous scope for the agro-food processing industry in these two states. During 2008-09 to 2014-15, the number of agro-food processing manufacturing units in H.P. increased from 85 to 135, the fixed investment increased from 52669 to 214646, employment generation increased from 5188 to 10134 and GVA increased from 38238 to 107638, reflecting the growth in the agro-food processing activities in the state (refer to

Table 5). The J&K state also reported increase in the number of agro-food processing units from 82 to 126, GVA increased from 8488 to 32248, fixed capital increased from 11357 to 26199 during 2008-09 to 2014-15 (refer to Table 6). However, employment generation decreased from 5172 to 4886 during the same period in J&K. In comparison to J&K, H.P. state is relatively in better position on the selected parameters.

Table No 5: Percentage Increase/Decrease in the selected Parameters of H.P Agro-Food Processing Industry

Parameters	2008-09	2014-15	Percentage Increase/Decrease
Number of Factories (no.)	85	135	58.82
Fixed Capital*	52669	214646	307.54
Gross Value Added*	38238	107638	181.49
Employment(no.)	5188	10134	95.34
*(Value in Rs. Lakh)			

Source: Author's Calculation based on ASI data for year 2008 -09 & 2014 -15

The present study measures the comparative performance of the agro-food processing industry in H.P. and J&K states. Productivity is a commonly cited ex-post measures for understanding the competitiveness of a firm/industry (Chaudhuri & Ray, 1997). The study measured the TFP of

the agro-food processing firms in these two states using MPI. The TFP has been measured using MPI over the period from 2008-09 to 2014-15. During the period, both the states reported productivity regress as the observed values are below unitary (refer to Table 7).

Table No 6: Percentage Increase/Decrease in the selected Parameters of J&K Agro-Food Processing Industry

Parameters	2008-09	2014-15	Percentage Increase/Decrease
Number of Factories (no.)	82	126	53.66
Fixed Capital*	11357	26199	130.69
Gross Value Added*	8488	32248	279.92
Employment(no.)	5172	4886	-5.53
*(Value in Rs. Lakh)			

Source: Author's Calculation based on ASI data for year 2008 -09 & 2014 -15

The highest productivity regress in H.P has been observed during 2012-13 of (-) 48.9 per cent followed by the year 2009-10 having productivity regress of (-) 39 per cent, and 2010-11 having productivity regress of (-) 27.7 per cent. The lowest productivity regress of (-) 1.3 has been observed in the year 2013-14. While as in J&K the highest productivity

regress of (-) 39.5 per cent has been observed during 2009-10 followed by 2013-14 having productivity regress of (-) 23.5 per cent and 2010-11 having productivity regress of (-) 21.5 per cent. The lowest regress of (-) 1.5 per cent has been observed in 2014-15.

Table 7: TFP Change & Productivity Regress in Agro-Food Processing Industry of H.P & J&K during 2008-09 to 2014-15

Years	H.P	Productivity Regress (in percentage)	J.K	Productivity Regress (in percentage)
2009-10	0.61	-39	0.605	-39.5
2010-11	0.723	-27.7	0.785	-21.5
2011-12	0.764	-23.6	0.787	-21.3
2012-13	0.511	-48.9	0.863	-13.7
2013-14	0.987	-1.3	0.765	-23.5
2014-15	0.886	-11.4	0.985	-1.5
Average	0.73	-27.10	0.79	-21.0

Source: Author's Calculation based on ASI data for year 2008-09 to 2014-15

1. Productivity Regress/Progress = (Observed TFP score-1)*100
2. Productivity values below unitary reflects Productivity Regress and above unitary Productivity Progress

The primary reason of this productivity regress in both states has been observed from efficiency change and technical change values (refer to Table 8). The observed values of the efficiency change are mostly around unitary, which means they are not the contributing factor of the productivity

regress in agro-food processing industry in H.P & J&K. However, the values of the technical efficiency has been observed far below the unitary values and therefore are the main reason for the productivity regress among the agro-food processing units of H.P. & J&K.

Table 8: Efficiency & Technical Change in Agro-Food Processing Industry of H.P & J&K during 2008-09 to 2014-15

Years	H.P		J&K	
	Efficiency Change	Technical Change	Efficiency Change	Technical Change
2009-10	0.887	0.688	1.069	0.566
2010-11	1.065	0.678	0.931	0.844
2011-12	1.052	0.726	1.075	0.732
2012-13	0.909	0.562	1	0.863
2013-14	0.981	1.005	0.931	0.822
2014-15	1.066	0.831	1.085	0.908
Average	0.991	0.736	1.013	0.78

Source: Author's Calculation based on ASI data for year 2008 -09 to 2014 -15

In H.P, segment wise highest productivity regress of (-) 38.5 per cent has been reported by 103 (Processing and preserving of fruits and vegetables), followed by 104 (Manufacture of vegetable and animal oils and fats) with productivity regress of (-) 27.8 per cent, 107 (Manufacture of other food products) with productivity regress of (-) 26 per cent and lowest regress of (-) 14 per cent has been found in 106 (Manufacture of grain mill products, starches and starch products) (refer to Table 9). Similarly in J&K, highest productivity regress of (-) 27.7 per cent has been observed in

103 segment followed by 104 with regress of (-) 26.8 per cent, 107 with (-) 17.6 per cent and lowest is found in 106 with productivity regress of 10.7 per cent. All the segments in both the states have been operating below the optimal frontier and are therefore having productivity regress during the entire period of study i.e. 2008-09 to 2014-15. The main reason of the productivity regress across the four segments during the entire period of the study is again technical change rather than efficiency change (refer to table 9).

Himachal Pradesh				
Segment	Efficiency Change	Technical Change	TFP Change	Productivity Regress
103	0.99	0.618	0.615	-38.5
104	0.968	0.747	0.722	-27.8
106	1.00	0.86	0.86	-14
107	1.00	0.74	0.74	-26
Jammu & Kashmir				
Segment	Efficiency Change	Technical Change	TFP Change	Productivity Regress
103	1.00	0.723	0.723	-27.7
104	1.006	0.727	0.732	-26.8
106	1.045	0.855	0.893	-10.7
107	1.00	0.824	0.824	-17.6

Source: Author's Calculation based on ASI data for year 2008-09 to 2014-15

The TFP measurement of H.P and J&K using MPI reveals TFP change values below unitary and thus are in productivity regress in both the states during the entire period of study i.e. 2008-09 to 2014-15. All the firms in these two states are operating below optimal frontier due to the technical change rather than efficiency change. The studies conducted by Virmani & Hashim (2011) and Ghose & Biswas (2012) also observed productivity regress in the food processing industry of India and primarily due to the technical change. Therefore, the results of the present study are also in line with the previous studies. Both the states, despite having rich resource base, are operating below optimal frontier and needs to look towards improving the technical component, particularly in view of the targets set by the National Manufacturing Policy (NMP) of 2011. NMP of 2011 favours enhancement of productivity of manufacturing sector of India and strongly recommends increase in TFP growth from present growth of 1.6 per cent (from 1999-00 to 2011-12) to 4.5 per cent by 2022 (Goldar, 2013). The agro-food processing industry is a technology-driven industry and has witnessed high growth during recent past. This growth is primarily due the recent advancements in the processing and preservation techniques (Srinivasan & Shende, 2015; Warde, 1999; Pingali, 2006). The low scores on technical change component of the studied agro-food processing firms of H.P and J&K reflects that these firms are lacking the technical infrastructure, particularly the technology infrastructure. Technical infrastructure is an important pillar for improving competitive performance of a manufacturing firm. The advantages arising from technical component helps firm to produce in right quantity and right quality (Vinas et al., 2001). Technical infrastructure also improves the innovation & flexibility capabilities and more importantly improve cost competitiveness of a firm (Kroll & Wright, 1999 and Tata et al., 1997). The state of H.P and J&K needs to identify strategic intervention areas for improving productivity of agro-food processing firms, particularly those interventions which can improve their technical aspect of the firms.

Conclusion:

The inter-state productivity comparison revealed that both the studied states are having productivity regress during the entire period of the study i.e. 2008-09 to 2014-15. This regress is primarily due to the technical change rather than the efficiency change. Both the states need to focus on improving the technical infrastructure of the agro-food

processing firms and making aware of agro-food processing entrepreneurs about the recent developments in the food processing technologies. Government institutions need to collaborate for encouraging entrepreneurs for improving their technical infrastructure, particularly adopting new processing technologies. This is indispensable in light of the potential both the states have for the agro-food processing industry. Entrepreneurs and policymakers need to work in a strategic perspective for the long-term growth and development of this potential industry in these two resource-rich states as well as for making their presence in the international and national markets.

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Sentiment Analysis of Tweets- IPL 2018 Final

Ramakrishnan Venkatesakumar and Murugaiyan Pachayappan

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Mega sport events like IPL create opportunities for marketers and media professionals to plan ad campaigns during telecasts. These events have vast number of fan followers other than general audiences. Success of such ad campaigns require depth information about audience dynamics. One such tool to trace the market intelligence is, analyzing the microblogging contents created in social media platforms. This research has filled a gap in the existing literatures by analyzing the audiences' sentiments for a mega sport event in India [IPL] through analyzing the Tweeter data. Tweets for the IPL 2018 finalists, CSK and SRH are collected; Tweets collection classified as 'during the final' and 'a day prior to final'. Results of the data analyses reflect a shift in the sentiment scores in favour of the team doing better in the final. Moreover, increase in audience sentiment levels, during the match against the day prior to the final for the team doing better is also noticed. Word clouds show mood of the people and shifts in the mood through the words spoken. Based on these results, managerial implications are placed at the end of the section

Key words: Text Analysis, Word Cloud, Sentiment Scores, Twitter data, IPL



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Understanding and measuring the consumer mood and sentiment remains as art rather than science. In the present day context of information era, the marketers and media professionals are keen to develop methodologies to measure the consumers/viewers sentiment. The information is useful for the marketers to understand the market and consumer expectations for a typical product/service; media professionals benefited by placing the right communication in suitable media platform.

Sentiment is a feeling, consciousness, or thought about something (Bali, Agarwal, Poddar, Harsole, & Zaman, 2016). In recent times, researchers attempt to collect, analyze and measure eWOM data, a computer based approach to understand the consumer needs through their product reviews/appraisals published as microblogs (Lin et al., 2017). An experiment on mood (Howard & Barry, 2001) confirmed that systematic message processing is reduced if the consumer/viewer is in positive mood and there is lack of

congruence between mood inducing event. Another experiment on mood research (Curren, 1994) reported that the marketers cannot leverage through mood manipulation, if the consumer is highly involved in the purchase decision. Positive mood of the consumers enhances the learning brand names too (Lee & Sternthal, 1999). Thus, the literature provides support for mood and influence of consumer sentiment on various decision stages. Many corporates, in the recent times, collect data from these 'micro blogs,' and addresses various product /service related queries (Agarwal, Xie, Rambow, & Passonneau, 2011). Moreover, professional service firms also started advertising about the new kind of service, viz., 'Tweeter Data Analysis' (Kouloumpis, Wilson, & Moore, 2011).

However, very limited efforts made in the past to measure the viewers/consumers sentiment through their 'micro blogs', a way of publishing one's view on the internet medium. This research paper aims to relate the role of mood inducing event [Indian Premier League-IPL] and audience sentiment [measured from their Tweets] and involvement [measured through number words in the Tweets]. In specific, this research work measured audience sentiment for the two teams played in the IPL-2018 finals [Sun Risers Hyderabad –SRH and Chennai Super Kings-CSK]; the tweets were collected during the finals and a day prior to final, to bring out the role of congruence of mood inducing event on sentiment. Moreover, 'Word Clouds' are developed to capture the list of words spoken during and a day prior to the event, to bring out the differences in audience reaction due to the influence of mood inducing events [before final / during final]. Finally, the relevance of the research outputs related to marketing is discussed.

Review of Earlier Studies

Analyzing the online data and other microblogging become a common analytic tool for many progressive marketing firms. Specialized service firms emerged in the recent past to provide business analytic solutions to the needy. Researchers also made depth studies on this emerging domain of text analytics. Contributions made on a wide range of topics; right from evaluation of product features (Chamlertwat, Bhattarakosol, & Rungkasiri, 2012), tourism industry (Gascón, Bernal, Román, & González, 2013), product sales predictions (Gaikar & Marakarkandy, 2015), brand management (Gürsoy, Bulut, & Yigit, 2017) and much more.

In addition, there are researches concentrating on methodology dimensions of text mining too. A chapter comprehensively covers the issues in Text Analysis, in particular, methodological issues (Pawar, Jawale, & Kyatanavar, 2016); another research work reported comparison of various algorithms and methods (Taboada, Brooke, & Voll, 2011). Methodology for sentiment analysis on twitter data is documented (Lakshmi, Harika, Bavishya, & Harsha, 2017) and a comparison of tree kernel based model versus feature based models (Agarwal et al., 2011) also attempted. Study results are concluded that there is need to combine types of features with classification algorithms to derive better classification and sentiment scores (Vinodhini & Chandrasekaran, 2012).

Word clouds are developed to analyse the data to summarize the electronic data in workplace and it is used for demonstration in the class room setting (Miley & Read, 2011). Further in the word cloud related domain, studies attempted to build word storms, which is a group of word clouds (Castellà & Sutton, 2014) to analyse the text data and comparison word extracting algorithms, which is proven to be better on running time and other metrics (Barth, Kobourov, & Pupyrev, 2014).

Thus, the review of earlier studies suggests wide range of topics discussed in the text analysis domain; however, growing challenges and emerging tools in the social media platforms paves ways to undertake newer avenues of research in the social media related domain. This research work addresses the following specific research objectives;

- To measure the audience sentiment for CSK and SRH and compare it with two time horizons [during the final and day before the final]
- To measure the audience's average and variation in number of words per tweet for the two teams and two time horizons [during the final and day before the final]
- To develop comparative word clouds for the CSK and SRH [during the final vs. a day prior to the final]

To address the research objectives, we consider the popular microblogging source, Twitter. From the official website of IPL 2018, required tweets were collected and analyzed.

Methodology

This is an exploratory study, predominantly depends upon the secondary data, the Tweets. Using the audience 'Tweets', the cricket audience's sentiment, involvement [measured through a proxy of number of words in each Tweets] and

frequently used words during and a-day prior to the final for each team [derived through Word clouds] are derived and compared.

Data

This study uses secondary data. The two teams, Chennai Super Kings [CSK] and SunRisers Hyderabad [SRH] were the teams playing in the IPL-2018 final. Tweets were collected from official pages of IPL and in total, 31000 Tweets were registered for CSK and 29000 Tweets were registered for SRH for the entire IPL-2018 event. Tweets were collected using R-Studio, an open source software and the package 'twitter'.

Sample Size

Required data for the study were collected from audience 'Tweets'. In total, 20,000 Tweets were collected [10,000 Tweets for CSK and 10000 Tweets for SRH]. For each team, 5000 Tweets during the day of final and 5000 Tweets, a day prior to the final were collected. Only the Tweets were used for the analysis [text column] and other information such as retweeted or not, tweeted or not, geographical information etc., were not considered for the analysis.

Data Analysis

This section summarizes the analyses of the data, i.e., the Tweets; hence, collected data are highly unstructured and requires a 3-stage analysis process; pre-processing the data [cleaning & creating structure], calculation of Sentiment score, Involvement score and creating Word Clouds for comparisons.

Pre-processing the data

Number of research papers mentioned the importance and various steps in cleaning the Tweeter (Al-Otaibi et al., 2018; Gaikar & Marakarkandy, 2015). Various steps include –

removing punctuations, converting the text to lower cases, stemming the words [replacing equivalence words], removing whitespace [blank spaces in the documents], removal of special characters [such as #, *, \$ etc.]. However we skipped 'Normalize elongated words' [Dhoooni as Dhoni], 'Converting non-English' words. This study context of IPL received tweets across globe and developing the Word Cloud with these words may be useful for the marketers to use them as key words in the communication strategies.

By using R-Studio and packages like 'tm', 'wordcloud', 'wordcloud2' and 'sentimentr' the researchers analysed the data. Initial data were inputted as three columns, '.CSV' format; the columns were named as "Team" [CSK /SRH], "Time" [Before/During] and "Text" [the tweets]. Using the 'gsub' command, the tweets were cleaned [removing special characters & numbers, lower case conversion, stop words removal, removal of single letter words and stripping white spaces].

Calculation of Sentiment score, Involvement score

Now the tweets are in 'plain' English, without any special characters. Then, using 'sentimentr' package, the sentiment scores are computed for the pre-processed data [Text Column]. This procedure has created sentiment score [sentiment] for each tweet and number of words in each tweet [word_count]. These two columns are added to the original data file to create comparative analysis.

Sentiment Score & Involvement

Average sentiment scores for each team is calculated and given in the Table-1; the mean scores confirm that there is an increase in the viewers' mood/sentiment level before the event [Final] and during the event. In particular, the average sentiment score for SRH is much higher than CSK team and fans of both the teams are experiencing congruence with the sentiment-inducing event.

**Table-1 Average Sentiment Score – CSK Vs SUN
[Before the day of Final & during Finals]**

Teams	Before	During	Overall Average
SUN	0.2263	0.3556	0.2909
CSK	0.1725	0.2022	0.1873
Average	0.1994	0.2789	0.2391

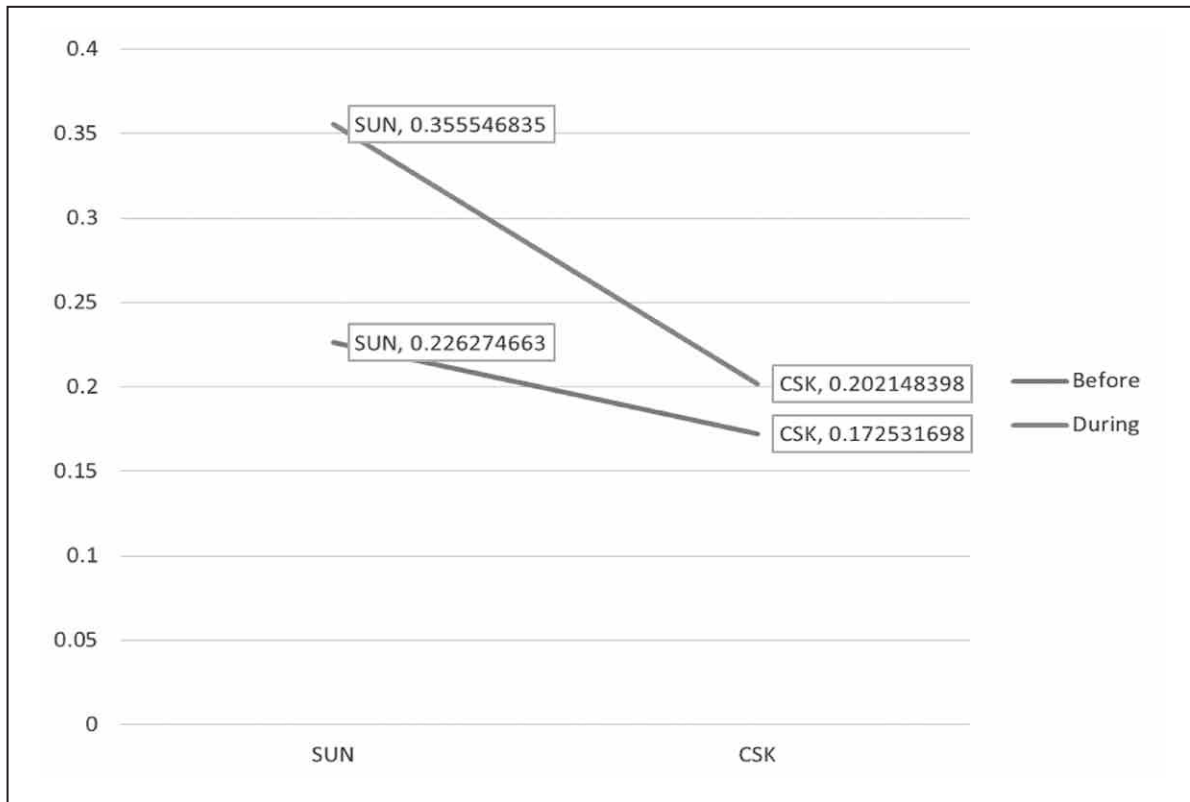


Figure-1: Sentiment Score Variation

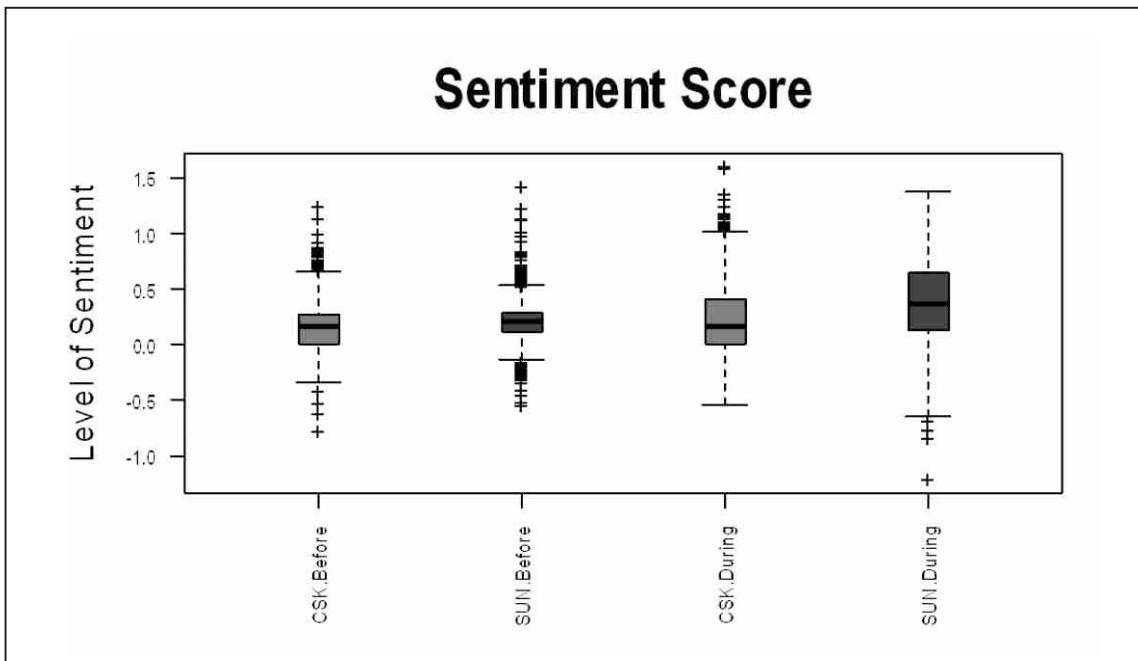


Figure-2: Sentiment Score Spread - Team & Time

Further analysis of the sentiment score, summarized through the Box-Whisker Plot indicates that shrinking of positive sentiment score during the match for SRH team against the data corresponding to the day before; when the match progressed, Team-CSK was dominating the show and high level of sentiment scores were recorded for the team during the match. This result gives a clear suggestion for the media and marketing professionals to develop media related strategies and input for managing the communication strategies. This finding has direct implications for the marketers that when the audiences experience mood congruent events, the information processing will be higher (Howard & Barry, 2001) and managing it with appropriate communication strategy will become a vital task for marketers.

An earlier study also confirmed that messages have more effect, if the consumers/audiences are better mood state (Bronner, Bronner, & Faasse, 2007). Another study results in the context of general elections confirmed that the predictions from these kinds of microblogging have capabilities of sensing future decisions of people (Connor, Balasubramanyan, Routledge, & Smith, 2010).

In the following table and chart, we summarized the summary of data analyzed for the 'number words' in the tweet. The number of words can be considered as proxy for people involvement in the mood congruent event; despite of the event/match progress, he/she could spare some time to register their emotions. Thus, the number of words tweeted is analyzed during the match and a day prior to the match for the two teams. Figure-3, again summarized the data in pictorial form.

**Table-2 Average Words per Tweet – CSK Vs SUN
[Before the day of Final & during Finals]**

Teams	Before	During	Overall Average
SUN	17.9146	13.1828	15.5487
CSK	13.4152	15.3676	14.3914
Average	15.6649	14.2752	14.97005

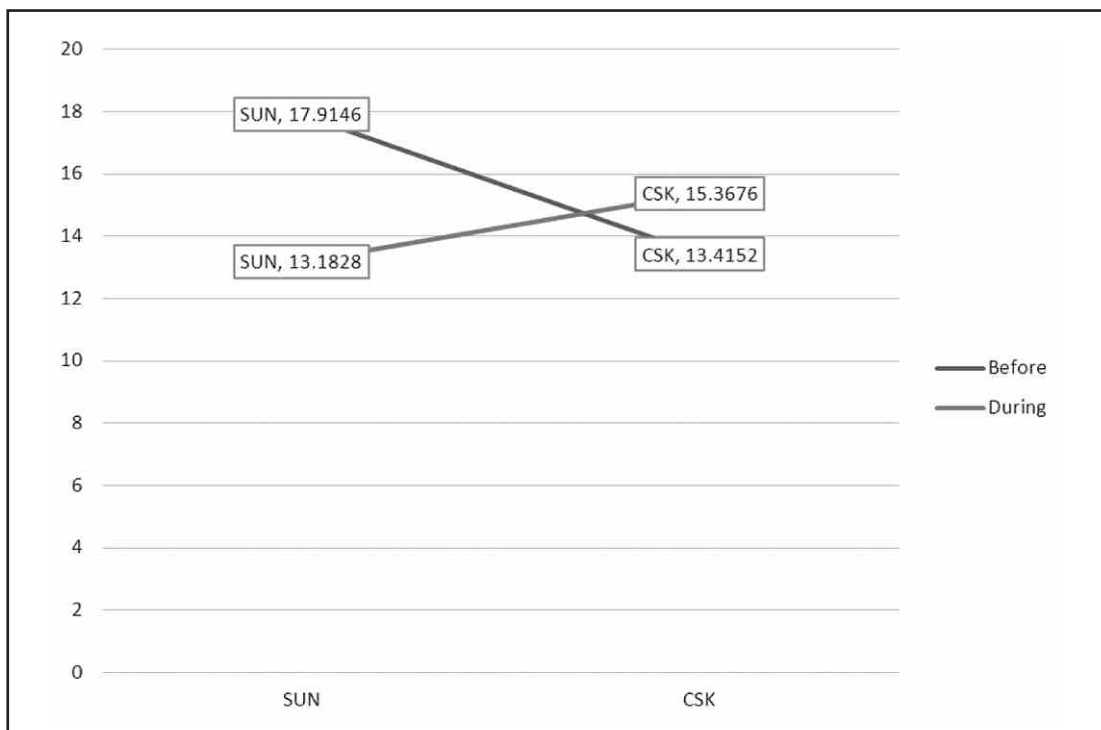


Figure-3: Average Words per Tweet

The results concluded that the shrinkage of mood / sentiment of the people at the time of match progressing; a day before, on an average, 17 words per tweet reduced 13 for the SRH team. As indicated in the earlier paragraph, when the team CSK was started doing better, the fans of SRH experienced negative emotions / sentiment and reduced their conversations. It may be noted that there is an increase in the average words per tweet for the CSK team during the match as against the day prior to the final. Thus, fans during and a day prior to the final witness clear indication of mood congruence on the mood-inducing event.

Analyzes of the sentiment score and average words per tweet have direct relevance for marketers, principally for the media professionals. A consumer experiment on mood confirms the relationship between context influencing mood condition and processing strategies; these two variables' interaction effect has its influence on post processing mood . A study result of the Twitter data suggests that it is very important decision for the marketers to create the star ratings from the textual reviews and provide personalized reviews to the online buyers .

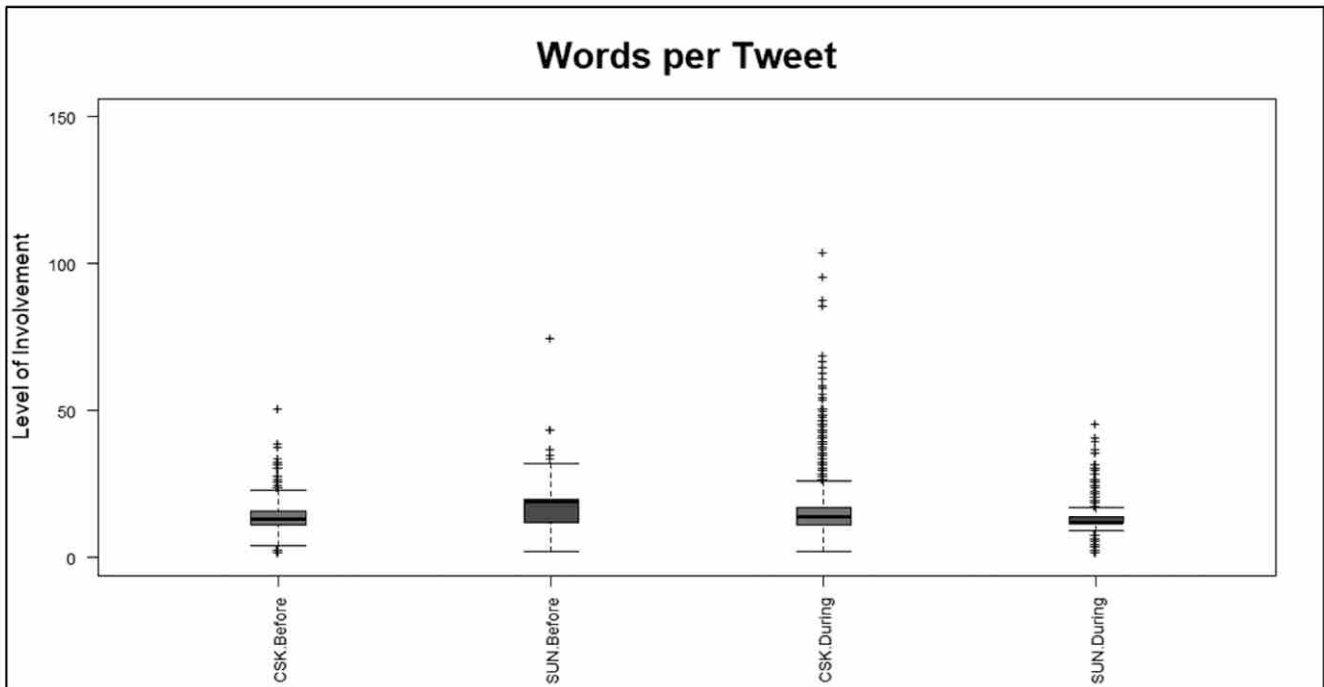


Figure - 4: Average Words per Tweet

Again, the summary from Box and Whisker plot in Figure-4 confirms the shrinkage involvement for the team-SRH and more involvement of fans of CSK during the match. Thus, analyzes of sentiment and involvement post an array of challenges to the marketers and media. If an ad is placed with celebrities, who are playing with the team CSK expects to create better mood congruence rather than celebrities who represents SRH. Thus, the media strategy should be more dynamic to alter the frequency of the ad and if required, withdrawal of an ad featuring a celebrity, whose team is not doing better.

Word Cloud Comparisons

To fulfil the next objective, we have developed various comparison word clouds for the Teams and Time; first, we created a comparison word cloud from the tweets, for the CSK team [during the final & a day prior to the final]. One may notice drasti-cally different set of words were used in the tweets in the two time settings. Tweets were more celebrating in nature during the final and very general one, the day prior to final.

Findings from these two word clouds have direct implications for media-planning professionals; it showed how the sentiment is hovering around the event, players. If

the ad is featured with a celebrity who involved in the event, then the team performance may have significant impact on the celebrity, brand as well as on the ad.

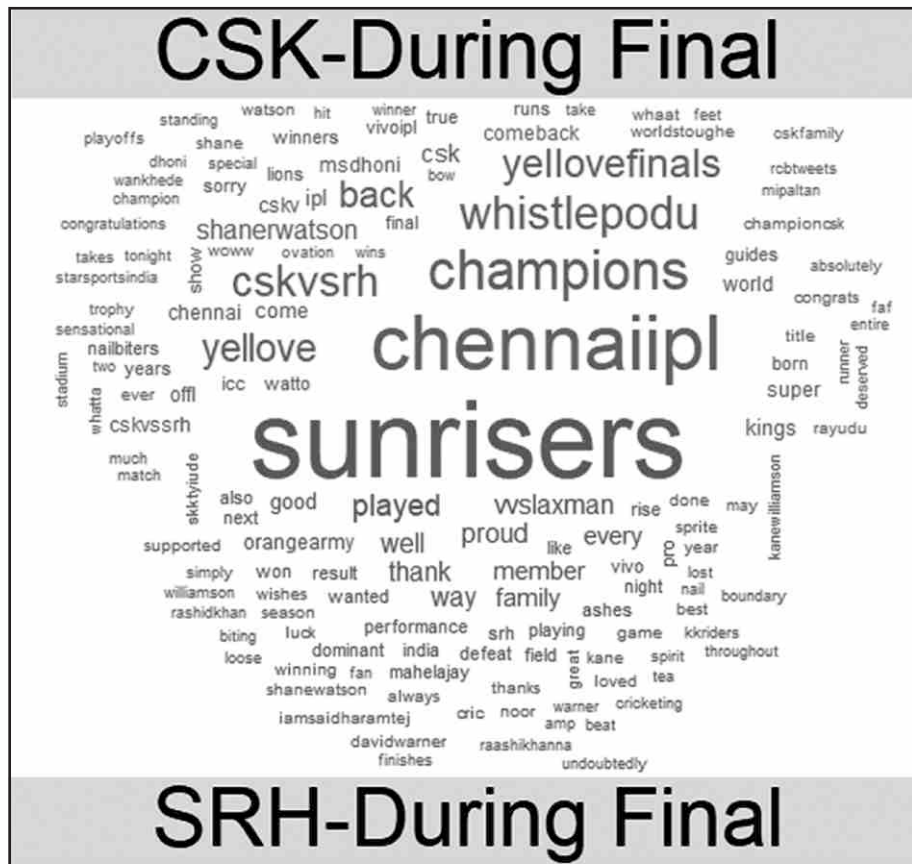


Figure-7: Comparison of Words in the Tweets – During Final

Finally, the comparison word cloud for the two teams played in the final is developed to comprehend the people sentiment. Many words with positive sentiments are noticed in the word cloud such as ‘champions’, ‘whistlepodu’, ‘yellow final’ [jersey colour of the CSK team], ‘back’ [the team winning], ‘Shane Watson’. No such prominent words are noticed for SRH team, other than people mentioning the team name. When the team was not doing well, there is a shift in the sentiment and words used in the tweets.

Thus, closely monitoring the sentiment of the people on a real time basis, become an essential element to develop performance metrics. This will help them to alter the media planning on a continuous basis rather than a static planning, particularly, when the celebrity himself /herself featured in the ad, involved as a player. For example, during the IPL

season, ‘Reliance Jio’ developed ads, where the two teams involved in the telecast of the match repeated continuously. This strategy tends to create neutral sentiment rather than positive.

Discussion and Managerial Implications

In the recent times, there is a growth in using online reviews prior to make purchase decisions; it is noticed that few instances, where the success/failure is decided by the reviews (Lakshmi et al., 2017). A research work on hotel context through analyzing social media communications from Twitter/Facebook etc. concluded that strengths and weakness for communications strategy could be measured to develop marketing strategies for hotels (Gascón et al., 2013).

Another study on twitter sentiment analysis of 100,000 tweets detected the consumer sentiment on smart phone features like application, screen; later study results were validated by the professionals in the industry (Chamlertwat et al., 2012). However, sentiment analysis of data from internet is not always an easy task; if the reviews are not complex or product related, it is easier to derive sentiment scores from the data. Reviews related to nature, music, art, or movie, then performing sentiment analysis becomes a complex act for the researchers (Sahayak, Shete, & Apshabi, 2015).

This study has many relevant insights for the media and marketing professionals. Mega event like IPL is always a point of attraction for many media persons to implement their advertising campaigns. However, this strategy needs careful insights on real time data analyses and modifying strategies dynamically based on the traverse of sentiments of people. Outcomes from the word clouds show a clear sign of change in mood state of consumer based on the mood congruent event. Moreover, the sentiment during the match is altered considerably for a team, which is doing better in the match.

Conclusion

This research attempted to capture the sentiment of people associated with an event [IPL]. Differences in sentiment scores were noticed not only for the teams involved in the event, also, alteration of sentiment scores during the match and a day prior to the match as well as shrinkage of sentiments for the team, which, was in the path of losing the match. In addition, we have measured the number of words in each tweet [as a proxy for involvement in the event] and average words per tweet also showed variation during the match and day prior to the match. There was a drop in the count for the team not doing well. Finally, we have developed the word clouds for the teams and a comparison cloud during the match to recognize the mood of the people. The word clouds also confirmed the shift in the people sentiment during the match. These insights are very useful for the marketers to develop media strategies and managing the communication strategies better.

Like any research work, this study also has few limitations; even though we have collected 20000 tweets [from the 60000+ tweets for the entire event], there are many other social media platforms people engage themselves and Twitter is only, one such platform. Thus, it may be reflecting Twitter user sentiment rather than an online users' sentiment

as a whole. IPL Cricket is a game, which is franchised based, and players from different countries /states represented in a team; thus, comparison of sentiment scores and word clouds when two nations playing a match may differ considerably.

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Story Telling- an Effective Pedagogy for Multicultural Education

Mohan B. and Latha R. Nair

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People of different cultures in this world differ in their beliefs and practices. Their interaction is unavoidable in the context, of a state. In a global context diversity becomes much more pronounced. In an increasingly connected world, harmonious living is possible when they understand and cooperate among one another well. Multiculturalism is about people of different cultures living together in a globalised village with mutual respect, harmony and equity. Multicultural education can facilitate the harmonious social life of people of different cultures within the boundaries of a nation and in a wider international setting as well. There is a need to have such educational policies in force both in national and international levels. There are various pedagogical methods to effect learning in this aspect. Story telling is an effective tool to achieve this. Researches in the modern era have revealed that human brain processes information on a cause effect context similar to the structure of a story. Due to this human brain can imbibe information provided in the form of stories easily and retention of such information is very high. Story telling technique combines this basic facility of human physiology with active learning techniques to communicate with the students for higher assimilation and retention.

Key words: *Multiculturalism, Education, traditional teaching, storytelling, cognition.*



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The notation of culture implies a spontaneous acceptance of etiquettes, manners and norms by a group of believers which are transmitted from generation to generation (LeBaron, 2003)¹. Culture works through symbols, heroes, rituals, and deeply held values (Benedict, 1991)². Hofstede (2001)³ defines culture as the collective programming of the mind that distinguishes one group of people from another. It is a matter of identity for an individual in a society which may be heterogeneous. State is a political society having population, defined territory, a government and sovereignty which acts through law endowed to it through coercive power and maintains within a community the universal external conditions of social order. Nation is a historically constituted stable community of people formed on the basis of language, territory, economy, and psychological makeup, manifested in a common culture. Almost all modern countries have heterogeneous population. However most of them are organized around the

language and cultural norms of dominant groups that have historically constituted them. National state is a historical form of complex integration and identification (JelenaPetkoviæ. 2011)⁴. When groups of different cultures mix together the outcome could be assimilation, separation, or integration. Generally the tendency will be for assimilation towards the dominant culture as the dominant culture will be in control of the state and in a position to use the tools of coercion and submission. The minority communities stand to suffer. Multiculturalism is about revaluing the condition of groups of marginalized and disrespected identities living in the nation states and remedying economic and political disadvantages they suffer. Nothing makes the issues involved in multicultural living more visible than migration of masses to different societies. One of the effects of international migrations is that the migrants 'take' with them the national boundaries of their countries, and bring them as a part of their consciousness to the 'new land'. The immigrants are concerned about stigmatisation of their cultures, opportunity to get into the political main stream and access to economic opportunities while the domicile lot look at them with suspicion and as threats to their settled life and culture. As far as the immigrants are concerned the confrontation with the new and unknown, its complexities and diversities, prompt them to remain within the known familiar and comfortable. In many immigrants this confrontation reinforces its tendency to remain within the homeland's own value systems and movement towards an indigenous social identity is accelerated as it provides a kind of protection for the self. This may also lead to the minority immigrant to adopt an aggressive and critical attitude against the dominant culture. It gives room for a rationalization against conformity. Urge for cultural or ethnic identity normally becomes stronger while abroad. The personal identity which differentiates self from others, thinking of oneself as a unique individual, shifts towards a social identity which makes one think as a group member (Tajfel and Turner)⁵ of the migrating community.

Multiculturalism addresses the strategies and policies adopted to govern and manage the problems of diversity and multiplicity which multicultural societies throw up (Hall 2000, 2009)⁶. It pursues engagement, understanding and cultural exchange between the different cultural groups, so that they can co-exist peacefully with less stress (Sadeqy, 2011)⁷. Multiculturalism is a process contextual to particular places and cultural experiences. Thus, the experiences of multiculturalism in Britain are unique to that

country, and are different from the experiences in other countries, such as Canada, Australia, Malaysia or the UAE. A common approach to solving multicultural issues may be a difficult proposition due to the above reason.

As a matter of concern the high level group of the UN alliance of civilizations report that tensions across cultures have spread beyond political level into the hearts and minds of populations⁸. The fixation towards one's own culture is on the rise globally and bigotries of all kind are on a dangerous ebb. For the sustenance and survival of this world in which multiple powers possess the ability to destroy it at the press of a button, the need to understand and respect the other becomes more and more important. Migration of races has been happening since prehistoric periods and stifling for supremacy has been a feature of migrations. But at no time in the past had human race possessed the capacity to destroy them as it has today. Peaceful coexistence of cultures is a genuine requirement now for the happiness and progress of humankind. The cultural diversity is dynamic in nature. It is a proven fact that a group with culturally diverse subgroups is more innovative and creative in nature. Thus cultural diversity has the potential to play a catalyst role in sustainable development by bringing in novel solutions to developmental issues, exercise of universally accepted human rights, providing social cohesion and democratic governance⁹. There is a need for intercultural dialogue moving beyond differences.

However certain advocates of multiculturalism trivialise the concept by suggesting that its impact is limited to dress, food, and music. Their celebrated model of multiculturalism has been called the three S model Sarees, Samosas and Steel drums in Britain. In fact the three S model of multiculturalism in effect obscures the economic, educational and political marginalization being faced by migrant communities. Promoting multiculturalism in a 3 S approach may make different groups hermetically sealed which may lead to polarization and strengthening of prejudice. Multiculturalism however cannot accept all the practices of minority groups as sacrosanct and as part of their cultural legacy to be preserved if they are not conducive to the overall well-being of the greater society. At the same time one has to be guarded against the danger of promoting those detestable practices of certain minority groups in the name of multiculturalism.

The above factors reiterate two points.

There is need for creating a multicultural society that would stress political participation and economic opportunities to

the groups beyond tokenism and symbolism, human rights and individual freedom over respect for cultural traditions and building of inclusive national identities while accepting ancient cultural identities within a nation state.

Building a global society promotes a multicultural living in consonance with the proclaimed principles of cultural diversity by United Nations aiding sustainable development.

Role of Education in moulding a society

Education involves all experiences that an individual acquires inside and outside the school. The role of education is paramount in building up a virtuous society. Society and education have a symbiotic relationship. As a system education moulds the society and at the same time it learns from the society. Education has two fold purposes to perform in the life of a man in Society – one is utility and the other is culture. According to Martin Luther King Jr education should make a man more efficient enabling him to achieve with increasing facility the legitimate goals of his life equipped with the ability for quick, resolute, incisive, critical and effective thinking. Finally it should also transmit to a person the accumulated experience of social living¹⁰. Social responsibility of education is about developing social skills, ethics, characters and way of living of individuals guided by the responsibility for furthering the common good. Transmitting good moral values could influence socio-cultural development. The main purpose of schooling is to provide for the fullest possible development of each learner for living morally, creatively and productively in a democratic society. The purpose of education is to teach a student how to live his life by developing his mind and equipping to deal with reality.

Multicultural education: Researches have shown that preschool and pre grade children are often well aware of, and may assume, the racial attitudes of parents and others around them Mary F. Lenox¹¹. With the above background it is a challenge to introduce children to a world which is becoming increasingly multiracial and multicultural and let them grow up imparting the spirit of respect for others and become global citizens in all its spirit.

The concept of multicultural education system becomes relevant in the above context. Firstly, multicultural education embraces the idea that all students, regardless of gender, social class and ethnic characteristics, ethnic, cultural, education system should have an equal opportunity to learn. Second, a multicultural education reforms

movement that is trying to change nature of schools and other educational institutions in a way that all learners of all ages, social class, gender, race, language and culture will have an equal opportunity to learn. Multicultural education is not limited to changes in the curriculum, but involves changes in the school and educational environment as well. Finally, multicultural education should be seen as a continuous process and it never ends (Banks and Banks 2007)¹². National association of multicultural education in USA defines multicultural education as a philosophical concept which affirms the need to prepare the students for their responsibilities in an interdependent world with an education system based on the ideals of freedom, justice, equality, equity and human dignity as acknowledged in documents such as Universal Declaration of Human Rights by the United Nations and US Declaration of Independence. It recognizes the important roles of schools in developing the necessary values and attitudes to engage in a democratic society which reflect cultural differences and pluralism that the students, teachers and their communities share. Multicultural education system challenges discrimination of all forms in schools and society by promoting principles of social justice and democratic principles.

In short multicultural education system grooms the child to live in a multicultural society with dignity equity and responsibility throughout his life.

For a migrant child the experience of migration into another culture may cause a cultural shock which can be described as a feeling of impotence from the inability to deal with the environment because of unfamiliarity with cognitive aspects and role playing skills. The cultural shock stress can cause psychological and physiological reactions. This can also cause role shock which caused by loss of roles central to one identity in the new culture. Changes in social roles and interpersonal relations affect wellbeing and the self-concept lead to role shock. Acculturative stress can cause marginality.

A migrant child may also experience identity crisis caused by the dual membership in two groups who have diverse or even conflicting goals and interests but request identification loyalty and membership from both the members. A migrant child needs to have his ethnic identity constantly defined and redefined. A migrant child has to receive a positive feedback on his or her dual ethnic identification in both the worlds - a condition conducive to developing a multicultural identity.

Children as they grow up, should be able to enjoy the richness of diversity as customers and should be able to

produce variety of items for a diversely demanding world as producers. Multicultural education system grooms the students to reach the highest levels of educational achievements as individuals while developing positive self-concept in them empowered with knowledge about histories, cultures and contributions of diverse groups in the society for living matured societal life. It enables the students to work for structural equality in various institutions and organizations acquiring knowledge skills and dispositions for redistributing power and income among diverse groups. It addresses issues of intolerance, linguicism that may be prevalent in a society where many communities are to live together.

Schools are important places for children and young people to think about who they are. As McCaslin (2006)¹³ notes, students come from a range of backgrounds and are bringing “varied ethnic, racial, linguistic and cultural backgrounds into classrooms that only fifty or sixty years ago were homogenous.” Identity is not static, or pre-determined by elements such as race, class or gender. It implores teachers to build “new social spaces” in their classrooms to help them extend their sense of self. Learning in a multi-cultural environment is seen as better compared to learning in a homogeneous environment.

The ideas generated by multi-cultural groups were seen to be of higher quality compared to that created in a homogenous group of people. Minority view points stimulated discussions of multiple perspectives and previously unconsidered alternatives were discussed. Most innovative companies deliberately established diverse teams.

Strategies for educating children

Willower (1975)¹⁴ found that educators vary along a continuum of beliefs about the way children learn to behave. He conceptualized this as pupil-control ideology. At one end of the continuum is the custodial (teacher-centered) educator who believes that teacher has to set the rules. He employs punitive sanctions and maintains attitudes of general mistrust, moralistic perceptions and keeps major focus on the maintenance of order. He will be of highly controlling nature and highly impersonal in relationships with students. At the other end is the humanistic (student-centered) educator who maintains active interaction, positive attitudes and communication and close personal relationships with students. He is flexible in enforcement of rules and is an advocate of student self-discipline. He

fosters self-determination and independence of students. (Willower, Eidell, & Hoy, 1967)¹⁵. Both these schools have their own advantages and disadvantages.

In teacher-centered classrooms, control is of primary importance and “authority is transmitted hierarchically” (Dollard & Christensen, 1996)¹⁶ meaning the teacher exerts control over the students. Critics of teacher-centeredness argue that in these classrooms, compliance is valued over initiative and passive learners over active learners (Freiberg 1999)¹⁷. These forms of instruction lend themselves to having the teacher stand in the front of the classroom while all students work on the same task. Rooms are often organized so that desks face toward the primary focal point, the teacher (Boostrom, 1991)¹⁸. In addition, teachers exert their control through a system of clearly defined rules, routines and punishments that are mandated rather than developed with the students (Freiberg, 1999)¹⁷. When students exhibit undesirable behavior, advocates of a teacher-centered approach often rely on punishments, such as reprimands, frowns, time outs and loss of special privileges.

Finally, advocates of a student-centered approach to classroom management proposes that teachers minimize the use of extrinsic rewards because they may adversely affect student motivation, create reliance on the teacher and encourage appropriate behavior for the sake of a reward rather than for the good of the group (DeVries&Zan, 1994)¹⁹.

However contrary to the common belief in summarizing her findings in the empirical literature, Chall (2000)²⁰ noted that: The effects on academic achievement (i.e., reading, writing, mathematics) of a teacher-centered educational approach was generally found to be more effective than the student-centered educational approach.

In this context the relevance of interactive story telling technique comes to the forefront as a teacher centric narrative method providing facility for student creativity and learning concurrently. Stories go well with multicultural setting and the power of stories can be used to convince the young minds about the virtues of a multicultural living.

Influence of storytelling – diverse perspectives

1. Historical Perspective: Since the beginning of time, stories have been used to entertain, pass on information, values and culture, and nourish the spirit. Human beings are natural storytellers and evidence of storytelling has been found in most civilisations. Story telling is

therefore a way of understanding the world and ourselves. Storytelling is an ancient art rooted in our common human culture, as well as in our physiology and psychology. It is a form of communication that predates history as a means of watching lessons and passing history down from one generation to another. Before printing technology evolved storytelling used to be practiced and has sociologically affected people around the globe (Thompson, 1978; Madej, 2003; Garzotto&Forfori, 2006)²¹. Storytelling was an activity during leisure time where old folks told stories to others especially young children for the purpose of educating them on matters related to culture, taboos, customs, and beliefs. Peshawar, capital of Khyber Pakhtoon Khawa Province of Pakistan where the caravan trade routes from China, India, Persia and Turkestan converged was an important stopping-place for traders. They used to meet in the Qissa Khwani Bazaar (Storyteller's market) of Peshawar and would exchange stories learnt on their travels. The storytellers now sit in Hujras and recite the stories. (Ahmad &Boase, 2010)²². The story tellers used to narrate the stories of kings and common people of different cultures which brought them together without even visiting the other societies and bringing the culture familiarity as is still seen between the people living at the Afghanistan and Peshawar borders of Pakistan Naqvi RH.²³

2. Socio-cultural Perspective: Values of a society as embedded in its literature are passed down through generations by means of oral storytelling. Stories were created for knowledge transfer and sharing (Machado et al., 2001; Madej, 2003).^{24, 25} Stories have increasingly been recognized as important in social science. The dominant group of society justifies its position with stock stories (Delgado, 1989, 1990; R. A. Williams, 1989)²⁶. These stock stories construct realities in ways that legitimize power and position. Stories by people of color can counter the stories of the oppressor. Furthermore, the discussion between teller and listener can help overcome ethnocentrism and the dysconscious way many scholars view and construct the world. (Tate, 1997, p. 220).²⁷

For Connelly and Clandinin (1994),²⁸ "life is a story that we live," and it is through the telling and retelling of those stories that we make meaning and come to understand the stories of others. When we understand

circumstances, events, or conflicts from other peoples' perspectives, we can identify and implement better strategies for addressing these problems." Stories are capable of stimulating cognitive skills of listeners and emotionally influence them (Brand & Donato, 2001).²⁹

Neurological perspective: Our brains are wired to understand and retain stories and not logic or facts for long– (Jennifer Aaker 2014)³⁰. Brain based learning theories is built on the structure of the brain, how it receives and interprets information(Dwyer, 1998)³¹ They promote teaching and learning methods that appeal to a variety of learning styles and intelligence with the goal of increasing learning within the short time.

The neurochemical called oxytocin is a key element produced in the brain which generates "it is safe to approach others" signal in the brain. It is produced when we are trusted or shown a kindness and it motivates cooperation with others. It increases empathy which is important in social beings. It was seen that character driven stories synthesise oxytocin and compelling gripping story creates oxytocin (Paul J Zak – Why your brain loves good story telling)³². Facts activate only the language processing areas of the brain, while stories activate the motor cortex and sensory cortex as well with the result that on being presented with a story, both sides of the brain work to process the words, interpret the story, and store its meaning in memory. Essentially, stories make the brain behave as if we are experiencing the events firsthand. For example, a frightening story might trigger the heart to beat faster. The combination of these brain responses makes us empathize and connect with stories (Berns et al., 2013).³³

Further to it, research conducted by Uri Hasson of Princeton University confirms that the brains of a person telling stories and that of the person listening to the stories can synchronise. Thus a person telling stories could plant ideas thoughts and emotions to the listener's brains. Using the power of stories we can make others experience what we experienced and get connected.

As partners in multicultural world the people are expected to show empathy as a quality for good social living. It was found out that a set of neurons in brain called mirror neurons are important in this regard. Neuroscientists have already declared that people scoring high on empathy tests have especially busy mirror neuron systems in their brains

(Suzanne Keen 2006).³⁴ Mirror neurons are neurons in the premotor area of the brain that are activated not only when performing an action oneself, but also while observing someone else perform that action. It is believed mirror neurons increase an individual's ability to understand the behaviors of others, an important skill in social species such as humans (Iacoboni, M., et al., 1999).³⁵ The evolution of mirror neurons and their links to language, emulation and empathetic response make a powerful case that without the vicarious stimulation of storytelling and unfamiliar role models, there is little motivation the human brain has to reach out and feel for the other. Some academicians and storytellers believe that the non-visual story has a deeper psychological impact than the visual story, since the non-visual relies on each mind using its personal experience to build its imagination, making it a more intimate, relatable 'vision' with a greater impact on one's empathy. In essence, the receiver of the story becomes the co-creator of the story (Woodard 2002).³⁶ As human beings we are part of a larger story of universe and of living beings. Narrative story telling improves learning by actively engaging learners in the information they are being exposed to versus passive student participation often found in traditional class room setting (Richter & Koppet, 2000).³⁷

4. Psychological perspective : Cognitive psychologists have suggested that we understand the world in terms of story-like causal relations (Sloman 2005)³⁸, computer scientists have suggested that stories should be used in modeling human cognition (Schank and Abelson 1977)³⁹, psychologists and philosophers have suggested that stories are central to the construction of the self (Bruner, 1986)⁴⁰, and management researchers have identified storytelling as a key element in what makes ideas memorable (Heath C. and Heath D., 2007).⁴¹ There has been much discussion in history and sociology on methods for integration of narrative into social science theory (Abbott 1983).⁴² Keathoately of cognitive psychology in university of Toronto opines that stories create a simulation of reality.⁴³
5. Religious perspective: The world's religions use stories to demonstrate human and spiritual values and virtues. The Bible, the Quran, and the Mahabharata are full of stories about the human condition and what helps us live together. The stories such as Good Samaritan, the Sun and the Wind, and the story of King Solomon and the baby, are examples. These stories cross histories and

cultures. The role of religious story telling needs to be contextualised within its broader human base. Stories are always intended to be entertaining and engaging; but the hallmark of religious stories is their embedded meanings about the values, purpose and direction to life – they are never just about entertainment (Power, 2010).⁴⁴ For early humans, stories were their vehicles for handing on cultural meanings, history and values, for explaining cultural practices and for providing personal guides to life. Humans had become genetically dependent on a non-genetic cultural inheritance not just for survival but for meaningful lives.⁴⁵

6. Pedagogical Perspective: According to Livo and Rietz (1986)⁴⁶, "the telling of stories is an old practice, so old, in fact that it seems almost as natural as using oral language". In aboriginal societies, storytelling is a very important part of the educational process. It is through stories that customs and values are taught and shared (Little Bear, 2000, p. 81).⁴⁷ Stories are passed down from generation to generation; between men, women, and children and are often used to teach. In reviewing the oral histories of the 1930 pre service teachers, Grinberg concluded that storytelling helped these prospective educators make connections between the children's lives and the classroom. More recently, Clark and Medina (2000)⁴⁸ have described how the reading and writing of literacy narratives in preservice teacher education have increased their understandings of literacy, pedagogy, and multiculturalism.

Egan (1988)⁴⁹ has argued for the conceptualization of teaching as storytelling; "the story, then, is not just some casual entertainment; it reflects a basic and powerful form in which we make sense of the world and experience" (p. 2) "... Therefore, storytelling can be perceived as tangible when individual awareness advances storytelling into the educational content of the curriculum (Abrahamson, 1998).⁵⁰ Yet, "stories are not just a means by which human beings make sense of the world around them" (Roney, 1994),⁵¹ they are also the means by which social change is enacted.

In regards to education, Elbaz (1991)⁵² contends that "story, is the very stuff of teaching, the landscape within which we live as teachers and researchers, and within which the work of teachers can be seen as making sense." McCaslin (2006)⁵³ reveals that although people tend to regard storytelling as being relevant only for young children, this perception obscures the importance of stories in many cultures as a way

of disseminating important information for all members of society. Stories help people to understand their place in the world and make connections, and in doing so assist in the construction of their identity.

Storytelling engages students on a level that many teaching methods do not (Rossiter, 2002).⁵⁴ Not only do learners hear the information, but they are immersed in the content on a deeper and richer level through emotional and personal connections and visual imagery (Abrahamson, 1998; Morgan & Dennehy, 1997).⁵⁵ The fact that stories evoke emotions adds to their learning effectiveness because learning experiences associated with emotions are more easily stored and recalled (Morgan, 1997; Weiss, 2000)⁵⁶ Similarly, Perry (2000) supports this premise stating that when stories stir emotions, the cognitive parts of the brain are activated to store the new information. Stories provide a sense of intimacy with the protagonist of the story, even in situations where physical distance, facial expressions, eye contact and other cues affecting immediacy and intimacy are absent. Stories help to make sense of, evaluate, and integrate the tensions inherent in experience; the past with the present, the fictional with the “real” the official with the unofficial, personal with the professional, the canonical with the different and the unexpected. Stories help us transform the present and shape the future for our students and ourselves so that it will be richer or better than the past (Dyson & Genishi, 1994).⁵⁷

Administering pedagogy through story telling

Interactive Story telling technique will be most useful in imparting the concepts of multiculturalism in the young minds. It is a learning platform which incorporates the advantages of teacher centric learning and the student centric learning. In combination with a narrative enquiry this method has four stages.

Stage 1: Teacher centered learning: The teacher explains the concept to be taught in detail. At the end of the explanation a contextual story is narrated.

- a) Select Stories that recognize and acknowledge unique traditions, customs, and beliefs of various ethnic and racial Groups.
- b) Select stories that deal with empathy. Where no empathy exists, conflict breeds. Its lack can be found all around us, be it in our wars, crime, inequality, anti-social behavior and even the lack of social consensus within previously homogeneous cultures and the myopic behavior of the “me” generation.

The story may be so designed to have the following eight essential elements of storytelling: 1. Character 2. Character Traits (that make characters interesting) 3. Goal 4. Motive 5. Conflicts & Problems 6. Risk & Danger 7. Struggles 8. Detail. Story is a narrative account of a real or imagined event.

The story has to have a goal which the protagonist is after because of a motive. Here the goal of the protagonist is to establish the virtues of multicultural living. There are obstacles which block the protagonist from reaching the goal. Details make the story look original. The blocks are to be created by a character leading to a conflict. Risk which is the probability of failure in reaching the goal has to be highlighted. Danger which is the consequence of failure is also to be highlighted. These create tension, excitement and drama in the story and actually drive the story. Dangers can be failures, ridicule or belittlement. The protagonist has to struggle to reach the goal which may be against internal situations or external factors. Without struggle the story will lack punch. Story is designed to explain the concept in detail.

In a multicultural education setting, the story, for example, can have a goal of applauding high victory achieved by a multicultural group against the bigotry of a racial oppressor who harass poor peasantry. A multiracial group using learning from their cultures or practices contribute to the strategy formulation of the group which uses it collectively to win over the adversary after a tough fight could be a story to instill the virtues of collective wisdom acquired from multiracial background.

Stage 2: Reflective phase. After the story is narrated the students are asked to reflect on the concept and the story and seek clarifications needed.

Stage 3: Student centered learning and dissemination. Now the students are split into groups and asked to make their own stories on the same thread with new interpretations of the events and solutions.

Stage 4: Narrative enquiry. Narrative sets the quality of experience to be studied, and it names the patterns of inquiry for its study. Based on the set patterns the stories are evaluated. While as a research method, it is important that “narrative inquiry must question the ‘truth’ status of teacher narratives and seek multiple critical (re)readings from a variety of analytic approaches” (Johnson, 2001, p. 199).⁵⁸ The narratives of ‘Panchthanthra’, an Indian classic, confirms the utility of this method by which Vishnu Sharma taught the idiotic princes the essence of governance in a period of six months.

In asking the participants to read, edit, and otherwise collaborate on the construction of their own personal stories, a teacher seeks to make their lives present. Ultimately, it is this type of procedure and discourse between participants and teacher that is most vital for the narrative to succeed. Larson (1997)⁵⁹ substantiates this position by emphasizing that “failing to engage in deliberative dialogue and inquiry, researchers put themselves at greater risk of not seeing, not understanding, and misinterpreting people whose lives and life experiences differ from their own”. Here narrative inquiry becomes a pedagogical strategy. Narrative inquiry as a means of learning offers a constructive stance and is found to be different from the traditional learning method which assumes students are passive knowledge receivers and accumulators.

Conclusion

Multicultural education is to be promoted to ensure a world which is truly global where people of different races, nationalities and ethnicities live in peace and harmony with equality and equity. In the current global context where parochialism is on the ebb it looks the only way ahead. There has to be a global agreement towards this. One of the best pedagogical tools available that can be used for meeting the objectives of multicultural education is storytelling, a historically established teaching methodology. Story telling ensures easy learning which is brain based and having high retention. Story telling is comparable to experiential learning. The teacher is able to elicit a bond of oneness with the student. A universally accepted theme can be taught to the students by the teachers which will ensure their development and respect other people of varied races and ethnicities. A Properly administered story telling methodology will ensure that the students make their own stories on the theme of equity and equality of races which will ensure that the student imbibes the spirit of multiculturalism as his permanent learning.

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Role of Transformational and Transactional Leaderships in Job Satisfaction: in a Select Public Sector Organisation

S. Narendra Rathnaraj and A. Vimala

A b s t r a c t

The indispensable role of leadership paves the way for any organization to reach its ultimate goal. The rapport between the leader and the subordinates, determines the success of leadership and in turn, the organisation at large. The different types of leadership result in different level of the commitment of the employees, productivity and job satisfaction. A successful leader makes attempts to influence the subordinates in order to reach the goals of the organisation. The goals are accomplished by the leaders, mainly through their styles of leadership. When leadership and its strategies are common to any industry or organisation, the role of leadership and its result in job satisfaction are more vital and complex in Civil Supplies Corporation of Government of Tamil Nadu. Though there are studies that are taken up to assess the role of leadership in job satisfaction, this study makes a difference by taking a service oriented organisation, i.e. Civil Supplies Corporation of Government of Tamil Nadu, rather than a profit making or expecting organisation. To understand this in a better way, this study was conducted with two hundred and fifty employees of Civil Supplies Corporation, Government of Tamil Nadu. The study focuses on two major aspects of leadership, specifically, transformational leadership and transactional leadership. On the analysis of employees, it is perceived that transformational leadership has been implied to be preferable for managing a public sector organisation with job satisfaction of employees.

Key words: Leadership; transformational; transactional; job satisfaction; public sector;



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There are numerous service sectors that help in the better living of the common man. However, though they are called service sectors, such organisations and industries are mostly profit oriented. At times, there could not be much difference seen between the service sector and the primary and secondary economic sectors, except the difference in the nature of work. The hidden agenda of all the economic sectors lies in gaining profit. Among all these, Civil Supplies sector is a domain where the profit is measured in terms of giving rather than gaining. In Tamil, there is a saying “The one who gives food gives life.” The pleasure of giving, especially food, is inexpressible. However, more than this self-satisfaction in this sector, the leadership qualities of the authorities provide more job satisfaction to the employees of this department. It is important to understand that the leadership qualities and the job satisfaction of this sector are totally different from the rest of the domains. The purely service oriented nature of

Civil Supplies Corporation demands a study on the important role of leadership and job satisfaction in enhancing the productivity of a Public Sector Corporation. The Tamil Nadu Civil Supplies Corporation was established in the year 1956 by Government of Tamil Nadu. The major activities of this Corporation are distributing food grains, sugar, cooking oil and even 'kerosene' at a very low cost through the public distribution system to the general public. The Corporation involves in procuring food grains from the farmers at a price fixed by Government from time to time. The procured grains are safely stored in the warehouse godowns and are distributed the products through the ration shops. This makes the fundamental effort of maintaining quality in the products provided to the common public, which remains to be the ultimate service oriented objective of the Civil Supplies Corporation. The employees of the Corporation are expected to dedicate themselves to execute the above tasks with commitment, care and concern and the authorities of Corporation as role model leaders lead the employees in the right direction.

The term leadership, from time immemorial, has been the subject of extensive debates, discussions and research by eminent scholars and management gurus. Yet the modern understanding and interpretations have made leadership a dynamic topic. Effective leadership improves organisational productivity, individual productivity, employee's motivation, behaviour, job satisfaction and so on. A leader has the ability to lead, guide and influence the attitude of the staff to realize the targets of an organization. It is the duty of such a leader to motivate his staff to work with enough confidence and enthusiasm. However, different leadership styles yield different results ranging from the worst to the best. In fact, a role model leader and his way of operation have been considered as the asset to any organisation.

Among various types of leaderships, the transactional and transformational leaderships are discussed much in the recent researches. Transactional leadership gives much priority to structure and order, as seen normally in Police and Military Services, who naturally manage a large number of employees or subordinates. It is mandatory, as the task assigned requires a time bound completion and execution of the work with clinical precision. This type of leadership expected to have self-motivated workforce. This leadership has a natural comparison with transformational leadership. According to Bass (1985), transformational leadership style

is the systemic way by which the subordinates or workers are motivated, congratulated and appreciated by the leader. In fact, instead of directing the employees, the leaders of this type, choose to influence the employees, rather than direct them. As a result, this increases employee's job satisfaction level thus leading to an improved organisational productivity.

An organisation that fosters the employee job satisfaction in a big way is also more capable of retaining and attracting employees with the required skills that it needs to enhance the production (Mosadegh Rad & Yarmohammadian, 2006). Several studies have also examined the relationship between the two factors and concurred that a successful leadership has significant impacts on job satisfaction and organisational commitment (Lok & Crawford, 1999, 2001; William & Hazer, 1986; Mosadegh Rad & Yarmohammadian, 2006).

Elevated job satisfaction motivates employees psychologically and also improves their physical well-being (Ilardi, Leone, Kansser, & Ryan, 1983) and positively affects the performance of the employees (Vroom, 1964; Porac, Ferris, & Fedor, 1983). According to Mosadegh Rad and Yarmohammadian (2006), employee job satisfaction refers to the attitude of employees towards their jobs and the organization which employs them.

Previous researches have explored the relationship between employee job satisfaction and leadership behaviour in various settings such as banking, healthcare, education and business organisations (Cook, Wall, Hepworth, & Warr, 1989; Bass, 1990; Chen & Silverthorne, 2005).

This article makes an attempt to categorize the relation between leadership styles and job satisfaction with respect to a public sector organization – Civil Supplies Corporation, Government of Tamil Nadu. The specific objectives of this study are:

- i. To find the relationship between transformational leadership and job satisfaction.
- ii. To find the relationship between transactional leadership and job satisfaction.

Literature Review:

Leadership: Leadership is a process of interaction between leaders and followers, where the leader makes an attempt to influence followers to achieve a common goal (Northouse, 2010; Yukl, 2005).

According to Chen and Chen (2008), studies on leadership have identified different types of leadership styles which leaders adopting various styles in managing organizations (e.g., Davis, 2003; Spears & Lawrence, 2003; House, Hanges, Javidan, Dorfman, & Gupta, 2004; Hirtz, Murray, & Riordam, 2007).

Among the more prominent leadership styles are Burns' (1978) transactional and transformational leadership styles. Transformational leaders emphasise followers' intrinsic motivation and personal development. They aim to merge followers' aspirations and needs with essential organisational outcomes. In so doing, transformational leaders are able to foster followers' commitment to the organisations and inspire them to exceed their expected performance (Sivanathan & Fekken, 2002; Miia, Nichole, Karlos, Jaakko, & Ali, 2006; Bass & Riggio, 2006; Bass, 1985, 1998).

In respect to current complex organisations and dynamic external and internal business environment, transformational leaders are often seen as ideal agents of change, who could lead followers in times of uncertainties and high risk-taking. In contrast, transactional leaders gain legitimacy through the use of rewards, praises and promises that would satisfy followers' immediate needs (Northouse, 2010). They engage followers by offering rewards in exchange for the achievement of desired goals (Burns, 1978).

Dimensions of Transformational leadership Avolio, Bass, and Jung (1997) indentified four dimensions of transformational leadership, namely, Idealized Influence, Inspirational Motivation, Intellectual Stimulation and Individualized Consideration.

Idealised influence concerns the formulation and articulation of vision and challenging goals and motivating followers to work beyond their self-interest in order to achieve common goals (Dionne, Yammarino, Atwater & Spangler, 2004). Accordingly, leaders act as role models who are highly admired, respected and trusted by their followers (Bass & Riggio, 2006). Further they emphasised

that leaders with great idealised influence are willing to take risks and are consistent rather than arbitrary by demonstrating high standards of ethical and moral conduct.

Inspirational motivation refers to the way, how the leaders motivate and inspire their followers to commit to the vision of the organization. Leaders with inspirational motivation foster strong team spirit as a means for leading team members towards achieving desired goals (Antonakis, Avolio, & Sivasubramaniam, 2003; Bass & Riggio, 2006).

Intellectual stimulation concerns with the role of leaders in stimulating innovation and creativity in their followers by questioning the assumptions and approaching old situations in new ways (Bass & Riggio, 2006; Nicholason, 2007). They always encourage their followers to try new approaches or methods to solve the old problems.

Individualized consideration refers to leaders paying special attention to each individual needs of the followers for achievement and growth by acting as a coach or mentor (Bass & Riggio, 2006; Nicholason, 2007).

Dimensions of Transactional leadership have been explained by Bass and Avolio (1995) that transactional leadership consists of three dimensions, namely a) contingent rewards, b) management by exception (active) and c) management by exception (passive).

- a) Contingent reward refers to leaders clarifying the work that must be achieved and use rewards in exchange for good performance.
- b) Management by exception (passive) refers leaders intervening only when problem arise.
- c) Management by exception (active) refers to leaders actively monitoring the work of followers and make sure that standards are met (Antonakis et al., 2003).

The above review of literature shows us the various aspects of leadership, more particularly the transformational and transactional leaderships. The following will explain the concept in a better light.

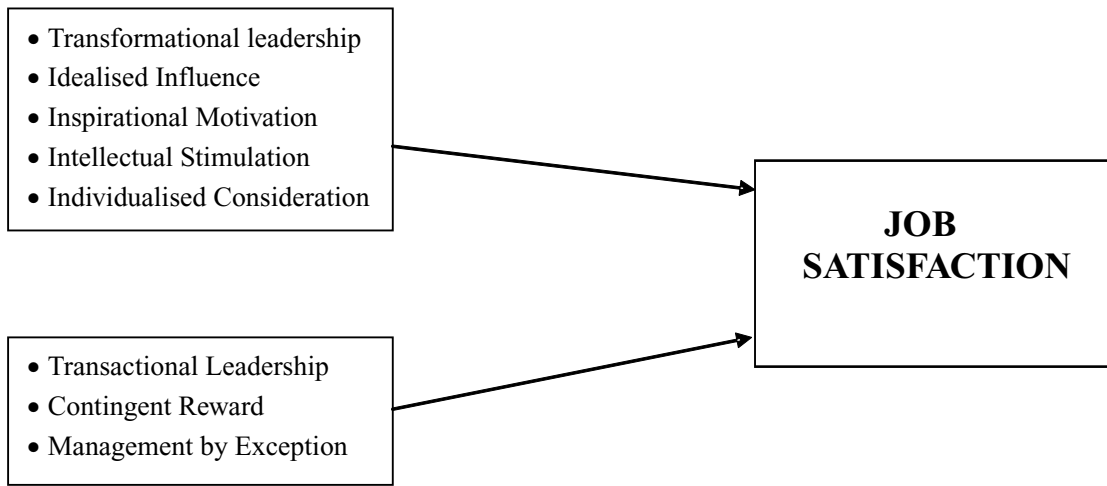


Figure 1

Relationship between transformational and transactional leadership style

Methodology:

The present study, due to its descriptive nature, is based upon a personally administered questionnaire. Because of the enormity of the research topic, Multifactor Leadership Questionnaire (MLQ) was preferred as a base questionnaire to undertake this study. However the standard MLQ questionnaire was tailored to the needs of the study based on the feedback from the pilot study; this allowed the study to be more effective and responsive. A sample of 350 Civil

Supplies Corporation employees working in Tamil Nadu was gathered through random sampling, with a response rate of 71%. As a result, 250 questionnaires were selected for analysis.

A descriptive test was also applied to determine the characteristics of the respondents to identify their gender, age, position within the organisation, experience, etc. The results are established in Table 1.

Table 1

Demographic Characteristics of respondents (N=250)			
Characteristics		N	Percent
Age (Years)	20-25	26	10.40%
	26-30	64	25.60%
	31-35	81	32.40%
	36-40	49	19.60%
	>40	30	12.00%
Experience (Years)	1-5	49	19.60%
	6-10	64	25.60%
	11-15	88	35.20%
	16-20	26	10.40%
	21-25	11	4.40%
	26-30	7	2.80%
	>30	5	2.00%
Level of job	Entry	62	24.80%
	Middle	158	63.20%
	Top	30	12.00%
Qualification	Graduation	123	49.20%
	Master	96	38.40%
	Other	31	12.40%
Marital Status	Single	115	46.00%
	Married	135	54.00%
Gender	Male	144	57.60%
	Female	106	42.40%

Descriptive statistics for independent and dependent variables are shown in Table 2.

TABLE 2

Descriptive statistics for Dependent variable and Independent variable		
	Mean	Std. Deviation
Transformational Leadership	2.9846	0.55658
Idealised Influence	3.0104	0.74976
Inspirational Motivation	3.2124	0.69289
Intellectual Stimulation	2.9182	0.53925
Individualized Consideration	2.9845	0.66882
Transactional Leadership	3.1745	0.63465
Contingent Rewards	3.3023	0.72478
Management by Exception (Active)	3.3566	0.68352
Management by Exception (Passive)	2.5626	0.95344
Job Satisfaction	4.2245	1.03562

From the above table it is observed that Transformational leadership has positive and significant effect on the job satisfaction ($r=0.324, p<0.01$). The parameter Idealised influence has positive and significant relationship with job satisfaction ($r=0.352, p<0.01$). Inspirational motivation has positive, moderate and significant relationship with job

satisfaction ($r=0.227, p<0.01$). Similarly the Intellectual Stimulation has a positive, moderate and significant relationship with job satisfaction ($r=0.209, p<0.01$). Even the Individualised Consideration also has positive, moderate and significant relationship with job satisfaction ($r=0.275, p<0.01$).

Correlations of transformational and its traits with independent variables are presented in Table 3.

TABLE 3

Correlations of transformational leadership and its traits with independent variables		
Job Satisfaction		
Transformational Leadership	Pearson correlation Sig. (2-tailed)	0.324** 0.000
Idealised Influence	Pearson correlation Sig. (2-tailed)	0.352** 0.000
Inspirational Motivation	Pearson correlation Sig. (2-tailed)	0.227** 0.000
Intellectual Stimulation	Pearson correlation Sig. (2-tailed)	0.209** 0.001
Individualized Consideration	Pearson correlation Sig. (2-tailed)	0.275** 0.000

Note: ** Correlation is significant at 0.01 level (2-tailed)

Based on the above data it is observed that the present study shows that the 'Transformational leadership' has positive and significant relationship with job satisfaction. Similarly 'Idealised influence' has positive and significant relationship with job satisfaction. In the same way 'Inspirational motivation,' 'Intellectual Stimulation' and 'Individualised Consideration' have positive, moderate and significant relationship with job satisfaction.

From Table 2 it is observed that Transactional leadership has positive, moderate and significant effect on the job satisfaction ($r=0.217, p<0.01$). Contingent Reward has positive, moderate and significant relationship with job satisfaction ($r=0.254, p<0.01$). Management by exception (Active) has positive, moderate and significant relationship with job satisfaction ($r=0.234, p<0.01$). Management by Exception (passive) has positive, moderate and significant relationship with job satisfaction ($r=0.203, p<0.01$).

Correlation of transactional and its traits with independent variable are as follows in Table 4.

TABLE 4

Correlations of transactional leadership and its traits with independent variables		
Job Satisfaction		
Transactional leadership	Pearson correlation Sig. (2-tailed)	0.217** 0.000
Contingent reward	Pearson correlation Sig. (2-tailed)	0.254** 0.000
Management by exception (Active)	Pearson correlation Sig. (2-tailed)	0.234** 0.000
Management by exception (Passive)	Pearson correlation Sig. (2-tailed)	0.203** 0.000

Note: ** Correlation is significant at 0.01 level (2-tailed)

From the analysis it is found that there is a positive and significant relationship between the components of transformational leadership and job satisfaction. In addition to the above results the study also reveals that is a positive, moderate and significant relationship between the components of transactional leadership and job satisfaction.

Conclusion

The above study made an attempt to find the relation between styles of leadership and employee job satisfaction, with special reference to Transactional and Transformational leaderships. The study made on two hundred and fifty employees of Civil Supplies Corporation of Government of Tamil Nadu identifies that there is a positive and significant relationship between Transformational leadership and job satisfaction. It is very well observed that the transformational leaders play a major role in creating a psychological empowerment and constructive work outcomes like organizational commitment and job performance which ultimately result in job satisfaction. It is due to this factor, the dedication of the employees of this largest service sector has enhanced a better public distribution system even at critical situations in Tamil Nadu.

But study notices that there is a positive and significant yet a moderate relationship between transactional leadership and job satisfaction. This study also looked at the fundamental effects of transformational and transactional leadership and the intervening role of trust and value on employees. Leadership styles were manoeuvred using three measures namely—quantity, quality, and satisfaction. Results indicated that transformational leadership had both direct and indirect effects on the performance of this Public Sector

Corporation, mainly due to the trust in the leader. However, it is evidently observed that transactional leadership had only indirect effects on the performance of the employees.

Thus the study concludes that transformational leadership deemed suitable to the Civil Supplies Corporation Government of Tamil Nadu, as it enhances the employee job satisfaction and achieving the organisational goals.

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Skimming and Scanning

Scaling the peak of civilizational greatness

Dr Mohan B

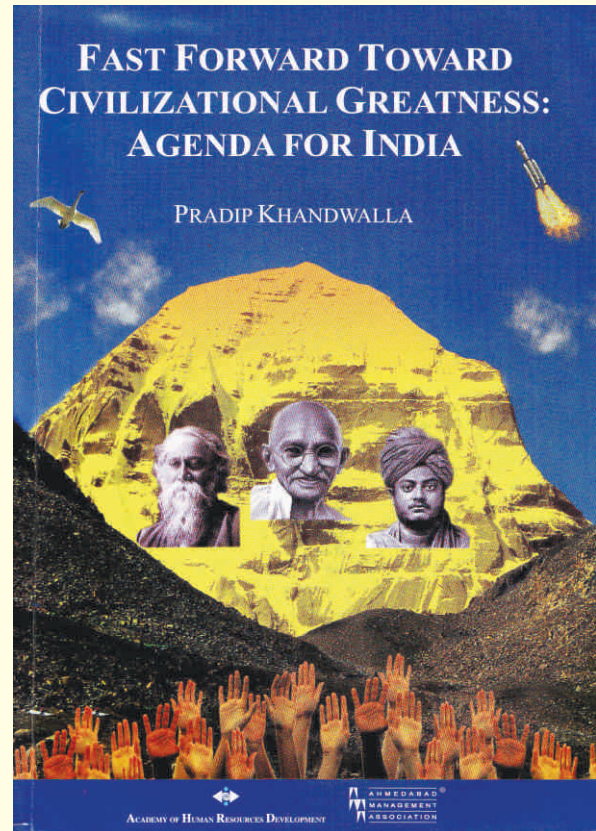
Great teachers consider it their duty to tell the world what they thought as the right way of doing things. In the book 'Fast forward toward civilizational greatness' Pradip Khandwalla, the renowned teacher from IIM, prescribes with a missionary zeal his idea of the action plan for the people of the nation to march ahead to reach civilizational greatness. A great civilization holds an imagery of people who are civic minded, kind, law – abiding, capable, innovative, agile, polite and generous. The book in seventeen chapters engages the readers with concepts that the author thinks, can qualitatively transform the progress of a nation and take it towards greatness.

The author believes that political influence and economic power that a nation may hold, need not make it a great civilization. He gives the example of Sweden as a great civilization in the modern world. It is a cradle to saddle welfare state and leads the world in gender equality, sustainable development, education and many other quality of life indicators. It is known for altruism and spends one percent of its GDP as foreign aid. Japan and Germany have shown the world how modern civilizations can be built from the ruins of war in short durations of time. How can one reach such coveted positions?

Pradip Khandwalla says that hidden powers of any nation will be unleashed when the civil society, business sector and the state itself engage and collaborate with humaneness, creativity and excellence in performance aided by spirituality to break into a virtuous cycle of growth. The virtuous cycle that he proposes has rapid economic growth, innovation, capable technology, strong nationalism, investment in human capital, elimination of structural blockages and the status of being a welfare state as entry points. He quotes the example of South Korea, China, Vietnam and Turkey to bring home his argument. South Korea broke into the virtuous cycle through the entry point of rapid economic growth while China and Turkey managed it by eliminating structural blockages. Vietnam managed it by investing heavily in human capital. In a virtuous cycle, complex chain of events take place between the constituents and aided by feed back loop, reinforce each other benevolently.

Rapid economic growth, the South Korean entry point to the virtuous cycle, was made possible by joint effort of business sector led by Samsung, Hyundai, Daewoo and the like, where as China and Turkey could do it owing to the transformational leadership of the state led by Deng Ziao Ping and Kamal Ataturk respectively.

Business houses, as seen in the case of South Korea and also in Japan, have tremendous power with them. “No business can be successful when the society around it fails,” exhorts the author and puts forth the concept of the need to be guided by enlightened self-interest of the individual while running business. A rational economic man acting on rational self-interest respecting the fairness of a market economy constitutes the basic element of capitalism and devoid of predatory instincts business working in a market economy can make miraculous changes in the economic progress of any nation. Grameen bank of Bangladesh is a living example of innovative business concept changing social landscape and handholding millions to sustainable life from abject poverty.



Many NGOs have made commendable changes in their areas of work across the globe driven by committed and motivated leadership. Aga Khan Rural Support Programme (India), Amul and SEWA are examples from India for such works. Social entrepreneurs are active today converging societal needs and business concepts and thus improving quality of social life. It is time that such people transform themselves as social leaders and contribute towards a greater transformation of the people. Disadvantaged communities can also be brought up by transformational leadership with vision. Aroville and Kaidesan remind us of the immense capacity of rural societies to transform as global icons under visionary leadership.

There is a need to orient the mindset of the youth towards civilizational greatness with creativity, humaneness and commitment for performance excellence. Visionary and professional leadership working with autonomy like National Institute of design, Tata institute of Social Science, National Institute of Drama has been able to transform generations of young men in this way.

Generally government agencies and departments in developing economies are not known for efficiency and performance . However there are departments like ISRO in India, Kenya Tead Development Agency and Public Health Programme in China which have become models in achievements. They have been performing as agencies with great autonomy in mission mode reaping success. Agencification coupled with application of new public management tools is the strategy for guiding departments towards performance excellence. E-governance and digitization are proven tools from developed countries which can be implemented for bringing transparency, efficiency and corruption free governance. Each of the various novel schemes that government introduces for improving quality of governance could be put under agencification mode.

Democracy guarantees liberty, equity and citizen rights. The ills of parliamentary democracy are to be removed for ensuring the leap forward. Mr Pradip Khandawalla recommends fixed tenure of elected representatives in place of the concept of holding office at the pleasure of legislature, separation of the functions of legislature and ministers and induction of experts from the fields as ministers to improve governance efficiency. State funding of elections will eliminate corruption from the system to a great extent. Citizen charters will ensure that the rights of citizenry are upheld.

India is a land of spiritualism. But it should not get corrupted by blind beliefs and greed towards materialism. Religions should be able to utilize faith to generate altruism, constructive creativity and humaneness. It should also encourage constructive creativity.

Thus in this book Pradip Khandawalla envisions India's ascent to civilizational greatness to be achieved through wide spread partnering between civil society, business sector and the state, a nobler social vision conditioning market economy and democracy to perform their role without greed for money and power. Multitudes of NGOs led by dedicated leaders would spearhead movements for improving quality of life in all segments of society. Agencification and new public management tools would improve the quality of governance. Social entrepreneurs maturing to become social leaders would lead efforts to integrate business interests with social needs to bring about all around well-being of the society. Young minds would be ignited to innovate and to perform with ethics and compassion. Then the inherent spirituality of Indian society would bind all the actions together and guide towards civilizational greatness – where head is held high and mind is without fear, where knowledge is free and the words come out from the depth of truth, where tireless striving stretches towards perfection and the stream of reason prevails over dreary dogma.



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ISSN-0973-3167



0973-3167