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INTRODUCTION

REVIEW OF LITERATURE

NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESIS (ES)

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

CONCLUSIONS

LIMITATIONS

SCOPE FOR FURTHER RESEARCH

REFERENCES

APPENDIX/ANNEXURE

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- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.

- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

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- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

RECONCILIATION BETWEEN TAXATION AND GDP GROWTH IN BANGLADESH: ISSUES AND ARGUMENTS FOR SOCIAL JUSTICE

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ABSTRACT

The study examines the relationship between Gross Domestic Product(GDP) growth and tax for the policy issues regarding long-term economic development of Bangladesh. This paper emphasizes the impact of taxation on GDP and demonstrates the influence that taxation has on the tax paying infant and small business firms. To analyze the relationship between GDP and tax, this research incorporated econometric models for time series data of Bangladesh over a period of 43 years. For overall estimation, unit root tests such as Augmented Dickey-Fuller (ADF 1981) test and Kwiatkowski–Phillips–Schmidt–Shin (KPSS 1992) tests have been employed for the incorporation of the econometric time series model; Johansen-Juselius cointegration test (1990) has been introduced for the existence of cointegration among the long run variables; Vector Error Correction Model (VECM) has been used for testing and assessing short-run association of cointregated series; Granger Causality Test (1969) has been used for unearthing pairwise causal relationship among the explained and all the other explanatory variables; and, finally stability tests by CUSUM and CUSUMSq have been deployed for examining whether the model is stable or not. The results show, if the Government in the long-run increases the collection of total tax revenue by one percent then the GDP will decrease to a 0.86 percent. The study concludes that the sustainable economic growth can only be achieved through a reformed tax policy on the basis of the country's socioeconomic situation and the canons of taxation.

KEYWORDS
GDP, total tax revenue, gross domestics saving, canons of taxation and sustainable economic growth.

JEL CODES
B22, B23, C01, C02, C22, C53, C82, C87, E02, E62, H2.

INTRODUCTION

Taxation is the major source of any government's revenue earning. Imposing tax is an intricate matter yet for covering government revenue earnings and ensuring steady tax policy and rate on different sectors. Every government should impose it prudently and optimistically by ensuring equity and social justice. In order to attract entrepreneurs, the Government of Bangladesh has been giving incentives in manufacturing and agricultural sectors since long. For the sake of economic assiduity, fiscal policy, including taxation, acts as a vital instrument of revenue earning all over the world. Taxation serves various development purposes to which Bangladesh is no exception as it also dependents on tax for raising its development budget especially in the area of infrastructure and human development. Here the government sector can play a vital role in this regard. Long-run relationship between tax and economic growth is vital for the sound implementation of policies as well as for ensuring social justice and equity.

The Government of Bangladesh adopted a vision to be a middle income country by the year 2021. It has also adopted one more vision to become a developed country and the 26th largest economy of the world by the year 2050. Under a Perspective Plan (2010-2021) the government has taken up some specific targets which incorporate issues such as achieve enhanced standard of living, better standard of education, improved quality of social justice, improved socio-economic milieu and sustainable development. In order to attain these marks, the government needs higher economic growth and for the higher economic growth it needs to improve the overall state of the infrastructure. To fulfill these issues, the target of GDP growth become plays a vigorous role in the economy. So here in perspective plan it was set out annually rise to 8.0 percent by 2015, and 10.0 percent by 2021 (Annual Report 2013-2014, 2015)

The revenue collection or tax system of Bangladesh can be divided into two parts: direct tax[i] and indirect tax[ii]. To achieve the aforementioned goals the Government of Bangladesh has almost indiscriminately raised all kinds of tax and VAT without giving any second thought on their future consequences. Besides, the government is also borrowing money from internal and external sources to fuel development budget, which would thus push the future tax burden to a new height. Imposing such a high rate of tax is a bad policy for a developing country like Bangladesh; which would eventually call in negative externalities. According to the Economic Studies of Brookings, high rate of tax reduces domestic consumption, savings, investments, and ultimately affects the GDP (Gale and Samwick 2014). A high rate of taxation could generate positive externalities only if then canons of taxation are the basis of such taxes is and only if such taxation creates positive incentives.

An increase in indirect tax, like supplementary duty and VAT, at the local level will rise negative externalities on both marginal people and business community. In Bangladesh the extreme poverty rate has dropped to 12.9 percent and poverty rate has dropped to 23.2 percent in 2016 (BBS, HIES 2016) yet most of the people are still living in the lower middle class strata and are struggling to meet their basic needs. Therefore, to ensure social justice and welfare for the people at the margin the government should adopt an indirect tax policy based on the canons of equity to trigger positive externalities. Theory conveys that, GDP, Gross Domestic Savings (GDS) and Total Tax Revenue (TTR) are interrelated (Keynes,1936). If the GDS increases then the GDP will increase but if the TTR increases then the GDS will fall. It ultimately means that the total investment will fall if the GDP falls. Figure 1.1 illustrates this relationship among GDP, GDS and TTR. Since the 1980s, all three of them are showing increasingly upward linear trend in Bangladesh while maintaining close link with each other.

FIGURE 1.1: RELATIONSHIP OF GDP, TOTAL TAX REVENUE, AND GDS
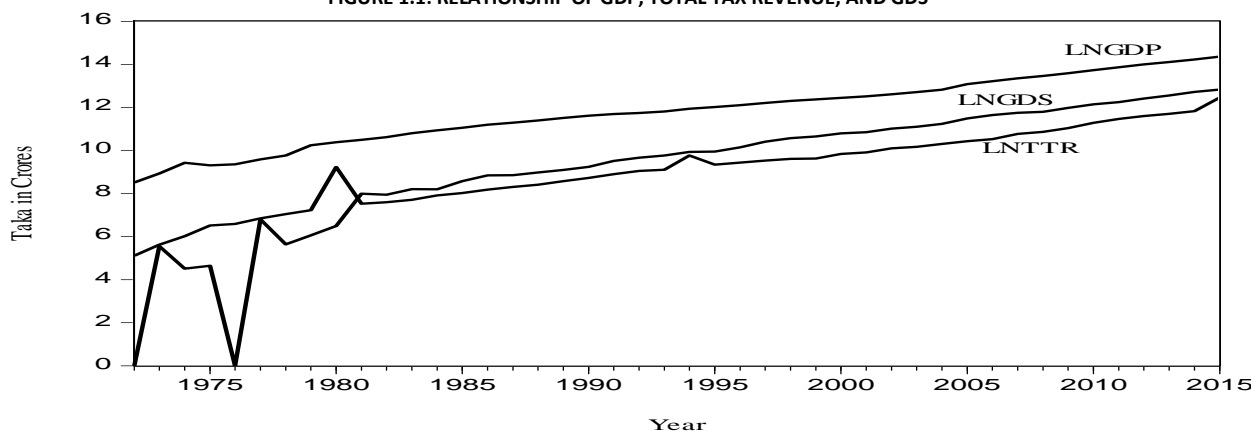
Source: National Board of Revenue (NBR)

The year 1972 and 1976 observed huge fluctuation between the GDP and GDS. In 1971, the year of independence, and in 1975, the year that witnessed the brutal assassination of the father of the nation, the country's savings were Tk.-167.50608 and Tk. -345.68894 cores respectively. However, its' taxation (TTR) had never faced a decreasing trend. The GDP from 1972 to 1979 was relatively low; as a result, the GDS was also very low between 1976 and 1982. In 1980 the government had collected a huge amount of tax. After 1980, the GDS increase rate was more than that of the TTR and it had witnessed almost parallel rate of increase with that of the GDP. Therefore, by this analysis we could say that the GDS have huge impact on the GDP; more than that of the TTR, because the GDS increased the GDP by rising the overall investment rate. However, the government never spends all that amount of TTR in the productive sector.

Supplementary duty is the major portion of indirect tax. The Government of Bangladesh has increased supplementary duty at local and import levels by risingTTR. Figure 1.2 shows the trends of supplementary duty at local and import levels between 1991 and 2015. The trends of supplementary duty at local and import levels are shooting upward on a year-by-year basis. Between 1993 and1999 the supplementary duty collection rate at the import level was relatively high compare to the local level, which was good for domestic investors but post 2000 the supplementary duty at the local level was increasing at a relatively higher rate than that of the import level.

FIGURE 1.2: TRENDS OF SUPPLEMENTARY DUTY AT LOCAL AND IMPORT LEVEL
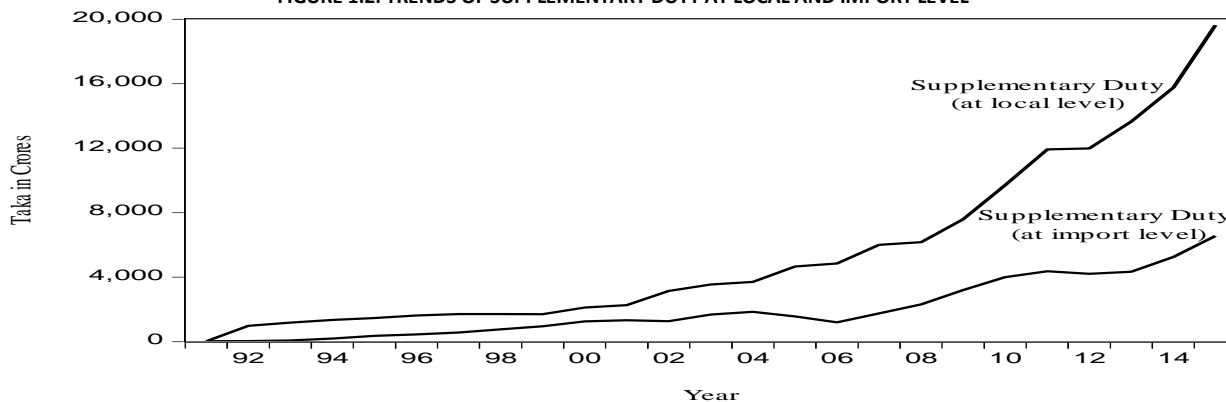
Source: National Board of Revenue (NBR)

In 2015, supplementary duty of Tk. 19630.96 cores was collected at the local level while the import level collection was Tk. 6560.2 cores. The supplementary duty collection at local levels was three times more than the import level. This type duty collection is destructive for domestic economy because then the imported goods become cheaper than the domestic products. Consumers by nature trend to buy cheap products that would in turn put the domestic producer into a tighter space. Such competition is bad for domestic investors because this will make them feel dis-incentivized.

The value added tax (VAT) also creates same kind of disincentive as it increases product's price. Figure 1.3 shows the trends of VAT at local and import levels between 1991 and 2015. Both trends were upward. Up until 2005 the VAT collection at import level was more than that of the local level, which was good for the domestic investors and also for the overall economy because it worked as an incentive. Prior to 2005 prices of local goods were relatively low due to a low VAT collection on local goods.

FIGURE 1.3: TRENDS OF VALUE ADDED TAX (VAT) AT LOCAL AND IMPORT LEVEL.
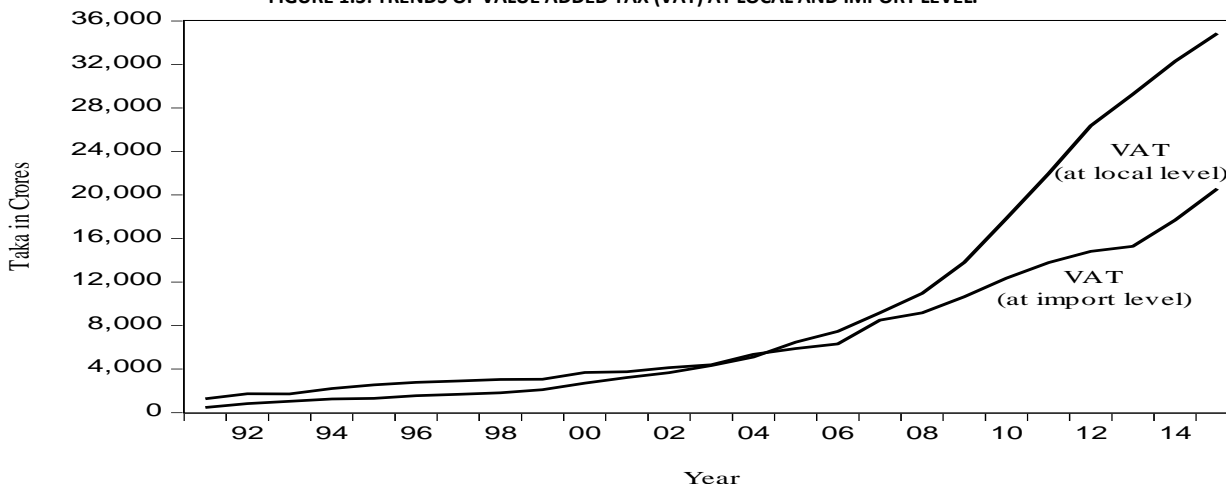
Source: National Board of Revenue (NBR)

The VAT collection at both local and import level went up after 2005. Between 2005 and 2015 government VAT collection at the local level was more than that of the import level. This is indicative of the fact that the government was hugely dependent on local level for its VAT collection. The low VAT collection on import level increased import of foreign goods, which has in turn increased consumption of foreign goods substituting for the local ones. Therefore, this form of VAT collection at the local level was not a good sign for the domestic economy.

Savings means disposable income (income after income tax) after consumption. From theory, we know that the prospective savings depends on disposable income and consumption(Keynes, 1936). The increasing rates of direct (income tax) and indirect tax (supplementary duty and VAT) unswervingly affect savings and consumptions. Figure 1.4 shows the trend of private, public, total consumption and the GDS. The total and private consumption are decreasing with a downward trend between 1980 and 2015 in relation to the constant rate but public consumption remained flat over the last 3.5 decades.

FIGURE 1.4: TRENDS OF GDS, PUBLIC, PRIVATE AND TOTAL CONSUMPTION
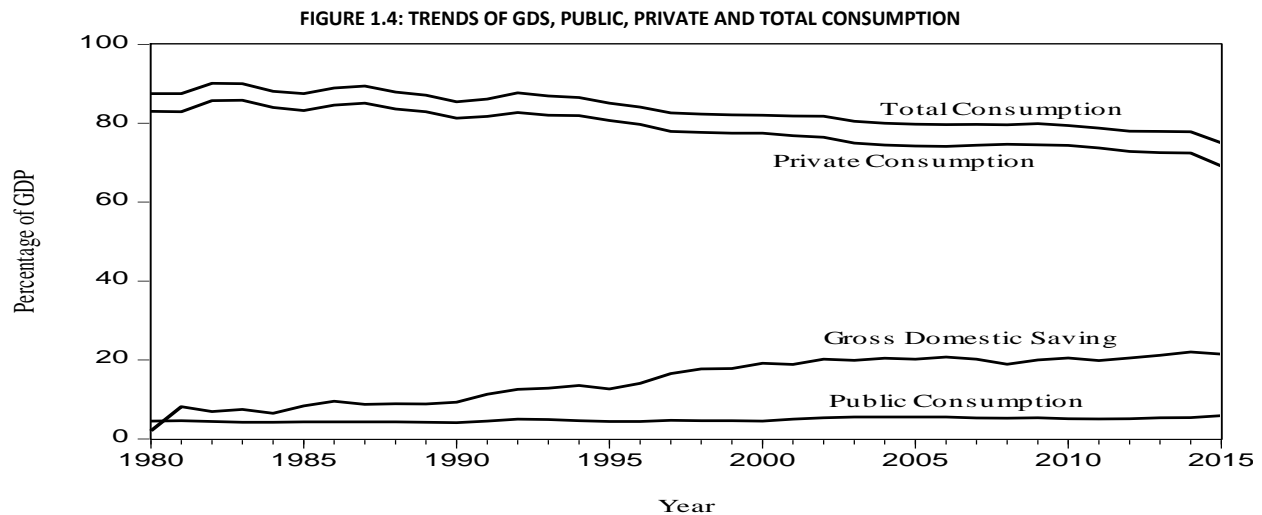
Source: Bangladesh Bureau of Statistics (BBS)

The total amount of consumption are dependent on private consumption. Arising GDS trend means that the GDP is rising against the backdrop of a total consumption decrease due to a overall taxation rise. The decreasing trend of consumption is a bad sign for the economy.

The Keynes general theory (1936) tells that saving equals to investment. Due to heavy taxation savings will decrease in the long-run as well as investment. Figure 1.5 shows that private and total investment was decreasing between 1980 and 1992. However, both private and total investments were rising with increasing trends between 1993 and 2015. Public investments were fluctuating around 6 to 7 percent up to 2005 while it experienced a rise between 1985 and 1991. Post 2005 onwards, up till the year 2011public investment once again experienced a fall. However, 2011 onwards the total investment has risen and continued to fluctuate around the 6 percent point.

FIGURE1.5: TRENDS OF GDS, PUBLIC, PRIVATE AND TOTAL INVESTMENT.
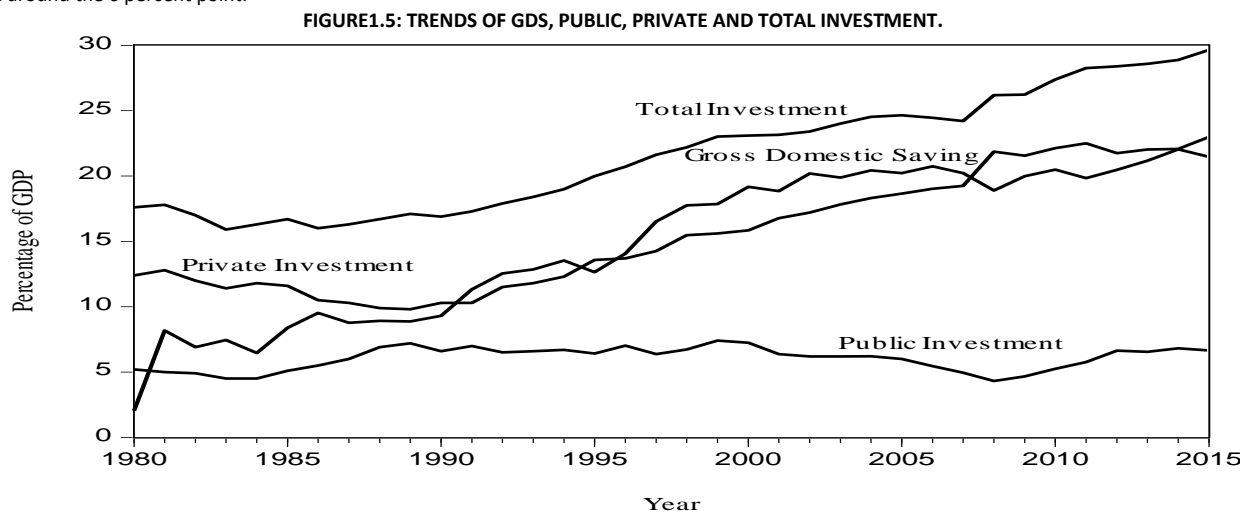
Source: Bangladesh Bureau of Statistics (BBS)

According to the figure 1.5 the GDS and the private investment showed a negative relation because when the GDS were increased then the private investment decreased and when the private investment increased then the GDS decreased. This had happened due to some internal and external economic forces like the high rate of taxation and various incentives. Based on the above observations it can be reiterated that the government should take up tax and VAT reforms policy following the canons of taxation and by ensuring social justice. This is how the strategic articulation plan of development, also known as the Perspective Plan 2021, of the Government of Bangladesh can be achieved.

REVIEW OF LITERATURE

A negative relation to economic growth confirmed by Rudolf Macek (2014), in the case of corporate taxation and personal income taxes approximated by World Tax Index. The study evaluates the impact of individual type of taxes on the economic growth by utilizing regression analysis on the OECD countries for the period of 2000–2011. Similar results were also achieved in the case of value added tax. Using time series data, Nadeem Iqbal et al. (2015) examined the empirical analysis of tax revenues and its impact on economic growth of Pakistan for years 1979-2010 using time series data. They show that there is significant positive impact of taxation on economic growth of Pakistan; i.e. if increase in sales tax and excise duties on all goods and services increase by 1 % lower the GDP growth of 3.8 % targeted at 4.1 % (IMF 2014).

The outcome of Plosser (1992) showed that, if government increases 0.05% of the average tax rate, the economic growth rate would be reduced by 0.4%. To know the result, he has compared the growth rate of per capita GDP in 24 OECD countries in 1960-1989 and ended up with the correlation coefficient of -0.52. Marginal tax rate plays a significant role in analyzing the long run impact on GDP growth rate through taxation, James et al. (2006) have indicated that high marginal tax rates, particularly rates at 50 percent or more, exert an adverse impact on long-term economic growth. They estimated that a 10 percentage point reduction in a country's top marginal tax rate will enhance the country's long-term annual growth rate of real GDP by approximately three-tenths of a percentage point.

Another significant study from Canadian Economic Perspective shows the impact of tax rate on economic growth. Ergete & Bev (2012) examined the impact of the Canadian provincial governments' tax rates on economic growth using panel data covering the period between 1977 and 2006 and found that a higher provincial statutory corporate income tax rate is associated with lower private investment and slower economic growth. Their estimates suggest that a 1 percentage point cut in the corporate tax rate is related to a 0.1–0.2 percentage point increase in the annual growth rate.

Engen & Skinner (1996) have reexamined the relationship between economic growth and taxation in light of the accumulated economic evidence. They also found that it is not necessarily obvious that high taxes are bad for economic growth, either in theory or in the data. However, the evidence is consistent with lower taxes having modest positive effects on economic growth. The impact of tax found out differently in the various income groups in the society and finally it become a useful explanatory variable to determine economic growth. Kalecki (1976) argued that taxation on lower income groups reduced real wages leading to less savings and hence investments. While for the higher income groups, increased taxes decreased the level of consumption; with the overall effect of reducing economic growth. Since demand for goods and services reduced by a across the board higher tax burden, inflationary pressures thus also minimized. To achieve a target economic growth the reform of tax policy play significant role:

Blanchard and Perotti (2002), claim that both increases in taxes and increases in government expenditures affect investment spending negatively. Accordingly, tax reforms through raising individual and corporate taxes do not necessarily spell out economic growth through increased government revenue but they could also derail economic growth through reduced social welfare and poor investment incentives. Taxes levied to the public and business entities must be reasonable and an effective tax reform strategy should not aim at increasing the citizens' tax burden. Instead, reforms should focus on streamlining the system and ensuring that tax proceeds are used effectively to achieve economic growth.

Arnold (2008) examined a set of panel growth regressions for 21 OECD countries and found that a significant effect of taxes on growth. Babalola & Aminu (2011) investigate the relationship between Fiscal policy and Economic growth (1977-2009) and found positive and significant causal relationship between income tax and economic growth. John et al. (2014) examines the dynamic causal relationship between tax revenue components and economic growth in Nigeria. They used time series data on different types of Taxes and GDP from 1986 to 2012. They found that total tax revenue has a significant effect on economic growth and that there exist a long-run relationship with equilibrium between aggregate tax revenue and economic growth. Lutfunnahar (2007) identified the determinants of tax share and revenue performance for Bangladesh along with 10 other developing countries for 15 years through a panel data analysis. The results suggested international trade, external debt and higher population growth are significant determinants of tax efforts. The study concluded low tax to GDP ratio for Bangladesh and other economies by not utilizing their tax revenue at full capacity that results in budgetary imbalance through raising tax revenue. It is not a one to one simple relationship between tax rate and GDP growth. A reciprocal relationship also given by Roshaiza et al. (2011). They analyze the relationship of economic growth and taxation revenue. This study included the annual data of Malaysia between 1970 and 2009. They used the GDP as measure of economic growth and concluded with the result that changes in taxes have no effect on economic growth. Another views found from neo-classical growth model of Solow. According to Solow (1956) in his model implied that taxes do not affect the steady state of growth. In other words, tax policy though distortionary, has no impact on long-term economic growth rates and total factor of productivity.

IMPORTANCE OF THE STUDY

Tax is an important part of any country's fiscal policy irrespective of its standing in the development ladder. By nature, Bangladesh's economy is rather vulnerable. As a powerful economic indicator the taxation policy influences Bangladesh's economy through consumption, saving and investment. The tax-based revenue influences economic growth negatively if the revenue budget solely depends on it. Therefore, this study aims to calculate the negative impact of tax revenue on economic growth and tries to find a way out of those while at the same time devises positive changes in the taxation policy to attain economic sustainability.

STATEMENT OF THE PROBLEM

The issue of tax policy and its impact on GDP growth rate is a delicate matter. It is very difficult to address and recommend proper policies of taxes without the long run study between tax rate and growth rate. To attain the sustainable GDP growth rate those relationship need to be figure out.

OBJECTIVES OF THE STUDY

The main objective of this study is to estimate the impact of tax revenue on GDP to show the actual impact of taxation on economic growth of Bangladesh. Besides, it has the following other objectives, too.

1. To analyze the long-run relationship between the GDP growth and tax rate with the cointegration potentiality.
2. To know the causal relationship between GDP and tax.
3. To forecast the impact of taxation on economic growth for sustainable development.
4. To learn about the issues related to justice and reconciliation in Bangladesh.

HYPOTHESIS

The null hypothesis of the study is

Ho: There is a significant negative relationship exist between GDP growth rate and tax rate

RESEARCH METHODOLOGY

SOURCE OF DATA - This paper is based on secondary time series data for the period from 1972 to 2015; collected from Bangladesh Bureau of Statistics (BBS), National Board of Revenue (NBR) Ministry of Finance, and Ministry of Planning of the Government of Bangladesh. The time series data covered a period that is 43 years long.

The overall methodology has two parts, theoretical and empirical. The empirical part is arranged by some econometric tests - ADF and KPSS tests for stationarity and Unit Root testing of a time series, Johansen's Cointegration tests for investigate long-run relationship, VECM for testing short run association of cointregated series, Pairwise Granger Causality tests for Pairwise causal relationship and CUSUM and CUSUM sq tests are for model stability.

ECONOMETRIC MODEL- A country's economic growth and her fiscal policy (tax) are interdependent. Sustainable economic growth demands appropriate fiscal policy. So, an equation for time serieshas been constructed in order to find out the relationship between Gross domestic products (GDP) or economic growths with respect of total tax revenue of Bangladesh;

$$Y_t = \alpha + \beta_1 T_t + \varepsilon_t \quad (1)$$

t =1992, 1993...............2014

Where, gross domestic product (Y), tax revenue (T) and t stand for the tth time periods, α is a deterministic constant factor and ε_t is a mean zero covariance stationary process and if the estimated value of β_1 is stationary significant then GDP and tax revenue can be forecasted.

Rewrite equation (1) as:

$$Y_t = \alpha + \beta_1 dT + \beta_2 idT_t + \varepsilon_t \quad (2)$$

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$$T_t = dT_t + idT_t$$

Here, tax revenue divided by direct tax *(dT)* and indirect tax *(idT)*

Now, by taking natural log in both sides we have:

$$\ln Y_t = \alpha + \beta_1 \ln dT_t + \beta_2 \ln idT_t + \varepsilon_t \quad (3)$$

THE EMPIRICAL PARTS

In this section, we investigate whether there is a long-run relationship between GDP and tax revenue. The unit root tests of time series data is an augment of the univariate time series of unit root tests. The univariate unit root tests not easily to except null hypothesis of time series in unit root approach. Now, Assuming the simple time series model for GDP (Y_t) with autoregressive AR (1) process.

$$Y_t = \phi Y_{t-1} + \varepsilon_t \quad (4)$$

Where, t = 1, 2, 3, ..., t is the time dimension, ε_t is a stationary error term.

Equation (4) can be expressed as;

$$\Delta Y_t = \rho Y_{t-1} + \varepsilon_t \quad (5)$$

Therefore, the null hypothesis time series is stationary around a deterministic trend (trend-stationary) and the alternative hypothesis is unit root.

Augmented Dickey-Fuller (ADF) Test- The ADF test (1981) for a unit autoregressive root tests the null hypothesis $H_0 : \gamma = 0$ against the alternative $H_1 : \gamma < 0$ in the following regression:

$$\Delta Y_t = \alpha + \gamma Y_{t-1} + \sum_{j=1}^{\rho} \delta_j \Delta Y_{t-j} + \varepsilon_t \quad (6)$$

Where Δ is the first difference operator and ε_t is a white noise error term and ρ is the number of lags in the dependent variable Y_t. In the hypothesis testing H_0 implies Y_t has a stochastic trend, while H_1 implies Y_t is stationary. If Y_t is stationary around a deterministic linear time trend, then the trend 't' i.e., the number of observation must be added as an explanatory variable. Alternatively equation (6) can be written as;

$$\Delta Y_t = \alpha + \beta t + \gamma Y_{t-1} + \sum_{j=1}^{\rho} \delta_j \Delta Y_{t-j} + \varepsilon_t \quad (7)$$

In the equation (7) Y_t is a random walk with drift around the stochastic trend. Here β is an unknown coefficient and the ADF statistic is the OLS t-statistic testing null hypothesis $\gamma = 0$ or not. If, the series found that the null hypothesis $\gamma = 0$ is rejected in the level then the data implies stationary and differentiation will not needed to take. If, series is found that the null hypothesis $\gamma = 0$ is accepted in the level then first differentiation should be taken and second differentiation also can be taken in order to make the series of data stationary.

Kwiatkowski–Phillips–Schmidt–Shin (KPSS) Test- The alternative test ADF introduced in 1992 by Kwiatkowski, Phillips, Schmidt and Shin called henceforth the KPSS test, has a null of stationary of a series around either mean or a linear trend; and the alternative assumes that a series is non-stationary due to presence of a unit root. The procedure is a test of non-stationary against the null hypothesis of stationary in the model;

$$Y_t = \alpha + \beta t + \gamma \sum_{i=1}^{t} Z_i + \varepsilon_t \quad (8)$$

$$= \alpha + \beta t + \gamma Z_t + \varepsilon_t$$

Where, ε_t is a stationary series, β is unknown coefficient and Z_i is an independent and identically distributed random variable stationary series with zero and variance one (these are merely convenient normalizations because a nonzero mean would move to α and a nonunit variance is absorbed in γ). If γ equal zero, then the process is stationary and trend stationary if γ is nonzero then Y_t is non stationary.

The KPSS test of the null hypothesis $H_0 : \gamma = 0$, against the alternative $H_0 : \gamma < 1 \text{ or } H_0 : \gamma = 1$. Under the null hypothesis α and β can be estimated by OLS. Let e_t denote the tth OLS residual

$$e_t = y_t - \alpha - bt \quad (9)$$

and let the sequence of partial sums be,

$$E_t = \sum_{i-1}^{t} e_t, \qquad t = 1, ..., T$$

The KPSS statistic is;

$$KPSS = \frac{\sum\limits_{t=1}^{T} E_t^{\,2}}{T^2 \hat{\sigma}^2} \quad (10)$$

Where,

$$\hat{\sigma}^2 = \frac{\sum\limits_{t=1}^{T} e_t^{\,2}}{T} + 2 \sum\limits_{j=1}^{L}\left(1 - \frac{j}{L+1}\right) r_j \text{ and } r_j = \frac{\sum\limits_{s=j+1}^{T} e_s e_{s-j}}{T}$$

and L is chosen by the researcher. Under the normality of the disturbances ε_t the KPSS statistic is an LM statistic that the researcher derive at under the general condition. If, computed value is greater than critical value then the null hypothesis $\gamma = 0$ stationary is rejected at a given level of significance. If, the series found that the null hypothesis $\gamma = 0$ is accepted in the level then the data implies stationary and differentiation will not needed to take. If, the null hypothesis $\gamma = 0$ is rejected in the level then first differentiation should be taken and second differentiation can be taken in order to make the series of data stationary.

Johansen Cointegration Test- The Johansen (1988) Maximum Likelihood (ML) methods of cointegration test widely used to identify the long run relationship among the time series variables. The Johansen method relies on a Vector Auto regression (VAR) model. A VAR is a system regression model, which includes more than one dependent variable (multivariate vector autoregressive models). Every variable is regressed on a combination of its own lagged values and lagged values of other variables from the system. Here, the researcher considers the following *n* dimensional VAR model of order *k*.

$$Y_t = \mu_t + \sum\limits_{i=1}^{K} A_i Y_{t-1} + \varepsilon_t \quad (11)$$

Where Y_t is a $n \times 1$ vector of variables that are integrated of order one which commonly denoted $I\,1$ and ε_t a $n \times 1$ vector and μ_t is an independently and identically distributed random variable. In the case of the stochastic process of Y_t. Johansen and Juselius (1990) propose two different ratio tests of the significance of these canonical correlations and thereby the reduced rank of the Π matrix: the trace test and maximum eigenvalue test, shown in equations (13) and (14) respectively.

$$\Delta Y_t = \mu_t + \Pi Y_{t-1} + \sum\limits_{i=1}^{K-1} \Gamma_i \Delta Y_{t-i} + \varepsilon_t \quad (12)$$

Where,

$$\Pi = -\left(I - \sum\limits_{i=1}^{K} A_i\right) \text{ and } \Gamma_t = -\sum\limits_{j=i=1}^{K} A_j$$

and $\Delta = 1 - L$, where L is the lag operator; I is the $n \times r$ matrix; A and elements of Y_t will be given by the rank of Π, denoted as r, λ is an eigenvalue of estimated Π. In the Trace test, the null hypothesis that there are at most r cointegrating vectors is tested (Against a general alternative) by calculating the test statistic;

$$\lambda_{trace}\,r = -T \sum\limits_{i=r+1}^{n} \ln\,1 - \hat{\lambda}_i \quad (13)$$

In this case, each in $\hat{\lambda}_i$ will be equal to zero (since log $1 = 0$), and λ_{trace} will also be equal to zero. However, the farther the estimated eigenvalues are from zero, the more negative is each of the expressions and the larger the λ_{trace} statistic. In the maximum eigenvalue test, the null hypothesis of *r* cointegrating vectors is tested against the alternative of $r+1$ cointegrating vectors by calculating the test Statistic.

$$\lambda_{max}\,r, r+1 = -T \ln\,1 - \hat{\lambda}_{r+1} \quad (14)$$

Again, if the estimated eigenvalue, $\hat{\lambda}_{r+1}$, is close to zero λ_{max}, will be large, and the null hypothesis that the number of cointegrating vectors is r will be rejected.

Vector Error Correction Model (VECM)- If in Johansen cointegration test detected cointreagation between the series that means there exist a long-run relationship with equilibium between explained and explanatory variables. So, researcher applies VECM for testing short-run association of cointregated series. The regression equations of VECM are as follows:

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$$\Delta Y_t = \alpha_1 + p_1 q_1 + \sum_{i=0}^{n} \beta_i \Delta Y_{t-i} + \sum_{i=0}^{n} \delta_i \Delta T_{t-i} + \sum_{i=0}^{n} \gamma_i Z_{t-i} \tag{15}$$

$$\Delta T_t = \alpha_2 + p_2 q_2 + \sum_{i=0}^{n} \beta_i \Delta Y_{t-i} + \sum_{i=0}^{n} \delta_i \Delta T_{t-i} + \sum_{i=0}^{n} \gamma_i Z_{t-i} \tag{16}$$

Where pq is the error correction component of the model that measures the speed at which prior deviations from equilibrium are corrected. VECM indicates that any short term fluctuations between explained and explanatory variable give rise to the stable long run relationship between the variables.

Granger Causality Test- Finally the Granger Causality test (1969) is carried out for checking the casual relationship between two variables such as T (representing tax revenue) and Y (representing GDP or economic growth). It is a prediction based econometrical concept. To say one variable T Granger causes another variable Y is to say that, by using past values of both variables T and Y, we can better predict future values of Y than by using only past values of Y that is, past observations of T contain information useful for predicting Y, beyond what is available from past observations of Y itself. Suppose T and Y from a bivariate time series given by the dynamic relationship.

$$Y_t = \phi + \sum_{i=1}^{n} \alpha_i Y_{t-i} + \sum_{j=1}^{n} \beta_j T_{t-j} + \varepsilon_{1t} \tag{17}$$

$$T_t = \lambda + \sum_{i=1}^{n} \delta_i Y_{t-i} + \sum_{j=1}^{n} \omega_j T_{t-j} + \varepsilon_{2t} \tag{18}$$

Where, ϕ and λ represent intercepts, ε_{1t} and ε_{2t} are the white noise disturbance terms which are assumed stationary. The T will Granger Cause Y if the calculated F statistics is significant at conventional level and similar will occur in case of Y to T.

EMPIRICAL RESULTS

This Part has been arranged by unit root ADF test (1981) and KPSS test (1992), Johansen-Juselius cointegration test (1990), Vector Error Correction Model (VECM), Granger Causality test (1969) and stability test.

TABLE 1: UNIT ROOT TESTS RESULTS (WITHOUT TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	ADF	-1.276746	-5.902586***	-9.283513***
LNDT	ADF	-0.301599	-2.348484	-4.592000***
LNIDT	ADF	-1.738212	-10.26220***	-13.83611***
LNTTR	ADF	-1.298493	-10.00137***	-13.68274***
LNGDS	ADF	-1.110575	-3.326297**	-2.977467**

Note: For determination of optimal lag lengths used Schwarz Information Criterion (SIC) with maximum lag length automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).

Source: Estimates of Unit Root Tests Results (Without Trend), 2018

Table 1, the time series data unit root test ADF provides empirical evidence that GDP, DT, IDT, TTR and GDS are non stationary[iii] at level but in first and second difference are stationary[iv] because at first and second difference the null hypothesis of unit root is rejected and accepted alternative hypothesis at 1% and 5% level of significance.

TABLE 2: UNIT ROOT TESTS RESULTS (WITH TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	ADF	-2.819584	-5.911985***	-9.353313***
LNDT	ADF	-2.117740	-1.924586	-4.974445***
LNIDT	ADF	-5.304905***	-10.26962***	-5.600671***
LNTTR	ADF	-5.032328***	-9.905557***	-13.54477***
LNGDS	ADF	-1.601710	-13.03359***	-3.965786**

Note: For determination of optimal lag lengths used Schwarz Information Criterion (SIC) with maximum lag length automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).

Source: Estimates of Unit Root Tests Results (With Trend), 2018

Table 2, the time series data unit root test ADF provides empirical evidence that DT and TTR are stationary at level because these rejected null hypothesis of unit root and accepted alternative hypothesis at 1% significance. Also the empirical evidence of GDP, DT and GDS are non-stationary at level but in first and second difference are stationary because at first and second difference the null hypothesis of unit root are rejected and accepted alternative hypothesis at 1% and 5% level of significance.

TABLE 3: STATIONARY TESTS RESULTS (WITHOUT TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	KPSS	0.839735	0.409266**	0.295641*
LNDT	KPSS	0.853892	0.220516*	0.360547**
LNIDT	KPSS	0.844266	0.268574*	0.405086**
LNTTR	KPSS	0.849900	0.176300*	0.403668**
LNGDS	KPSS	0.798859	0.356221**	0.300548*

Note: For determination of bandwidth selection by Newey-West and BartleettKernel estimation automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).

Source: Examination of Stationary Tests Results (Without Trend), 2018

Table 3, the time series data stationary test KPSS provides empirical evidence that GDP, DT, IDT, TTR and GDS are non stationary at level because the null hypothesis of stationary is rejected but in first and second difference are stationary because at first and second difference the null hypothesis of stationary is accepted and rejected the alternative hypothesis of non-stationary at 5% and 10% level of significance.

TABLE 4: STATIONARY TESTS RESULTS (WITH TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	KPSS	0.146582***	0.210163***	0.150848***
LNDT	KPSS	0.128092**	0.220490	0.111210*
LNIDT	KPSS	0.134737**	0.170408***	0.415520
LNTTR	KPSS	0.120336**	0.151617***	0.463720
LNGDS	KPSS	0.205663***	0.156309***	0.166131***

Note: For determination of bandwidth selection by Newey-West and BartleettKernel estimation automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).

Source: Examination of Stationary Tests Results (With Trend), 2018

Table 4, the time series data stationary test KPSS provides empirical evidence that GDP, DT, IDT, TTR and GDS are stationary at level because the null hypothesis of stationary are accepted at level and rejected the alternative hypothesis non stationary at 1% and 5% level of significance.

TABLE 5: JOHANSEN TESTS FOR COINTEGRATION: 1972 – 2015

H_0	H_1	λ_{trace}	Prob.	λ_{max}	Prob.
$r = 0$	$r = 1$	289.3395***	0.0001	33.87687***	0.0000
$r \leq 1$	$r = 2$	163.2256***	0.0000	27.58434***	0.0000
$r \leq 2$	$r = 3$	74.51326***	0.0000	21.13162***	0.0000
$r \leq 3$	$r = 4$	32.05733***	0.0001	14.26460***	0.0001
$r \leq 4$	$r = 5$	2.026251	0.1546	3.841466	0.1546

Note: Here r is number of cointegration vectors and lag intervals is 5. (*** and ** show level of rejection at 1% and 5% respectively).

Source: Results of Johansen Tests for Cointegration: 1972 – 2015 from NBR data, 2018

Table 5, The Johansen-Juselius (1990) maximum likelihood approach used to examine the long run relationship between the explained and explanatory variables.

Here the cointegration of null hypothesis is H_0 and the alternative hypothesis is H_1. The J-J cointregation test shows that the null hypothesis $r = 0$ (none) to $r \leq 3$ (at most 3) are rejected because the λ_{trace} and λ_{max} statistic value are less than 5% level of significance respectively and accepted the alternative hypothesis $r = 1$, $r = 2$, $r = 3$ and $r = 4$ again the null hypothesis $r \leq 4$ (at most 4) is accepted because the λ_{trace} and λ_{max} statistic value are more than 5% level of significance respectively and rejected the alternative hypothesis $r = 5$. These results provide the evidence that there are at least four cointegrating equation model. So, the evidence provides that there exist long-run relationship between explained variable (GDP) and all other explanatory variables (DT, IDT, TTR and GDS).

TABLE 6: VECTOR ERROR CORRECTION TESTS FOR SHORT-RUN COEFFICIENTS ESTIMATES

Variables	LNGDP	LNDT	LNIDT	LNTTR	LNGDS
Coefficients β	0.135137	2.500982	1.270085	2.245742	-1.313832
Standard error	0.46294	1.54756	1.44226	1.38138	0.53799

Note: *** and ** show the level significance at 1% and 5% respectively. Standard errors in parentheses represent asymptotic p-values associated with the tests.

Source: Results of VECT from NBR data, 2018

Table 6, the vector error correction tests results of first cointegrating equation implies that the model is statistically insignificant which also implies that the change of explanatory variables (DT, IDT, TTR, and GDS) does not causally affect explained variable (GDP) in short run. The coefficient of the model implies that percentage of error in the variables. In the GDP 14% error occurred for each year. Therefore, 14% error need to be corrected each year then it will reach equilibrium after 7.14 years and all other variables DT, IDT, TTR and GDS are already in equilibrium.

TABLE 7: JOHANSEN NORMALIZED COINTEGRATING TESTS FOR LONG-RUN COEFFICIENTS ESTIMATES

Variables	LNGDP	LNDT	LNIDT	LNTTR	LNGDS
Coefficients β	1	-0.043709	-0.047176	-0.856425	0.131790**
Standard error	-	0.11183	0.29752	0.39542	0.02413

Note: *** and ** show significance at 1% and 5% respectively. Standard errors in parentheses represent asymptotic p-values associated with the tests.

Source: Results of Johansen Normalized Cointegrating Tests from NBR data, 2018

Table 7, the Johansen Normalized cointegrating test result of first cointegrating equation implies that only GDS is statistically significant at 5% level of significance though the other variables GDP, DT, IDT and TTR have statistically insignificant long running relationships. The coefficients of cointegrating equation model implies that if DT rise in 1% then GDP will fall 0.044%, if IDT rise in 1% then GDP will fall 0.047%, if TTR rise in 1% then GDP will fall 0.86% and if GDS rise in 1% then GDP will rise 0.13% in the long run.

TABLE 8: PAIRWISE GRANGER CAUSALITY TESTS RESULT

Null Hypothesis:										Obs	F-Statistic	Prob.
LNDT does not Granger Cause LNGDP										43	0.68198	0.4138
LNGDP does not Granger Cause LNDT											0.22619	0.6370
LNIDT does not Granger Cause LNGDP										43	0.03088	0.8614
LNGDP does not Granger Cause LNIDT											35.5093	5.E-07
LNTTR does not Granger Cause LNGDP										43	0.00060	0.9805
LNGDP does not Granger Cause LNTTR											32.3436	1.E-06
LNGDS does not Granger Cause LNGDP										43	1.27361	0.2658
LNGDP does not Granger Cause LNGDS											41.0752	1.E-07
LNIDT does not Granger Cause LNDT										43	0.97808	0.3286
LNDT does not Granger Cause LNIDT											32.3638	1.E-06
LNTTR does not Granger Cause LNDT										43	0.47328	0.4955
LNDT does not Granger Cause LNTTR											36.6754	4.E-07
LNGDS does not Granger Cause LNDT										43	1.27832	0.2649
LNDT does not Granger Cause LNGDS											25.3391	1.E-05
LNTTR does not Granger Cause LNIDT										43	12.8503***	0.0009
LNIDT does not Granger Cause LNTTR											16.7964***	0.0002
LNGDS does not Granger Cause LNIDT										43	2.24605	0.1418
LNIDT does not Granger Cause LNGDS											26.3676	8.E-06
LNGDS does not Granger Cause LNTTR										43	1.12726	0.2947
LNTTR does not Granger Cause LNGDS											26.6469	7.E-06

Note: *** and ** show the level rejection at 1% and 5% respectively.

Source: Estimates of Pairwise Granger Causality Tests Result, 2018

Table 8, the Pairwise Granger causality tests result shows that the independent relationship among the existing variables one by one. There is no cause and effect between GDP, DT, IDT, TTR and GDS because they are not statistically significant. Only TTR Granger cause IDT and IDT Granger cause TTR at 1% level of significance respectively which has no impact on economic growth (GDP).

Stability Test - The cumulative sum (CUSUM) and cumulative sum of squares (CUSUMsq) are used to examine whether the short run and long run parameters are stable or not. The CUSUM test takes the value of cumulative sum of recursive residuals for lower and upper bounds at 95% confidence interval at each point (Pesaran, Shin and Smith, 2001). If the statistics of both test lie between lower and upper critical bounds at 5% significant level (the regression equation is correctly specified) then the hypothesis is not rejected (Bahmani-Oskooee and Nasir, 2004).

FIGURE 4.1: CUMULATIVE SUM OF RECURSIVE RESIDUALS AT 5% SIGNIFICANT LEVEL
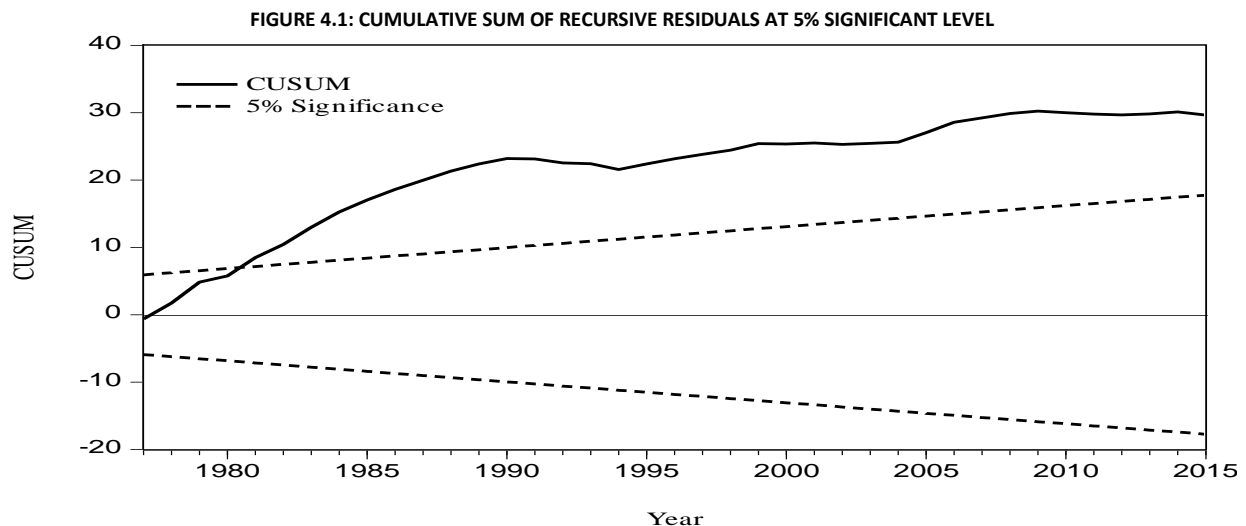
Source: Result of Cusum test from NBR data

FIGURE 4.2: CUMULATIVE SUM OF SQUARES OF RECURSIVE RESIDUALS AT 5% SIGNIFICANT LEVEL
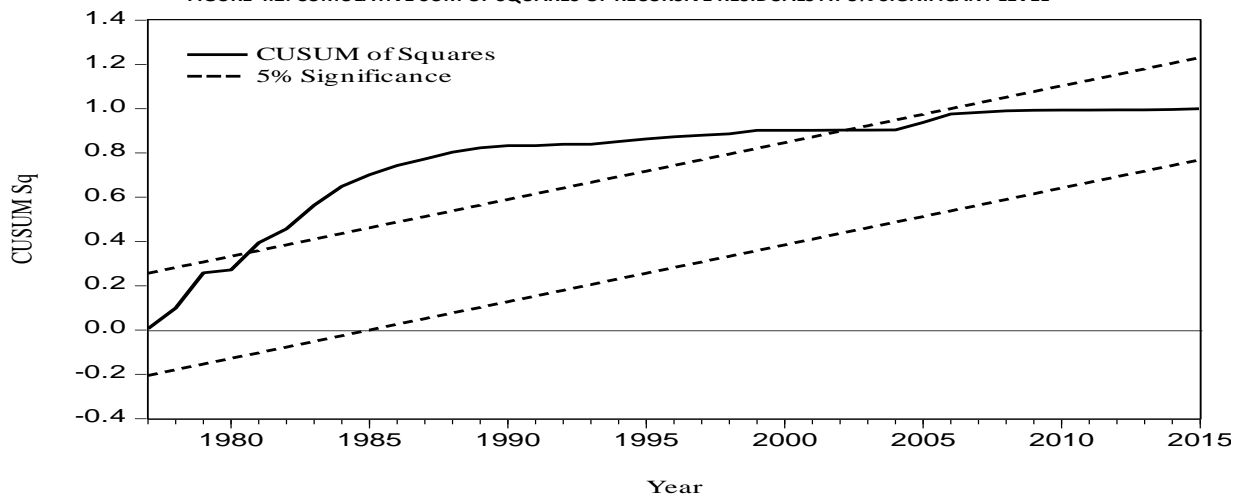
Source: Result of Cusum test from NBR data

Both CUSUM and CUSUMsq tests (Figure 4.1 and 4.2) propound that there is unstable relationship between economic growth and taxation because both the CUSUM and CUSUMsq lines are not aligning within the 5% critical bounds.

RECOMMENDATIONS

Based on this study results, the Government of Bangladesh should adopt the following recommendations immediately for ensuring sustainable development.
1. Taxation should be progressive based on the canons of taxation. The basic plan of revenue collection shuld be based on direct tax instruments and dependency on indirect tax instruments especially dependency on VAT gradually transform to direct tax instruments.
2. For sustainable economic growth, the government should keep the stability of macroeconomic indicators especially fiscal policy instruments.
3. In order to maintain sustainable economic development the government should give incentives to maintain the long-run positive relationship between fiscal policy instruments (tax) and economic growth rate (GDP).
4. Bangladesh Bank can play a significant role in short-run and long-run periods to stabilize the GDP growth rate and tax rate with transforming tax base and policies through combination of monetary policy and fiscal policy instruments.
5. To maintain social justice and equity the dependency on the instruments of indirect tax to direct tax and this transformation should be worked under a particular plan rather than quick application.
6. Government supposed to increase taxation areas and tax bases for their fiscal requirements which finally will ensure the prevailing and upcoming development targets.
7. Revenue collection policy and procedure of the government have to be retionalized and reform. The objectives of the tax reform policy follow the basic rules of equity and social justice.

CONCLUSION

This paper empirically analyzes the long run relationship between GDP growth and tax for forecasting sustainable economic growth of Bangladesh. For analyzing the long term relationship the paper uses time series data for the period starting at1972 and ending at 2015. This study of 43 years used autoregressive AR (1) distributed model for the unit root test. For the unit root test used ADF test(1981) and KPSS test (1992), for long run cointegration test among the variables used the Johansen-Juseliusco integration test (1990), VECM used for short run relationship between variables, Granger Causality test (1969) used for parewise Granger cost test among the explained and for all other explanatory variables finally used stability tests to examine whether the model is stable or not. The result implies that GDP and tax are having long-run negative relationship, which also shows that tax has significant negative impacts on GDP and sustainable economic growth. If government increases taxation with conventional way and without any concern for internal and external economic agents then it leads to reduced economic growth (GDP) in the future. For long-run sustainable economic growth the country should review, reform and improve its tax policy and tax to GDP ratio on the basis of its socio-economic conditions with respect to equity and social justice. The burden of heavy direct tax badly effect wage earning people, infant and small business firms. The imposition of indirect tax on marginalized people and most of the time violates social justice. Therefore, the government should take up direct and indirect tax reform policy on the basis of socio-economic condition and the canons of taxation.

END NOTES

[i] The direct taxes are combination of income tax and other taxes like corporate tax, taxes on kinds of land rents, holding taxes.

[ii] The indirect taxes are combination of import duty, export duty, excise duty, supplementary duty (local and import level), VAT (local and import level), turnover taxes.

[iii] Non stationary means time series will have time varying mean or time varying variance or both.

[iv] Non stationary means time series will have time varying mean or time varying variance or both.

SCOPE FOR FURTHER RESEARCH

This paper attempts to evaluate the long run relationship between tax and GDP for sustainable economic growth. In the future researchers could incorporate more comprehensive data and improve the result finally evaluation methodology for more accurate results.

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A STUDY ON COPING STRATEGIES FOR RELIEVING STRESS AMONG TEACHERS WORKING IN PRIVATE SCHOOLS WITH SPECIAL REFERENCE TO TIRUPUR CITY

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ABSTRACT

Stress is inseparable part of human life. We may all experience stress at one time in our life time. Sometimes it can be difficult for us to recognize it in them. The extent to which an individual is affected may depend on how forcefully it affects the individual and duration of time limit i.e. for a short or long period of time. If the stress is perceived by the individual for a long period of time, it may create several physiological and psychological problems such as changes our behavior pattern, irritability, Worrying and feeling nervous. Stress may be created as a result of external environment or it may be created by the internal factors. A certain degree of stress is essential in order to achieve the desired results, but beyond certain limit is destructive. Stress affects our physical and mental well-being. Hence it is essential to know the physical and mental coping strategies adapted to handle the physical and mental well-being of individuals.

KEYWORDS
Tirupur City, relieving stress, private schools.

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1. INTRODUCTION
Stress simply means the strain or unpleasant feeling and worries that an individual perceives when facing with contradicting demands or tasks beyond his capabilities. It's a psychological and physiological response to events that disturbs person's equilibrium when facing a threat. In general stress has negative connotation, but in reality stress has both positive and negative effects. In the modern work environment, stress is unavoidable. In a work environment it is essential to have a reasonable degree of pressure in order to complete the work within the prescribed time limit. If the individual perceives moderate level of stress in the work environment that stress is served as a motivator in accomplishing the task assigned to him, that moderate level of stress will help the organization to fulfill its goals and it improves the performance of employees and productivity of the organization. On the contrary if the level of stress perceived by the employee is high it has an adverse effect on the individual and on his family and in the organization as well.

2. OBJECTIVES OF THE STUDY
The following are the main objectives of the study:
1. To identify the Demographic profile of the teachers working in private schools.
2. To analyze the coping strategies practiced by the private school teachers to reduce the level of stress.
3. To analyze the findings and offer valuable suggestions to manage and prevent the stress.

3. SAMPLING DESIGN
For the study purpose schools were categorized into two categories such as CBSE and Matriculation schools situated in the Tirupur city. Totally more than fifty schools are functioning in Tirupur City. The total size of population is more than 2000. Finally the researcher took the sample size of 850 respondents. The information is collected from the sample respondents through structured interview schedule. Stratified random sampling method is used to select the sample.
To establish the highest degree of reliability on the impact of stress experienced by private school teacher in Tirupur City. A pilot study was conducted to ensure the content validity and reliability of research which included 45 statements having the five-point likert scale ranging from strongly agree to strongly Disagree, distributed to the 10 schools Tirupur. This result suggests that the instruments are reliable to be used for this study.

4. REVIEW OF LITERATURE
Review of literature is an important aspect of any research work and this helps the researcher to obtain information about previous studies. Review of previous studies widens the knowledge of the researcher and in the light of the literature review the researcher can analyse and identity the gaps that exist between the past and present study. The Review of literature relating to different fields are given below.

Deepti Pathak (2012)[1] has found that negative correlation exists between organizational stress and job satisfaction level among employees; perceived organizational support as a powerful moderator lessens amount of stress experienced leading to higher job satisfaction.

Chin, Y.F. et al., (2012)[2] examines the relationship of role ambiguity, role conflict and role overload with work family conflict and employee health, role of supervisor's support on employee's health, work home conflict. The result explains that job stress characteristics have direct impact on work family conflict and employee's health in the organisation. Role ambiguity is found to be a significant predictor of work family conflict, role conflict and role overload is not found to be a significant predictor of work family.conflict. Interaction between role conflict and supervisor social support positively and significantly correlates with work family conflict. While relationship between role conflict and co-workers social support negatively correlates with work family conflict, interaction between role conflict, role overload and supervisor social support moderate work family conflict; but interaction between job stress characteristics and co-workers social support did not moderate the effects of work family conflict. The study confirms that organisational social support moderates the effect of job with social support from supervisor and co-workers can help them to cope with stress.

Maheswari, S.U and N.R V. Prabha (2012)[3] have studied the level of stress among the employees for class I, class II and class III of VST motors, Katpadi. The study analyses the role related variables namely inter role distance, role stagnation, role expectation conflict, role overload, role isolation, role erosion, personal inadequacy, self role distance, role ambiguity, role inadequacy. The study finds that inter role distance is the major role stressors for class I employees and role ambiguity

is the lowest stressors. Role erosion arises from the feeling of being under employed, which is the stressor for class II employees and personal inadequacy and role isolation are the least stressors. For class III employees, role erosion arises out due to the feeling of being under employed and it is the major stressor. Personal inadequacy and role ambiguity are the least stressors. The study proves that majority of the employees have moderate level of stress followed by higher stress. Moreover, they are vulnerable to various individual factors of stress.

Mazumadr. H, et al., (2012)[4] has examined the students stress during their college life. This shows that post graduate students are more susceptible to stress due to the increase in the responsibility than the graduate students. Experience of stress is more prevalent among females than males. Most of stress comes from future orientation. Post graduate students feel much more stress in physical or mental factor than the graduate students. College students feel relatively more stressors in the career aspect due to different reasons. Physical and mental effect is much higher in females than males due to over stress. One factor shows more dominant in male than female i.e., Job, while other stress factors such as family, relationship and social are more found in females than males. Violent behaviour, disturbed relationship, drug use, alcohol use, smoking and the like are the behavioural changes occurring during stress. Relationship disturbances are mainly affected by stress. Regarding physiological factors, anger and low satisfaction levels contribute highest and lowest percentages for the affected people. Depression, anger, anxiety and low self esteem 'are the: other factors which contribute stress among the students. There are different symptoms regarding psychosomatic factors and head ache is found in m re percentage which lead to major stress among the students. High blood pressure, head ache, ulcer, sleep problem have been observed during exam days. Students are scared about the study during exam days which result in serious stresses among them.

Rajesh C Jampala (2012)[5] has studied stress levels among the public and private sector employees using the variables such as demand, control, management, support, peer support relations, role and change. The analysis shows that employees of the private sector are facing more stress than employees of the public sector. There is a significant change in the stress level observed in the demand, control, relation, and role factors between the public and private sector employees. The employees of the finance sector are facing high stress than those of banking and insurance sector. They face more stress in demand and relation factors and banking employees face more stress in the change factor. Employees working in urban areas face little more stress than those in rural areas. Significant difference is observed in demand factor among them. Men face little more stress than women and they face stress with the demand factor where as women with control factor. Employees with less experience faced high stress than the experienced one. Demand, relation and role factor are the most common factors among them. Marketing staff face higher stress than administrative staff. Marketing staff have stress with demand and role factor than administrative staff. Employees having professional degree face more stress than employees with graduate and post graduate qualification. Graduates experience more stress than post graduate. Role and relation factors are found among the employees having different qualifications.

Mangayarkarasi.K and Sellakumar. G.K (2012)[6] has assessed the level of occupational stress and its impact on general health. The result of the study shows that there is a significant difference between high and low occupational stress groups on their general health. In the study employees scored higher in occupational scale and scored lesser in general health score. These two variables are negatively correlated. Both high and low occupational groups significantly differ in the level of general health. Female employees reported higher job stress in various dimensions. Job environment, work shift, time shortage in completing their work, management style, role ambiguity : and organizational climate influenced in increasing the level of stress. Study also reveals that employees have acquired mental and physical complaints such. as burnout syndrome, job dissatisfaction, depression, suicidal ideation, coronary heart disease, ulcer, musculoskeletal pain and other physical problems. Concentration, sitting in the same posture, listening, reasoning and continuous monitoring of the computers were the reasons for the increased score in the occupational scale. Work load and time pressure has the influence in stimulating the level of stress and consequently the health condition of the employee diminishes.

Syed Hussain Shah, et al., (2012)[7] in their research titled "Impact of Stress on Employees's Performance: A Study on Teachers of Private Colleges of Rawalpindi" find that a positive relation exists between the monetary reward and employee efficiency and the author has further investigated that there is a negative relation-ship between the organizational structure and employee efficiency and further it is found that there is no significant relationship between administrative support and employee efficiency.

Harish Kumar Tyagi and Mudasir Manzor Kirmani(2012)[8] in their research titled "Effect of Type of School, Gender, Age, Qualification and Experience on role stress: An Empirical Study on Educational Administrators of Eritrea" have found that Five out of five variables such as type of school, gender, age qualification and experiences have significance differences on job stress. Government and private school principals/directors differ significantly in their stress level. Study indicates that there is significant difference in stress level between male and female. In terms of age, younger groups are more prone to experience Job stress than the older ones. The study further reveals that school principals vary in their stress level as their educational qualification varies, less qualified Principals are more stressed than their counter parts.

Arvind Hans, et al., (2014)[9] in their research titled " A Study on Work Stress and Job Satisfaction among Headmasters: A Case Study of Bilingual Schools in Sultanate of Oman - Muscat" reveal that Headmasters feel stress due to heavy workload, time pressure, poor working environment etc. It is found from the study that the Headmasters of Bilingual schools in Oman are highly satisfied with their Jobs and also more likely to experience stress related to ill health both physical and psychological. As the performance of the school depends upon the active performance of the headmasters, proper training has to be given to the headmasters to prepare them for managing or dealing with stress and achieve high job satisfaction. The phenomena related to Job satisfaction and work stress among head masters in bilingual schools is found similar to others studies in the past. However, the study may bring clear understanding of these phenomena in this sector and add little more value in the literature for better generalization across culture.

Olatunji. S. O & Mokuolu, Bolade. 0 (2014)[10] have conducted a study on "The Influence of Sex, Marital Status, and Tenure of Service on Job Stress, and Job Satisfaction of Health Workers in a Nigerian Federal Health Institution" and found that sex, marital status and tenure of service have significant influence on the job satisfaction and the level of stress reported by nurses and doctors. Singles report a higher level of job stress than the married and invariably a lower level of job satisfaction than their married counterparts. Further the research finding reveals that job satisfaction increases with tenure of service. It can then be deduced that experience on a job reduces the level stress, and then enhances the satisfaction that is derived from the job.

5. DEMOGRAPHIC PROFILE OF THE RESPONDENTS

In this section, an attempt has been made to discuss the profile of the sample respondents of school teachers working in Tirupur city. The demo-graphic variables of the respondents such as Age, Gender, Marital status, Educational Qualification, Nature of Institution, Designation, Nature of Post, Total service, Number of Years of Service in Present Institution, Salary are analyzed.

5.1. AGE

The perception level of stress varies at different age groups; hence an attempt has been made to analyze the age group of the respondents. For the purpose of study, the respondents are grouped according to the age such as Below 30 years, between 31-40 years, between 41-50 years, and Above 50 years. When age increases, experienced stress also increases due to the increase in the responsibility (Beena and Poduval 1992)[11]. Age Wise Classification of Respondents is pre-sented in Table 1.

Table 1 indicates that 34 per cent of the respondents fall in the age group of between 40-50 years followed by the age group between 30-40 years (28 per cent) and 24 per cent of the respondents fall above 50 years age group. Only 14 per cent of the respondents fall below 30 years age group.

It is observed from the analysis that a majority of the respondents fall in the age group of between 40-50 years.

5.2. GENDER

It is the general belief that stress tolerance level differs between male and female. In general females are more vulnerable to stress than male counterparts. Female teachers have perceived maximum level of job stress than the male teachers (Abirami 2012)[12]. The classification of the respondents on the basis of gender is shown in the Table 1

It is evident from the above Table 1 that 58 per cent of the respondents are male teachers and the rest of the respondents are female teachers (42 per cent). It is inferred from the analysis that a majority of the respondents are male members.

5.3. MARITAL STATUS

One of the most important and memorable events in the life of either man or woman is marriage. There is no doubt that the selection of marital partner is one of the most important decisions one makes in his/her lifetime. Marriage is a legal commitment by giving assurance that the couple take care of each other in their life time. Hence, marital status of the respondents has great influence on level of stress. Marital status of the respondents is classified as Unmarried, Married, Widow and Divorcee for the purpose of study and are presented in the Table 1.

Marital status in Table 1 depicts that maximum % of the teachers are married (70 per cent) followed by unmarried (26 per cent), widows and divorcees are (2 per cent).

From the analysis it is observed that the majority of the respondents are married.

5.4. EDUCATIONAL QUALIFICATION

The educational qualification of the respondents is one of the important influencing factors in determining the level of stress. Since the knowledge is wisdom, highly educated individual has awareness and more knowledge about stress and its coping techniques when they face stress. It is clear that higher education can combat stress and burn out related problems among the members (Chand & Monga 2007)[13]. The respondents are categorized into Post Graduates, Master of Philosophy and Doctor of Philosophy and are presented in the Table 1.

It is inferred from the above Table 1 that a majority of the respondents are B.Ed or M.Ed degree holders (52 per cent) followed by under graduate and post graduate degree holder (44 per cent) and only four per cent of the teachers are M.Phil / Ph.D holders.

It is observed from the analysis that a majority of the respondents are B.Ed or M.Ed holders.

5.5. NATURE OF INSTITUTION

The nature of institution is an important variable which causes stress to an individual. There are a number of factors which influences stress such as Discrimination in pay or salary structure, Strict rules and regulations, Ineffective communication, Peer pressure, Less promotional opportunities, Lack of participation in decision-making, Excessive control over the employees by the management, Less promotional opportunities. For the purpose of the study the school teachers have been classified as teachers working in CBSE and Matriculation schools and the same has been presented in the Table 1.

It could be observed from the Table 4.5 that a majority of the teachers (51 per cent) are working in Matriculation schools followed by CBSE (49 per cent). From the analysis it is clear that a majority of the respondents are working in Matriculation schools.

5.6. DESIGNATION

Designation of the employee is one of the essential variables that have to be analyzed as it directly describes various aspects of job analysis such as authority and responsibility and duties of the employees in different cadres. Employees in the higher cadre perceive higher level of stress than the employees at lower cadre. The reason is quite obvious that though the higher cadre employees enjoy considerable amount of privileges, they have to discharge the responsibilities vested with the cadre. The respondents for the study purpose are classified as B.T Assistant and PG Assistant and presented in the Table 1.

Designation wise classification of the teachers represents that a majority of the teachers i.e., 62 per cent are working in the B.T Assistant Cadre and rest of them (38%) are in PG Assistant Cadre.

It is observed from the analysis that a majority of the respondents are in B.T Assistant Cadre.

5.7. TOTAL SERVICE

Total service of the respondents is the crucial factor in determining the level of stress. The perception of the respondents towards stress or stressors and the ability to cope with it may vary based on the total service. The total service of the respondents may be classified as the respondents having Less than 5 years, 5-10 years, 11-20 years, 21-30 years and Above 30 years and presented in the Table 1.

Table 1 reveals that 32 per cent of the school teachers have put in 5-10 years of service followed by 11-20 years of total service (30 per cent) and 14 per cent of the school teachers have less than 5 years and above 30 years of total service. Only 10 per cent of the school teachers have 21-30 years of total service. From the analysis it is clear that a majority of the respondents have 5-10 years of total service.

5.8. NUMBER OF YEARS OF SERVICE IN PRESENT INSTITUTION

Number of years of service in present institution is a prime variable that has to be studied as it reveals various aspects of job such as job retainment and job turnover. On one hand if the respondents feel less stress or stressor on the job and finds job security, they prefer to work in the present institution for a long duration. On the other hand, if they perceive high stress or stressors on the job and have less job security, they may quit the job as and when they find job opportunity elsewhere. Normally under these conditions the institution may have high job turnovers. Hence the teachers are categorized as the respondents working in the present institution for less than 5 years, 5-10 years, 11-20 years, 21-30 years and Above 30 years and the same is presented in the Table 1.

It could be observed from the Table 1 that 30 per cent of the school teachers are working in the present institution for the past 5-10 years. 26 per cent of the teachers are working in the present institution for the past 11-20 years followed by less than 5 years (20 per cent) and 14 per cent of the school teachers are working in the present institution for more than 30 years. Only 10 per cent of the school teachers are working in the present institution for the past 20-30 years.

It is inferred from the analysis that a majority of the respondents are working in the present institution for the past 5- 10 years.

5.9. SALARY

Salary of the respondents is the prominent factor which has direct influence on motivation, job satisfaction, job performance and organizational commitment. Apart from this, salary serves as a symbol of social status. Increase in the standard of living gives pride and psychological satisfaction and at the same time providing low salary has an adverse effect such as low job satisfaction, reduces job performance, and leads to a high rate of absenteeism. Salary of the respondents is classified into different categories and is presented in the Table 1.

It could be observed from the Table 1 that 42 per cent of the private school teachers fall in below 10,000 salary group followed by 28 per cent of the teachers fall in 10000-20000, 12 per cent of the teachers fall in 20001-30000 salary groups, 10 per cent of the school teachers' fall in 30001-40000 salary groups. Only 8 per cent of the school teachers are in getting above 40,000 salary group.

It is observed form the analysis that majority of the respondents are in below 10,000 salary group.

6. PHYSICAL STRESS MANAGEMENT STRATEGIES

Physical stress management strategies are helpful to relieve us from physical stress. There are a number of ways through which we can relieve our stress, some of the physical stress strategies adapted are Reducing physical stress, Relaxation, Correct posture, Diet, Physical exercise, Medicinal therapy and Natural care.

6.1 REDUCING PHYSICAL STRESS

The simplest form of relieving stress and its associated problems is reducing the physical stress. We may practice different methods for reliving our physical stress. The methods adapted for stress relieving may vary from one person to another, because there are a number of factors such as education and experience influence in selection of appropriate method. Some of the physical reducing strategies practiced by the respondent are given below in Table 2.

From the Table 2 it is clear that 36 per cent of the respondents are adopting a coping strategy of "set priorities" for reducing their physical stress followed by "Alternating of heavy work with light work" (32%) and very few respondents i.e., 4 per cent adopting the strategy of " Take hired help" in order to reduce their physical stress.

6.2 RELAXATION

In the present situation one has to accomplish different tasks and has to perform numerous responsibilities and contradicting job demands. Under these circumstances it's needless to say that individual faces high level of stress. The relaxation technique plays a crucial role in stress management. Relaxation not only brings peace of mind and calm, it reduces the symptoms or effects of stress on our mind and body. Relaxation techniques help us to relieve stress and other health problems associated with stress. The common relaxation techniques adopted by the respondents are presented in the Table 2.

Table 2 indicates that 36 per cent of the respondents have opted to take "Drinking water" as a relaxation technique to manage stress followed by "Take out time for leisure" (30 per cent) and 28 per cent of the respondents responds "Take rest" as a relaxation strategy for coping stress. Only 6 per cent of the respondents are practicing "Deep Breathing" as a relaxation technique in physical stress management strategy.

6.3. CORRECT POSTURE

The concept of correct posture helps to understand the concept of good sitting positions, since one third of our life time is spent in our offices. Correct posture reduces stress and strain on the muscles, tendons, and skeletal system and reduces your risk of developing a musculoskeletal disorder (MSD). Good sitting posture reduces the stress and strain on ligaments. Proper posture also reduces muscle fatigue. We may practice different approaches to reduce stress such as Using of ergonomically designed furniture, Avoid strenuous posture, Change of posture and convenient placement of things to reduce physical work and the details are listed in Table 2.

It is inferred from Table 2 that 42 per cent of the respondents are in favor of "change of posture" in correct posture strategy followed by "Convenient placement of things to reduce physical work" i.e., 28 percent and 24 per cent of the respondents are practicing "Avoid strenuous posture" as their physical stress management strategy. Only 04 percent of the respondents favor "Use ergonomically designed furniture" in correct posture strategy for reducing stress.

6.4. DIET

One of the most important factors in reducing stress is to have a well-balanced diet. Every person is different in taste and food pattern varies from one person to another. Some persons prefer to consume less food and others may prefer to consume more food. A healthy diet improves the immune system and helps to reduce the impact of stress. When under stress, it is important to consume high fibre food such as fruits, vegetables, grains, cereals and all important nutrients in order to cope with stress effectively. The common diet practices adopted by the respondents are presented in Table 2.

It is observed from Table 6.4 that 42 per cent of the respondents practicing "Take balanced diet" and 12 per cent of the respondents adopt "Consume food many times in small quantities" as a stress coping strategy in physical stress management strategy. None of the respondents have perceived "Consume more food" as a coping strategy for reducing physical stress.

6.5. PHYSICAL EXERCISE

Physical exercise serves as a one of the most effective source of stress reduction. Exercise increases stamina and strengthen our immune system which in turn increases our overall health. Generally any form of exercise, from walking to yoga, can act as a stress reliever. Regular exercise increases the self-confidence of an individual and helps to cope with the symptoms associated with mild depression and anxiety. When we are involved in regular Physical exercise we feel healthy, it means exercise helps to boost up the production of our brain's neurotransmitters, called endorphins which in turn help to have sound sleep and evade the problems associated with stress. The list of common physical exercises practiced by the respondents is presented in Table 2

Table 2 indicates that a majority of the respondents (60 per cent) are practicing physical exercise of "Walking" followed by "Playing games" (16 per cent) and only 6 per cent of the respondents are practicing "jogging" as a stress coping strategy. None of the respondents are practicing "Swimming" as a coping strategy for reducing their physical stress in physical stress management strategy.

6.6. MEDICINAL THERAPY

The most effective way for relieving stress is taking counseling from the psychologist or from the psychiatrist. Simply the term therapy denotes treatment. Medical therapy refers medical treatment undertaken by the respondents to relive from stress. The common form of medical treatment adopted by the respondents for relieving stress is given below in the Table 2.

It is inferred from Table 2 that a majority of the respondents i.e., 96 per cent do not practice any medical therapy for reducing their physical stress and only 4 percent of the respondents adopt the practice of taking "Sleeping pill" as their coping strategy in physical stress management strategy. None of the respondents use "Mood altering drugs" and "Tranquilizers" for reducing their stress.

6.7. NATURAL CARE

Natural care indicates natural treatment to the respondents with the help of things available in nature. Natural care is the best source for relieving stress and several diseases without any negative side effect. Medicinal herbs are mainly used for their therapeutic value. The therapies adopted in nature care are given in Table 2.

It is observed from Table 2 that 70 per cent of the respondents do not practice any therapy in natural care.14 per cent of the respondents are practicing "Water therapy" as their coping strategy for relieving stress. Only 08 per cent of the respondents are practicing "Herbal therapy" and "Hot water therapy" as their coping strategy for relieving stress under natural care. None of the respondents are practicing "Colour therapy" and "Aroma therapy" as their coping strategy for reducing physical stress in natural care.

7. MENTAL STRESS MANAGEMENT STRATEGIES

Mental stress refers the psychological problems faced by the respondents due to stress. We may adopt different stress coping strategies to get relief from mental stress. Some of the stress management strategies adopted by the respondents for reliving psychological stress are categorized as Religious / Meditation, Psycho-therapy, Social Support, Altering Situation, Reducing Responsibilities and Performing most liked activities.

7.1 RELIGIOUS/ MEDITATION

Involving in religious activities or meditation is one of the effective ways for reducing mental or physical stress of the respondents. Meditation provides relaxation to mind and soul. Meditation can be done in two ways; meditation that requires focusing and that does not require focusing. In the first one the meditation that requires focusing means, where individual has to focus on any object, image or sound and involves in deep breathing for certain duration of time limit. In the second one there is no need for concentration of any object, sound or image; simply sit in a calm place and close our eyes and chanting of mantras.

Apart from meditation, yoga, involvement in religious activities, offering prayers, chanting of mantras and going on Pilgrimage serve as effective sources for relieving psychological stress of the respondents. The common religious or meditational strategies adopted by the respondents are given in Table 2.

It is clear from the Table 2 that 40 per cent of the respondents adopt the practice of "Offering prayer" followed by "Meditation" and 22 per cent of the respondents are involved in "Religious activity" as their coping strategy for reducing their mental stress. 6 per cent of the respondents use the practice of "Chanting of mantras" and "Yoga" when they perceive stress. Very few respondents adopt the practice of going on "Pilgrimage" as a coping strategy in order to reduce their mental stress.

7.2 PSYCHOTHERAPY

Psychotherapy usually involves talking with the psychologist or psychiatrist about our mental health problems. In psychotherapy, the respondents realize the psychological condition of health, moods, feeling, thoughts and behaviour and psychotherapy helps us to learn how to take control of life and to respond to the life challenging situations with the help of healthy coping strategy. The list of psychotherapy adopted by the respondents is given in Table 2.

It is inferred from Table 2 that more than half of the respondents (52 per cent) are practicing the "positive thinking" followed by "Change in routine" (20 per cent) and "Recreation with family" (20%) as their coping strategy for reducing their mental stress. Only 08 per cent of the respondents adopt the habit of "Cry to relieve the stress" as their coping strategy in psychotherapy to relive from mental stress.

7.3 SOCIAL SUPPORT

Social support plays a crucial role when we are facing stressful events or pass over though times in our walk of life. The social support group comprises of our family members, relatives, friends circle and specially our colleagues with whom we are spending most of our time apart from our family members, where we share our cheerful and sad moments of our life. Social support provides the psychological feeling of comfort that our relatives and friends are there to help us when we are facing conflicting situations. The general social support activities adopted by the respondents are given in Table 2.

Table 2 indicates that 34 per cent of the respondents adopt the practice of "Attend social gathering" followed by "Talk to someone" i.e., 22 per cent as their coping strategy to reduce mental stress. Only 10 per cent of the respondents choose the practice of "Take counseling" as their coping strategy, when they perceive mental stress.

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7.4 ALTERING SITUATION

One of the effective ways for reducing mental stress is to alter the situation. An individual may adopt different coping strategies to relive stress based on their experience and their ability to cope with stress. The common practices adopted in relieving stress are change of place, avoiding painful reminders, maintaining well organized home and adapt to the de-stressing events. By practicing these techniques we can reduce our stress to the possible extent. The common altering situation adopted by the respondents to relieve stress is presented in Table 2.

It is observed from Table 2 that 34 per cent of the respondents adopt "Avoiding painful reminders" followed by "Change of place" i.e., 26 per cent as coping strategy in altering situations for relieving mental stress 20 per cent of the respondents are practicing "Maintaining well organized home" and "Adapting to the de-stressing events" as their coping strategy to reduce their mental stress.

7.5 REDUCING RESPONSIBILITIES

Reducing the responsibilities is the easiest way for Stress reduction. The simplest stress reduction techniques practiced by the respondents are postponing certain tasks (it may help the respondents to overcome the problem of stress for the time being), legitimately avoid disliked tasks, by delegating the work assigned to them to their subordinates and changes in Preference of Job. The stress reduction activities practiced by the respondents are presented in Table 2 under the title reducing responsibilities.

It is inferred from Table 2 that 30 per cent of the respondents respond in favor of "Postponing certain tasks" as their coping strategy for relieving their mental stress. 26 per cent of the respondents respond in favor of "Legitimately avoid disliked tasks" and "Changes in Preference of Job". Only 18 per cent of the respondents have responded in favor of "Delegating the Work" as coping strategy for relieving mental stress.

7.6 PERFORMING MOST LIKED ACTIVITIES

Performing most liked activity is the effective way for stress reduction. Involvement of oneself in most liked activities gives some sort of psychological fulfillment and satisfaction to the respondents. Performing most liked activities such as painting, listening to songs, singing, cooking and gardening which distract ones thoughts from whatever is causing your stressing or anxiety. These activities help the individual to relieve stress. As it enables to achieve a positive state of mind which occurs when an individual involved in an activity is totally immersed with strong feelings of involvement and focus. The other most liked activities performed by the respondents are given in Table 2.

It is observed from Table 2 that 34 per cent of the respondents reporting "Watching T. V." as the most liked activity followed by "Listening to songs" (22 per cent) and 14 per cent of the respondents report "Going for movie/shopping" is the most liked activity for relieving their mental stress. 8 per cent of the respondents report "Singing", "Spending time in park/with nature" and "Cooking" as their most liked activity performed by them. 6 per cent of the respondents opt "Gardening" as their most liked activity. None of the respondents have opted "Painting" as their most liked activity.

8. FINDINGS

8.1 BASED ON DEMOGRAPHIC VARIABLES

1. A majority of the respondents are in the age group of between 40-50 years.
2. A majority of the respondents (58 per cent) are male teachers.
3. Maximum percentage of the teachers is married (70 per cent) and only 1.5 per cent of the teachers are divorcees.
4. A majority of the respondents (54 per cent) are B.Ed / M.Ed holders.
5. A majority of the teachers (51 per cent) are working in Matriculation Schools.
6. A majority of the teachers (62 per cent) are working in the BT Assistant Cadre.
7. 32 per cent of the school teachers have 5-10 years of total service.
8. 30 per cent of the school teachers are working in the present institution for the past 5-10 years.
9. 42 per cent of the school teachers are in below Rs.10,000 salary group.

8.2 COPING STRATEGIES FOR RELIEVING STRESS

(A) Physical Stress Management Strategies

1. 36 per cent of the respondents are adopting a coping strategy of "set priorities" for reducing their physical stress.
2. 36 per cent of the respondents opt to take "Drinking water" as a relaxation technique to manage stress.
3. 42 per cent of the respondents are in favor of "change of posture" in correct posture Strategy.
4. 42 per cent of the respondents perceive "Take balanced diet" for reducing physical stress.
5. A majority of the respondents (60 per cent) are practicing physical exercise of "Walking" as a coping strategy for reducing physical stress.
6. A majority of the respondents i.e., 96 per cent do not take any medical therapy for reducing physical stress.
7. A majority of the respondents i.e., 70 per cent are not practicing natural care as a coping strategy for reducing physical stress.

(B) Mental Stress Management Strategies

1. 40 per cent of the respondents report to the practice of "Offering prayer".
2. More than half of the respondents (52 per cent) adopt the "positive thinking" as their coping strategy in psychotherapy to relive from mental stress.
3. 34 per cent of the respondents report to the practice of "Attend social gathering" as their coping strategy, when they perceive mental stress.
4. 34 per cent of the respondents practice "Avoiding painful reminders" as their coping strategy to reduce their stress.
5. 30 per cent of the respondents are in favor of "Postponing certain tasks" as their coping strategy for relieving their mental stress.
6. 34 per cent of the respondents report "Watching T. V." as the most liked activity.

9. SUGGESTIONS

1. Develop a positive attitude realizing the truth everybody has his / her own strength and weakness and try to find solutions to the problems.
2. Develop the habit of doing exercises such as walking, cycling and the like regularly for 20- 30 minutes every day and that can reduce stress.
3. Have enough sleep and have a healthy balanced diet which will help us to relive from stress Problems.
4. Try to avoid people causing stress in our life by limiting the amount of time we spend with them or end the relationship completely.
5. Develop the habit of doing meditation for 15- 20 minutes every day twice a day.

10. CONCLUSION

An attempt has been made to identify the coping strategies adopted by the school teachers when they are stressed under two categories - physical stress management strategies and mental stress management strategies. It is concluded from the analysis that a majority of the teachers practiced Set priorities, Drinking water, Change of posture, Take balanced diet, Walking and None of the respondents practiced medical therapy and natural care when they are physically stressed. Further, Offer prayer, Positive thinking, Attend social gathering, Avoiding painful reminders, Postponing certain tasks and Watching T.V. are practiced by maximum per cent of the teachers when they are mentally stressed.

The present study will create the awareness among the school teachers and institutions regarding stress and its coping strategies for minimizing their stress in their personal life and in the work environment. Stress not only affects the efficiency of the individual, to a great extent it affects the work performance. Hence, it is necessary to provide an appropriate environment and support to relieve from stress related problems.

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APPENDIX

TABLE 1: AGE, GENDER, MARITAL STATUS, EDUCATIONAL QUALIFICATION, NATURE OF THE INTUITIONS, DESIGNATION, YEARS OF SERVICE, YEARS OF EXPERIENCE IN PRESENT INSTITUTIONS AND SALARY WISE CLASSIFICATIONS

S.No	Age	Number of the Respondents	%	Gender	Number of the Respondents	%	Marital Status	Number of the Respondents	%	Educational Qualification	Number of the Respondents	%	Nature of the Intuitions	Number of the Respondents	%
1	Below 30 years	119	14	Male	493	58	Unmarried	221	26	UG / PG	378	44	CBSE	413	49
2	30-40 years	238	28	Female	357	42	Married	595	70	B.Ed / M.Ed	440	52	Matric	437	51
3	40-50 years	289	34				Widow	21	02	M.Phil / Ph.D	32	04			
4	Above 50 years	204	24				Divorcee	13	02						
	Total	850	100	Total	850	100	Total	850	100	Total	850	100	Total	850	100

S.No	Designation	Number of the Respondents	%	Years of Service	Number of the Respondents	%	Years of experience in Present Institutions	Number of the Respondents	%	Salary	Number of the Respondents	%
1	B.T Assistant	527	62	Less than 5 years	119	14	Less than 5 years	170	20	Below 10000	356	42
2	PG Assistant	323	38	5-10 years	272	32	5-10 years	255	30	10000-20000	236	28
3				10-20 years	255	30	10-20 years	221	26	20000-30000	107	12
4				20-30 years	85	10	20-30 years	85	10	30000-40000	85	10
5				Above 30 years	119	14	Above 30 years	119	14	40000 & Above	66	08
	Total	850	100	Total	850	100	Total	850	100	Total	850	100

Sources: Primary Data

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TABLE 2: COPING STRATEGIES FOR RELIEVING STRESS

S.No	Reducing physical stress	No. of Respondents	Percentage	Relaxation	No. of Respondents	Percentage	Correct posture	No. of Respondents	Percentage	Diet	No. of Respondents	Percentage
1	Set priorities	306	36	Deep breathing	51	06	Change of posture	357	42	Eat less	238	28
2	Keeping ready well ahead	187	22	Drinking water	306	36	Avoid strenuous posture	221	26	Take balanced diet	357	42
3	Alternating of heavy work with light work	272	32	Take out time for leisure	255	30	Convenient placement of things to reduce physical work	238	28	High fibre diet	153	18
4	Use of time and labour saving devices	51	06	Take rest	238	28	Use ergonomically designed furniture	34	04	Consume more food	0	0
5	Take hired help	34	04							Consume food many times in small quantities	102	12
Total		850	100	Total	850	100	Total	850	100	Total	850	100

S.No	Physical Exercise	No. of Respondents	%	Medicinal therapy	No. of Respondents	%	Natural care	No. of Respondents	%	Religious/ Meditation	No. of Respondents	%	Psychotherapy	No. of Respondents	%
1	Swimming	0	0	Sleeping pill	34	04	Colour therapy	0	0	Meditation	204	24	Change in routine	170	20
2	Walking	510	60	Mood altering drugs	0	0	Aroma therapy	0	0	Offer prayer	340	40	Positive thinking	442	52
3	Playing games	136	16	Tranquilizers	0	0	Herbal therapy	68	08	Chanting of mantras	51	06	Recreation with family	170	20
4	Going to gym	68	08	None of the above	816	96	Water therapy	119	14	Religious activity	187	22	Cry to relieve the stress	68	08
5	Jogging	51	06				Hot water therapy	68	08	Yoga	51	06			
6	Yoga	85	10				None of the above	595	70	Pilgrimage	17	02			
Total		850	100	Total	850	100	Total	850	100	Total	850	100	Total	850	100

S.No	Social Support	No. of Respondents	Percentage	Altering Situation	No. of Respondents	Percentage	Reducing Responsibilities	No. of Respondents	Percentage	Performing most liked activities	No. of Respondents	Percentage
1	Work in group	153	18	Change of place	221	26	Postponing certain tasks	255	30	Painting	0	0
2	Attend social gathering	289	34	Avoiding painful reminders	289	34	Legitimately avoid disliked tasks	221	26	Listening songs	187	22
3	Talk to someone	187	22	Maintaining well organized home	170	20	Delegating the Work	153	18	Singing	68	08
4	Attending parties	136	16	Adapt to the de-stressing events.	170	20	Changes in Preference of Job	221	26	Watching T. V.	289	34
5	Take counseling	85	10							Going for movie/shopping	119	14
										Spending time in park/with nature	68	08
										Cooking	68	08
										Gardening	51	06
Total		850	100	Total	850	100	Total	850	100	Total	850	100

Sources: Primary Data

EVALUATION OF OPERATING AND FINANCIAL PERFORMANCE IN POST-ACQUISITION
(WITH SPECIAL REFERENCE TO UNILEVER-BLUE AIR)

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ABSTRACT
The purpose of this paper is to study the concept of Acquisition in detail by taking one example of some companies. The objective is to examine the relationship between the operating performance and financial performance. Mergers/Acquisition is a phenomenon which is easy to think but hard to implement. Post mergers transition phase is most difficult one as in any organization whether large or small. Mergers/Acquisition is a process which s very essential nowadays for the survival of the business. Companies are acquiring more and more firms in order to expand their business and with many reasons. In this paper the study period is restricted for 5 years and financial tool is ratio. Statistical tool is Mean, standard deviation, Kurtosis and skewness are used in descriptive statistics and also correlation.

KEYWORDS
acquisition, profitability, correlation.

JEL CODE
G34

1. INTRODUCTION
The reasoning behind mergers and acquisition is that two companies together are more valuable than two separate companies. The key principle behind buying a company is to create shareholders value over and above that of the sum of the two companies. This rationale is particularly alluring to companies when times are tough strong companies will act to buy other companies to create a more companies to create a more competitive, cost-efficient company. The companies will come together hoping to gain a greater market share or achieve greater efficiency. Because of these potential benefits, target companies most often agree to be purchased when they cannot survive alone (Brigham,1986; Cyco and Murgin, 2000; Brealey and Myers, 2003)

The advantages stemming from M & A have been evaluated in terms of the ability to exploit scale and scope economies, gain market control, economize transaction costs, diversify risks, and provide access to existing know-how. Nonetheless, empirical evidence on M & A has also suggested that M & A might fail because of over-optimistic expectations of benefits and underestimation of post-integration difficulties like lack of market or technology relatedness, business culture clashes, etc. The two main approaches to tackle this this issue empirically are stock price studies.

2. THEORETICAL BACKGROUND
Unilever announced that it has signed an agreement to acquire Blue air, the world's leading supplier of innovative mobile indoor air purification technologies and solutions.

Launched in 1996 in Stockholm, Blue air had a turnover of US$106m in 2015 and is a leading player in the premium category of air purifiers in markets like China, US, Japan, South Korea and India. This significant venture in air purification will further complement Unilever's existing water purification business.

Nitin Paranjpe, President of Unilever's Home Care business said: "We are delighted to be adding Blue air to our Home Care portfolio. The Blue air brand and products are widely known and represent exceptional quality and design, as well as superior capacity and performance. Blue air was founded on the belief that business should be a force for good in society, which is shared by Unilever."

Sold in over 60 countries around the world, Blue air has grown rapidly in recent years as the demand for indoor air purification has increased, as consumers become more aware of the health and wellbeing risks posed by poor air quality. Blue air's acclaimed air purifying products remove up to 99.97% of all contaminants from the air, including hazardous sooty particles, allergens and viruses.

Blue air founder Bengt Rittri, who calls clean air a basic right, said: "Blue air was launched 20 years ago with the mission to start a clean air revolution by bringing people the world's best air purifiers."

"This mission remains embedded in the company values of Blue air today as we continuously work to elevate people's health and wellbeing in a world where WHO says outdoor air pollution has been continuously increasing over the past several years, with billions of people now exposed to dangerous air.

"We are saying yes to leveraging the help of Unilever – one of the world's most admired corporations for its sustainability practices – to help Blue air take the next step to allow more people to take action to create safe indoor havens for themselves, their loved ones, work colleagues and customers. Unilever is the best possible partner to help Blue air more quickly fulfil its mission to help people enjoy the health benefits of breathing clean air."

3. LITERATURE REVIEWS
The operating performance approach compares the performance of companies between the pre-merger and post-merger phase by using accounting data which determines whether consolidation leads to changes in reported costs, revenue or profit figures. The most widely researched financial parameters in relation to M&A are profitability, productivity, ROI, market share etc. Review of literature shows that the impact of M&As on the operating performance and profitability of firms may be both positive or detrimental in nature. This section first discusses the studies dealing with mergers in nations other than India followed by studies undertaken on Indian mergers.

Manoj Kumara NV (2017), in a paper "Impact of post mergers and acquisition on capital structure of the firm: A study of selected Indian bidding firms" the objective of the study is to examine the changes in capital structure and its impact on profitability through mergers and acquisition. The study period of this paper is 6 years, statistical and financial tool is used for the study and they have concluded that the research should focuses on evaluation of capital structure using net income approach model by considering the actual year cost of capital.

Ismail et al. (2011), in a paper "Review of Literature Linking Corporate Performance to Merger and Acquisitions" analysed prior literature of M&As and its effects on financial performance. Previous studies used various measures to examine the impact of M&As on corporate performance, where measures might be based on accounting measures, market measures, and mixed measures or qualitative measures. The study proved that there is a dispute regarding the factors that affect the reported performance, where eight factors might affect performance: method of payment (cash or stock), book-to-market ratio, type of merger or acquisition transaction (related or unrelated), cross-border vs. domestic M&As, mergers vs. tender offers, firm size, macro-economic conditions, and time period of transaction.

Bratianu and Anagnoste (2011), in a study "The Role of Transformational Leadership in Merger and Acquisitions in Emergent Economies" analysed the role of transformational leadership in M&As, in emergent economies. The study found that M&As represent strategies for developing new markets, or for increasing market dominance in old markets.

Nam et al. (2008), in a study entitled "Prediction Model of Post-merger Performance" developed a comprehensive model describing the post-merger performance of a combined firm based on a fundamental return on equity equation. The study found that the post-merger performance is the function of relative size, price-to-book ratio, synergy, cost of equity, and book value change, and that these factors affect the P of a successful merger simultaneously.

Rottig (2007), in a paper "Successfully Managing International Merger and Acquisitions: A Descriptive Framework" constituted the most frequently used means through which multinational corporations (MNCs) undertake foreign direct investment (FDI); most of these transactions are not successful. The study identified key difficulties that cause the high failure of cross-border M&A developed a typology of strategies to facilitate the management of these problems. The study found that the performance of international M&As is a function of successful cultural combination during the post-acquisition integration process.

McDonald et al. (2005), in a paper "Planning for a Successful Merger or Acquisition: Lessons from an Australian Study" used semi-structured interviews: to identify the link between corporate strategic planning and M&As strategy; to examine the due diligence process in screening an M&As; and to evaluate previous experience in successful M&As. The study found that there was a clear alignment between corporate and M&As strategic objectives but each organisation had a different emphasis on individual criterion. Due diligence was also critical to success; its particular value was removing managerial ego and justifying the business case.

Selcuk and Yilmaz (2011), in an article "The Impact of Merger and Acquisitions on Acquirer Performance: Evidence from Turkey" analysed the impact of M&As deals on the performance of acquiring Turkish firms. The study was based on both stock market and accounting data. The study proved the hypothesis that acquiring firms are negatively affected by M&As activities the abnormal returns are statistically negative and different from zero for 10-day and 7–day returns for stocks of Turkish firms involved in M&As exceed average industry returns.

Azhagaiah and Sathish Kumar (2012), in a study "A Study on the Short-run Profitability of Acquirer Firms in India" attempted to study the impact of M&As on the short-term post-merger profitability (P) across industries in India with a sample of 10 corporate firms each in four major industries which have undergone M&As in the same industry (related merger) during the period 2004 to 2007 with an objective of comparing the post-merger P using appropriate P measures (ratios) and compared the mean P of acquiring firms for three years before merger and three years after merger by use of t–test. they concluded that there is a significant improvement on the short-run post-merger of acquiring firms across industries in India except Banking and Finance Industry.

Jain and Raorane (2011), in a paper "Mergers and Acquisitions- A Change Paradigm in Performance of Indian Company" attempted to evaluate the impact of M&As on the performance of the acquiring and target firms. The sample size of the study was limited to 13 firms. Empirical tests were carried out on the financial data with the help of liquidity ratios, namely, current ratio and quick ratio in order to ascertain whether M&As resulted in SW or not. The study used paired samples t-test for measuring the pre-merger and post-merger average performance of the acquiring and target firms. The study concluded that the acquiring firms always benefited more than that of the target firms in the M&As event.

Indhumathi et al. (2011), in an analysis "The Effect of Mergers on Corporate Performance of Acquirer and Target Companies in India" attempted to compare the performance of the acquiring and target firms. The study analysed the financial performance of sample firms from the viewpoint of profitability, liquidity, leverage, and activity. From the overall analysis, it was found that the acquiring firms increased shareholders' wealth, that is, increased the returns for the investment after the M&As event.

4. OBJECTIVE OF THE STUDY
To examine the relationship between the operating performance and financial performance.

5. RESEARCH METHODOLOGY
TYPE OF RESEARCH
Descriptive research study is used to describe the characteristics of a population or phenomenon being studied. It does not answer questions about how/when/where/why the characteristics occurred.

SAMPLING DESIGN
It is a part of the target population, which can be an individual element or group from within a statistical resident to estimation the characteristics of the entire population.

SAMPLE

TABLE A

Acquiring	Acquired	Type of activity	Deal value	Year of occurrence	Strategic motive
Unilever (London)	Blue Air (Roman)	Acquisition	15.6 Billion Euro	16-aug-16	Expansion of business, Long term survival in the market

SOURCES OF DATA
Secondary data are data which are already collected and published by others, and they are journals, articles, company records, books, websites, etc.

STATISTICAL TOOLS
Descriptive statistics – These are used to describe the basis features of the data in a study. They provide simple summaries about the sample and the measures.
Mean – Simple or arithmetic average of a range of values or quantities, computed by dividing the total of all values, also called Arithmetic mean.
Standard deviation – It is a measure of the dispersion of a set of data from its mean. It is calculated as the square root of variance by determining the variation between each data point relative to the mean.
Kurtosis & Skewness: Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the centre point.
Kurtosis is a measure of whether the data are heavy-tailed or light-tailed relative to a normal distribution.
Correlation - It is a statistical technique that can show whether and how strongly pairs of variables are related.

FINANCIAL TOOLS
Ratios - A ratio is a relationship between two numbers indicating how many times the first number contains the second. It is a quantitative analysis of information contained in a company's financial statements. Ratio analysis is used to evaluate various aspects of a company's operating and financial performance such as its efficiency, liquidity, profitability and solvency.

HYPOTHESIS
Ho: There is no significant relation between operating performance and financial performance.

6. DATA ANALYSIS AND INTERPRETATION
In this study considers five years of ratios as a secondary data analysis. Ratios use as financial tools and mean, standard deviation, kurtosis, skewness and correlation used as a statistical tool. To examine the relationship between the operating performance and financial performance.

TABLE 6.1: ANALYSIS OF RATIOS

Ratios	2013	2014	2015	2016	2017
Gross Profit	14.59	15.04	15.97	16.91	17.72
Return on net worth	142.01	118.04	115.87	110.73	69.18
Net profit	14.7	13.8	14	12.76	14.07
Return on capital employed	163.63	147.75	148.75	160.3	95.17
Return on long term fund	163.63	147.59	148.75	160.3	95.17
Inventory turnover ratio	10.8	10.76	12.57	13.61	14.6
Debtors turnover ratio	34.13	33.96	38.52	18.06	17.3
Fixed asset turnover ratio	6.73	6.77	6.99	6.31	7.38
Total asset turnover ratio	9.79	8.62	8.32	9.73	5.39
Asset turnover ratio	8.34	9.42	8.8	9.11	6.65

Sources: Authors calculation, Annual report database.

In the above table the ratios of five years from 2013 to 2017 is showing. The Gross profit of 2013 and 2017 has been increased from 14.59 and 15.04 respectively. The Inventory turnover ratio of 2013 and 2017 has been increased from 10.8 to 14.6 respectively and also fixed asset turnover ratio of 2013 and 2017 has been increased from 6.73 to 7.38 respectively.

TABLE 6.2 DESCRIPTIVE STATISTICS ANALYSIS

Descriptive	Mean	Standard Deviation	Kurtosis	Skewness	Minimum	Maximum
GP	16.046	1.292915	-1.76939	0.237284	14.59	17.72
RONW	111.166	26.38061	2.363188	-1.00407	69.18	142.01
NP	13.866	0.704045	2.084394	-0.91003	12.76	14.7
ROCE	143.088	27.68884	3.780441	-1.88401	95.17	163.63
ROLTF	143.088	27.68884	3.780441	-1.88401	95.17	163.63
ITOR	12.468	1.699962	-2.22054	0.132126	10.76	14.6
DTOR	28.394	9.953471	-3.01942	-0.45193	17.3	38.52
FATOR	6.836	0.391127	0.804226	0.122779	6.31	7.38
TATOR	8.37	1.789651	2.522302	-1.53156	5.39	9.79
ATOR	8.464	1.089739	2.504011	-1.5422	6.65	9.42

Sources: Authors calculation, Annual report Database.

In the above table the descriptive statistics of mean, standard deviation, kurtosis and skewness. Gross profit of mean is 16.046, std deviation is 1.292915, kurtosis is -1.76939 showing negative value. Inventory turnover ratio mean is 12.468, std deviation is 1.699962, kurtosis is -2.22054. Fixed asset turnover ratio mean is 6.836, std deviation is 0.391127 and kurtosis is 0.804226.

TABLE 6.3 CALCULATION OF CORRELATION

		GPM	RONW	NPM	ROCE	ROLTF	ITOR	DTOR	FATOR	TATOR	ATOR
GPM	R	1	-0.9	-0.486	-0.699	-0.699	0.988	-0.82	0.328	-0.662	-0.582
	Sig.		0.037	0.405	0.188	0.188	0.001	0.089	0.588	0.223	0.302
RONW	R	-0.9	1	0.239	0.922	0.923	-0.851	0.698	-0.621	0.899	0.698
	Sig.	0.037		0.698	0.026	0.026	0.067	0.190	0.264	0.038	0.190
NPM	R	-0.487	0.240	1.000	-0.144	-0.144	-0.437	0.533	0.571	-0.189	-0.393
	Sig.	0.406	0.698		0.817	0.817	0.462	0.355	0.314	0.761	0.513
ROCE	R	-0.700	0.923	-0.144	1.000	1.000	-0.658	0.502	-0.848	0.990	0.843
	Sig.	0.188	0.026	0.817		0.000	0.227	0.388	0.070	0.001	0.073
ROLTF	R	-0.700	0.923	-0.144	1.000	1.000	-0.658	0.502	-0.848	0.990	0.843
	Sig.	0.188	0.026	0.817	0.000		0.227	0.388	0.070	0.001	0.073
ITOR	R	0.989	-0.851	-0.437	-0.658	-0.658	1.000	-0.790	0.325	-0.625	-0.610
	Sig.	0.001	0.067	0.462	0.227	0.227		0.112	0.594	0.260	0.274
DTOR	R	-0.820	0.698	0.533	0.502	0.502	-0.790	1.000	-0.001	0.393	0.495
	Sig.	0.089	0.190	0.355	0.388	0.388	0.112		0.999	0.512	0.397
FATOR	R	0.329	-0.621	0.571	-0.848	-0.848	0.325	-0.001	1.000	-0.897	-0.777
	Sig.	0.589	0.264	0.314	0.070	0.070	0.594	0.999		0.039	0.122
TATOR	R	-0.662	0.899	-0.189	0.990	0.990	-0.625	0.393	-0.897	1.000	0.811
	Sig.	0.223	0.038	0.761	0.001	0.001	0.260	0.512	0.039		0.095
ATOR	R	-0.583	0.698	-0.393	0.843	0.843	-0.610	0.495	-0.777	0.811	1.000
	Sig.	0.302	0.190	0.513	0.073	0.073	0.274	0.397	0.122	0.095	

Sources: Authors calculation and SPSS Data base.

In the above table calculation of correlation, the Gross profit of 'R' resulted with 1, RONW & DTOR is -0.9 & -0.820 respectively these are negatively strongly related, ROCE & ROCTF are resulted with -0.700 and -0.700 so these are strongly correlated, NPM, TATOR and ATOR is -0.487,0.662 and -0.583 respectively these are weakly correlated. ITOR is resulted with 0.989 so these is positively strongly correlation & FATOR is 0.329 it is positively weekly correlated.

FINDINGS AND RECOMMENDATION

➢ The study finds that the gross profit ratio has been increased from the year 2013 to 2017 that is 14.59 and 17.79 respectively.
➢ The analysis finds that Inventory turnover ratio has been increased from the year 2013 to 2017 that is 10.8 and 14.6 respectively.
➢ In this study finds that return on capital employed and return on long term fund resulted the highest value in the mean and the standard deviation.
➢ In this study finds that fixed asset turnover ratio has resulted positive values in mean, standard deviation, Kurtosis and skewness.
➢ The study finds that in the analysis of correlation return on net worth and debtors turnover ratio resulted the negatively strongly correlation.
➢ The analysis of this paper Inventory turnover ratio resulted with Positively strongly correlation that is 0.989.
➢ The study finds that in the analysis of correlation the net profit margin and asset turnover ratio resulted with weakly correlated.
➢ The profitability of the firm is showing good progress so for further growth it can be give more importance for concentrating on operational efficiency of the firm.
➢ The Debtors turnover ratio and total asset turnover ratio is showing a decreasing tendency, it implies the efficiency of the firm. So, the firm requires to give more focus on improving the overall efficiency of the firm.
➢ In this study the profitability ratios have been increased so considering this the company can go with the acquisition for further development of the company.

CONCLUSION

Mergers and acquisition are the one of the business strategy by which companies are going to implement. The study started reviewing the mergers and acquisition literature review with an aim to understand the relevant procedure and the relationship between the operating performance and financial performance. In this current study show that strongly correlated in the profitability. To conclude that the company can go with the acquisition and also slight increase in the efficiency of the firms it shows that company can concentrate on increasing the efficiency.

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PERCEPTION TOWARDS LIC's MICRO INSURANCE POLICIES AMONG POLICY HOLDERS IN BANGALORE REGION

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ABSTRACT
The study finds out that micro insurance sector will soon cease to be influenced by low income segment of the society. India has experimented a lot with micro insurance and the sector is still driven by supply lead interventions. Micro insurance not only provides a platform for LIC to enlarge its frontiers and increase their market share (increased premium), it also provides the opportunity to enhance insurance penetration and insurance density amongst the low income population. LIC MI offers a good platform in creating additional employments i.e. agents, specialists etc.

KEYWORDS
Bangalore, Micro insurance polices.

JEL CODES
I13, G22.

INTRODUCTION

Micro insurance is insurance with low premiums and low caps / coverage. In this definition, "micro" refers to the small financial transaction that each insurance policy generates. "General micro insurance product means health insurance contract, any contract covering the belongings, such as, hut, live-stock or tools or instruments or any personal accident contract, either on individual or group basis, as per terms stated in Schedule-I appended to these regulations"; and "life micro insurance product" means any term insurance contract with or without return of premium, any endowment insurance contract or health insurance contract, with or without an accident benefit rider, either on individual or group basis, as per terms stated in Schedule-II appended to these regulations as those within defined (low) minimum and maximum caps. The IRDA's characterization of micro insurance by the product features is further comple-mented by their definition for micro insurance agents, those appointed by and acting for an insurer, for distribution of micro insurance products (and only those products).

MEANING
Insurance Regulatory and Development Authority of India (IRDAI) has created a special category of insurance policies called micro-insurance policies to promote insurance coverage among economically vulnerable sections of society. The IRDA Micro-insurance Regulations, 2005 defines and enables micro-insurance.
A micro-insurance policy is:
- A general or life insurance policy with a sum assured of Rs 50,000 or less

A general micro-insurance product is any:
- Health insurance contract
- Any contract covering belongings such as
- Hut
- Livestock
- Tools or instruments or
- Any personal accident contract
- They can be on an individual or group basis

A life micro-insurance product is:
- A term insurance contract with or without return of premium
- Any endowment insurance contract or
- A health insurance contract
- They can be with or without an accident benefit rider and
- Either on an individual or group basis

There is flexibility in the regulations for insurers to offer composite covers or package products that include life and general insurance covers together

Intermediaries:

Micro- insurance business is done through the following intermediaries:

- Non-Government Organisations
- Self-Help Groups
- Micro-Finance Institutions

The micro insurance regulation (2005) has helped the growth of regulated micro insurance in India. According to the IRDA annual report 2012-13, 50.36 lakhs of Individual MI (life) policies were sold in India in the year 2012-13. The cumulative premium collected from individual MI (life) policies was ₹10,967.59 lakhs. After the eight years of MI regulations, there are clear trends in the way, business is conducted.

2.REVIEW OF LITERATURE

C. Manivannan & Dr. G. Karunanithi in their study on "Micro Life insurance products of LIC of India in Vellore Division" states that Micro insurance is the need of the hour and a proper implementation will benefit to everyone in the society. It is evident that this sector has influenced by the rural and urban areas of weaker sections obligations. The LIC of India should take steps to in& crease the business of Micro Insurance as well as to collect the renewal premium from the policy-holders.

Shwetha Mathur in her study "Micro Insurance - A Powerful Tool to Empower Poor", it states that micro insurance Policy-induced and institutional innovations are promoting insurance among the low-income people who form a sizable sector of the population and who are mostly Without any social security cover. Although the current reach of 'micro-insurance' is limited, the early trend in this respect suggests that the insurance companies, both public and private, operating with commercial considerations, can insure a significant percentage of the poor. Serving low-income people who can pay the premium certainly makes a sound commercial sense to insurance providers. To that extent imposing social and rural obligations by insurance regulator (IRDA) is helping all insurance companies appreciate the vast untapped potential in serving the lower end of the market.

Arvind. M & Nayana Renu Kumar (2008) in their study "Low income households and micro insurance: Understanding the need and management challenges" aims at understanding the needs for insurance and the current coping mechanisms at the people's level. It also examines their attitude towards micro insurance programmes designed and delivered through Micro Finance Institutions (MFIs). It also studies the micro insurance products currently offered in the central Tamil Nadu region, and the management and implementation challenges faced by the MFIs in delivering micro insurance. To understand the client demand, around ninety households were surveyed across the three districts in central Tamil Nadu namely Trichy, Perambaloor and Tanjore. The survey accounted for clients of two MFIs namely SHEPHERD and ASA. It was observed that households (both MFI clients and Non MFI clients) had an access to and had taken regular insurance policies through the insurance agency network. Their associations with MFIs show well in their understanding and need for insurance. Thus the study reveals the requirement for more education about micro insurance at the people's level, the necessity for more bargaining power and insurance training at the MFI's level is the need for a social perspective at the insurance company's level.

3. NEED OF THE STUDY

Micro insurance is specifically designed for the protection of low –income people, with affordable insurance products to help them cope with and recover from common risks. In India, micro insurance formal sector is dominated by the life insurance giant LIC. The performance of LIC has created trust among people and they prefer MI from LIC than from private players.

As there are 100 MI policy holders of LIC of India has been surveyed, it is very essential to study the perception of LIC's MI so that the overall opinion about LIC's MI can be measured and to improve the MI policies distribution among the low income people. In the company's perspective, it will be very helpful to formulate the MI policies, selecting the proper channels, and to take measures to overcome the problems of discontinuance.

4. RESEARCH METHODOLOGY

OBJECTIVES OF THE STUDY

1. To identify the socio economic profile of the sample customers.
2. To measure the perception towards the LIC's Micro insurance policies among the policy holders in Bangalore region.

RESEARCH DESIGN

The research design is empirical and analytical in nature.

SAMPLE SIZE

50 LIC's micro insurance policy holders.

SAMPLING METHOD

Convenience sampling method of random sampling technique.

DATA COLLECTION METHOD

The data is collected through survey of 50 respondents of different areas of Bangalore district. A structured questionnaire was prepared to record responses.

DATA ANALYSIS

Collected data was analyzed through SPSS. The percentage and mean technique was used for analysis.

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5. FRAME WORK OF ANALYSIS

TABLE 1: SOCIO ECONOMIC PROFILE OF THE MI POLICY HOLDERS'

Sl.No	Socio Economic Profile		No. of Respondents
1	GENDER	Male	12
		Female	38
2.	AGE	18-30 years	6
		31-40 years	14
		41-50 years	22
		Above 51 years	8
3.	EDUCATION	Illiterate	3
		Primary	20
		Secondary	5
		Higher secondary	12
		Graduate and +	10
4.	Marital status	Married	28
		Unmarried	8
		Widow	7
		Divorcee	07
5.	OCCUPATION	Agriculture	08
		Self employed	30
		Government service	03
		Private sector	09
6.	MONTHLY INCOME	Less than Rs.5000	10
		Rs.5001 – 10000	20
		Rs.10001-15000	12
		Above Rs.15000	08
7.	TYPE OF FAMILY	Joint	17
		Nuclear	33
8.	FAMILY SIZE	2	04
		3	22
		4 and above	24
9.	EARNING MEMBERS	1	04
		2	28
		3	09
		4 and above	09
10.	LOCATION	Rural	15
		Urban	35

Source: Primary data

The following were the findings of socio economic factors, out of 50 policy holders 38 of them are women. Most of them are belonging to the age group of 41- 50 years category. Most of the Micro policy holders are with educational qualification ranges up to secondary education and as per analysis majority of the policy holders are, self employed with a monthly income of Rs. 5001- Rs.10,000. The majority of the respondents belongs to nuclear family with a family size three members. It is observed that earning members in family is two and most of them are located in Urban areas.

6. PERCEPTION OF MICRO INSURANCE POLICY HOLDERS

The opinion pertains to How Individuals makes opinion about Life Insurance companies that offers different policies through buying policies. This helps the company to put more efforts for marketing and advertising strategies intended to retain Existing customers and attract new customers.

7. SUGGESTIONS

It is recommended that LIC should restructure its marketing policies so that they can induce un-insured, low income population to invest in micro insurance policies and also to meet competition with private players, based on the above study it is recommended to LIC that to produce multi benefit Micro Insurance Policies, which fulfills the needs of varied low income people in different areas.

Micro Insurance products designed in such way, so that it should give rebate on premium and also LIC should introduce more number of premium payable centers in all areas, apart from this they can appoint agents to collect premium directly from policy holders. and also they can organize premium Mela in selected areas for direct collection of premium from policy holders and to sell MI products.

8. CONCLUSION

Micro insurance sector will soon cease to be influenced by low income segment of the society. India has experimented a lot with micro insurance and the sector is still driven by supply lead interventions. Micro insurance not only provides a platform for LIC to enlarge its frontiers and increase their market share (increased premium), it also provides the opportunity to enhance insurance penetration and insurance density amongst the low income population. LIC MI offers a good platform in creating additional employments i.e. agents, specialists etc.

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A STUDY ON MARKETING STRATEGIES OF PHARMACEUTICAL INDUSTRY WITH SPECIAL REFERENCE TO PATHANAMTHITTA DISTRICT

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ABSTRACT

Drug and Pharmaceutical industry plays a vital role in the health care of any country. Pharmaceutical Industry is one of the most intense knowledge driven industry, which is continuously in a state of dynamic transition. This study is basically conducted to know about the marketing strategies that are used by various pharmaceutical companies to promote their product in the market through Medical Representatives and other channels. This study also helps in analyzing major players in pharmaceutical industry. The industry is moving towards basic research driven expert oriented global presence and providing wide range of value added quality product and services.

KEYWORDS
pharmaceutical industry, dynamic transition, medical representatives.

JEL CODE
M31

1. INTRODUCTION
Indian pharmaceutical industry is climbing up the value chain from bringing a pure reverse engineering industry focus on domestic market. The industry is moving towards basic research driven expert oriented global presence and providing wide range of value added quality product and services. The pharmacy formulation market varies radically from the consumer market in many ways. Pharmaceutical companies are not allowed to publicly market their products. Marketing has to be restricted to promotional campaigns, advertisement only in medicinal magazines, journals etc., through medical representatives**.** The Indian Pharmaceutical industry has been witnessing phenomenal growth in recent years, driven by rising competition levels in the country and strong demand from export markets. The Indian Pharmaceutical Industry today is in front rank of India's Science – Based Industries with wide ranging capabilities in the complex field of drug manufacture and technology.

2. REVIEW OF LITERATURE
❖ **Pharmaceuticals- Market and Opportunities 2007 Ernst & Young Indian Brand Equity Foundation reveals** that India Brand Equity Foundation (IBEF) is a public-private partnership between the Ministry of Commerce & Industry Government of India and the Confederation of Indian Industry.
❖ **Patent Expiry of Blockbuster Drugs and Push for Lower Healthcare Costs Drive Generic Pharmaceuticals Market August 15,2007** is based on a research report by Frost & Sullivan namely U.S. Generic Pharmaceuticals Market Outlook, this article provides a brief overview of the impact of patent expires in the US generic pharmaceuticals market.
❖ **Domestic drug makers immune to slowdown**, **Business Standard (March 13,2009) PB Jayakumar** in his article views the pharmaceutical industry as one of the few industries that is recession proof.

3. STATEMENT OF THE PROBLEM
Pharmaceutical sales is a challenging business. The sales force is scattered around the country and globe. The representatives are on the road up to 80%of the time meeting doctors, pharmacists, and hospital administrators. Physicians are demanding more from pharmaceutical companies and their sales force. So to protect market share, pharmaceutical companies have to rely on sales force and innovative promotional strategies. Different pharmaceutical companies adopt different marketing strategies. The competition between various companies is increasing day by day. A study has to be done to know the marketing strategies adopted by the industry in order to reach the market and succeed. This is the reason for selecting this topic.

4. SCOPE AND SIGNIFICANCE OF THE STUDY
Pharmaceutical industries are rising in number. The basic idea of the study is to identify the different marketing techniques adopted by the pharmaceutical companies to sell their products in the markets through Medical Representatives and other channels. This also emphasizes on the role played by the medical representatives in this regard. The study also aims on analyzing the major players of Indian pharmaceutical industry. The introduction of product patent in India has brought some fundamental changes in strategies of Indian pharmaceutical companies, with focus shifting more towards Research and Development. Rapid growth of this industry requires further attention. In these circumstances, an investigation is relevant.

5. OBJECTIVES OF THE STUDY
1. To know the promotional strategies used by the pharmaceutical companies to sell their products in the market.
2. To analyze major players of Indian Pharmaceutical industry
3. To understand the role played by Medical Representatives in this regard.
4. To study the growth of pharmaceutical industry in India

6. RESEARCH METHODOLOGY
SAMPLE SIZE: The sample of 50 respondents was selected for the study.
DATA COLLECTION: The present study made use of both primary and secondary data. Primary data was collected from the sample respondents selected for the study through a structured Questionnaire. Secondary data were used for providing background information to the study. It was collected from various publications, articles, books, and websites relating to the study. The research was made by questionnaire in accordance to their convenience. So, the method selected was Convenience Sampling Method

7. PHARMACEUTICAL MARKETING IN INDIA: A MICROSCOPIC VIEW

TABLE 1: TOP 10 PUBLICLY LISTED PHARMACEUTICAL COMPANIES IN INDIA BY MARKET CAPITALIZATION AS OF JULY 2018

RANK	COMPANY	MARKET CAPITALIZATION 2018 (INR CRORES)
1	Sun Pharmaceuticals	134,158.23
2	Cipla	50,441.20
3	Piramel Enter	45,532.79
4	Lupin	39,119.16
5	Dr Reddys Labs	38,469.40
6	Cadila Healthcare	37,463.86
7	Biocon	36,009.00
8	Aurobindo Pharm	35,234.37
9	Divis Laboratories	29,443.12
10	Torrent Pharmaceuticals	24,349.64

8. ANALYSIS AND INTERPRETATION

TABLE 2: POSITION WISE CLASSIFICATION

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Sales Manager	5	10
Regional Manager	2	4
Advertising Manager	0	0
Marketing Manager	1	2
Field Sales Representatives	42	84
Total	**50**	**100**

Source: Primary data

INTERPRETATION: Among the total respondents 84% are field sales representatives, 10% are sales manager, 4 % are regional managers and 2% are marketing managers.

TABLE 3: FORMAL MARKETING TRAINING METHODS

PARTICULARS		NO. OF RESPONDENTS	PERCENTAGE
	Induction Basic Training	9	18
	Field Training	7	14
	Orientation/Refresher Training	1	2
	Special Skill Development Training	1	2
Yes	All of the Above	32	64
No		0	0
Total		**50**	**100**

Source: Primary data

INTERPRETATION: Among the total respondents everyone is being imparted formal marketing training by the company, and among them 18% are imparted with induction basic training only, 14% are imparted with field training only, 2% are imparted with refresher/ orientation training, another 2% are imparted with special skill development training and rest 64% are imparted with all the above 4 training.

TABLE 4: SALES PROMOTION TECHNIQUES

PARTICULARS	NO. OF RESPONDENTS	RANK
Conducting Camps	4	4
Gift Vouchers	33	2
Product Studies	43	1
Others	6	3

Source: Primary data

INTERPRETATION: Most of the respondents say that they follow more than one promotional techniques. Among the total respondents most are preferred product studies hence it ranks first Gift vouchers is ranked second.

TABLE 5: PROMOTIONAL STRATEGIES OF PHARMACEUTICAL COMPANY

PARTICULARS	NO. OF RESPONDENTS	RANK
Inform about product	10	3
Persuade the customers to purchase	14	2
Create a good market share for their product	30	1
Other motives	2	4

Source: Primary data

INTERPRETATION: The promotional strategy of the pharmaceutical companies is more oriented towards creating a good market share for the product as it is preferred by more and is ranked first. This is one criterion which makes the marketing strategy of the pharmaceutical companies different from that of others. Persuade the customers to purchase is ranked second and informing about the product is ranked third.

TABLE 6: BENEFIT OF ADOPTING MARKETING STRATEGIES

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Increasing Sales	17	34
Satisfying Customers	4	8
Developing Brand Equity	15	30
Developing New product	12	24
Facing competition	2	4
Total	**50**	**100**

Source: Primary data

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INTERPRETATION :Among the total respondents 34% says increasing sales is the benefit of adopting marketing strategies, 30% says developing brand equity is the benefit, 24% says developing new product is the benefit, 8% says facing competition is the benefit and the rest 4% says satisfying customers is the benefit

TABLE 7: FASTEST GROWING SEGMENTS OF THE INDIAN ECONOMY

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Highly Agree	6	12
Agree	25	50
Disagree	19	38
Highly Disagree	0	0
Don't Know	0	0
Total	**50**	**100**

Source: Primary data

INTERPRETATION: India's pharmaceutical industry is one of the fastest growing segments of the Indian economy and this is also one of the vital industrial segments which are directly related to the health of the nation. 50% agree with this statement, 38%disagree with it and the rest 12% highly agree with this statement.

TABLE 8: FRINGE BENEFITS PROVIDED BY THE COMPANY

PARTICULARS	NO. OF RESPONDENTS	RANK
Travel Allowance	50	1
Medical Reimbursement	25	3
Provident Fund	44	2
Educational Allowance	0	0
Others Incentives	11	4

Source: Primary data

INTERPRETATION: Among the total respondents, travel allowance is being provided to all the respondents by the company hence it is ranked first, 44 respondents are being provided with provident fund hence it is ranked second, medical reimbursement is ranked third and no one is provided with educational allowance, apart from all the above 11 respondents are being provided with incentives also.

TABLE 9: MAJOR CHALLENGE FROM MARKETING VIEW POINT

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Fragmentation of the market	6	12
Market risk due to lack of price control mechanism	20	40
MNCs	9	18
Others	15	30
Total	**50**	**100**

Source: Primary data

INTERPRETATION: Among the total respondents 40% agree that from the marketing view point market risk due to lack of price control mechanism is the major challenge, 18% says MNCs is the major challenge and 12% says fragmentation of the market is the major challenge.

TABLE 10: RECOMMENDATION TO THE INDUSTRY AND GOVERNMENT WITH REGARD TO PROMOTIONAL STRATEGY OF PHARMACEUTICAL COMPANY

PARTICULARS	NO. OF RESPONDENTS	RANK
Implement improve and monitor regulation	15	4
Measures to improve the transparency of drug companies	32	3
Stop the practice of gifts to doctors	42	1
Ensure code of conduct drug promotion	33	2
Other measures	2	5

Source: Primary data

INTERPRETATION: Majority of the respondents prefer to stop the practice of gifts to doctors as a recommendation to the industry and government with regard to promotional strategy, hence it is ranked first. Ensuring code of conduct drug promotion is ranked second, Measures to improve the transparency is ranked third and implement, improve and monitor regulation is ranked fourth.

TABLE 11: UNETHICAL STANDARDS EXISTING IN PROMOTION OF PHARMACEUTICAL PRODUCTS

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Yes	38	76
No	0	0
Can't Say	12	24
Total	**50**	**100**

Source: Primary data

INTERPRETATION: Among the total respondents 76% agree that unethical standards exist in promotion of pharmaceutical products and the rest 24% is not ready to say their opinion. Adherence to ethical standards while pursuing the promotional strategy for selling their products is a concern in the pharmaceutical industry. It is an accepted fact that the promotional measures do contain unethical practices.

9. MAJOR FINDINGS
Major findings of the study are as follows:
1. Majority of the respondents are field sales representatives
2. All the respondents have been provided formal marketing training by the company which includes Induction Basic training, Field training, Orientation/Refresher training and Special skill development training.
3. Product studies is the mostly provided activity by the company for sales promotion. Gift vouchers and conducting camp is also used.
4. Create a good market share for the product is the mostly preferred promotional strategies of pharmaceutical company by the respondents.
5. About 34% of the respondents agree that increasing sales is the major benefit of adopting marketing strategies in the company. The other benefit include Satisfying customers, Developing Brand equity, developing new product and facing competition.
6. About 50% of the respondents agree that Indian pharmaceutical industry is one of the fastest growing segments of the Indian economy.
7. Every respondents are being provided travelling allowance by the company. Medical reimbursement, Provident Fund, incentives are also being provided.

8. About 46% of the respondents says that entry of multinationals is not the major challenge to the domestic players in the pharmaceuticals market and among them market risk due to lack of price control mechanism is the major challenge from the marketing view point of pharmaceutical industry in India.
9. Majority of the respondents recommend to the industry and government to stop the practice of gifts to the doctors as promotional strategy of the pharmaceutical companies.
10. About 76% of the respondents agree that unethical standards exist in the promotion of pharmaceutical products in India.

10. SUGGESTIONS

1. Implement and enforce a ban on gifts to doctors.
2. Take measures to improve the transparency of drug companies' marketing activities and seriously address the conflict of interest encountered in drug companies' funding of medical education.
3. Many unethical practices are occurs in this field. It is suggested to authorities of government that fresh study of the matter is needed and strong laws should be made so that maximum unethical practices are minimized and good practices become the culture of the pharmaceutical industry.
4. Proper guidelines for working hours and days in field, number of doctors to meet daily and maximum visit to one doctor in a month etc should be formulated by the State and Union governments and implemented forcefully.
5. Government must make laws and regulations more powerful which carry heavy punishments also related to marketing practices of pharmaceuticals. The arrangement should be made that pharmaceutical companies in India should perform ethically and behave like a corporate citizen.

11. CONCLUSION

India's pharmaceutical industry has got remarkable and extraordinary path of growth over the years, and as India's pharmaceutical industry is among the most highly organized sectors, it seems it will also continue in coming years. To promote the pharmaceutical products and medicines, companies maximum employ science graduates. But now new trends has been absorbed that pharmaceutical companies are also recruiting management graduates. The promotional strategies adopted by the various pharmaceutical companies are being executed through Sales Representatives in order to capture the market and this had created a good market share for their product. The study conducted has been very fruitful in terms of meeting its objectives, providing deeper and clear picture.

12. LIMITATIONS OF THE STUDY

❖ The major limitation is the Time factor
❖ The sample size were limited to 50.
❖ The data received from some respondents were not clear.

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FINANCIAL PERFORMANCE ANALYSIS OF THE STATE BANK OF INDIA FROM 2011-2015 BY USING THE DUPOUNT SYSTEM FINANCIAL ANALYSIS

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ABSTRACT
This study attempts basically to measure the financial performance of the state Bank of India commercial bank for the period 2011-2015 by using DuPont system of financial analysis which is based on analysis of return on equity model. The return on equity model disaggregates performance into three components: Net profit margin, total assets turnover and the equity multiplier. It was found that the financial performance of State Bank of India is relatively steady and reflects volatility in the return on equity. Total assets turnover exhibit relative stability for the period from 2011 to 2015. The equity multiplier also shows almost stable indicators for the period from 2012 to 2015. Net profit margin declined from 2013 to 2015.

KEYWORDS
SBI, DuPont system, asset utilization.

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INTRODUCTION

For any business in the private sector there are numerous of models to describe how well the business is running. Among these the DuPont model was created in the early 1900s but is still a model valid to use for assessment of the profitability. The model was created by F. Donaldson Brown who came up with the model when he was assigned to clean up the finances in General Motors and has ever since been an important model for financial analysis. Remarkably it has not been used in the security community for risk prioritization or impact analysis. The original DuPont method of financial ratio analysis was developed in 1918 by an engineer at DuPont who was charged with understanding the finances of a company that DuPont was acquiring. He noticed that the product of two often-computed ratios, net profit margin and total asset turnover, equals return on assets (ROA). The elegance of ROA being affected by a profita-bility measure and an efficiency measure led to the DuPont method becoming a widely-used tool of financial analysis Liesz, (2002). In the 1970's, emphasis in financial analysis shifted from ROA to return on equity (ROE), and the DuPont model was modified to include the ratio of total assets to equity. Regarding this fact the researcher have taken the challenge to use this model for State Bank of India the largest bank in India.

Banks and other financial institutions are a unique set of business firms whose assets and liabilities, regulatory restrictions, economic functions and operating make them an important subject of research, particularly in the conditions of the emerging financial sectors. Banks' performance monitoring, analysis and control needs special analysis in respect to their operation and performance results from the viewpoint of different audiences, like investors/owners, regulators, custom-ers/clients, and management themselves. Different versions of financial ratio analysis are used for the bank performance analysis using financial statement items as initial data sources. The usage of a modified version of DuPont financial ratio analysis is discussed in the article. Empirical results of the State Bank commercial banking system performance analysis are also presented in the article from (2011-2015).

As with little, et al (2009), the modified DuPont model of financial ratio analysis is used to identify the drivers of financial success under alternative business strategies. Firms in the retail industry are categorized according to their high/low relative net operating income to sales and operating asset turnover ratios. Firms with high relative net operating income to sales and low relative operating asset turnover are assumed to be pursuing a differentiation Published by Canadian Center of Science and Education 87 strategy and those with high relative operating asset turnover and low relative net operating income to sales are assumed to be pursuing a cost leadership strategy. The performance variable used is return on net operating assets.

This study attempts basically to measure the financial performance of the State Bank of India. As a matter of fact banks are classified according to their financial characteristics and financial indicators which can be presented from the banks financial statements. The other objectives will attempt to find out the ratios of net profit margin, asset utilization, equity multiplier and return on equity from the period of 2011-2015. Net profit margin ratios are an indication of how effective a company is at cost control. The higher the net profit margin is, the more effective the company is at converting revenue into actual profit. This study also aims at finding out the asset utilization of the State Bank of India for the same period. The asset utilization ratio calculates the total revenue earned for every dollar of assets a company owns. This ratio indicates a company's efficiency in using its assets. An equity multiplier analysis is used in this study which is a formula used to calculate a company's financial leverage, and the debt a company uses to finance its assets. The equity multiplier is also a kind of leverage ratio, which is any method of determining a company's financial leverage. It can be calculated by looking at a company's balance sheet and dividing the total assets by the total stockholder equity. One of the most important profitability metrics is return on equity (ROE). Return on equity reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the balance sheet. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. For the most part, the higher a company's return on equity compared to its industry, the better.

The paper is organized as follows. Section I introducing the importance and objectives of study. Section II discusses the relevant literature review. Section III gives a brief overview on the State Bank of India-the most important recent developments in the bank.DuPont financial ratio analysis modified methodology and em-pirical results of the banking system performance are discussed in Section IV. In Section V the paper ends with some concluding remarks.

LITERATURE REVIEW

In order to more effectively evaluate operational managers, Nissim & Penman (2001) suggest using a modified version of the traditional DuPont model in order to eliminate the effects of financial leverage and other factors not under the control of those managers. Using operating income to sales and asset turnover based on operating assets limits the performance measure of management to those factors over which management has the most control. The modified DuPont model has become widely recognized in the financial analysis literature. See, for example, Pratt & Hirst (2008), Palepu & Healy (2008), and Soliman (2008). In addition, Soliman (2004) found that industry-specific DuPont multiplicative components provide more useful valuation than do economy-wide components, suggesting that industry-specific ratios have increased validity.

In carrying out bank performance analysis, it is important to emphasize that banks differ in their corporate governance from firms in other, less regulated industries. These differences, in turn, present their own challenges for bank managers, regulators, depositors, investors, and other stakeholders. "Bank managers live in a more complex environment than their peers in industry due to bank regulations. In addition to the demands placed on them by shareholders, regulators have strong incentives to influence managerial action, and this may be in conflict with shareholder demands" Harm (2002). Governance is a set of mechanisms with which the providers of capital and other stakeholders are defending their interests against the firm. The firm is run by managers, and this a point where conflicts of interests starts. An excellent survey of recent literature (both theoretical and empirical) is also presented by Harm (2002).

Macey and O'Hara (2003) argue that bank officers and directors should be held to broader (if not higher) set of standards than their counterparts in less regulated non- financial firms, and banks pose special corporate governance problems. Kose and Qian (2003) consider another important theme in the corporate governance of banks – the effect of the incentive features built into the compensation schemes of bank mangers. Adams and Mehran (2003) focus also on the differences between the corporate governance of banks and manufacturing firms and support the theory that governance structures are industry-specific. In general, the components of firm's governance structure are determined by various different factors, which all will influence also performance analysis aims and techniques: the nature and structure of firm's assets and liabilities (leverage, share of financial assets, business risk, cash- flow patterns), firm size, industry, regulations, etc. Various measures of rates of return are used mainly for that purpose. We fully agree with the opinion that "Relaying too heavily on just a few indicators of bank profitability can be misleading. While ROA, ROE, and interest margin (and non interest expenses) to gross income remain the key measures, they should ideally be supplemented by the analysis of other operating ratios" Sundararajan, et al (2002).

Brigham and Houston, (2001) The modified model was a powerful tool to illustrate the interconnectedness of a firm's income statement and its balance sheet, and to develop straight-forward strategies for improving the firm's ROE.

Hawawini and Viallet (1999) offered yet another modification to the DuPont model. This modification resulted in five different ratios that combine to form ROE. In their modification they acknowledge that the financial statements firms prepare for their annual reports (which are of most importance to creditors and tax collectors) are not always useful to managers making operating and financial decisions.

OBJECTIVES OF THE STUDY

1. To analyse the financial position and performance of the State Bank of India by applying Dupount System.
2. To measure the Return on Equity, Equity Multiplier and Net Profit Margin from 2011 to 2015.
3. To analyse the Balance Sheet and Income Statement.
4. To know over all bank financial performance condition from 2011 to 2015.

RESEARCH METHODOLOGY

The present study is based on secondary data. The published Annual report of SBI taken from their websites, magazines and journals on finance have been used a source of data.

STATE BANK OF INDIA

The origin of the State Bank of India goes back to the first decade of the nineteenth century with the establishment of the bank of Calcutta in Calcutta on 2nd June 1806. Three years later the bank received its charter and was redesigned as the Bank of Bengal (2nd January 1809). A unique institution, it was the first joint stock bank of British India sponsored by the Government of Bengal. The Bank of Bombay and the Bank of Madras followed the Bank of Bengal. These three banks remained at the apex of modern banking in India till their amalgamation as the imperial bank of India on 27th January 1921.

Pursuant to the provisions of the State Bank of India Act of 195, the Reserve Bank of India which is India's central bank acquired a controlling interest in the imperial bank of India. On 1st July 1955 the imperial bank of India became State bank of India. In 2008 the government of India acquired the Reserve Bank of India's stake in State Bank of India so as to remove any conflict of interest because the RBI is the country's banking regulatory authority.

In 1959 the government passed the State Bank of India Act. This made SBI subsidiaries eight that had belonged to princely states prior to their nationalization and operational take over between September 1959 and October 1960, which made 8 state banks associates of SBI.

SBI has acquired local banks in rescues. The first was the Bank of Bihar which SBI acquired in 1969, together with its 28 branches. The next year SBI acquired National Bank of Lahore which had 24 branches. 5 years later in 1975, SBI acquired Krishnaram Baldeo Bank, which had been established in1916 in Gwalior. In 1985 SBI acquired the Bank of Cochin in Kerala, which had 120 branches. SBI was the acquirer as its affiliate, the state bank of Trevancora, already had a network in Kerala.

The first step towards unification occurred on 13th August 2008 when State Bank of Saurashtra merged with SBI, reducing the number of associates state banks from seven to six. Then on 19th June 2009 the SBI Board approved the absorption of State Bank of Indore.

The acquisition of State Bank of Indore added 470 branches to SBI's existing network of branches. Also following the acquisition, SBI's total assets will inch very close to the 10 trillion mark. The total assets of SBI and the State Bank of Indore stood at 9,98,190 million as of March 2009. The process of merging of State Bank of Indore was completed by April 10, and the SBI Indore branches started functioning as SBI branches on 26th August 2010.

BRANCHES

The corporate centre of SBI is located in Mumbai. In order to cater to different functions, there are several other establishments in and outside Mumbai, apart from the corporate center. The bank boasts of having as many as 14 local head offices and 57 Zonal Offices, located at major cities throughout India. It is recorded that SBI has about 10000 branches, well networked to cater to its customers throughout India.

ATM SERVICES

SBI provided easy access to money to its customers through more than 8500 ATMs in India. The Bank also facilitates the free transaction of money at the ATMs of State Bank Group, which includes the ATMs of State Bank of India as well as the Associate Bank –State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Indore, etc.

SUBSIDIARIES

The State Bank Group includes a network of eight banking subsidiaries and several non-banking subsidiaries. Through the establishment, it offers various services including merchant banking services, fund management, factoring services, primary dealership in government securities, credit cards and insurances.

The eight banking subsidiaries are:

State Bank of Bikaner and Jaipur (SBBJ)

State Bank of Hyderabad (SBH)

State Bank of India (SBI)

State Bank of Indore (SBIR)

State Bank of Mysore (SBM)

State Bank of Patiala (SBF)

State Bank of Saurashtra (SBS)

State Bank of Travancore (SBT)

PRODUCTS AND SERVICES

SBI Term Deposits SBI Loan for Pensioners

SBI Recurring Deposits Loan against Mortgage of Property

SBI Housing Loan against Shares & Debentures

SBI Car Loan Rent plus Scheme

SBI Educational Loan Medi-Plus Scheme

OTHER SERVICES

Agricultural/Rural Banking

NRI Services

ATM Services

Demat Services

Corporate Banking
Internet Banking
Mobile Banking
International Banking
Safe Deposit Locker
RBIEFT
E-Pay
E-Rail
SBI Vishwa Yatra Foreign Travel Card
Broking Services

FINANCIAL ANALYSIS MODEL FOR FINANCIAL INSTITUTION

Saunders (2000) provides a model of financial analysis for financial institutions based on the DuPont system of financial analysis return on equity model. The return on equity model disaggregates performance into three components: net profit margin, total asset turnover, and the equity multiplier. The profit margin allows the financial analyst to evaluate the income statement and the components of the income statement. Total asset turnover allows the financial analyst to evaluate the right-hand side of the balance sheet: assets. The equity multiplier allows the financial analyst to evaluate the left-hand side of the balance sheet: liabilities and owners equity.

Return on equity analysis provides a system for planning as well as analyzing financial institution performance. The profit margin allows the analyst to develop a pro forma income statement. That is, net income is equal to revenues less expenses. Thus, the financial planner can determine the revenue level necessary to achieve the net income target. The total asset turnover ratio allows the analyst to project the total asset level necessary to generate the projected revenue level. The total asset requirement can be used to project the pro forma levels of all of the asset accounts. The fundamental equation of accounting is that assets equal liabilities plus owners equity. Thus, the equity multiplier ratio can be used to project the pro forma financial needs and the financial structure of the financial institution.

Return on equity, ROE is the first decomposed into return on asset. ROA, and the equity multiplier, EM. Return on asset decomposed into net profit margin and total assets turnover.

ROE= (ROA) (EM)
ROA= (NPM) (TAT)
Where
ROE = Return on equity
EM= is the equity multiplier
TAT= total assets turnover
ROA = return on assets
NPM= Net profit margin

Return on equity is net income divided by total equity capital and return on assets is net income divided by total assets. The equity multiplier is the ratio of total assets and total equity capital.

ROE= (NI)/ (TEC)
ROA= (NI)/ (TA)
EM= (TA)/ (TEC)
Where
NI= Net Income
TA= Total Assets
TEC=Total Equity Capital

Net profit decomposed into both income and expenses components. Total assets turnover can be decomposed into interest and non interest income components. The net profit margin ratio can be used to develop a proforma income statement. The total assets turnover ratio can be used to estimate the pro forma right hand side of the Balance sheet. The equity multiplier ratio can be used to estimate the pro forma left hand side of the Balance sheet. Thus, the DuPont system of financial analysis can be used to construct a financial plan for the bank. The DuPont system of financial analysis provides a means for the firm to monitor performance through the planning period and to post audit the planning process.

BALANCE SHEET ITEM

SBI has Three major categories of assets- Investments, Advances and other assets. Other assets include cash and Balance with RBI, Balance with Bank, Money at call, fixed assets, Work In progress. Investments fluctuated from 2.9 crores in 2011 to a 4.9 crores in 2015 with an average of Rs. 3.7 crores. An advance has increased from a low of Rs. 7.5 crores in 2011 to Rs.13 crores in 2015 and an average of Rs. 10.35crore. Other assets are 1.71 crores in 2011 and increased steadily to Rs. 2.53 crores in 2015 with an average of Rs 1.84 crores.

SBI has Three major liabilities accounts- Deposits, Borrowings and Share holder funds. Deposits increased from Rs. 9.3 crores in 2011 to the Rs. 15.7 crores in 2015 with an average level of Rs. 12.3 crores. Borrowings increased from Rs. 1.1 crores in 2011 to the Rs. 2.05 crores in 2015 with an average level of Rs. 1.6 crores. Shareholder funds increased from 0.64 crores in 2011 to the Rs. 1.2 crores in 2015 with an average level of Rs. 0.98 crores.

INCOME STATEMENTS ITEM

SBI has three sources of income- Interest income, other income and net income. Other income includes income from investment and others. Interest income has fluctuated from Rs. 0.81 crores to Rs. 1.52 crores with an average of Rs. 1.19 crores. Other income increased from Rs. 0.15 crores in 2011 to the 0.22 crores in 2015 with an average of Rs. 0.17 crores. Net income increased from Rs. 0.08 crores in 2011 to the Rs. 0.13 crores in 2015 with an average of Rs. 0.11 crores.

SBI has four expenses categories: Interest expenses, operating expenses, provision and contingencies and taxes. Interest expended has fluctuated from Rs. 0.48 crores in 2011 to Rs. 0.97 crores in 2015 with an average of Rs. 0.74 crores. Operating expenses increased from Rs. 0.23 crores in 2011 to the Rs. 0.38 cores in 2015 with an average of Rs. 0.30 crores. Provision and contingencies increased from 0.10 crores in 21011 to 0.19crores in 2015 with an average of Rs. 0.14 crores. Taxes decreased from 6689.71 crores in 2011 to 6212.39 crores 2015 with an average of Rs. 6161.34 crores.

DuPont ANALYSIS OF SBI BANK

Return on equity for SBI for the study period averages 12.96% but with a range from 12.84% in 2011 to 11.17% in 2015. Net profit margin averages 9.90% with a range of 10.15% in 2011 to 8.59% in 2015. Total asset turn over averages 0.078 times with a range from 0.07 times in 2011 to 0.08 times in 2015. The equity multiplier averages 16-34times with a range from 18.83times in 2011 to 15.95times in 2015. The equity multiplier decreased from 18.83 times in 2011 to 15.95 times in 2015.net profit margin fluctuates from the low 10.15% in 2011 to 11.78 % in 2013 and then to 8.59% in 2015.

DISCUSSION OF FINANCIAL RATIOS

At present total assets of SBI bank, investment averages in 23.27% of total assets with a high of 24.17% in 2015 and a low of 22.24% in 2014. Advances average 64.9% of total assets with a high of 67.48% in 2014 and a low of 61.83% in 2011. Other assets average 11.82% of total assets with a high of 14% in 2011 and a low of 10.27% in 2014. Deposits average 77.20% with a high of 78.15% in 2012 and a low of 76.31% in 2011. Borrowings average 10.07% with a high of 10.80% in 2013 and a low of 9.51% in 2012. Other liability and provisions averages 6.58% with a high of 8.6%in 2011 and 5.41% in 2014. Share holders fund averages 6.15% with a high of 6.60% in 2014 and a low of 5.31% in 2011.

SUMMARY AND CONCLUSION

This paper presents a model for the financial analysis of a bank based on the DuPont system of financial analysis. The bank return on equity is decomposed into net profit margin, total assets turnover and the equity multiplier. This model is applied to State Bank of India is one of the largest Bank in India. The DuPont system of financial analysis shows the performance of the State Bank of India over the years from 2011 to 2015.

Beginning with 2011, State Bank of India had high return on equity as well as equity multiplier as compared to other years under study. The equity ratios declined from 2012-2015 which indicates that the State bank had less financial leverage in the recent years, which means the bank is relying less on debt to finance its assets. Total assets turnover exhibit relative stability for the period from 2011 to 2015. Net profit margin declined from 2013 to 2015. Net profit reached 10.99% with an average 9.90%, total assets turnover of about 9.05% and a average of 8.57% and the equity multiplier levelled out an about 18.83% with average of 16.34%.

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APPENDIX

**TABLE 1: STATE BANK OF INDIA FINANCIAL STATEMENTS (2011-2015)**

Income Statement-Income	2011	2012	2013	2014	2015	Average
Interest Income	81394.36	106521.45	119655.10	136350.81	152397.07	119263.75
Other Income	15824.59	14351.45	16036.84	18552.92	22575.89	17468.32
Expenses						**Average**
Interest Expended	48867.96	63230.37	75325.80	87068.63	97381.82	74374.92
Operating Expenses	23015.43	26068.99	29284.42	35725.85	38677.64	30554.47
Provision and contingencies	10381.34	13090.23	11130.83	15935.36	19599.54	14027.46
Taxes	6689.71	6776.02	5845.91	5282.71	6212.39	6161.35
Net profit	8264.51	11701.29	14104.98	10891.18	13101.57	11613.91
Brought forward	0.34	0.34	0.34	0.34	0.32	
Transferred from amalgamation	0.00	0.57	0.00	0.00	0.00	
Total Net Income	8264.86	11713.34	14105.32	10891.51	13101.90	11615.39
Balance Sheet-Assets	2011	2012	2013	2014	2015	Average
Investments	295601	312198	350878	398800	495027	370480.08
Advances	756719	867579	1045617	1209829	13,00026	1035954
Other Assets	171416	155742	169716	184119	253027	186804
Total Assets	1223736	1335519	1566211	1792748	2048080	
Balance Sheet-Liabilities						**Average**
Deposits	933933	1043647	1202740	1394409	1576793	1230304.4
Borrowings	119569	127006	169183	183131	205150	160807.8
Others	105248	80915	95404	96927	137698	103238.4
Share holder fund	64986	83951	98884	118283	128439	98908.6
Total Liability	1223736	1335519	1566211	1792748	2048080	

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TABLE 2: STATE BANK OF INDIA RATIO COMPUTATION:

Income Statement Item	2011	2012	2013	2014	2015	Average
Interest Expended	50.27%	52.31%	55.51%	56.21%	55.66%	54.00%
Operating Expenses	23.67%	21.57%	21.58%	23.06%	22.10%	22.40%
Provision and contingencies	10.69%	10.83%	8.20%	10.29%	11.20%	10.24%
Taxes	6.88%	5.60%	4.31%	3.42%	3.56%	4.75%
Net Income	8.50%	9.69%	10.39%	7.03%	7.49%	8.62%
Total Income Statement	100%	100%	100%	100%	100%	100%
Balance Sheet-Assets	**2011**	**2012**	**2013**	**2014**	**2015**	**Average**
Investments	24.15%	23.37%	22.40%	22.24%	24.17	23.27%
Advances	61.83%	64.96%	66.76%	67.48%	63.47%	64.9%
Other Assets	14%	11.66%	10.83%	10.27%	12.35%	11.82%
Total Assets	100%	100%	100%	100%	100%	100%
Balance Sheet-Liabilities	**2011**	**2012**	**2013**	**2014**	**2015**	**Average**
Deposits	76.31%	78.15%	76.79%	77.78%	76.99%	77.20%
Borrowings	9.77%	9.51%	10.80%	10.22%	10.07%	10.07%
Others	8.60%	6.06%	6.09%	5.41%	6.72%	6.58%
Share holder funds	5.31%	6.28%	6.31%	6.60%	6.27%	6.15%
Total Liabilities and share holder equities	100%	100%	100%	100%	100%	100%
DuPont Ratios	2011	2012	2013	2014	2015	Average
Net Profit Margin (NPM)	10.15%	10.99%	11.78%	7.98%	8.59%	9.90%
Assets Utilization(TAT)	7.94%	8.00%	8.66%	8.64%	8.54%	8.57%
Equity Multiplier (EM)	18.83%	15.91%	15.83%	15.16%	15.95%	16.34%
Return on Equity (ROE)	12.84%	14.36%	15.94%	10.49%	11.17%	12.96%

Source: Calculated from the State Bank Annual Financial Reports 2011-2015
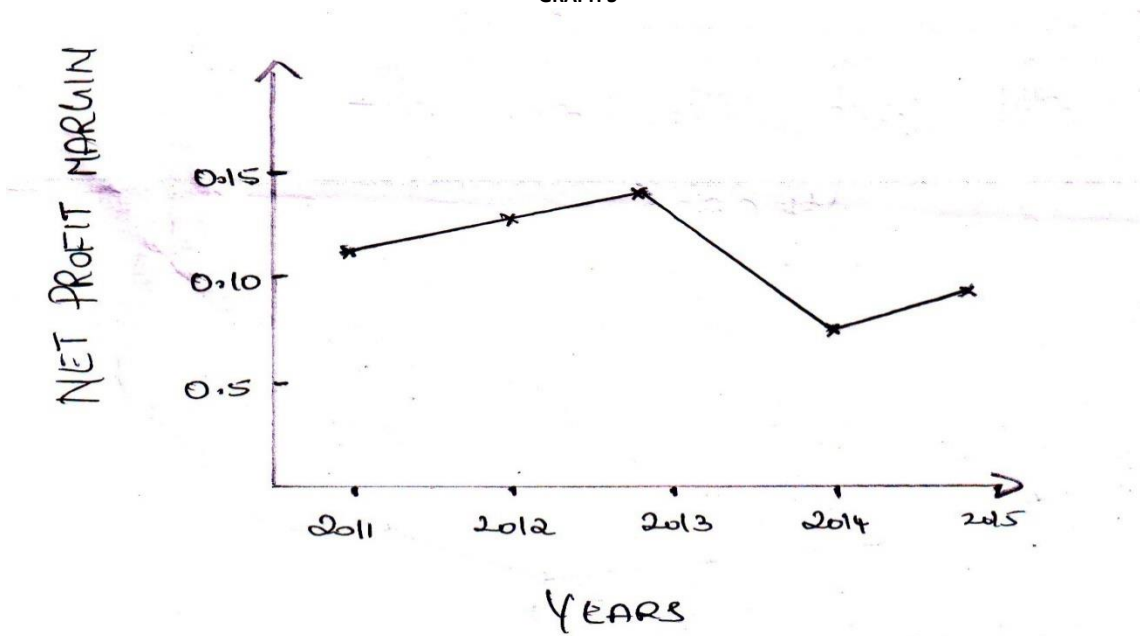
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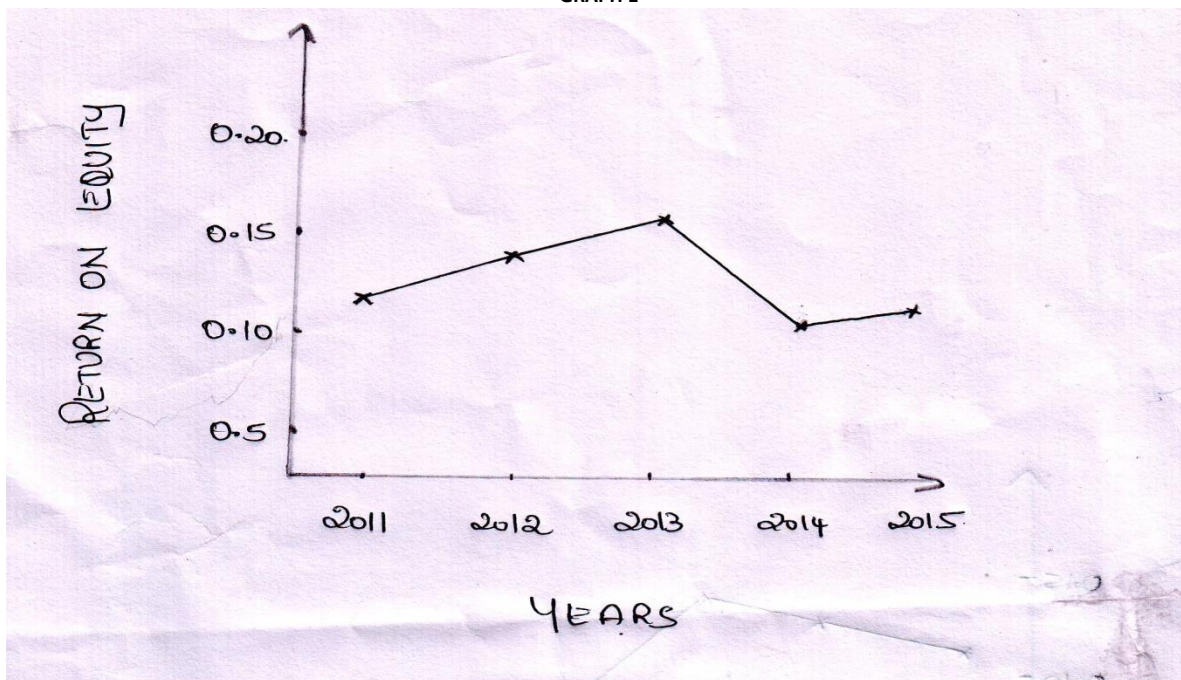
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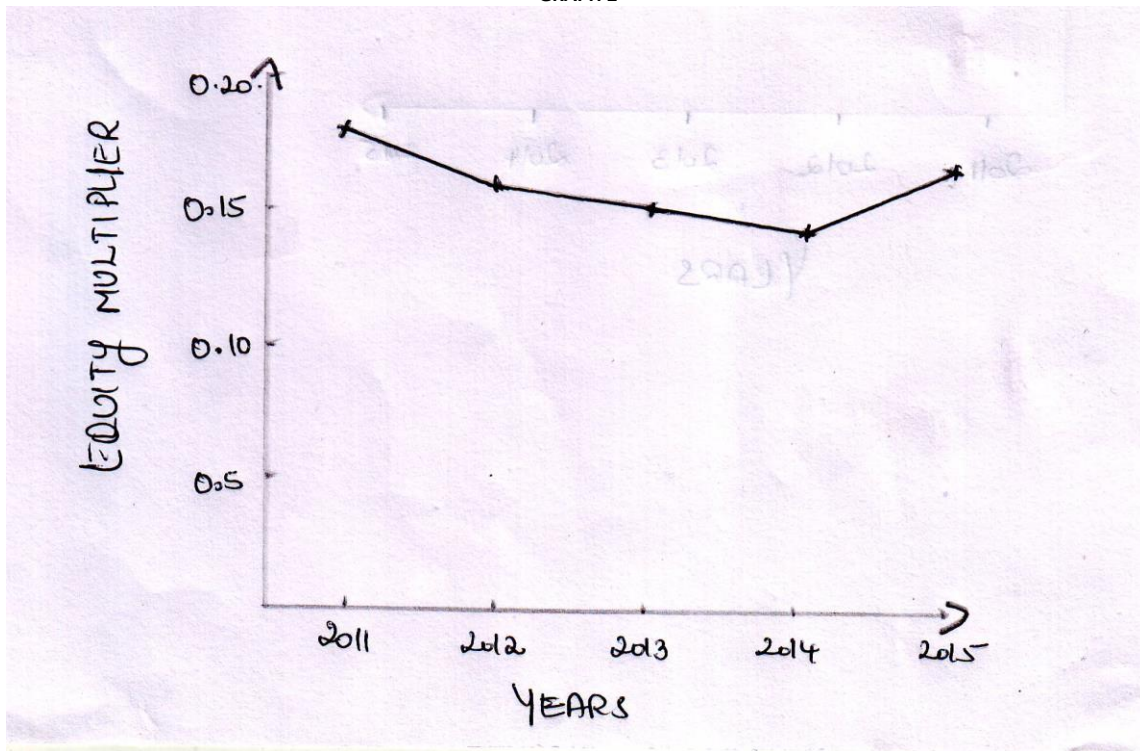
GRAPH 3

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