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THE IMPACT OF INCOME TAX AND INFLATION ON SALARY: A CASE STUDY OF GOVERNMENT GAZETTED TEACHERS IN PESHAWAR, PAKISTAN

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Abstract

This research explores impact of income tax and rate of inflation on the salary of government school teachers (SGST) in Peshawar (Pakistan) and the extent of economic erosion in the salary because of these two macro-economic factors. The data consists of 380 teachers of BPS-16 and above as a sample data from a population of 2528 teachers for fiscal year 2014-2015. The result shows that both income tax and inflation rate have positive relationship with SGST. This implies that higher the inflation and income tax, higher will be the economic erosion in salary. The loss in SGST due to Income tax and Inflation is 5.9% while the annual increment in salary is less than 10% of basic pay, which is less than the economic erosion in salary. Thus, there is economic inconsistency or adaptability between the salary erosion and the annual increment.

Keywords: *Inflation, Income tax, Salary, Real Income, Nominal income, Economic Erosion, annual increment.*

Introduction

Salaries play a vital role in motivating employees to exhibit and implement their unobservable skills in performing different tasks or jobs (Lang, 2003). Salary is the payment, normally paid on monthly basis, to the employee by employer for their services (Perry & Cline, 2013). Salary comprises any amount received from the employer in the form of revenue or capital gain; it includes any pay, remuneration, wages, payment for leaves, allowances, commission, fee, gratuity, any prerequisite, expenditure by employer on behalf of employee or benefit in lieu of any profit or wages, pension agreement, Benevolent fund, Golden handshake payments, Pension or annuity or any supplement to pension, any prerequisite, any allowance provided by employer like; rent, utilities, education, entertainment, traveling allowance, and amount of profit in lieu of salary (Fedral Borad of Revenue, 2015). For salary, important thing to consider is the performance of employees that whether they are getting enough for what they are providing in the form of services (Lang, 2003)

Taxes are charges levied upon the residents of a country by the government and are used for the general welfare of the public (Amir, Qayyum, Nasir, Hussain, Iqbal, & Butt, 2011).

"Taxes are generally compulsory contributions of wealth levied upon persons, natural or corporate, to pay the expenses incurred in conferring common benefit upon the residents of the state" Lehn (as cited in Dewtt, 2006). Main types of taxes are income tax, Wealth tax, gift tax, expenditure tax, custom duties, excise duties and sales tax. From the stated definitions, we can suggest two main characteristics of taxes (a) it is required to pay under certain circumstances or conditions (b) It is meant for the general purpose of state (Dewtt, 2006). Tax rate is the rate or percentage of the taxable income which must be paid as tax (Horne, Wachowicz, 2004). It is neither a voluntary payment, nor charity or donation. In fact, it is enforceable by law and any person guilty of tax evasion may sustain punishment. Taxes are mainly used for public services, property protection, defence expenditures, economic infrastructural facilities etc. (Amir, Qayyum, Nasir, Hussain, Iqbal, & Butt, 2011).

The decrease in income tax leads to increase in disposable income; but on the other hand it decreases government expenditures and *vice versa* (Pettinger, 2007). Tax revenue is an important component of government revenue but it also has significant impact on the salary of employees and net wages of workers (Cruces, Galiani, & kidyba, 2010). When tax rate increases, every employee have recourse to the employer who compensates employees for the said changes and this simultaneously forces the competitors to raise the salary as per the tax rates to retain their skilled worker (McGuigan, 2015). It is a common belief that lower tax rates reduce unemployment because of the decrement in wages. (Cruces, Galiani, & kidyba, 2010).

The extent to which taxes affect the pay or wages of employees depends on the types and nature of taxes and its rates. The increase in tax rates off-set the annual increase in employee's salary and hence diminishes the annual increase by the value of tax rate applied. This means that if annual increase is lower than the increase in tax rate, the gross income will increase but the personal income earned or after tax income will diminish. To off-set the rise in prices of goods and services because of rise in the rate of taxes, the employees expect higher wages or pay from their employer. Therefore employees look for jobs which give them better compensation for the rise in taxes. In this competitive market, the employers increase the pays of skilled employees to compensate them against the increase in taxes and to retain these skilled workers (McGuigan, 2015).

"Inflation is normally the increase in prices of all the goods in specific time period. It is a persistent and appreciable rise in general level of prices" Gardner (as cited in Nasir, 2010). "By inflation is meant a steady and sustained rise in prices" Milton Friedman (as cited in Nasir, 2010). Inflation is the continuous increase in the prices (Dewtt, 2006). Generally, it is the measure that how much the price of goods & services rise in a certain time period (Oner, 2010). Inflation lowers the standard of living because people pay more for the same quantity of goods and services (Razali & Ibrahim, 2010; Harack, 2011). From conventional prospective, the rate of inflation is inversely related to the welfare. Feenstra (as cited in Razali & Ibrahim, 2010).

The increase of money supply and/or state of full employment level leads to high demand and in response if there is less output to fulfil the needs will give rise to inflation. Inflationary gap is the difference between the income of the customers and available supply of the output. The important features of inflation are (a) It is the process of rising prices. (b) it is initiated by some changes which lead to an increase in demand and hence rise in prices starts. (c) It is disseminated by consumer as a rise in prices. (Dewtt, 2006). J.M. Keynes has classified inflation in two types; (a) Demand Pull inflation (b) Cost Push inflation (as cited in Nasir, 2010). The inflation which rises because of aggregate increase in demand of goods and services is the demand pull inflation. While the rise in cost of supply stock leads to cost push inflation (Razali & Ibrahim, 2010; Nasir, 2010).

High inflation is the close friend of high prices or high inflation is correlated to increase in prices variability, which leads to the variability of future profits and investment projects or opportunities. This high rate of inflation ultimately leads to the lower level of investment and growth. It may also affect the lending and borrowing decisions of an economy with the collaboration of tax rates (Ayyoub, Chaudhry, Farooq, 2011).

Main sources of inflation are excessive money supply, demand and supply for goods and services, government spending and public expectation about inflation of rise in prices (Oner, 2010). Population growth rate is also an important factor of inflation (Jaffri, Farooq, & Munir, 2016). It affects consumers more by increasing prices of commodities like Food, gasoline and cleaning items. Inflation reduces consumption behaviour of people for items, real income, employment level, causes loss to output and lowers standard of living and level of savings. Rebecca (as cited in Razali & Ibrahim, 2010). The main factors that cause inflation in Pakistan, as per researchers' study are; currency devaluation, value addition to agriculture sector, support prices of wheat, import prices, electricity and oil (Ayyoub, Chaudhry, Farooq, 2011). Stable rate of inflation is beneficial as consumers can predict in such situation that the prices will rise and hence make expenditures at earlier bases (Oner, 2010).

Inflation decreases the real income in an economy and introduces the uncertainty situation. Blejer & King (as cited in Qayyum (2006). Inflation and Taxes should be anticipated in every project and should estimate after tax and inflation adjusted cash flows, otherwise the project will yield lower than the planned as the inflation and taxes reduce the real income or yield (Horne, Wachowicz, 2004).

Literature Review

1. Taxes

McGuigan (2015) commented on the concequences of taxes, if it is applied in UAE. He explored that the effect of taxes depends on the nature of tax, its types and where and to whom it will be applied and on what rates. Taxes, like inflation, will reduce the income of employees, so as the purchasing power as the rate of goods and services rise with the rise by the tax rates applied.

Amir et al. (2011) compared the taxes of Pakistan and India by taking time series data from 1999 to 2009 using regression model. He found that in Pakistan, most of the tax revenue is generated from the indirect tax and in india most of the taxes are by direct taxes. Indirect tax depends on expenditures on goods and services and therefore charge equally to all types of people, where direct taxes, like salary taxes, hits pockets directly and hence lead to reduce the differnce between rich and poor.

Padda & Akram (2009) studied public policies like endogenious and exogenious theories. The neoclasical theories say that permanent changes of Government policies, like tax rates, doesn't have any permanent effect on the growth of output, which means, changes in tax rate will have only temporary effect on the long run economic growth. Contrary to this, endogenious growth theories argue that changes in tax rates may have an impact on growth of economy.

2. Inflation

Ayyoub, Imran, Fatima (2011) studied the inflation and its effects on the economy of Pakistan to re-examine that whether it is helping the economy or is harmful to the economy. For this they analysed annual time series data from 1972-2010 by Ordinary Least Square method. The result shows that there is negative relationship between inflation and growth of Pakistan's economy. He argued that different researchers have different opinion about the threshold of

inflation. Inflation hurts poor people more than the richer as more of their income is spent on food items. They concluded that there is trade-off between inflation and GDP growth and proposed that threshold of 7 per cent or below 7 per cent will have positive impact on the economic growth of Pakistan's economy.

Qayyum (2006) examined the relationship between money supply and Inflation and its consequences on the economic growth. He stated that the main determinants of real income in an economy are the change in labour wages, capital and technology. By using Quantity theory, he argued that the rise in prices is the determinant of growth in money supply, its velocity and the growth of real income. He calculated the velocity of money from the data acquired from State bank of Pakistan using econometric analyses like regression, correlation and covariance. The real income changes with the passage of time, independent of demand for money, but the available resources to produce goods and services are the real factor of increase in real income. He concluded that in Pakistan, the growth or money supply at the first stage affects the real GDP and then on the second stage it leads to inflation.

Razali & Ibrahim (2010) in Malaysia selected 10 low cost housing and residential areas and interviewed 210 respondents from households having monthly income less than RM500. By using reports and descriptive statistics, they explained that households of lower income living in urban areas suffer more because of inflation as compared to rural areas. He recommended that in such situations when inflation suddenly shoots up, government should assist people with lower income by providing them basic need of life.

3. **Taxes & Income**

Picker (2016) argued that increase in taxes rates leads labours or employees to avoid legal market to serve by moving toward untaxed areas and using their leisure time in areas like household sector, large underground economy and shadow markets by contributing less to National income and employment in industries and utilize their skills at low wages and low input level. The taxes affect the working activity, Industry Mix and Shadow economy size. The increase in taxes affects the labour directly by supply and demand for labour and indirectly by government expenditures from tax revenues. The comparative study of different countries in 1990 explored that tax hike 128% leads to 122 fewer hours of market work per adult per annum and the employment to population ratio drops by 49%. It increased the size of shadow economy by 38% of official GDP and decreased 10% to 30% the share of national yield and employment in some industries. This comparison is useful for three main reasons; First, the focus on taxes leads to the contribution of skilled labours to the national output and also show the demand for skilled labours. Second, countries with higher taxes are expected to spend the tax revenue in social security programes. Third, some countries persistently add social funds used by government to run social welfare programes to the taxes which leads to higher tax rate and are well suited for assessing long term effects.

Cruces, Galiani, & kidyba (2010) stated that it is a commom belief that the lower tax rates reduce unemplyement because of reduction in wages. In Argentina, the same is applied by implementing the payroll tax rate according to geographical area. The whole geographical area is divided into 85 areas having their own distinguished tax rates. The tax rates are applied on the basis of need and efficiency.

Saez (2003) studied the effect of marginal tax on income by getting the data for comparison which was very close in characteristics to each other and was of consecutive years. He found that the change or elasticity of adjusted gross income to income tax is significant but the elasticity of wages income to income tax is insignificant.

Caliendo, Gambaro, & Haan (2007) analyzed the determinants of reservation wages by analysing the effects of progressive income taxes on the ratio between reservation and net market wages. The study also analyise the relationship between income tax and labour supply. They conducted this analysis on Germany tax and transfer system, where couple files Joint taxation, the couple could be one-earner couple or two-earner couple. One earner has to pay lower tax rate than the secondary earner couple. They concluded that this joint taxation system is discrimination against the secondary earner as it discriminates on the basis of marital status, which leads to the relative negative labour supply incentives to secondary earner and positive incentives to single earner.

Lang (2003) stated that in situation of inelastic labour supply the increase in taxes or tax rates will decrease the nominal wages by increase in taxes. US segment the taxes on earning bases. If the earning follows the higher earnings base, the employee tax will be high and if the employee's earning falls in lower earnings base, then he will pay lower income tax. Furthermore, the taxes are split between employer and employees. As the employer pays a part of employee tax too, the rise in taxes will lead to reduce the number of employees and will require more incentive work with efficiency from the remaining employees or workers. In many satuations the employer can not reduce the wages of employees because of rise in tax rates. In inelastic supply of labour the increase in payrol taxes are beared by employer inspite of proportionate increase in wages.

Pettinger (2007) states that decrease in income tax rates increase disposable income. Which increases consumer spendings and hence it leads to demand pull inflation but if the economic growth of an economy is low or consumer confidence is low – i.e. the lower income tax does not upsurge the consumer spending – then it wouldn't aid to inflation. In case of decrease in Value added Tax (VAT), the product prices will decrease and hence may lead to increase in inflation.

4. Inflation & Income

Braumann (2001) stated that the income of fixed salary person falls with the rise in prices of goods and services. Real income raises the standard of living, not the nominal income. The higher the inflation rate, the higher the lender will suffer and *vice versa*, as the real interest is lower than the nominal interest and inflation erodes the interest earned. It reduces the value of debt, government revenues like tax, excise duty etc. Inflation affects the real wages, which have direct impact on income distribution and level of poverty. He explained general equilibrium without depending on nominal inflexibilities and presented this by using two sector models with cash in advance constraint using statistical tools and equations. According to this setup, inflation erode real wages in two ways; (a) it declines in capital stock and lowers the productivity of labours (b) shifts in relative prices. The papar have proven theoretically that a sharp rise in inflation leads to sharp decline of real wages. He suggested that fighting inflation could be the first step to reduce poverty. Average time of inflation duration is seven year which is quite enough to adjust prices accordingly. Finally, The decline in real wages occurs even during repeated and closly spaced inflation crises like in Argentena, Brazil and Uruguay. As during the second and third shock of inflation in the same generation, the money illusion was very limited. Therefore, it seems possible that the fall in real wages during the high inflation is an equillibrium phenomenon, which means that the real wages is adjusted to the inflation with time.

Macewan (2014) has answered the question that how and how much wages can affect the rate of inflation and *vice versa.* He stated that rise in minimum wages should be based on productivity and profitibility of the firm. The rise in the prices of goods which are important and used on daily basis generally forces minimum wages to rise, not rise in all types of goods.

Inflation affects the debtor and creditor very badly, especially when the inflation rate rise while a debtor has to pay a fix rate of interest for amount borrowed. Minimum wages should be increased at the rate of rise in inflation but not lower or higher than the rise in inflation. The higher incearse in wages will lead to higher demand and hence push the prices, which will lead to inflation and hence diminish the real wages.

Braumann (2000) studied 23 cases of inflation of 17 different economies and came out with the result that medium decline in real wages was 24%. In inflation, the real wages decline by average of 4 times of the decline in per capita GDP. The normal labour or workers suffer heavy losses, but the highly skilled labour preserve their real wages. If inflation accelerate, the nominal wages holdups behind, and real wages decrease. But this argument has some weaknesses; first, fall in real wages, other things remaining the same, would lead to increase in demand of labour and labour activity. However, in high inflation, one observes the opposite. Second, the argument assumes an important degree of money illusion on the part of worker. Rational workers soon discover the lagging of nominal wages and erosion of their real wages and will start acting accordingly.

Pettinger (2011) argued that increase in wages also calls for inflation as it aids both to demand pull and cost push inflation. But in cases where the rise in wages of labours is based on the efficiency and productivity of the labour, then it doesn't increase the rate of inflation and wages increase with increase in production and profitability. If the increase in wages is faster than productivity, then the firm will assist inflation, as the cost of production will rise. In simple words, the rise in wages must be justified by increase in productivity.

Harack (2011) says that IRF for a unit labour cost show that the positive increase in wages leads to a clear positive increase in inflation. It is a fact that wages take time to affect inflation because of its rigid nature. This fact can be interpreted as that the rise in wages may give rise to inflation and increase in prices of imports. But by pressurizing the labour wages downward will lead to get competitive advantage in international business and high exports with lower price because of lower labour wages.

Perry & Cline (2013) states that in inflation, the real wages erode. Let say that there are two employees named Y and Z. Assume that the inflation rate is 10% in this country. Y gets 5% annual increase and Z is getting 11% annual increase in the salary. In this case, Y is receiving 5% less than inflation which means that his real income diminshes by 5%. Contrary to this, Z is getting 1% higher than inflation and hence his/her real income increase by 1% only. In US, for few decades, the employees were paid lower than the rate of inflation because of which their nominal income increased but not the real income.

Moran (2016) states that workers can feel happy for the coming fiscal year 2016-2017 as their wages are going to revise and getting adjusted for the rate of inflation. The raise should be atleast equal to the rate of inflation. In essence, the wages growth rate for Lebanon should be equal to 11.5%, China 6.3%, Germany 2.7%, Canada 2.6%, United Kingdom 2.3%, United States 2.7%, Latin America 11.4%, India 4.7%, Ukraine 36.8% and for Venezuela 52.6%.

Sanchez (2015) states using scattered diagram for the period 1960 – 2009 that wages and salary increase with increase in the rate of inflation. The increase is equal to the rate of inflation and should not be lower than inflation rate as in that case the increase will be nominal and would contribute less to the labour or employee real income.

Writer (2015) forecasted that average rate of increase in salaries of the employees in South Africa for the year 2016 will be 6.9% making the country one of the top 20 countries for increase in salary for the year. This increase wouldn't be possible without the high rate of inflation in South Africa, i.e. near 6%. If inflation is taken into account, the real increase in

salaries is only 1%. According to survey, the average increase in the world's salary will be 5.1% in 2016, which is about 5% more than increase of 2015.

Korn Ferry (2015) drew the data of 20 million job holders of 24,000 organizations from 110 countries of the world showing the predicted salary for the year 2016 by HR departments of these organizations. The data states that the increase for the year 2016 is the highest among the last three years. In this increase only 2.5% is the real salary increase, which is nominal salary increase minus inflation. The study discussed and listed the increase in salary and its inflation rate for the years 2015 and 2016. Besides the slow economic growth of Asian countries, its increase in real salary is fairly high than the rest of the world, especially China, which shows the third highest increase in real salary.

In the above review, it is found that researchers and scholars have studied the effect of income tax on income from different prospective. Cruces, Galiani, & kidyba (2010) examined the income tax rates and effects on the wages in Argentina and concluded with its pros and cons. Picker (2016) studied the relationship between high tax rates and the consumption and expenditure behaviour. Caliendo, Gambaro, & Haan (2007) analysed the labour response to the level of income tax levied on their income or wages. Padda & Akram (2009) studied the public policies like endogenous and exogenous theories and tax rates. McGuiagn (2015) explained the effects of taxes if it is levied on the people of UAE. Lang (2003) explained productivity with the help of competitive models of wages or salary. Saez (2003) studied elasticity of wages to the change on income tax rate.

Some studies explored inflation and its effects on income like Moran (2016), Writer (2015), Korn Ferry (2015) and Sanchez (2015) analysed and discussed that in the coming fiscal year 2015-2016, salary and wages will increase to very higher degree to adjust for the last year inflation. Macewan (2014) discussed its impact on prices and recommended policies for minimum wages or salaries. Pettinger (2011) explained that increase in wages and salaries directly lead to higher inflation. Qayyum (2006) explained effects of inflation on economic growth. Ayyoub, Chaudhry & Farooq (2011) examined Pakistani economy with reference to vulnerable inflation and analyzed data from 1972 to 2010. Braumann (2001) studied the effect of inflation on wages and poverty. Perry and Cline (2013) put forward the moderation policy for inflation by the help of various theories.

The above literature contributed to inflation, Salary/wages and income taxes in detail from different perspectives. But none has analysed the impact of both, i.e. inflation and income Taxes, on the salary of employees, and the level of erosion or loss in salary because of these two factors. This study is important to fill this gap by defining the impact of income tax and inflation on the salary of employees and the level of erosion or loss incur in salary because of these two macro factors.

Following is the theoretical framework for the study.
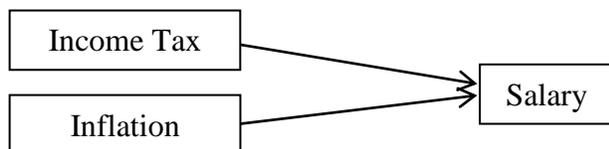
Hypothesis
H_o: Income tax and Inflation have insignificant effect on the salary of government school teachers.

H[1]: Income tax and Inflation have significant effect on the salary of government school teachers.

Methodology

1. Source of data

Secondary data is used which is acquired from the most authentic sources, i.e. database of Independent monitoring Unit (IMU), Elementary and Secondary Education Department, Government of Khyber Pakhtunkhwa, Accountant General Office of Khyber Pakhtunkhwa (AG office) and Pakistan Bureau of Statistics (PBS).

2. Population and Sample size

The population is homogenous and comprises of Government school teachers of Basic pay scale (BPS) 16 and above, which are known as gazetted employees. Employees below BPS-16 are not considered as in rare cases their annual income exceeds the taxable limit, i.e. Rs 400,000 per annum. There are 2528 teachers of BPS 16 and above in Peshawar, which is the population of study and sample size 380 teachers selected on simple random basis.

3. Analytical Technique

For Analysis, Descriptive statistics and analytical statistics are used with the help of SPSS version 23 window based software.

4. Analytical Model

The model of the study, which determines the impact of income taxes and inflation rate and the level of economic erosion on the salary because of both factors is as below.

$$SGST = \beta_o + \beta_1 \, (\text{Income tax}) + \beta_2 \, (\text{Inflation}) + \varepsilon_i$$

5. Variables:

Salary of Government School Teachers (SGST)

In the above model, the dependent variable Salary of Government school teachers in Peshawar for fiscal year 2014-2015 includes Basic pay, Qualification pay, House Rent Allowance, medical Allowance, Adhoc Allowance 2010, Adhoc Allowance 2013, Adhoc Allowance 2014 and may include some other compensations like deputation Allowance, Hard Area Allowance and Special task allowance etc. depending on the nature and location of services.

Income Tax

Income tax on Salary Income is addressed in the Income tax Ordinance 2001 mainly in section 12 and section 149 and the tax rates are defined in part I of the First Schedule of the said ordinance. According to the ordinance, no tax is levied upon the person whose annual salary income is below Rs 400,000/- per annum and some types of payments like pensions etc. are exempt. The tax rates are divided in special slabs or stages depending on annual earning of the employee, which determines the tax rate applicable to employee.

Inflation

Inflation is the 'erosion in salary (in Rs) because of inflation rate'. Inflation rate is the percentage of variation in Consumer price index (CPI) for fiscal year 2014-2015. It is measured on the basis of change in the prices of 487 goods and services from 76 markets of 40 cities by Pakistan bureau of Statistics (Pakistan Bureau of Statistics, 2016). CPI reflects the changed prices of Food and energy prices as well, which affect the income of the employees on the ground (Marquit, 2016).

Economic Erosion in Salary

The term "Economic erosion in salary" is the aggregate of income tax deducted for the year from the salary of an employee and erosion in salary because of the rate of inflation in that year. "Economic erosion in salary" or loss because of income tax and inflation simply depends on the said two independent factors. The higher the income tax rate and rate of inflation, the higher will be "Economic erosion in salary" and *vice versa*. In the same way, increase or decrease in any one of the two factors, i.e. rate of inflation or Income tax, will directly increase or decrease Economic erosion in the salary.

Results

1. Descriptive Statistics

Table 1 presents descriptive statistics of variables. where N is sample size, Mean is average or arithmetic mean of the data, Standard deviation is the variation of data from its arithmetic mean, minimum is the lowest value of the data and maximum is the highest value of the data.

Table 1: Descriptive statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Total Salary for FY 2014-2015	380	730826	224381	426844	2541081
Total Income Tax Deducted FY 2014-2015	380	12722.4	18180.3	905	245687
Erosion because of Inflation FY 2014-2015	380	32392.6	9381.82	19214	107298
Total Economic Erosion in Salary for FY 2014-2015	380	45115	26896.6	20119	343040
Total Economic Erosion in salary by % FY 2014-2015	380	5.9235	0.85781	4.71	14.27
Inflation rate for Months (%) for FY 2014-15	12	4.56	2.025	2.11	7.88

2. Correlation:

Table 2 shows Pearson correlation between Total salary, Income tax deducted and Erosion in salary because of inflation rates for fiscal year 2014-2015. The result shows that there are perfect positive relationships between Total salary and Income tax deducted for the year and erosion in salary because of inflation rates at 0.01 significance level. This infer that any increase (decrease) in independent variables will very strongly affect dependent variable, i.e. Total salary of employee, in the same direction.

Table 2: Pearson Correlations Matrix

		Total Salary for FY 2014-2015	Total Income Tax Deducted FY 2014-2015	Erosion because of Inflation FY 2014-2015
Total Salary for FY 2014-2015	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	380		

Total Income Tax Deducted for FY 2014-2015	Pearson Correlation	.909**	1	
	Sig. (2-tailed)	.000		
	N	380	380	
Erosion in salary because of Inflation for FY 2014-2015	Pearson Correlation	.999**	.894**	1
	Sig. (2-tailed)	.000	.000	
	N	380	380	380

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

3. Regression

Multi-regression analysis shows strength of relationship and level of dependency of variables on each other. Dependent variable is total salary and Independent variables are Income tax deducted and erosion in salary because of inflation.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000a	1.000	1.000	23.509

a. Predictors: (Constant), Erosion because of Inflation FY 2014-2015, Total Tax Deducted FY 2014-2015

In table 3, Model summary show that "R"= 1, or 100%, which means that there exist perfect relationship between dependent variable Total Salary of employee and independent variables Income tax deducted and Erosion because of inflation for fiscal year 2014-2015. Coefficient of determination "R^2" = 1, which shows that 100% variation in Total salary of employees for fiscal year 2014-2015 is explained by independent variables.

Table 4 is the table of regression coefficient of income tax deducted for fiscal year 2014-2015. β_0 = 4.195, which is the value of dependent variable when independent variables are zero. β_1 = 1, which means that one percent change in income tax deducted will bring change of 1% in total salary of the employee. β_2 = 22.17, which shows that one percent change in inflation rate will bring change of 22.17% in the total salary of employee. T-test values are 6754.06 and 77254.12 for income tax and erosion in salary because of inflation respectively. Relationship is very significant at 0.000, which is far less than P value 0.01. It infers that hypothesis H_1 should be accepted.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.195	7.753		.541	.589
	Total Tax Deducted FY 2014-2015	1.00	.000	.081	6754.06	.000
	Erosion because of Inflation FY 2014-2015	22.17	.000	.927	77254.12	.000

a. Dependent Variable: Total Salary for FY 2014-2015

Conclusion

The study explores the impact of income tax and inflation rate on the Salary of Government School teachers. It also explores the total economic erosion in salary because of income tax rates and rate of inflation. Using secondary data for fiscal year 2014-2015, the study developed a model for analysis which has been tested with the help of descriptive and analytical statistics using SPSS statistical software version 23.

The results assert that there is a very significant direct relationship between SGST (dependent variable) and income tax and Inflation rate (independent variables). It connotes that if one variable increase, the other will also increase and *vice versa.* The study explored that on average every employee is losing about 5.9% of its total income per annum because of income tax, and inflation per month. The government pays annual increment less than 10% of basic pay depending on the Basic Pay (Finance Department Khyber Pakhtunkhwa, 2016), which is far less than the economic erosion in salary because of the said two factors. This increase does not add anything to the life standard of employee but helps to offset a part of loss in salary because of these two macro factors.

Implications

This study is of vital importance to policy makers like Finance department of Pakistan, Federal Board of Revenue (FBR), State Bank of Pakistan and Establishment department of Khyber Pakhtunkhwa to manage the policies regarding income tax rates, Inflation rate and salary of the employees. It helps in adjusting salary of employees by keeping in mind the effect of Income tax rate and Inflation rate. On the basis of above study and facts, it is suggested that policy makers should control the rate of income tax and inflation and adjust the annual increment to about 6% of the gross salary, so that that the increments add to the standard of living and remove the anxiety of employees, instead of merely to raising the nominal income or value.

Limitations and future Recommendations

This study explores the impact of inflation and income tax on the salary of government School teachers of BPS 16 and above. The researchers can expand the population by considering all teachers, teachers of private schools, schools of the whole province or any other province or provinces. The model can be used for colleges, universities, any other government sector or industry. Future research can add other independent factors, like Natural disaster, Fuel prices, terrorism etc.

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