



Pay Commission in India: Economic Implications

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Abstract:- *The revenue profile of the Centre has its own significance as pay and allowance and pension burden is financed using the revenues generated by the government. Also, the Centre has to share the taxes with the States as mandated by the constitution. Therefore, it is the responsibility of the Centre to manage the revenue in such a manner that it is able to meet the committed liabilities without jeopardizing its fiscal space. Salary is treated as consumption expenditure and it would not be sensible on the part of the government to meet these liabilities by borrowing and increasing its debt burden. The instruments used by the Central Government to generate revenues are direct taxes, indirect taxes and non-taxes. There are capital receipts as well which comprises of recoveries of loans provided to State and foreign governments, Public Sector Enterprises and Union territories as well as receipts from disinvestment. But these receipts do not come in the ambit of revenue receipts. Table 4.2 below presents the composition of the Central Government's revenue receipt and the growth rate. Interestingly, the composition of the total revenue being generated from different sources has shifted considerably over the period 1995-96 to 2015-16. Direct taxes net of share meant for States, indirect taxes and non-tax revenues were approximately around 20 per cent, 54.2 per cent and 25.6 per cent in 1995-96. The combined share of direct and indirect taxes was around 75 per cent and has increased consistently and is around 80 per cent today. However, over time the share of indirect taxes has been coming down while direct taxes have been increasing. The share of non-tax revenue have shown a decline during the years when the recommendations of the 6th Pay Commission were implemented. Also, the rate of growth of revenues being generated from direct and indirect taxes are lower during these years. The rate of growth of direct taxes was 7.1 per cent in 1997-98, 7.2 per cent and 9.5 per cent in 2008-09 and 2009-10. The growth in indirect taxes for these years is 0.3, -6.2 and -5.3 per cent respectively. The rate of growth of direct taxes and indirect taxes has been particularly high in years preceding the 6th Pay Commission. The growth rate in direct taxes was 40.6 per cent in 2006-07 and 36.4 per cent in 2007-08, while indirect taxes were 21.3 per cent and 14.6 per cent. Notably, tax breaks were provided during this time to counter the slowdown in India.*

Research Questions

- What will be the burden on the finances of Centre and State governments over the next 10 years due to implementation of the recommendations of the Seventh Pay Commission?
- What is the multiplier effect of total, revenue and capital expenditure?

- What is the multiplier effect of components of revenue expenditure such as salary, pension, interest payment and remaining revenue expenditure?

Research Objective

- To document the impact of Fifth Pay Commission and Sixth Pay Commission on fiscal accounts of the Centre and the State governments.
- To analyze the effects of Pay Commissions on fiscal accounts of the Centre and the State governments using historical growth rates and recent trends in fiscal variables.
- To develop a summary of the Central and State government Pay Commission recommendations with focus on changes in salaries and pensions.
- To analyze the moderation in other items of revenue expenditure and capital expenditure due to pay commission.
- To estimate the multiplier impact of increase in components of government spending such as salary, pension and remaining revenue expenditure on private consumption and GDP.

Research Hypothesis

Ho: The burden of pay commission recommendation on States will be uniform. H1: The burden of pay

commission recommendation on States will not be uniform. Ho: The multiplier effect for the components of revenue expenditure will not vary. H1: The multiplier effect for the components of revenue expenditure will vary.

Ho: The multiplier effect for items of revenue expenditure will not be less than 1. H1: The multiplier effect for items of revenue expenditure will be less than 1.

The period of each Pay Commission along with financial impact is presented in table

2.1 below. The real increase recommended in minimum pay by each Central Pay Commission over the existing minimum indicates that the highest real increase was 54 per cent in the 6th Pay Commission.

Table 2.1: Real Increase in Pay and Financial Impact, Central Pay Commission

S.No.	Pay Commission	Year	Financial impact	Real increase in pay (in %)
1	1 st CPC	(1946-47)		NA
2	2nd CPC	(1957-59)	₹ 396 million	14.20
3	3rd CPC	(1972-73)	₹ 1.44 billion	20.60
4	4th CPC	(1983-86)	₹ 12.8 billion	27.60
5	5th CPC	(1994-97)	₹ 185 billion	31.00
6	6th CPC	(2006-08)	₹ 220 billion	54.00
7	7th CPC	(2014-15)	₹ 1000 billion	14.30

Source: 7th CPC Report and Prafulla Das, 2014

Table 2.2 below brings out the trend in pay structure in the government of India over the years. Compression ratio has been taken as a ratio of maximum salary drawn by the Secretary to Government of India to minimum salary drawn by the lowest functionary in the government.

Table 2.2: Minimum and Maximum Pay, Pay Commission Recommendations

CPC	Year	Minimum Pay	Maximum Pay	Compression Ratio
1st CPC	(1946-47)	55	2000	1:36.4
2nd CPC	(1957-59)	80	3000	1:37.5
3rd CPC	(1972-73)	196	3500	1:17.9
4th CPC	(1983-86)	750	8000	1:10.7
5th CPC	(1994-97)	2550	26000	1:10.2
6th CPC	(2006-08)	7000	80000	1:11.4
7th CPC	(2014-15)	18000	225000	1:12.5

Source: 7th CPC Report

Table 2.3 below brings out the trend in pension structure. The revised minimum pension in 6th PC was ₹3,500. It was 2.26 time the pre-revised pension of ₹1,275.

Table 2.3: Minimum Pension and Maximum Pension (in ₹), Previous Pay Commission Recommendations

CPC	Minimum Pension	Maximum Pension	Minimum Family Pension	Maximum Family Pension
4th CPC	375	4,500	375	1,250
5th CPC	1,275	15,000	1,275	9,000
6th CPC	3,500	45,000	3,500	27,000

Source: 7th CPC Report

The pension recommended by 7th CPC has not been clearly spelt out. They have used two approaches to arrive at the pension amount which could be around a multiple of 2.57 times of the current basic pension. The pensioner will get the higher of the two. Following these calculation the minimum pension will be ₹ 9000 (7th CPC).

Table 3.2: Financial Impact of the Implementation of the 7th Pay Commission (Figures are in ₹ Crores)

	2016-17 CPC	without 2016-17 with CPC	Financial impact	% increase
Pay	244300	283400	39100	16
Allowances				
House Rent Allowance	12400	29600	17200	138.7
Transport Allowance	9900	9900	0	0
Other Allowances	24300	36400	12100	49.8
Pay and allowance	290900	359300	68400	23.5
Pension	142600	176300	33700	23.6

Source: 7th Pay Commission Report

Table 4.1: Central Government Budgetary Items (% of GDP (Base: 2011-12) at Current Market

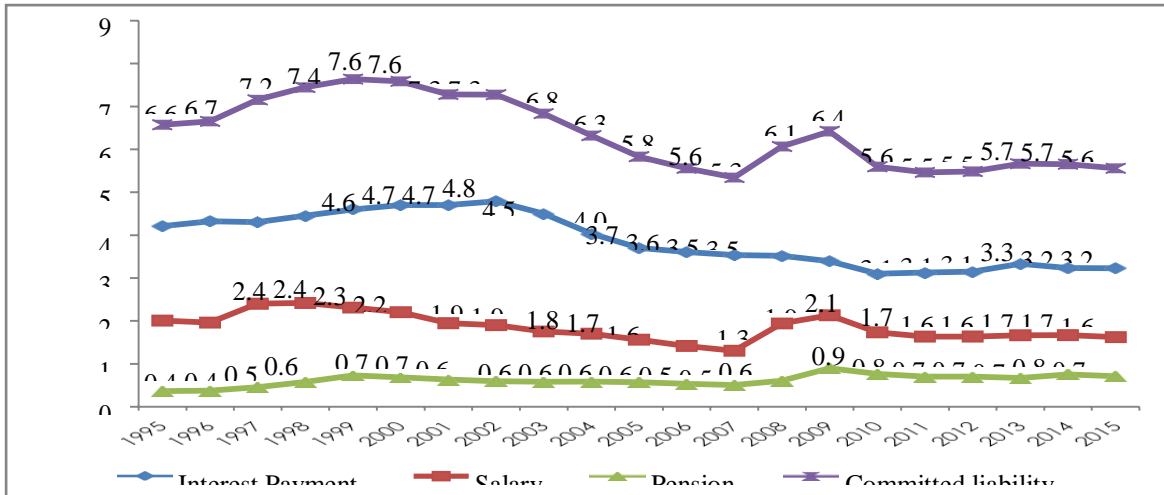
Prices), 1995-96 to 2015-16

Year	Revenue Expenditure	Capital Expenditure	Revenue receipts	Capital receipts	Gross Fiscal Deficit	Revenue Deficit
1995	11.8	3.2	9.3	0.6	5.1	2.5
1996	11.5	3.1	9.2	0.6	4.8	2.4
1997	11.8	3.4	8.8	0.6	5.8	3.0
1998	12.4	3.6	8.5	0.9	6.5	3.8
1999	12.7	2.5	9.3	0.6	5.3	3.4
2000	13.2	2.3	9.1	0.7	5.6	4.0
2001	13.2	2.7	8.8	0.9	6.2	4.4
2002	13.8	3.0	9.4	1.5	5.9	4.4
2003	13.1	4.0	9.6	3.1	4.5	3.6
2004	12.2	3.6	9.7	2.1	4.0	2.5
2005	12.3	1.9	9.7	0.3	4.1	2.6
2006	12.4	1.7	10.4	0.2	3.4	1.9
2007	12.3	2.4	11.2	0.9	2.6	1.1
2008	14.5	1.7	9.9	0.1	6.2	4.6
2009	14.5	1.8	9.1	0.5	6.7	5.4
2010	13.8	2.1	10.4	0.5	4.9	3.3
2011	13.1	1.8	8.6	0.4	5.9	4.5
2012	12.5	1.7	8.8	0.4	4.9	3.7
2013	12.2	1.7	9.0	0.4	4.5	3.2
2014	11.8	1.6	8.8	0.4	4.1	2.9
2015	11.2	1.8	8.7	0.5	3.9	2.5

Source: Author's Own Calculation

The increase in revenue expenditure to GDP has been consistent for the period 1996-97 to 2002-03. Capital expenditure has also been on the higher side during this period. The compression in revenue and capital expenditure from 2004-05 and 2005-06 respectively is attributable to the implementation of the FRBM. The 5th and 6th Pay Commission came with their reports in 1996-97 and 2006-07 respectively. Their recommendations were accepted and implemented in years 1997-98, 1998-99, 2008-09 and 2009-10. The effect on revenue expenditure to GDP ratio is clearly visible with the effect being more pronounced for 6th pay commission which coincided with various fiscal stimuli being provided to the economy in wake of the crisis. There was a 2 point jump in the revenue expenditure to GDP ratio in 2008-09 as compared to a mere 0.5 in 1998-99.

Share of GDP (Base: 2011-12), 1995-96 to 2015-16



Source: Author’s Own Calculation

Figure 4.1 shows the share of interest payment, salary, pension and committed expenditure as a percentage of GDP. Interestingly, for the years when the Pay Commission recommendations have been implemented, a quantum jump in the ratios can be observed. The share of committed expenditure increased to 7.45 in 1998-99 and was 7.64 in 1999-00. Similarly, the ratio was 6.06 and 6.42 in 2008-09 and 2009-10. The peaks are prominent in case of salary as well as pension. The hike in salary and pension tapers off after a couple of years. Noticeably, the share of committed expenditure has come down over the years.

Table 4.2: Composition of Central Government’s Total Revenue Receipts (in %) and Growth Rate (in %) over the Period 1995-96 to 2015-16

	Percentage of total revenue receipts			Growth rate in		
	Direct tax (net)	Indirect tax	Non-tax revenue	Direct tax (net)	Indirect tax	Non-tax revenue
1995	20.2	54.2	25.6	21.1	21.6	19.3
1996	20.1	54.1	25.8	13.9	14.5	15.6
1997	20.3	51.2	28.5	7.1	0.3	17.3
1998	21.5	48.5	30.0	18.2	5.9	17.3
1999	22.8	47.8	29.3	29.0	19.7	18.7
2000	25.8	45.2	29.0	19.8	0.2	5.1
2001	23.7	42.6	33.7	-3.9	-1.4	21.1
2002	26.7	42.0	31.3	29.2	12.9	6.7
2003	29.0	41.8	29.1	24.3	13.9	6.3
2004	31.4	42.1	26.5	25.3	16.7	5.7
2005	34.8	43.1	22.1	25.8	16.1	-5.4
2006	39.1	41.8	19.2	40.6	21.3	8.3
2007	42.7	38.4	18.9	36.4	14.6	23.0
2008	45.9	36.1	17.9	7.2	-6.2	-5.3
2009	47.4	32.3	20.3	9.5	-5.3	19.9
2010	39.8	32.5	27.7	15.4	38.6	88.0
2011	45.7	38.1	16.2	9.5	11.7	-44.3
2012	45.1	39.3	15.6	15.5	20.5	12.9
2013	44.9	35.5	19.6	14.9	4.3	44.8

2014	45.4	36.6	18.0	9.8	12.0	-0.6
2015	37.6	41.4	21.0	-10.2	22.7	27.0

Source: Author's Own Calculation

The trends and patterns in main components of direct and indirect taxes are presented in table 4.3 below. Personal income tax and corporate tax are the major items of direct taxation; and excise duties and custom duties are the major items of indirect taxation. It has been often said that the number of people who pay taxes in India is very low and government is making efforts to increase the tax payer's base. The share of corporate taxes was comparatively higher during the mid 1990's (74 per cent) and the share of personal income tax was only 19.4 per cent. However, over the years a marginal decline in share of corporate taxes is observable while the tax revenue from personal income taxation has increased considerably (38.4 per cent in 2015-16).

Table 4.3: Composition of Tax Revenues of the Central Government (in %), 1995-2015

Share of direct taxes (net)		Share of indirect taxes		
Personal income tax		Corporation tax	Excise duties (net)	Customs duties
1995	19.4	74.0	37.2	59.9
1996	18.6	73.2	34.3	62.7
1997	13.2	73.7	37.2	58.7
1998	17.9	76.4	39.4	56.1
1999	22.0	74.1	40.2	55.8
2000	47.9	50.7	57.2	39.3
2001	46.3	52.7	63.5	33.0
2002	45.1	55.0	64.4	32.9
2003	40.2	59.7	63.6	31.3
2004	36.9	62.8	59.9	32.4
2005	37.5	62.3	57.9	31.2
2006	36.9	62.9	51.1	34.6
2007	37.4	62.5	46.2	36.2
2008	35.1	64.8	41.9	35.5
2009	34.8	65.1	45.6	32.6
2010	32.7	66.7	43.0	38.1
2011	34.4	66.2	40.6	36.9
2012	35.4	64.4	40.9	33.6
2013	37.2	62.7	38.3	33.6
2014	37.6	62.2	38.1	31.8
2015	38.4	61.4	44.6	26.1

Source: Author's Own Calculation

Over the period 2000-00 to 2003-04, the rate of personal income taxes was higher than corporate taxes. Clearly, a reversal in the strategy of the government is observable. However, it needs to be pointed out that direct taxes comprised only 20 per cent of total revenue receipts in the early 1990s. The tax structure was clearly regressive as indirect taxes are paid equally by people belonging to different income levels. The

growth rate for components of direct and indirect taxes are presented in the table 4.4. The growth in personal income taxes for 1997-98 (-23.9 per cent), 2008-09 (0.5 per cent), 2009-10 (8.7 per cent) and 2010-11(8.4 per cent) is lower. The growth rate of revenues from corporate taxes, excise and custom duties are also lower in these years.

Table 4.4: Growth Rate (%), Components of Tax Revenue of Central Government, 1995-2015

Personal income tax	Corporation tax	Excise duties (net)	Customs duties	
1995	24.5	19.3	5.3	33.5
1996	9.2	12.6	5.8	19.8
1997	-23.9	7.8	8.7	-6.2
1998	60.5	22.5	12.0	1.2
1999	58.5	25.1	22.3	19.1
2000	160.3	-18.0	42.4	-29.4
2001	-7.0	-0.2	9.5	-17.0
2002	25.7	34.9	14.5	12.6
2003	10.7	34.9	12.6	8.4
2004	15.2	31.9	10.0	20.9
2005	27.6	24.7	12.2	11.6
2006	38.6	41.9	6.9	34.7
2007	38.0	35.6	3.8	20.0
2008	0.5	11.2	-14.9	-8.2
2009	8.7	10.0	3.1	-13.0
2010	8.4	18.3	30.6	62.1
2011	15.4	8.7	5.4	8.2
2012	18.8	12.4	21.5	9.7
2013	20.6	11.8	-2.3	4.5
2014	11.2	9.0	11.4	5.7
2015	-8.3	-11.4	43.4	0.7

Source: Author's Own Calculation

In case of non-tax revenues a declining trend is visible. The different components of non-tax revenue are fiscal services, interest receipts, dividends and profits; and miscellaneous services. Different fees charge by the government such as passport fee, driving license fee, etc comes under the fiscal services. The government receives interest on loans provided to State Governments, Public Sector enterprises and local governments. Government also receives profits and dividends from public enterprises and investments.

Table 4.5: Composition of Non-tax Revenue of the Central Government (in %), 1995-2015

	Fiscal Services	Interest Receipts	Dividends and Profits	Miscellaneous Services
1994	2.9	66.9	11.5	18.8
1995	1.9	65.3	11.5	21.2
1996	1.3	67.9	11.8	19.0
1997	0.7	66.2	13.6	19.5
1998	0.6	67.1	16.9	15.4

1999	0.7	63.7	18.0	17.7
2000	0.4	58.6	24.3	16.6
2001	0.5	52.4	25.5	21.5
2002	0.4	52.0	29.4	18.2
2003	0.4	50.2	27.5	21.9
2004	0.4	39.9	28.3	31.5
2005	1.1	28.7	33.1	37.1
2006	0.1	27.1	35.2	37.6
2007	0.1	20.6	33.7	45.6
2008	0.1	21.4	39.8	38.7
2009	0.1	18.7	43.2	38.0
2010	0.0	9.0	22.0	69.0
2011	0.1	16.6	41.6	41.7
2012	0.6	15.1	39.1	45.2
2013	0.4	11.0	45.5	43.1
2014	0.7	12.0	45.4	41.9
2015	0.3	10.1	44.6	45.0

Source: Author's Own Calculation

The share of fiscal services in the entire pool has remained miniscule and has remained below 1 per cent since 2005-06. Since 2003-04, which coincides with enactment of the FRBM act, a decline in interest receipts can be observed. Government has clearly found alternate avenues of revenue generation in form of dividend and profits and miscellaneous services. However, if the growth rates in different components of non-tax revenue in table 4.6 are observed, a number of wide variations are observable. Particularly, the growth rate in interest receipts has been negative in 2004-05 (16 per cent) and 2005-06 (32 per cent). However, an upward trend from 2011-12 is observable. The growth rate of fiscal services was comparatively higher in 2005-06 (196 per cent) and 2012-13 (509 per cent). The fluctuation in dividends-profit growth could be related with performance of the public sector enterprises.

Table 4.6: Growth Rate (%) of Components of Non-tax Revenue of the Central Government, 1995-2015

	Fiscal Services	Interest Receipts	Dividends and Profits	Misc.Services
1995	-19.8	16.6	19.6	34.8
1996	-24.2	20.0	18.7	3.8
1997	-35.5	14.6	34.4	20.2
1998	1.5	18.8	46.4	-7.5
1999	35.4	12.7	26.0	36.1
2000	-32.7	-3.2	42.1	-0.9
2001	44.9	8.3	27.4	56.6
2002	-23.5	5.9	22.8	-9.8
2003	22.3	2.4	-0.3	27.6
2004	-13.4	-16.0	8.4	52.3
2005	196.6	-32.0	11.0	11.3
2006	-90.9	2.2	15.2	9.9
2007	11.5	-6.5	17.7	49.1

2008	-32.2	-1.6	11.9	-19.5
2009	91.5	5.2	30.2	17.6
2010	-25.7	-9.4	-4.5	241.4
2011	53.6	2.6	5.5	-66.4
2012	509.3	2.5	6.2	22.4
2013	12.5	5.3	68.2	38.1
2014	57.7	8.9	-0.7	-3.3
2015	-54.8	6.6	24.8	36.6

Source: Author's Own Calculation

Expenditure Profile

In this section, the expenditure profile of the Central Government over the period 1995-2016 is discussed with a focus on absolute growth rate of components of committed expenditure and as a share of the revenue budget. Table 4.7 below presents the share of revenue and capital expenditure in total expenditure.



Table 4.7: Composition of Central Government's Revenue and Capital Expenditure (in %) over the Period 1995-96 to 2015-16

Year	Revenue exp.	of which			Capital exp. (7+8)	of which		Total exp. (2+6)
		Pension	Interest payments	Salary		Loans and advances	Capital outlay	
1	2	3	4	5	6	7	8	9
1995-96	78.5	3.1	35.8	17.1	21.5	63.3	36.7	100
1996-97	79.1	3.2	37.4	17.0	20.9	66.3	33.7	100
1997-98	77.7	3.8	36.4	20.3	22.3	66.1	33.9	100
1998-99	77.5	4.6	36.0	19.5	22.5	70.0	30.0	100
1999-00	83.6	5.7	36.2	18.2	16.4	50.9	49.1	100
2000-01	85.3	5.2	35.7	16.7	14.7	48.2	51.8	100
2001-02	83.2	4.8	35.6	14.7	16.8	56.3	43.7	100
2002-03	82.0	4.3	34.8	13.8	18.0	42.5	39.0	100
2003-04	76.8	4.4	34.3	13.3	23.2	26.4	31.3	100
2004-05	77.1	4.8	33.0	13.9	22.7	25.5	46.2	100
2005-06	86.9	4.6	30.2	12.7	13.1	17.1	82.9	100
2006-07	88.2	4.3	29.2	11.5	11.8	12.4	87.6	100
2007-08	83.4	4.1	28.8	10.6	16.6	9.6	90.4	100
2008-09	89.8	4.1	24.2	13.3	10.2	15.6	84.4	100
2009-10	89.0	6.2	23.4	14.7	11.0	13.9	86.1	100
2010-11	86.9	5.5	22.5	12.6	13.1	16.0	84.0	100
2011-12	87.8	5.3	23.8	12.4	12.2	13.1	86.9	100
2012-13	88.2	5.6	25.2	13.1	11.8	12.5	87.5	100
2013-14	88.0	5.5	27.3	13.6	12.0	10.2	89.8	100
2014-15	88.2	6.4	27.4	14.1	11.8	14.9	85.1	100
2015-16	85.9	6.3	28.7	14.4	14.1	10.4	89.6	100

Source: Author's Own Calculation

Bulk of the expenditure incurred by the Central Government is revenue expenditure which has increased from 78.5 per cent in 1995-96 to 85.9 per cent in 2015-16. The share of capital expenditure has clearly declined from 21.5 in 1995-96 to 14.1 per cent in 2015-16. Interest payment is a major component of the revenue expenditure. Government has been able to cut back the interest payment burden from as high as 35.8 per cent in 1995-96 to 28.7 per cent in 2015-16. The share of salaries and pension seems higher in recent years. The major components of capital expenditure are loans and advances and capital outlay. A reversal in the pattern of expenditure on these two components is clearly visible. As of 2015-16, 90 per cent of the total capital expenditure is made for capital outlay purpose.

In table 4.8 below, the estimates of expenditure elasticity for various components have been presented. As expected, the expenditure elasticity is higher during the Pay Commission years. Interestingly, the expenditure elasticity has shown a decline in recent periods with decline being more prominent if when

controlled for committed expenditure in total expenditure. However, the capital expenditure elasticity is higher even during the Pay Commission years.

Table 4.8: Expenditure Elasticity of Central Government's Expenditure, 1995- 96 to 2015-16

1995-96 to 1998-99	1999-00 to 2007-08	2008-09 to 2010-11	2011-12 to 2015-16	
Total Expenditure	1.167	0.869	0.935	0.704
Revenue expenditure	1.137	0.904	0.838	0.663
Capital expenditure	1.305	0.700	1.754	0.966
Revenue expenditure excluding pension	1.083	0.916	0.781	0.663
Revenue expenditure excluding salary	1.010	0.981	0.876	0.619
Revenue expenditure excluding salary and pension	0.956	1.002	0.819	0.591

Source: Author's Own Calculation

The growth rate in interest payment, pension and salary are depicted in table 4.9. The growth in interest burden subsided from 2001-02 but from 2006-07 onwards a reversal in trend is visible. The growth rate in interest payment was more than 10 per cent over 2006 to 2010. There are wide fluctuations in growth rate of Pension and Salary. Notably, the increase in pension over the period 1997-1999 was on average 40 per cent. In 2009-10, the growth rate in pensions was approximately 70 per cent. The growth rate in salary is higher in 6th Pay Commission. It was around 68 per cent in 2008-09 and 26.4 per cent in 2009-10. The growth rate in salary during the 5th Pay Commission was 35.6 per cent in 1997-98 and 15.5 per cent in 1998-99.

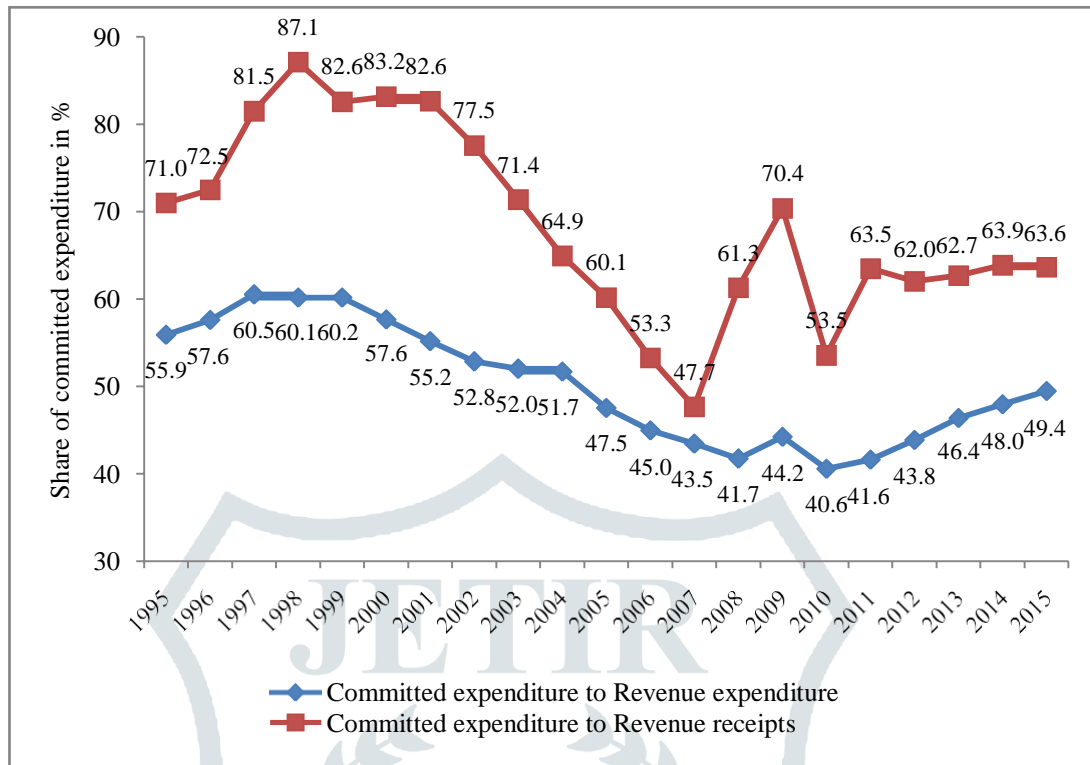
Table 4.9: Growth Rate (%) in Interest Payment, Pension, Salary and Committed Expenditure of the Central Government, 1995-96 to 2015-16

	Interest Payment	Pension	Salary	Committed expenditure
1996	18.8	19.1	13.0	17.1
1997	10.4	35.1	35.6	19.2
1998	18.7	46.2	15.5	19.3
1999	15.9	42.1	7.2	15.1
2000	10.0	0.7	2.6	6.9
2001	8.2	0.4	-4.4	3.9
2002	9.6	0.4	5.0	7.6
2003	5.3	9.7	3.4	5.2
2004	2.3	15.1	10.7	5.5
2005	4.5	10.7	4.5	5.1
2006	13.3	9.1	5.5	10.8
2007	13.8	9.8	6.9	11.7
2008	12.4	35.8	68.1	28.2
2009	10.9	70.5	26.4	21.8
2010	9.8	2.2	-2.3	4.7
2011	16.7	6.6	9.1	13.0
2012	14.7	13.6	14.0	14.3
2013	19.5	7.8	15.0	16.7
2014	7.5	25.0	11.0	10.6
2015	9.7	3.4	6.9	8.1

Source: Author's Own Calculation

Figure 4.2 below presents the share of salary and pension as a percentage of revenue expenditure and revenue receipts of the Centre Government for the period 1995-96 to 2015-16. The committed expenditure here is defined as the sum of interest payment, salary and pension components. The increase in these three components due to Pay Commission implementation puts a tremendous burden on the revenue receipts. The share of committed expenditure to revenue receipts increased to 81.5 per cent in 1997-98, and was 87.1 in 1998-99. From, 2001-02 onwards a decline took place. The share due to implementation of 6th Pay Commission was way lower as compared to the 5th Pay commission. This could be due higher revenue receipts during 2008-10.

Figure 4.2: Percentage Share of Committed Expenditure to Revenue Receipt and Revenue Expenditure of Central Government (in %) over the Period 1995- 96 to 2015-16



Source: Author’s Own Calculation

The growth of civilian employees, Salary and Salary per employees is presented in table 4.10 below for Pay Commission and non-Pay Commission years. The rate of growth of Civilian employees has shown a declining trend till 2010-11. However, over the period 2011-12 to 2015-16, it is 4 per cent. The growth rate of salary per employee has been higher during 6th Pay commission.

Table 4.10: Growth of Employment, Salary and Salary per Employee, Central Government and Defence Civilian Employees, 1995-96 to 2015-16

	Salary	Employees	Average Salary per employee
1995-96 to 1998-99	21.4	-0.4	21.9
1999-00 to 2007-08	4.6	-2.5	7.4
2008-09 to 2010-11	30.7	-0.4	31.3
2011-12 to 2015-16	11.2	4.0	7.3

Source: Author’s Own Calculation

Recommendations for further research

The study contributes to the ongoing debate about whether preference should be given to capital or revenue expenditure. The negative multiplier effect of private consumption expenditure indicates the presence of Ricardian equivalence. Notably, this observation is contrary to the results observed by (Bose and Bhanumurthy, 2013). Higher government expenditure today can result in higher taxes tomorrow to prevent government insolvency. However, there are a number of steps which can be taken to further our knowledge, since this is the first attempt in case of India where the effect of all the components of expenditure on GDP and PCE is being estimated.

- SVAR model is just one of the approaches which have been used to estimate the multiplier effect. There are other approaches such as sign restriction approach, narrative approach and traditional macroeconomic models which can be used to estimate the multiplier effect. These approaches can be used to validate the magnitude as well as sign of the multiplier effect.
- The Medium-term Fiscal Policy statement 2018 states that the government plans to do away with the target for revenue deficit. It has been argued in the document that the expenditure incurred on maintenance of schools, and hospitals is as important as expenditure required for their construction. Clearly certain expenditure arises from the welfare concerns while other expenditure is incurred for unproductive purposes. It will be helpful to segregate the two types while doing the analysis.
- Analysis has been undertaken only for selected States. In due course of time, the effective hike which has implemented for each State will be known. The analysis can then be refurbished to understand the true impact on GSDP. Given the time constrain the data on wages and salaries for all the States could not be obtained which has prevented an overall comparison. Only data available in the public domain has been used. State governments can be reached out to obtain the data.
- Till now the focus has been on GDP and Consumption items only. But it is expected that the components of revenue and capital expenditure will have differential impact on other indicators such as inflation, fiscal deficit and employment levels. Further research is warranted to understand these dynamics. Also, given the limited observations a host of other factors were not controlled in the regression. Alternate model specification could be tried to test the results and to explain the negative multiplier effect.
- Last but not the least; the results are sensitive to the behavior of capital receipts. In this case the analysis can be supplemented with information from recent Medium-term Fiscal Policy documents to create alternate scenarios. Also, the off- budgeting activities of the government has not been considered while presenting the impact on fiscal accounts. Atleast some effort can be put to estimate the additional fiscal stress which the government will experience if these liabilities are also taken into account.

References

- Akerlof, G. (1982), "Labor Contracts as Partial Gift Exchange," *Quarterly Journal of Economics*, 97, pp.543-69.
- Akerlof, G. and J. Yellen (1986), "Efficiency Wage Models of the Labor Market", *Cambridge: Cambridge University Press*.

Alumnia, M., Benetrix, A., Eichengreen, B., O'Rourke, K., Rua, G., 2010. From Great Depression to Great Credit Crisis: Similarities, Differences and Lesson. *Economic Policy* 25, pp. 219–265.

Auerbach, A.J., Gorodnichenko, Y., 2011. Fiscal Multipliers in Recession and Expansion. *NBER Working Papers* 17447.

Barro RJ (1991) Economic Growth in a Cross Section of Countries. *Quarterly Journal of Economics* 106:407–443.

Barro RJ, Sala-i-Martin X (1995) *Economic growth*, McGraw-Hill, New York. Barro RJ (1997) *Determinants of economic growth. A cross-country empirical study*.

MIT Press.

Barro, R.J., Redlick C.J., (2009). Macroeconomic Effects from Government Purchases and Taxes. *NBER Working Paper No. 15369*.

Blanchard, O., Leigh, D., (2013). Growth forecast errors and fiscal multipliers.

American Economic Review 103, pp.117–120.

Bhattacharya, B.B., (1984). *Public Expenditure, Inflation and Growth: A Macro- Econometric Analysis for India*. Oxford University Press, Delhi.

Bose S., Bhanumurthy, N.R., (2013). Fiscal Multipliers for India. *NIPFP Working Paper No. 125*.

Chakraborty , L (2002): Fiscal Deficit and Rate of Interest Link in India: An Econometric Analysis of Deregulated Financial Regime, in *Economic and Political Weekly, Volume No. 19*.

Chakraborty, L (2012) Interest Rate Determination in India: Empirical Evidence on Fiscal Deficit--Interest Rate Linkages and Financial Crowding Out. *Economics Working Paper Archive 744. Levy Economics Institute*. Christiano, L., Eichenbaum, M., Rebelo, S., 2011. When is the government spending multiplier large? *Journal of Political Economy* 119, pp.78–121.

Chew, D. C. E. (1993). “Civil Service Pay in the Asian-Pacific Region”. *Asian Pacific Economic Literature* 7(1).

Das, P. (2014), Possible Impact of Seventh Central Pay Commission Recommendations on Income Distribution in India.

Devereux, M.B., (2010). Fiscal Deficits, Debt, and Monetary Policy in a Liquidity Trap. *Central Bank of Chile. Working Paper No. 581*.

Diamond, J. (1989), “Government Expenditure and Economic Growth”, *International Monetary Fund, Working Paper, 89/45*.

Glinkaya, E. and M.Lokshin, (2005). “Wage differentials between the public and private sectors in India”, Policy Research. *Working Paper 3574, The World Bank*.

Goyal (2004). Does Higher Fiscal Deficit Lead to Rise in Interest Rates? *Vol –No. 21, 2004*.

Goyal, A., Sharma, B., (2015). Government Expenditure in India: Composition, Cyclicity and Multipliers. *Indira Gandhi Institute of Development Research, Mumbai. Working Papers*.

RBI. *Previous versions of Handbook of Statistics on the Indian Economy*

RBI (2017 and 2018). *Handbook of Statistics on State Government Finances*

Hemming, R., Kell, M. and Mahfouz, S., (2002). The Effectiveness of Fiscal Policy in Stimulating Economic Activity – A Review of the Literature, *IMF. Working Paper No. 208*.

Hicks, J. R. (1950), “A Contribution to the Theory of the Trade Cycle”, Clarendon Press, Oxford.

Ilzetzki, E., Mendoza, E., Végh, C., (2013). How big (small?) are fiscal multipliers? *Journal of Monetary Economics* 60, pp. 239–254.

Jain, R., Kumar, P., (2013). Size of Government Expenditure Multipliers in India: A Structural VAR Analysis. *RBI. Working Paper Series 7*.

Karras, G., (2014). Is Fiscal Policy More Effective During Cyclical Downturns?, *International Economic Journal*, 28 (2), 255-271.

Keynes, J.M., (1936). *The General Theory of Employment, Interest and Money*, Book III, (Chapter 10). Macmillan & Co. Ltd., London.

Kirchner, M., Cimadomo, J. and Hauptmeier, S. (2010) Transmission of government spending shocks in the euro area: time variation and driving forces, ECB. *Working Paper Series, No. 1219. European Central Bank, Frankfurt.*

Koh, W.C., (2017). Fiscal multipliers: new evidence from a large panel of countries. *Oxford Economic Papers* 69 (3), pp. 569–590.

Krishnamurty, K., (1985). *Inflation and Growth: A model for India* in Krishnamurty, K., and Pandit, V. Macroeconometric Modelling of the Indian Economy: Studies on Inflation and Growth. Hindustan Publishing House, Delhi.

Linnemann, L. (2006) The effect of government spending on private consumption: a puzzle? *Journal of Money, Credit, and Banking*, 38, 1715–35.

Marattin, L. and Salotti, S. (2014). Consumption Multipliers of Different Types of Public Spending: A structural vector error correction analysis for the UK”, *Empirical Economics*, 46 (4). pp.1197-1220.

Marshall, T.H. (1950), *Citizenship and Social Class and Other Essays*. Cambridge University Press.

Mohan, R. (2008). “*The Growth Record of the Indian Economy, 1950-2008: A Story of Sustained Savings and Investment*”, Keynote Address by Deputy Governor, Reserve Bank of India at the Conference “Growth and Macroeconomic Issues and Challenges in India” organized by the Institute of Economic Growth, New Delhi.

Musgrave, R. (1959). *The Theory of Public Finance*, New York, Mc Graw-Hill. Perotti, R., (1999). Fiscal policy in good times and bad. *Quarterly Journal of Economics* 114, pp. 1399–1436.

Ministry of Finance, GOI. *Previous issues of Union Budget documents and Economic Survey*.

Ministry of Finance, Government of India. *Previous issues of Annual Report on Pay and Allowances, Pay Research Unit, Department of Expenditure*. Rao, M. G. and P. Chakraborty, (2006). “Finances of Karnataka: Fiscal Implications of Salary Hike”, *National Institute of Public Finance and Policy*, Delhi.

Ray, P., S Sikdar and A. Sinha, (2015). “A Study on Fiscal Implications arising out of the Implementation of The Fifth and Sixth Central Pay Commissions on the Finances of The Union and The State Governments for the Seventh Central Pay Commission”, IIM Calcutta.

Rawls, J. (1971). *A Theory of Justice*, Harvard University Press.

Romer, P. (1994), “The Origins of Endogenous Growth”, *The Journal of Economic Perspectives*, Vol. 8, No. 1, Winter.

Schiavo-Campo, S.; de Tommaso, G. and Mukherjee, A (1997); “Government employment and pay: a global and regional perspective”. *Policy, Research working paper ; no. 1771*. Washington, DC: World Bank.

Ministry of Finance, Government of India. Seventh Central Pay Commission (November 2015). “*Report of the Seventh Central Pay Commission*”, Accessed at <https://www.finmin.nic.in/seven-cpc>.

Singh, M., B.Varkkey, S. K. Maheshwari, and P. Agarwal, (2015). “A Study for Comparing Salaries/ Emoluments in the Government Sector vis-à-vis Central Public Sector Undertakings/ Private Sector in India”, IIM Ahmedabad.

Sutherland, A. (1997) Fiscal crisis and aggregate demand: can high public debt reverse the effects of fiscal policy?, *Journal of Public Economics*, 65, pp. 147–62.

Snowdown, B., Vane, H.R., 2005. *Modern Macroeconomics: Its Origins, Development and Current State*. E. Elgar, Cheltenham.

Woodford, M., (2011). Simple analytics of the government expenditure multiplier.

American Economic Journal Macroeconomics 3, pp. 1–35.