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CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

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IMPACT OF FISCAL DECENTRALIZATION ON MAJOR ECONOMIC INDICATORS IN INDIA

FERNANDA DE XAVIER ANDRADE
RESEARCH SCHOLAR
GOA UNIVERSITY
TALEIGAO PLATEAU

ABSTRACT
Fiscal decentralization is known to increase the efficiency in the delivery of public goods and services and especially when regions are heterogeneous in nature. While countries have been known to undertake extensive expenditure decentralization across sub-national governments, however the extent of tax decentralization that is undertaken is of a much lesser extent. Generally, countries prefer that the central government retains the collection of major tax revenues because of the benefits of economies of scale in tax collection. Collection of taxes by the Central government is also seen as an important mechanism for undertaking fiscal equalization between sub-national governments especially when they differ substantially in fiscal capacities and cost disabilities. However, when sub-national governments undertake more of the expenditure responsibilities a major part of which is funded by intergovernmental transfers it can lead to increased dependency and fiscal profligacy by sub-national governments and adversely affect economic growth. Hence this paper tries to find out the impact of tax decentralization on two important economic indicators. This paper undertakes a panel regression comprising of 14 non-special category states from 1981-82 to 2012-13 to empirically find out the impact of tax decentralization on Net State Domestic Product and fiscal deficit. The findings suggest that tax decentralization has a positive and significant lagged impact on Net State Domestic Product and negative significant lagged impact on fiscal deficit.

KEYWORDS
tax decentralization, fiscal deficit, sub-national government, intergovernmental transfers.

JEL CODE
H20, E620, H71, H77.

INTRODUCTION
Different fiscal arrangements and institutions determine the conditions for economic growth and fiscal profligacy, and so their relative impact can be assessed based on their effect on Gross State Domestic Product (GSDP) and fiscal deficit of sub-national governments. In this regard, the customary public finance instruments that include taxes and government expenditures, revenues and transfers can either enhance or dampen regional Gross State Domestic Product and fiscal deficit of sub-national governments.

Intergovernmental financial relations contain five main features, Bird R.M and Vaillancourt F (2006), Marinkov M (2013):

1) Expenditure decentralization: The assignment and devolution of spending responsibilities to sub-national governments.
2) Revenue and tax decentralization: The assignment and devolution of tax and revenue sources and autonomy to sub-national governments.
3) Fiscal Equalization: inter-jurisdictional fiscal transfers and grants to decrease fiscal imbalances.
4) Sub-national borrowing.
5) Institutional structure within which the national and sub-national government powers are put into effect.

Each of these five features can have different effects on the major economic indicators of the sub-national governments.

In general, the first wave of decentralization beginning in the 1950's and 1960's focused on administrative decentralization amongst countries, which meant merely delegating responsibilities funded by the state to local governments. The second wave of decentralization from mid 1970's upto 1980's attempted to devolve central government responsibilities and revenue sources to local governments. As it was realized that decentralized planning and increased local participation was a more effective strategy to implement development programs that focus on meeting basic needs, such as health and education programs. However local governments often found themselves with greater share of responsibilities but not the revenue sources. The third wave of decentralization which is ideologically driven is based largely on the principle that in a increasingly globalized economy, states need to be more market oriented that is keeping customer at the centre. The third wave also focuses on the fiscal devolution model of decentralization. Lindaman K and Thurmaier K (2002). Fiscal decentralization is a complex phenomenon involving many different aspects including fiscal, political and administrative. Fiscal decentralization can be considered as the fiscal empowerment of lower levels of government which includes the devolution of taxing and expenditure powers along with the arrangements for correcting mismatches in resources and responsibilities Oommen M.A (2004). Inorder to empirically understand the impact of decentralization on economic indicators, the decentralization indicator needs to be quantified. Different empirical papers have used different measures of fiscal decentralization including expenditure decentralization Qiao, B., Martinez-Vazquez, J., & Xu Y (2008), revenue decentralization Oommen M. A. (2006) and political decentralization Asfaw A., Frohberg K, James K.S. and Jütting J (2007). No matter what measure of fiscal decentralization is used many economists feel that the decentralization indicator should be constructed in such a way that it reflects the autonomy of the sub-national governments and the measure does not include expenditure or revenue components over which the sub-national governments have no control in terms of spending decisions or revenue raising ability. When the decentralization measure reflects the autonomy of the sub-national government it will reflect the true level of decentralization and thus empirical findings will be reliable Akai N and Sakata M (2002). This chapter limits its analysis to tax decentralization at sub-national.

The first section of the paper comprises of literature review followed by need of the study and statement of the hypothesis this in turn is followed by description of data, research methodology, theoretical framework, empirical findings and conclusions.

REVIEW OF LITERATURE
Fiscal decentralization has been associated with a number of benefits like increase in productivity of the public sector, increase in the accountability of the sub-national governments, better delivery of public goods and services due to the closer proximity to the beneficiaries and thus less wastage of resources Bird and Wallich (1993), Ostrom, Schroeder & Wynne (1993), Boadway R and Shah A (2007), Falch & Fischer (2012). Fiscal decentralization is specially found to be effective when sub-national governments are heterogeneous in nature because in such a situation uniform provision of services by the Centre will be less effective as each region will have its own requirements and fiscal capacities Oates W (1972). While the extent of expenditure decentralization is fairly similar across federations, the extent of revenue and tax decentralization varies widely. Economies of scale in tax collection by the Centre provide an efficiency argument for assigning greater taxation powers to the central government Boadway R and Shah A (2007). These are the traditional efficiency and equity arguments that promote asymmetry in expenditure and revenue-raising responsibilities between different levels of Governments that gives rise to fiscal imbalances. Sub-national expenditure funded by common pool resources such as grants and revenue-sharing might have a deteriorating effect on fiscal balances. By separating the link between taxes and benefits it might turn the public sector's resources into a common pool that competing local governments will try to take advantage of as per their requirements and extract greater resources from the Central government Rodden J (2003). This happens because regional governments' fail to internalize the entire cost of transfers on national taxpayers and in the recognition that the central government maintains a strong interest in the matters of the regions. Since citizens of the state link state goods and services with relatively low tax burdens, they underestimate the costs to themselves of public goods provided by the state as a considerable part of the state expenditure is funded through transfers. The result is excess demand on state spending by its residents Boadway R

and Shah A (2007). These detrimental incentives are prevalent in a federal setup with important tax sharing arrangements or egalitarian fiscal equalization, but low tax autonomy of the sub-national governments, or when heavily indebted regions can easily expect a bail-out Goodspeed TJ. (2002). When sub-national governments can obtain funds from the federal government to resolve their financial or economic difficulties, then any effort to consolidate their budgets becomes difficult Schaltegger C A. And Feld LP (2009).

When a sub-national jurisdiction has to finance its spending by own tax revenue, the local politicians do not have particular incentives to over-spend. This promotes fiscal competition amongst regional governments wherein they resort to use of improved quality of public goods and taxes as instruments to attract mobile production factors. Brennan and Buchanan (1980) put forth that the resulting fiscal competition provides for a check on government size and, and even on government debt. Fiscal adjustment may be used as a successful reform strategy by regional governments to compete with their successes in achieving sound public finances in order to attract good taxpayers and this in turn will encourage fiscal consolidation at the sub-national and consequently at the central level. Successful fiscal adjustment thus becomes more likely under competitive federalism Schaltegger C A. And Feld LP (2009). Maximum efficiency in a decentralized system requires that lower-level governments internalize all the social benefits and costs of their policy choices Boadway R and Shah A (2007). Decentralization of tax capacity arises from the need for regions to bear some responsibility for financing their expenditure from their own sources; however decentralization of revenue capacity is not efficiency enhancing per se due to loss of economies of scale. But, it is argued, regional government accountability is enhanced to the extent that governments are required to raise their own revenues to finance their (major part) expenditures programs Boadway R and Shah A (2007).

However, tax decentralization can also have negative effects as greater tax decentralization at the sub-national level means less resources available at the Central government level and thus it may affect the equalization mechanism of the Central government and lead to an increase in fiscal disparities as poorer regions may be unable to compete with richer regions due to their structural and economic conditions. Greater tax decentralization and increased autonomy of the sub-national governments can lead to macroeconomic instability as sub-national governments pursue their local policies, without regard for the situation at the macro level Rodden J. and Wibbels E. (2002). Greater tax decentralization may also lead to tax competition between sub-national governments to attract trade and business and thus affect the overall revenue collection of the sub-national governments and this in turn may be a cause for reduction of government undertaking important expenditure in areas of social importance Rao G and Singh N (1999).

Following are the results of a literature review undertaken of similar studies regarding the impact of fiscal decentralization on economic growth and fiscal deficit. A panel data study of 16 Central and Eastern European countries for the period 1990–2004 was undertaken and their findings suggest that the long-term effects on economic growth differ according to the type of decentralisation that is expenditure and intergovernmental transfers to sub-national government is found to be negatively correlated with economic growth, whereas taxes devolved at sub-national level have positive effects on long-term economic growth Rodriquez-Pose and Krøijer (2009). In another study comprising of a panel data set of 61 provinces in Vietnam, the authors found that the effect of expenditure decentralisation on economic growth was negative, but the effect of revenue decentralisation on economic growth was positive Nguyen and Anwar (2011). On the other hand, a study in Indonesia for the period 1992–2002 found that the expenditure indicator of fiscal decentralisation is positively related to economic growth, whereas the revenue indicator of fiscal decentralisation is negatively related to economic growth Ismail and Hamzah (2006). A study by Jin and Zou (2005) uses a panel dataset for 30 provinces in China to examine the relationship between fiscal decentralisation and economic growth over two sample periods. Their results suggest that divergence (rather than convergence) between sub-national revenue and expenditure assignments leads to higher rates of growth in China. A study comprising of 50 states of the United States between 1992 and 1996 proved that that fiscal decentralization contributes positively to economic Akai N and Sakata M (2002)

A few studies regarding the impact of fiscal decentralization on fiscal deficit are available. A study that used a panel of 26 Swiss cantons from 1981 to 2001, it was found that fiscal centralization decreases the possibility of successful budget consolidations. Central government institutions encourage the discretionary use of public funds and thus get in the way of long-lasting fiscal adjustments. In addition, the authors present empirical evidence that an increase in federal transfers significantly reduce the chance of successful consolidations. On the other hand, fiscal competition in a federation strengthens fiscal discipline thereby increasing the reliability of long-lasting fiscal stabilization (Schaltegger C A. and Feld LP (2009). In yet another study, a measure of vertical fiscal imbalance (VFI) was used to find out the relationship between overall fiscal performance and the financing structure of sub-national governments using data from 28 OECD countries for the time period 1995-2007. On average, the general government fiscal balance is found to improve by one percent of GDP for each 10 percentage point reduction in VFI Eyraud L and Lusinyan L (2013). In a panel data set of 30 countries regressions were undertaken for the entire 30 countries together as well as for sub-samples amongst these 30 countries comprising of OECD and Non-OECD Countries. The study showed that sub-national tax autonomy was found to worsen fiscal positions at the sub-national level for the entire sample as well as for the subsamples. This according to the authors could be the result of coordination failures due to moral hazards in decentralized policy-making. In a study comprising of panel data from 32 industrial and developing countries, 1980–1994, it was found that expenditure decentralization leads to smaller national governments, larger sub-national governments, and larger aggregate governments; revenue decentralization increases sub-national governments by less than it reduces national governments, hence leads to smaller aggregate governments Jin J & Zou H F , 2002 .

Hence the findings of previous empirical studies reveal that while in some countries fiscal decentralization has had a positive impact on economic growth in other countries it had a negative impact. Similarly in terms of fiscal decentralization and fiscal deficit while some studies have found a negative relationship between fiscal decentralization and fiscal deficit other countries have found a positive relationship. Hence the results of fiscal decentralization on major economic indicators is ambiguous and probably differs from country to country depending on the structural and institutional arrangements within the country and the extent of fiscal decentralization that has been undertaken within the country.

NEED AND IMPORTANCE OF THE STUDY

A panel level study on the impact of tax decentralization on major economic indicators like Net State domestic product and fiscal deficit has not been previously undertaken for the sub-national level of governance in India. India is a country where the extent of expenditure decentralization is greater than the extent of tax decentralization and hence it would be useful to undertake a study on the impact of decentralization on Net state domestic product. This is because if tax decentralization is indeed having a positive impact on NSDP then without increasing the amount of resources that are devolved by merely changing the arrangement in tax collection it can enhance income. States have also been struggling to curtail their fiscal balances and thus if tax decentralization has a negative impact on fiscal deficit then it would be worthwhile to undertake greater tax decentralization at the sub-national level.

Objective of the study**:** To find out the impact of tax decentralization on Net State Domestic Product and fiscal deficit

1) Hypothesis: Ho: Tax Decentralization has no significant impact on NSDP growth
2) Hypothesis: Ho: Tax Decentralization has no significant impact on NSDP growth

The author has not put any alternate hypothesis because as in the literature review fiscal decentralization can have both negative as well as positive effects on economic growth and fiscal balance and hence in the case of India too fiscal decentralization can have an either positive or negative impact on NSDP and fiscal deficit.

DATA DESCRIPTION

The author has undertaken the analyses for 14 non-special category states as classified by the Finance Commission The states included in the study are Andhra Pradesh (AP), Bihar and Jharkhand together (BJ), Gujarat (Gu), Haryana (Ha), Karnataka (Ka), Kerala (Ke), Madhya Pradesh and Chattisgarh (MPC), Maharashtra (Ma), Orissa (Or), Punjab (P), Rajasthan (Ra), Tamil Nadu (TN), Uttar Pradesh and Uttarakhand (UPU) and West Bengal (WB). The author has dropped Goa from the analysis because it is an outlier in per capita terms being a comparatively small state with lesser population. The analysis has been restricted to non-special category states because the special category states have very different fiscal capacities and expenditure needs and hence it would not be appropriate to club both the category of the states together.

The tax decentralization (TD) measure has been computed in such a way that it reflects autonomy of the state in terms of tax revenue collection as follows:

TD = State own tax revenue per capita of state 'i' divided by the sum of central tax revenue per capita and state own tax revenue per capita (central tax revenue is revenue prior to transfers of the state share in Central taxes).

$$TD = \frac{\text{State own tax revenue pc}}{(\text{Central tax revenue pc+State own tax revenue pc})} \quad (1)$$

While constructing this measure of tax decentralization, the measure used by Oommen M.A. (2006) was adopted. However, the only difference from the measure used by Oommen MA (2006) was that in this study the measure was compiled in per capita terms and did not include the third tier level of governance as time series data for the same is not available.

The share of Central taxes has not been included in the tax revenue of states because though the state has full autonomy in its expenditure decision however the state has no control (increasing or decreasing its revenue share) over the tax rate or base from the point of view of revenue collection.

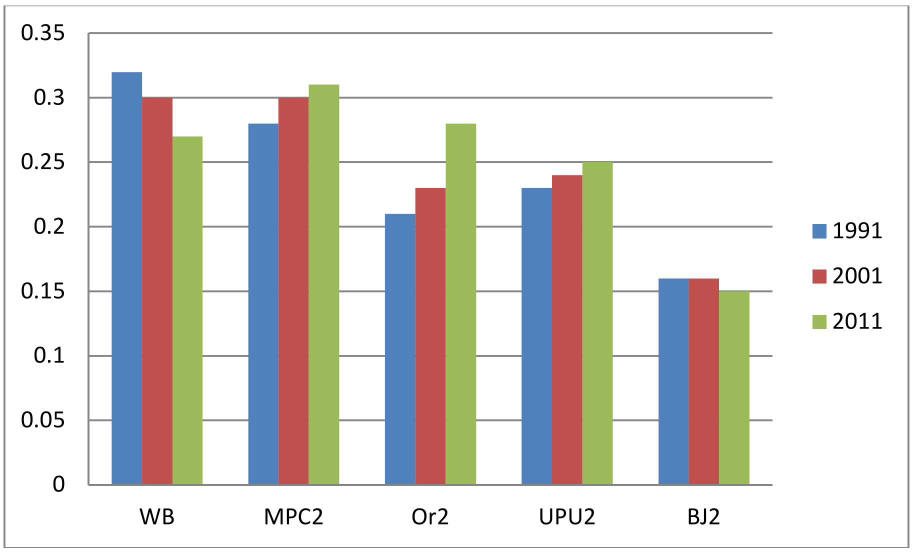
TABLE 1: TRENDS IN TAX DECENTRALIZATION FROM 1981-82 TO 2011-12

1991 (Average 1981-1991)		2001 (Average 1992 - 2001)		2011 (Average 2002-2011)	
T D <0.5	**TD>0.5**	**T D <0.5**	**TD>0.5**	**T D <0.5**	**TD>0.5**
Ke, TN, WB, Or, MPC,BJ, Ra, UPU, ,Ka, Gu	P	Ke, Ka AP, BJ, WB, Ra, UPU, MPC, Or	**TN**, P, **Ma, Ha, Gu**	**AP**, Ka, Ke, **Gu, P** BJ,MPC, UPU, Ra, Or, WB,	TN, Ma, Ha

Source: Author's compilation of data from EPWRF

In table 1 average trends of tax decentralization have been compiled. A state with the value of tax decentralization of 0.5 or greater is considered to be a highly decentralized state in terms of tax revenue. A state with a decentralization value less then 0.5 is not considered to be highly decentralized. During 1981 -1991 only one state was highly decentralized and that was Punjab, all other states had decentralization values below 0.5. In the period between 1992-2001 there was some improvement with Tamil Nadu, Punjab, Maharashtra, Haryana and Gujarat now moving into the highly decentralized category. However, during 2002-2012 only Tamil Nadu, Maharashtra and Haryana were considered highly decentralized with Punjab and Gujarat slipping below 0.5 in terms of tax decentralization.

FIGURE 1: STATES THAT RANK LOW IN TERMS OF TAX DECENTRALIZATION



Source: Author's compilation of data from EPWRF

The data compiled in Figure 1 is average data for the previous ten years. Bihar- Jharkhand is the worst performing state and the level of tax decentralization decreased in 2011, wherein its value of tax decentralization was 0.15 (Figure 1). Orissa which was the second last in terms of tax decentralization upto 2001 improved drastically in 2011and overtook UPU and West Bengal. West Bengal showed a steady decline in tax decentralization over the years. It initially had a value of 0.33 in 1991 and it declined to 0.27 in 2011. UPU has witnessed a steady increase in tax decentralization values since 1991.

Hence huge differences exist in terms of tax decentralization across these 14 non special category states. And hence in this chapter the author tries to find the impact of these decentralization indicators on some important economic factors of India.

RESEARCH METHODOLOGY

This study undertakes a panel data regression of 14 non-special category states in India. In comparison to purely cross-sectional data, panels are attractive since they often have far more information than single cross-sectional analysis and thus allow for an increased accuracy in estimation

Following regressions and tests have been undertaken in this study:

Breusch–Pagan LM test: Ordinary Least Square (OLS) Model vs Random Effect Model

Sargan Hansen Statistic: Fixed Effect (FE) Model vs Random Effect (RE) Model

Fixed effects regression with Draay and Kriscoll standard errors

Theoretical Framework

The following panel regression has been undertaken using Equation 2:

$lnYit = \beta 0it + \beta 1Decit + \beta 2Xit + \beta 3Dummy + eit$--------------------- **(2)**

Where

The subscript *i* is the observation unit, state; *t* is the time unit

lnY= Natural log of per capita Net state domestic product at current prices

β_1 Dec= tax decentralization indicator

Regarding the tax decentralization measure it could either have a positive or negative impact on NSDP

β_2X= control variables as stated below:

Governance indicator: total administrative expenditure divided by the total revenue expenditure of state "i" in per capita terms in current prices.

If an increasing amount of revenue expenditure is used for government administrative purposes than it will have a negative impact on the economy as it will crowd out resources from more purposeful uses and it also means that the administration is ineffective. And therefore an increase in governance indicator is expected to have a negative impact on NSDP

Inflation Indicator which is the state GSDP deflator measured as the ratio of GSDP current prices divided by GSDP constant prices of individual states in different time periods.

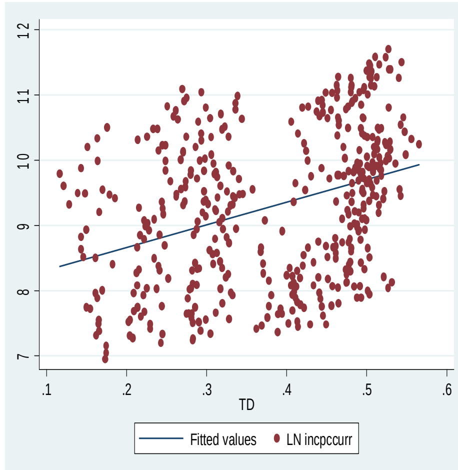
Inflation is expected to have a negative impact on growth as higher inflationary pressure will increase price of inputs and thus affect production negatively. At the same the interest rates will be hiked to tackle inflation again affecting production and thus inflation is expected to have a negative impact on NSDP. However moderate inflation can have a positive impact on growth.

Capexatio: capital outlay per capita divided by aggregate expenditure per capita of state i in current prices.

The capexratio is used because it increases the productive capacity of the state and hence an increase in the capital expenditure compared to total expenditure is expected to have a positive impact on income.

β3 Dummy= Liberalization dummy that is 0 for pre liberalization years and 1 after that (1991) (it captures the impact of trade, foreign direct investment that increased drastically after liberalization)

FIGURE 2: SCATTER PLOT OF TAX DECENTRALIZATION AND NATURAL LOG OF NSDP PER CAPITA



Source: EPWRF

There seems to be a positive relationship between tax decentralization and NSDP per capita (Fig2).

EMPIRICAL FINDINGS

In table 2 we divide the regression results into different parts depending on the type of regression that is used. The indicator of fiscal decentralization is run along with other variables as mentioned above. Basically through the regressions we try to understand the impact of tax decentralization indicator on NSDP per capita in India.

Intially the Breusch-Pagan Lagrange multiplier (LM) test was undertaken to test whether a simple Ordinary Least Square (OLS) regression was more appropriate than the random effects model. The null hypothesis states that a simple OLS is appropriate and the alternate hypothesis states that the random effects model is appropriate. The results of the test show that a random effects model is significant as compared to a simple pooled OLS regression.

TABLE 2: REGRESSION RESULTS: DEPENDENT VARIABLE: LN NSDP PER CAPITA

Variables	Random Effects	Fixed Effects	Driscoll and Kraay
TD	2.27***	5.39**	5.39*
inflation	-0.04	0.06	0.06
Governance	-7.08*	-23.5***	-23.5***
Capexratio	2.62**	5.09***	5.09***
Liberalization	1.78***	1.47***	1.47***
constant	7.59***	7.61***	7.61***
Adjusted Rsquared	within = 0.73 between = 0.61 overall = 0.71	within = 0.76 between = 0.56 overall = 0.59	0.7
Breusch and Pagan Lagrangian multiplier test for random effects Prob > chibar2 =	0.00		
Sargan-Hansen statistic, P value		0.00	
Modified Wald test for groupwise heteroskedasticity, Pvalue		0.00	
Breusch-Pagan LM test of independence, Pvalue		0.00	

Source: EPWRF and MOSPI

Robust Cluster Standard Errors for random and fixed effects model, No of Obs: 448 Significance Level: ***1 per cent , **5 percent, *10 percent

Since 14 different states with different linguistic, cultural, demographic and geographical distributions have been used in the regression model we further undertake the Hausman test to choose between the fixed and random effects model. Since we have used the cluster robust standard errors we cannot use the standard Hausman test for post-estimation to check between fixed and random effects model. Hence instead of the Hausman test we use the Sargan Hansen test to choose between the random and fixed effects model. The null hypothesis states that the Random effects model is consistent and the alternate hypothesis states that the fixed effects model is consistent. The Sargan Hansen test rejects the null hypothesis and thus suggests that the fixed effects model is significant over the random effects model (Table 2). The Adjusted R squared has decreased for all the regressions at 0.6 as compared to the random effects model. The tax decentralization indicator is significant at 5 percent level and a one-unit increase in tax decentralization will lead to a 5 percent increase in NSDP per capita. The Governance indicator has a significant and negative impact on NSDP per capita and the coefficient has increased in size as compared to the earlier regression. Inflation is non-significant throughout. As expected capex and liberalization ratio are highly significant at one percent and have a positive impact on NSDP growth. The Modified Wald test for group-wise heteroskedasticity in fixed effects regression suggests the presence of heteroskedasticity amongst the variables. Hence the robust clustered standard errors have been used in order to account for heteroskedasticity and first order autocorrelation.

Similarly, Breusch-Pagan LM test of independence of the error terms shows the presence of correlation amongst errors across clusters (states) and hence the Driscoll and Kraay standard errors have been used for the fixed effects regression. The results of Driscoll and Kraay standard errors for the fixed effects regression are similar to the fixed effects regression with robust clustered standard error; however, the only difference is that tax decnetralization variable is significant at 10 percent level.

FISCAL DECENTRALIZATION AND FISCAL DEFICIT

THEORETICAL FRAMEWORK

In this section we try to analyse the impact of tax decentralization on fiscal deficit indicator

$$Fisc\ Def = \beta 0it + \beta 1Decit + \beta 2Xit + \beta 3Dummy + eit \text{-------------------} \quad (3)$$

Where:

The subscript *i* is the observation unit, state; *t* is the time unit

Fiscal Def: Fiscal deficit as a percentage of GSDP

β_1 Dec= tax decentralization as stated above

β_2X= control variables as stated below

Inflation Indicator: which is the state GSDP deflator measured as the ratio of GSDP current prices divided by GSDP constant prices of individual states in different time periods.

IP: Interest Payments as a percentage of GSDP

Growth Rate: Growth rate of NSDP per capita current prices

Dummy Variable: The year of implementation of the FRBM Act in the states

EMPIRICAL FINDINGS

The Breusch and Pagan Lagrangian multiplier test shows that the random effects model is more appropriate to a pooled OLS regression. The adjusted R-squared is around 40 percent. Tax decentralization seems to have no impact on fiscal deficit in the random effects model. While Interest payments and inflation have a significant positive impact on fiscal deficit, Growth and Liberalization has a significant negative impact on Fiscal deficit (Table 3).

TABLE 3: REGRESSION RESULTS: DEPENDENT VARIABLE: FISCAL DEFICIT AS A PERCENTAGE OF GSDP

Variables	Random Effects	Fixed Effects	FE with Driscoll and Kraay standard errors		
TD	-0.49	-2.29			
TD Lag 1				-4.3**	
TD Lag 2					-7.5***
inflation	0.28**	0.21	0.21	0.14	0.04
Interest Payments as a percentage of GSDP	0.68***	0.61***	0.61***	.59***	0.57***
Growth rate of NSDP per capita current prices	-0.03***	-0.04***	-0.04***	-0.04***	-0.04***
FRBMA Act	-1.38***	-1.37***	-1.37***	-1.37***	-1.34***
Constant	2.65***	3.6**	3.6***	4.55	5.96***
Adjusted R Squared	within = 0.35 between = 0.77overall = 0.41	within = 0.37 between = 0.48 overall = 0.36	0.36	0.37	0.38
Breusch and Pagan Lagrangian multiplier test for random effects Prob > chibar2 =	0.00				
Sargan-Hansen statistic , Pvalue		0.00			
Modified Wald test for groupwise heteroskedasticity, Pvalue		0.00			
Breusch-Pagan LM test of independence, P value		0.00			

Source: EPWRF and MOSPI

Robust Cluster Standard Errors for random and fixed effects model, No of Obs: 448 Significance Level: ***1 per cent , **5 percent, *10 percent

The Sargan-Hansen statistic shows that fixed effects model is more appropriate. In this model tax decentralization has no significant impact on fiscal deficit although it has a negative coefficient just as in the previous regression. Robust clustered standard errors have been used to account for heteroskedasticity. While Interest payments and inflation have a significant positive impact on fiscal deficit, Growth and Liberalization has a significant negative impact on Fiscal deficit. Lastly we run the regression with Driscoll and Kraay standard errors because we found correlation amongst errors across clusters. In this regression tax decentralization variable now becomes significant at the lags. The tax decentralization variable is significant on the first lag at five percent and second at one percent and has a negative impact on fiscal deficit. All the other variables have similar signs and significance as previous regressions.

CONCLUSION

The results suggest that tax decentralization has a positive and significant impact on NSDP per capita. Hence it will be worthwhile to increase tax decentralization at the sub-national level as it enhances income. However more importantly is that tax decentralization having a significant and negative lagged effect on fiscal deficit. Hence tax decentralization is the perfect combination for sustainable growth as the sub-national governments bear the costs of their expenditures through the revenue they have raised and do not depend on intergovernmental transfers. This makes the sub-national governments more responsible as there is a direct link between expenditure undertaken and the revenue raised, hence their accountability to the taxpayer's increases. The results also suggest that increase in the administrative expenditure has a negative impact on NSDP per capita and hence it should be curtailed. Capital expenditure is also growth enhancing and therefore should be encouraged and liberalization too has had a significant impact on NSDP per capita. On the other hand, Interest payments lead to an increase in fiscal deficit hence along with greater tax decentralization of states, a limit can be imposed on the borrowing of states. The FRBM act has had a significant and negative impact on fiscal deficit. Hence tax decentralization should be taken along with other monitoring mechanisms to inorder to reap the full benefits of its positive effects.

REFERENCES

1. Akai, N. and Sakata, M. (2002), "*Fiscal decentralization contributes to economic growth: evidence from state-level cross-section data for the United States*", *Journal of Urban Economics,* Vol.52, pp. 93–108
2. Asfaw, A., Frohberg, K., James, K.S., and Jütting J (2007), "*Fiscal Decentralization and Infant Mortality: Empirical Evidence from Rural India", The Journal of Developing Areas*, Vol. 41, No. 1, pp. 17-35
3. Bird, R.M. &Wallich, C. (1993), "*Fiscal Decentralization and Intergovernmental relation in transitional economies: towards a systematic framework of analysis"*, Washington DC, the world Bank
4. Bird, R.M. and Vaillancourt, F. (2006), "Perspectives *on Fiscal Federalism*", World Bank, Washington DC.
5. Boadway, R. and Shah, A. (2007), "*Intergovernmental fiscal transfers principles AND practice, Public sector accountability and governance series"*, The International Bank for Reconstruction and Development, The World Bank
6. Brennan, G. and Buchanan, J.M. (1980), "*The Power to Tax: Analytical Foundations of a Fiscal Constitution",* Cambridge University Press, Cambridge UK.
7. Driscoll, J. C., and Kraay. A. C. (1998), "*Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data*", *Review of Economics and Statistics* Vol. 80, pp. 549–560
8. Electronic Database of the Economic and Political Weekly Research Foundation (EPWRF)

9. Eyraud, L. and Lusinyan, L. (2013), "Vertical fiscal imbalances and fiscal performance in advanced economies", Journal of Monetary Economics Vol.60, pp.571–587
10. Falch, T. and Fischer, J.A.V. (2012), "*Public sector decentralization and school performance: International evidence*", Economics Letters Vol.114 pp. 276–279
11. Goodspeed, T.J. (2002), "*Bailouts in a federation", International Tax and Public Finance* Vol. 9, pp. 409–421
12. Government of India, Ministry of Statistics and Programme Implementation (MOSPI)
13. Ismail, A.G.B. and Hamzah, M.Z. (2006), "*Fiscal decentralization and economic growth nexus: evidence from province-level cross-section data for Indonesia*", *Review of Islamic Economics*, Vol. 10, No.2, pp. 133-149
14. Jin, J. and Zou, H. (2002), "*How does fiscal decentralization affect aggregate, national, and sub-national government size?" Journal of Urban Economics* Vol. 52, pp. 270–293
15. Lindaman, K. and Thurmaier, K. (2002), "Beyond Efficiency and Economy: An Examination of Basic Needs and Fiscal Decentralization", Economic Development and Cultural Change, Vol. 50, No. 4 pp. 915-934
16. Marinkov, M. (2013) "*The impact of aggregate revenue and expenditure assignments on economic growth: the case of provinces and municipalities in south Africa*", Submission for the 2013/14 Division of Revenue, Financial and Fiscal Commission, Chapter 7
17. Nguyen, L.P. and Anwar, S. (2011), "*Fiscal decentralization and economic growth in Vietnam*", *Journal of Asia Pacific Economy*, Vol. 16, No.1, pp. 3-14.
18. Oates, W.E. (1972), "*Fiscal Federalism"*, Harcourt Brace Jovanovic, New York.
19. Oommen, M. A., (2006), "*Fiscal Decentralisation to the Sub-State Level Governments", Economic and Political Weekly*, Vol. 41, No. 10, pp. 897-903
20. Ostrom, E., Schroeder, L., & Wynne, S. (1993), "*Institutional incentives and sustainable development: Infrastructure policies in perspective",* Oxford: Westview Press.
21. Qiao, B., Martinez-Vazquez, J., & Xu, Y. (2008), "*The tradeoff between growth and equity in decentralization policy: China's experience", Journal of Development Economics*, Vol.86, No.1, pp. 112–128.
22. Rao, M. G. and Singh, N. (2005), *Political economy of federalism in India*. Delhi: Oxford University Press.
23. Rodden, J. (2003), "*Reviving Leviathan: Fiscal Federalism and the Growth of Government*" *International Organization Vol.*57, pp. 695–729
24. Rodden, J. and Wibbels, E. (2002), "Beyond the Fiction of Federalism: Macroeconomic Management in Multi-Tiered Systems." *World Politics*, Vol.54, pp. 494–531
25. Rodriquez-Pose, A. and Krøijer, A. (2009), *"Fiscal decentralisation and economic growth in Central and Eastern Europe",* London School of Economics*,* Europe in Question Discussion Paper Series.
26. Schaltegger, C. A. and Feld, L.P. (2009), "*Are fiscal adjustments less successful in decentralized governments? European", Journal of Political Economy* Vol.25, pp.115–123

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