

**Working Paper
457**

**HORIZONTAL DEVOLUTION OF
RESOURCES TO STATES IN INDIA-
SUGGESTIONS BEFORE THE FOURTEENTH
FINANCE COMMISSION**

R. Mohan, Dr. N Ramalingam, D. Shyjan

May 2014

The Centre's Working Papers can be downloaded from the website (www.cds.edu). Every Working Paper is subjected to an external refereeing process before being published.

**HORIZONTAL DEVOLUTION OF RESOURCES TO STATES IN
INDIA- SUGGESTIONS BEFORE THE FOURTEENTH
FINANCE COMMISSION**

R. Mohan, Dr. N Ramalingam, D. Shyjan

May 2014

We express our gratitude to Dr. T.M. Thomas Isaac, former Finance Minister, Government of Kerala, Dr. M.A. Oommen, former Chairman of the Fourth State Finance Commission, Kerala, the anonymous referee and Prof. Amit Ray, Director, Centre for Development Studies, Thiruvananthapuram for guidance, comments and encouragement. We also thank the participants of the Open seminar held at Centre for Development Studies, Thiruvananthapuram on 16th January 2014 for their comments and suggestions. Usual disclaimer applies.

ABSTRACT

The paper discusses the general backdrop of the Constitutional and political aspects of the Indian federal structure and the terms of reference of Finance Commissions which go beyond the traditional issues of devolution, before proceeding to analyse the major issues involved in devolution of taxes and grants from Union to the States in India.. The Finance Commissions, since Eleventh have been assigned the task of incentivising implementation of fiscal reforms at the State level. Presently, the Finance Commissions face the increasing challenge of recommending criteria for horizontal devolution meeting the demand of low income States without being substantially adverse to the middle income States. Though the States have made a common demand for an increased share in divisible pool of Central taxes, there are sharp differences about criteria for horizontal devolution among them.

The focus of the paper is to suggest an alternate methodology for horizontal devolution from divisible pool of Central taxes and disbursement of grants. Tax devolution criteria suggested are population and gap of per capita own tax revenue of a State from the average of highest three States worked on a normative basis. Methodology for normatively estimating expenditure requirements of States are also attempted in this paper. It is suggested that for grant disbursement, the Finance Commissions need to become the prime agency.

Keywords:

General Backdrop

a) Constitutional Framework

Indian Constitution does not use the word Federal in its preamble. Though strong centralising features are present in the Constitution, it equally does recognise certain basic federal principles. India is a union of States and does not comprise indestructible units. The power of the Parliament to redraw the boundaries of States without their consent, the emergency powers in the Constitution, the enabling provision for President's rule in States (though circumscribed after the Supreme Court judgement in *S R Bommai* case AIR 1994 SC 1918), an expanding concurrent list, vesting of residuary powers with the Centre are all examples of unitary features of the Constitution. The clear demarcation of powers of taxation between the Centre and the States and provisions for devolution taxes and grants in aid (the latter being laid down in Article 280) are two of its major federal features.¹ The 73rd Constitutional Amendments that added clause 3 sub-clause (bb) and (c) to Article 280 acknowledged the virtual transformation of the two tier Indian Constitution into a multi-tiered federal system.

Under this Constitutional framework, the political relations of our federal structure underwent substantial changes during the last six and a half decades. It is this evolving process that determines the political

1 There can be criticisms that Goods and Services Tax (GST) has ended the exclusive domain of the States in commodity taxes and that the States have no decisive role in recommendations of the Finance Commissions.

relations between the Centre and the States. This poses challenges and sets the stage for a process of fiscal devolution. The challenge is to see to it that serious discord is not created among the States in a scenario with wide income disparities. It would be worth discussing the evolving political context briefly, before entering into issues of vertical and horizontal devolution of taxes, disbursement of grants and attempting to offer suggestions before the Fourteenth Finance Commission.

b) Evolving Political Context since the 1950s

In the first decade of 1950s, States were reorganised on linguistic basis. This was an important step towards cohesive provincial units. Though the Centre and the States were ruled by the same party, (except for a brief interlude in Punjab and East Patiala States Union (PEPSU) in 1953 and during 1957-59 in Kerala), the State Chief Ministers were leaders with substantial local base.² In short, there was an overall centralised political framework with strong local presence. This continued till mid-1960s. During 1967-1971, nine States came under rule of opposition parties. Though this could have been an opportunity for the emergence of a more rational federal polity, it did not happen. Instead, the period witnessed use of office of the Governor for making and unmaking governments.

The 1970s witnessed a high degree of centralisation in Indian polity with the same party ruling the Centre and the States without the presence of State level leaders with a powerful local base. This was contrary to what was prevalent during the first one-and-a-half decades. The nation also witnessed the internal emergency (1975 June – 1977 March) during this period. Though in the 1970s, regional parties like Dravida Munnetra Kazhagam (DMK) in Tamil Nadu and Akali Dal in Punjab demanded a substantial restructuring of Centre – State relations; it did not help in countering the strong centralising tendencies. In the post-emergency

2 In fact, this is one of the essential requirements for preservation of federalism mentioned in Oates (2005)

scenario of 1977, the Left Front government in West Bengal submitted a memorandum to the Centre suggesting major changes in Centre-State relations, which also did not produce the right moves.

But in the 1980s, demands for restructuring Centre-State relations became strident with non-Congress Chief Ministers' conclaves being held³ and the voices could no longer be ignored. This led to the appointment of the Justice Sarkaria Commission for making recommendations for restructuring Centre-State relations. At the same time, the question of devolution of power to the third tier, namely the local self-government, also got attention. Centre sought to bring Constitutional amendment for empowering the local self government and holding regular elections. The biggest drawback of this attempt was that it omitted to provide a separate list of powers for the local self government. At that time, the move was criticised as an attempt to disempower the States by directly devolving resources to districts. Later, an amended version of the bill became part of the Constitution during the early 1990s.

The decades since the 1990s have witnessed major changes in political federalism as single party rule at the Centre ended and coalition governments with participation of regional parties came to power at the Centre. It was these parties which raised the voice for substantial restructuring Centre-State relations during the 1970s and the 1980s. But paradoxically, this period has witnessed more shifts towards the Centre in the fiscal arena.

The taxing powers of the States witnessed substantial reform when General Sales Tax on purchase and sale of commodities was changed to Value Added Tax (VAT) with input tax credit for intra-State sales with

3 In Karnataka and Andhra Pradesh, non-Congress governments led by the Janata Party and Telugu Desam respectively were formed after the 1983 Assembly elections. The ALADMK which was in power in Tamil Nadu, the Left Front which was in power in West Bengal and Tripura and the National conference which was in power in Jammu & Kashmir were the other non-Congress governments.

uniform rates across States. Though Constitutionally, States could levy different rates, uniform rates were brought in through the Empowered Committee of State finance ministers. The proposed Goods and Services Tax (GST), goes a step further by making harmonised rates, Constitutional and envisaging a new Constitutional body GST Council. These are clear trends towards fiscal centralisation in an era of dissipating political centralisation.

It is to be noted that the fiscal position of the States deteriorated considerably during the latter half of the 1990s and States were forced to accept loans from multi lateral institutions with conditionalities for levy of user charges, deficit targets etc. The Finance Commissions since the Eleventh, also started imposing the same for grant disbursement and debt relief. Instead of attempting to restructure Centre-State relations, the parties which became part of the coalitions at the Centre, started arguing for more discretionary grants for their States. In effect, the balance of fiscal power became centripetal during this period (See Rao 2002 for a discussion)⁴. The Punchi Committee recommendations on restructuring Centre-State relations (2010) hardly received any attention in the political and academic arena when compared to the interest, Sarkaria Commission recommendations had evoked in the late 1980s.

In this general Constitutional and political background, the recommendations of the Finance Commissions, being Constitutionally appointed bodies gain much importance as they make rule based

4 Rao and Singh (2001) discuss in detail the empirical studies on political variables in devolution of resources from Centre to States and find the impact of variables like number of seats from the State in the Lok Sabha and same party in power at the Centre and the States as statistically significant variables. This association needs to be viewed with caution as the States sending largest number of representatives to the Lok Sabha are also the poorest States. In the coalition era different variables like political support of the coalition partner and the State from where it sends the largest number will have to be seen. The point to be noted is that for a fair distribution of transfers in a centralised as well as fragmented polity, role of Constitutional bodies in disbursement of grants assumes critical importance.

recommendations for tax devolution. In a scenario, when issues of federalism are not getting the pride of place they deserve in political and academic arena, the task of the Finance Commissions become more challenging as they are not merely to recommend devolution of taxes and disbursement of grants, but also to do the same in a fair and non-discriminatory manner. It is the time when Finance Commissions need to focus more on their traditional role of ameliorating horizontal and vertical equities.

2. The Changing Role of Finance Commissions: — A Brief look from the perspective of Theories of Fiscal Federalism

The theories of fiscal federalism are broadly categorised as first and second generation (see Oates 2005 for a detailed discussion). While the former focussed on the macroeconomic functions like stabilisation, distribution and allocation among various levels of government, implicitly admitting the interventionist role of the state, the latter focussed on minimising the role of the state and saw federalism as a market preserving mechanism (Weingast 1995). This in turn implied a hard budget constraint on the sub-national governments. The expanding terms of references of the Finance Commissions to include deficit targeting, and linking grant disbursement and debt relief to legislating deficit targets have theoretical basis in second generation theories of fiscal federalism.⁵

The terms of reference of Fourteenth Finance Commission like that of its predecessors since the Eleventh, have both traditional roles of tax devolution and grant disbursement (given the vertical and horizontal inequities in the fiscal arena) and the rather new role of imposing hard budget constraint like balancing the revenue account in the budgets. It goes further in suggesting insulating pricing of public utilities from policy fluctuations.

5 See Bagchi (2002) for a review of the debate between Musgrave and Buchanan: “Public Finance vs Public Choice “in University of Munich in 1988.

Over a period of time, especially since the Eleventh, Finance Commissions have become a vehicle for incentivising implementation of fiscal reforms especially, legislatively mandating deficit targets as a proportion of Gross State Domestic Product (GSDP). The Terms of reference of the Fourteenth Finance Commission has gone a step further by suggesting recommendations to insulate pricing of public utilities from policy fluctuations. This makes a political decision of pricing or subsidies difficult. In a democratic set up, this can have repercussions in the political domain, as it stymies the legislative and executive powers in the fiscal arena. States will not be able to decide on pricing of public utilities, provision of which is in the State List of the Constitution. This can upset the balance of Centre- State fiscal relations by making this also one of the conditionalities for grant disbursement by future Finance Commissions. This explicit term of reference is a clear indication of expanding role of Finance Commissions in imposing a hard budget constraint on the States.

The province of this paper does not extend to discussing these issues in detail, but only attempts to make a mention of the evolution of theories of federalism and their impact on the terms of reference of the Finance Commissions. Here, we focus on the issues that need to be addressed while making recommendations on tax devolution to the States vertically and horizontally by the Fourteenth Finance Commission, with focus on the latter. The paper also discusses an alternative methodology for grant disbursement among the States.

3. Tax Devolution- The Case for a Higher Share

There is a consensus among States that their share in the divisible pool of Central taxes should be raised from the present 32 percent to 50 percent. In fact, States had submitted a joint memorandum to the Thirteenth Finance Commission for this. In the Indian context, the issue of larger expenditure obligations on States, especially in the social

sector and larger and more buoyant sources of tax revenue being with the Centre, has been the reason for demanding a higher share of Central taxes by the States. But over a period of time, with ever expanding concurrent list and larger number of Centrally Sponsored Schemes (CSS), Central spending in social sector has increased. Of late, flagship schemes of the Centre like MNREGS, SSA and NRHM have not only increased Central but also States' spending in health and education sectors through matching contributions. But the States' own-revenue GSDP ratio has almost remained stagnant and not shown much improvement during 2006-07 to 2010-11 as compared to 2001-02 to 2005-06 (see Table 1).

Table 1. Own Tax Revenue / GSDP Ratio

STATE	2001-02 to 2005-06	2006-07 to 2010-11	2006-07 to 2007-08	2008-09 to 2010-11
Andhra Pradesh	7.28	7.70	7.92	7.68
Bihar	4.18	4.36	4.16	4.49
Goa	6.85	6.69	7.38	6.23
Gujarat	6.32	6.51	6.58	6.47
Haryana	7.50	7.01	8.08	6.30
Karnataka	8.64	9.40	9.93	9.05
Kerala	7.33	7.79	7.78	7.79
Madhya Pr.	6.39	7.41	7.34	7.46
Maharashtra	7.00	6.89	6.95	6.86
Orissa	5.10	5.54	5.63	5.48
Punjab	7.04	6.72	6.80	6.67
Rajasthan	6.33	6.46	6.80	6.23
Tamil Nadu	8.32	8.49	8.69	8.36
Uttar Pradesh	5.75	6.63	6.68	6.59
West Bengal	4.37	4.35	4.43	4.29
ALL STATES AVERAGE	6.56	6.80	7.01	6.66

Source: Computed from 'State Finances: A Study of Budgets', RBI, Various issues.

Table 2. Changing Composition of Revenue Expenditure 2001-02 to 2005-06 and 2006-07 to 2011-12.

	2001-02 to 2005-06	2006-07 to 20011-12	2001-02 to 2005-06	2006-07 to 20011-12
State	Dev Exp / Rev Exp	Dev Exp / Rev Exp	Int Exp/ Ev Exp	Int Exp/ Rev Exp
Andhra Pradesh	59.36	66.03	21.60	14.33
Bihar	49.31	60.97	22.36	12.29
Chhattisgarh	64.14	69.00	15.29	15.54
Goa	61.21	68.97	16.42	15.20
Gujarat	60.85	62.35	24.16	20.57
Haryana	58.37	68.35	19.46	12.55
Himachal Pradesh	55.27	58.94	25.16	18.33
Jammu and Kashmir	52.90	54.29	16.04	12.20
Jharkhand	62.88	64.40	11.09	11.00
Karnataka	58.69	66.50	15.24	10.70
Kerala ⁶	53.04	46.19	20.96	17.35
Madhya Pradesh	57.62	59.35	17.60	13.71
Maharashtra	53.87	62.51	18.13	16.18
Orissa	48.86	61.03	30.21	15.93
Punjab	40.59	46.44	22.68	19.33
Rajasthan	56.18	61.89	24.98	16.89
Tamil Nadu	51.54	56.50	17.18	12.20
Uttar Pradesh	49.72	52.77	27.37	18.38
Uttarakhand	62.13	60.61	17.03	14.52
West Bengal	45.72	53.22	32.68	25.83
All States	55.11	60.02	20.78	15.65

Source. Computed From 'State Finances: A Study Of Budgets', Rbi, Various Issues.

6 In Kerala's case, the mode of devolution to Panchayats changed since 2006-07 with the government accepting the recommendations of the Third State Finance Commission. The funds devolved to Local Self Governments are classified as Non-Plan Revenue Expenditure under the Non-Developmental head since 2006-07, but these funds are utilised as developmental expenditure by Local Self governments.

As far as revenue expenditure is concerned, its overall proportion to Gross State Domestic Product (GSDP) has fallen from 15.65 percent during 2001-02 to 2005-06 to 14 percent in 2006-07 to 2010-11. It is pertinent to note that during the -period, 2006-07 to 2011, though the GSDPs of States rose by 4.18 percent, when compared to the period during 2001-02 to 2005-06, the Revenue expenditure/GSDP ratio fell by 1.65 percentage. Development expenditure as a proportion of GSDP also fell during the second period. Reserve Bank of India's State Finances - A Study of Budgets' also states that "The consolidated revenue expenditure- GDP ratio of state governments are budgeted to be lower by 0.2 percentage points, attributable to a decline in development revenue expenditure (both social and economic services) as a ratio to GDP in 2013-14 (BE)."

Chakraborty and Dash (2013) have pointed out that "The econometric exercise reveals that the state level fiscal policy and fiscal rule has been successful in reducing fiscal imbalance even when we control for other policy shocks and other standard determinants of fiscal balance. However, it is clear that fiscal targets under fiscal rule have been achieved through a cut in discretionary development spending. Our econometric exercise shows that cut in spending has been partially offset by higher central transfers. Had this not been the case, the state level contraction in development spending would have been even higher to comply with the rule."

But it is to be taken note of that the composition of revenue expenditure has undergone a better change during the period. With debt relief packages of Finance Commissions in place and softening of interest rates on loans, the interest payments as a proportion of revenue expenditure has come down and share of development expenditure in revenue expenditure has gone up. (see Table 2). The all States average of development expenditure as a proportion of revenue expenditure has gone up from 55.11 percent during 2001-02 to 2005-06 to 60.02 percent

during 2006-07 to 2011-12. Proportion of interest expenditure as a proportion of revenue expenditure has come down from 20.78 percent during 2001-02 to 2005-06 to 15.65 percent during 2006-07 to 2011-12.

But the States are under fiscal pressure in the face of a stagnant own tax- GSDP ratio to maintain deficit targets so that they get the debt relief packages recommended by the Finance Commissions. This leads to compression of expenditure and revenue expenditure as a proportion of GSDP to maintain deficit targets, inspite of the fact that composition of revenue expenditure has undergone a change in favour of development expenditure during 2006-07 to 2011-12 when compared to 2001-02 to 2005-06.

Besides the above, the actual share of States in Centre's divisible pool has also been less than the share recommended by the Finance Commissions due to increasing share of surcharges in Central taxes (which are not part of divisible pool as per Article 270 of the Constitution of India).as pointed out by Justice Punchi committee on Centre State relations. The report of the committee states:

“The share of cesses and surcharges witnessed a sharp increase from 4.9 per cent of the gross tax revenue of the Centre in the award period of FC-VIII to 11.34 per cent in the award period of FC-XII. In the years 2008-09 and 2009-10, the share of cesses and surcharges increased further to over 13 percent of the gross tax revenue.” (Paragraph 6.3.01)

“The introduction of new cesses and surcharges has neutralised the higher tax devolution recommended by the successive Finance Commissions. FC-XI and FC-XII recommended States' shares in net Central taxes at 29.5 and 30.5 per cent, respectively. But because of large scale resort to the levy of cesses and surcharges, actual tax devolutions to States were lower at 25.95 per cent of gross tax revenue in the award period of FC-XII as compared with tax devolution

amounting to 26.57 per cent in the award period of FC-XI. Thus, the increase of States' share in Central taxes by one percentage point by FC-XII was more than neutralised. (Paragraph 6.3.02)"

With stagnant own tax- GSDP ratio, the need to compress revenue expenditure, especially development expenditure as a proportion of GSDP, debt relief packages and fiscal responsibility legislations mandating achievement of revenue and fiscal deficit targets within a time frame, and actual devolution from Finance Commissions being less than stipulated, the States feel the need for a higher share in divisible pool of Central taxes⁷.

It is in this context that States have been making a common demand for a higher share in the divisible pool of the Central taxes. But this unity breaks down when it comes to deciding criteria for horizontal devolution of Central taxes in the divisible pool among the States.

4. Horizontal Devolution of Taxes among States

For enhancing the share of states from the divisible pool there is consensus among the States. But the same is not only absent as regards the criteria for determining the horizontal devolution among States, but also there are sharp differences among low income and middle income States. The main reason is the contest between low income (Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan) and middle income States Kerala, Tamil Nadu, Karnataka, Andhra Pradesh etc) on

7 *Rangarajan and Srivastava (2008) commenting on share of States in vertical devolution state, "In India, there has been a long-term stability in the share of the centre and the states in the combined tax revenues of the system after tax devolution. It may be considered desirable to continue to maintain this stability as long as there are no basic changes in the division of responsibilities between the centre and the states. It is further shown that maintaining such a stability would require an upward adjustment in the share of states in the divisible pool of taxes in periods where the expected buoyancy of central taxes is higher than that of the states."*

a) Which base year population should be used: - whether 1971 or the latest census. While the former is more beneficial for middle income States as there has been effective population control since 1971, the latter is more beneficial for low income States which have a higher population share based on latest census (2011). The argument that can be against the use of 1971 population is that it does not take into consideration the actual needs of the present population and population share which is the main equalising criterion is being made into an incentive criterion. (The Terms of Reference of the Fourteenth Finance Commission provide for taking into consideration demographic changes since 1971).⁸

b) What is the weightage to be given to Income Distance Criterion, which is the gap between the per capita income of a State from the average of the highest three per capita income States. Bihar in its memorandum to the Fourteenth Finance Commission has demanded 70 percent share for Income Distance while Kerala has recommended for not using this criterion.

It is suggested that for the Special category States, a fixed proportion of divisible pool of Central taxes can be set apart and their horizontal shares can be computed based on share of population and revenue gap among these States. Otherwise, a criterion like revenue gap (which is explained below) will give distorted results if we compute taking both the groups together. In what follows in this paper, we discuss only the shares of General Category States

8 The use of '1971' population is as part of the decision of National Development Council so that the States which have implemented population control measures are not penalised. Delimitation of Lok Sabha constituencies is also based on 1971 census. See Bhaskar and Subhramanyam (2014) for a discussion. They point out that Finance Commission will not be able to deviate from using 1971 population in the present situation.

4.1 Suggested Methodology for Horizontal Distribution of Taxes

It is proposed that tax devolution criteria need to satisfy the test of progressivity, that it is inversely proportional to fiscal capacity and directly proportional to fiscal needs of a State. Fiscal need of a State is the responsibility to provide a certain minimum level of public goods and social services to citizens within its jurisdiction. When fiscal capacity or ability to raise own revenues is less, the ability to meet fiscal needs will also be lower, Hence, it is recommended that, devolution criteria should be ones which augment the fiscal capacity so that a certain level of fiscal needs are attained across States.

Here, we suggest simple criteria which do satisfy the above test for horizontal devolution of taxes. Population and Per Capita Revenue Gap with 50 percent weight for each are suggested as the two criteria for horizontal devolution of taxes. We take fiscal need reflected by population and fiscal capacity reflected by Revenue Gap criterion. Cost disability criteria like area and index of infrastructure can be used for sector specific grant devolution. It is also felt that since Revenue Gap criterion uses normative estimates of tax revenues of States, incentive for tax effort is built into this.

4.2 Population Criterion

We project two scenarios with 1971 and 2011 population. Population share of a State is taken as its share in the total population for 1971 and 2011 respectively.

4.3 Revenue Gap Criterion

The measure is based on tax revenue of the States. Non tax revenue is excluded so that certain resource rich States do not get undue benefit without much special effort.

The average of the tax revenue of each State for 2008-09, 2009-01 and 2010-11 was divided by the 2011 population to arrive at the per

capita tax revenue. When the difference of per capita tax revenue of a State is taken from the average of highest three per capita income States, we get the revenue gap for a State. But this will sometimes reward lack of tax effort of a State among States with comparable tax base.

To avoid this, we compute normative revenue of a State. This is done by dividing States into three different groups – High, Low and Middle income (See Table 3). The tax GSDP ratio of highest among the Middle Income States (Karnataka) is applied to High and Middle Income States. For Low Income States, tax GSDP ratio of 6 percent is taken. For States in groups, having higher actual tax revenues, actuals are taken as the normative. The gap between the per capita normative revenue of a State and that of the average per capita normative revenue of the highest three States (Goa, Haryana and Maharashtra) is taken as the normative revenue distance. The share of each State in the sum of the normative revenue distance is taken as the revenue gap for the State. For the highest State, it is zero and for the second and third States, it is the difference from the average. In Revenue Gap criterion, GSDP enters in computing normative revenue of a State. But by assigning different tax ratios, for High, Middle and Low income States, the problem of variations in components of GSDP across States is attempted to be minimised.

Revenue Gap criterion attempts to equalise per capita tax revenues of States so that the ability to provide a level of public goods and services are augmented. Bagchi and Chakraborty (2004) made a similar attempt for measuring normative deficits for States. (normative revenue expenditure was assigned for Low Income States to the level of Middle Income States) We proceed differently by including Revenue Gap in tax devolution criteria. On the expenditure side, we recommend a different normative method, while discussing about grants.

Since the normative criterion is computed by assigning the tax-GSDP ratio of the highest State in the group, there will be no perverse incentive to be lax in tax effort so as to get a larger share in this criterion.

When the devolution formula was tested for progressivity, it is seen that the rank correlation sign between tax share and GSDP per capita is negative and statistically significant at 1 percent level. The revenue gap criterion is proposed to replace the income distance criterion (which has been used by the Finance Commissions) based on the distance of a State's GSDP from the average GSDP of highest three States. The main criticisms levelled against the income distance criterion are,

a) GSDP does not correctly proxy the tax base of a State. Higher GSDP is due to dominance of sub-sectors in the service sector not within the taxing power of the States

b) As this does not take into consideration tax effort, the same needs to be included as an additional criterion. The formula for fiscal discipline as improvement from base year ratio of own revenue as a proportion of revenue expenditure when compared to the same ratio for a later period penalises certain States due to reasons beyond their control.

The computation of Revenue Gap criterion can be stated as follows:

Own Tax Revenue of a State: - Average of Own Tax Revenue for 2008-09, 2008-09 and 2009-10

Normative Own Tax Revenue: - Own Tax Revenue when tax GSDP ratio of Highest Middle Income State (presently Karnataka) is applied to High Income and Middle Income States and 6 percent tax- GSDP ratio is applied to low income States. If a low income State has actual tax-GSDP ratio higher than 6 percent, actual is taken. (Category of States in Table 3)

Per Capita Normative Own Tax Revenue: - Normative Own Tax Revenue divided by 2011 population

Revenue Gap: - Distance of Per Capita Normative Own Tax Revenue from the average Per Capita Normative Own Tax Revenue of three Highest States (Goa, Haryana and Maharashtra)

Revenue Gap Share: - A State's Revenue Gap as a proportion of sum of Revenue Gap of all States.

The scaled revenue gap using 1971 and 2011 populations will be

1971 population of the i^{th} State \times i^{th} State 's Revenue Gap

1971 population of all States \times Sum of Revenue Gaps of all States

2011 population of the i^{th} State \times i^{th} State 's Revenue Gap

2011 population of all States \times Sum of Revenue Gaps of all States

Table 3. Category of States based on Per capita Gross State Domestic Product at Current Prices (Average of 2008-09, 2009-10 and 2010-11).

HIGH INCOME	MIDDLE INCOME	LOW INCOME
Goa	Kerala	Chhattisgarh
Haryana	Uttarakhand	Jammu & Kashmir
Maharashtra	Tamil Nadu	Jharkhand
Gujarat	Andhra Pradesh	Madhya Pradesh
Punjab	Karnataka	Uttar Pradesh
Himachal Pradesh	West Bengal	Bihar

In the category of Low Income States, actual own tax revenue is taken as normative tax revenue for Chhattisgarh and Madhya Pradesh as their tax GSDP ratio is 6.42 and 6.70 percent respectively and higher than the 6 percent tax-GSDP ratio taken for other Low Income States.

Table 4. Normative Own tax Revenue Per capita Gap and Share of States.

State	Own Tax Revenue Normative Per Capita (Rs)	Own Tax Revenue Gap (Rs)	Own Tax Revenue Gap Share (%)
Goa	18074	0	0
Haryana	8144	3005	2.429
Maharashtra	7231	3918	3.167
Gujarat	6901	4248	3.433
Uttarakhand	6515	4634	3.745
Himachal Pradesh	6456	4693	3.793
Punjab	6409	4740	3.831
Tamil Nadu	6365	4784	3.867
Kerala	6331	4818	3.894
Andhra Pradesh	5294	5855	4.732
Karnataka	5273	5876	4.750
West Bengal	3972	7177	5.801
Rajasthan	2989	8160	6.595
Chhattisgarh	2966	8183	6.614
Odisha	2782	8367	6.763
Jammu & Kashmir	2777	8372	6.767
Madhya Pradesh	2402	8747	7.070
Jharkhand	2317	8832	7.139
Uttar Pradesh	1804	9345	7.553
Bihar	1182	9967	8.056

Average of Own Tax Revenue Per capita of Goa, Haryana and Maharashtra is Rs 11149/-

Table 5. Tax Share of States Based on 1971 Population and Revenue Gap (Scaled By 1971 Population)

State	OTR Gap Share Scaled By 1971	Population Share	Tax Share
Andhra Pradesh	3.790	8.010	5.900
Bihar	6.250	7.758	7.004
Chhattisgarh	1.418	2.143	1.781
Goa	0.000	0.147	0.074
Gujarat	1.688	4.916	3.302
Haryana	0.449	1.849	1.149
Himachal Pradesh	0.242	0.637	0.439
Jammu & Kashmir	0.576	0.851	0.713
Jharkhand	1.871	2.620	2.245
Karnataka	2.562	5.395	3.979
Kerala	1.531	3.931	2.731
Madhya Pradesh	3.908	5.528	4.718
Maharashtra	2.940	9.282	6.111
Odisha	2.732	4.040	3.386
Punjab	0.956	2.495	1.725
Rajasthan	3.130	4.745	3.937
Tamil Nadu	2.934	7.586	5.260
Uttar Pradesh	11.662	15.440	13.551
Uttarakhand	0.310	0.827	0.568
West Bengal	4.733	8.159	6.446

Table 6. Tax Share of States Based on 2011 Population and Revenue Gap (Scaled By 2011 Population)

State	OTR Gap Share Scaled By 2011 Population	Population Share	Tax Share
Andhra Pradesh	3.367	7.397	5.452
Bihar	7.027	9.070	7.486
Chhattisgarh	1.419	2.232	1.782
Goa	0.000	0.127	0.061
Gujarat	1.742	5.276	3.381
Haryana	0.517	2.215	1.290
Himachal Pradesh	0.219	0.599	0.409
Jammu & Kashmir	0.714	1.096	0.815
Jharkhand	1.977	2.880	2.320
Karnataka	2.440	5.341	3.850
Kerala	1.092	2.917	2.168
Madhya Pradesh	4.313	6.343	5.004
Maharashtra	2.990	9.818	6.191
Odisha	2.384	3.665	3.128
Punjab	0.892	2.421	1.642
Rajasthan	3.803	5.996	4.448
Tamil Nadu	2.344	6.303	4.498
Uttar Pradesh	12.666	17.438	14.216
Uttarakhand	0.318	0.884	0.580
West Bengal	4.452	7.981	6.204

Table 7. Tax Shares of High Income, Middle Income and Low Income Shares (1971 and 2011 Population Scaled)

1971 POPULATION		2011 POPULATION			
CATEGORY	STATE	SHARE	CATEGORY	STATE	
HIGH INCOME	Goa	0.074	HIGH INCOME	Goa	1.782
	Haryana	1.149		Haryana	1.290
	Maharashtra	6.111		Maharashtra	6.191
	Gujarat	3.302		Gujarat	3.381
	Punjab	1.725		Punjab	1.642
	Total	12.361		Total	14.285
MIDDLE INCOME	Kerala	2.731	MIDDLE INCOME	Kerala	2.168
	Uttarakhand	0.568		Uttarakhand	0.580
	Tamil Nadu	5.260		Tamil Nadu	4.498
	Andhra Pradesh	5.900		Andhra Pradesh	5.452
	Karnataka	3.979		Karnataka	3.850
	West Bengal	6.446		West Bengal	6.204
	Total	24.884			Total
LOW INCOME	Chhattisgarh	1.781	LOW INCOME	Chhattisgarh	1.782
	Jammu & Kashmir	0.713		Jammu & Kashmir	0.815
	Jharkhand	2.245		Jharkhand	2.320
	Rajasthan	3.937		Rajasthan	4.448
	Madhya Pradesh	4.718		Madhya Pradesh	5.004
	Uttar Pradesh	13.551		Uttar Pradesh	14.216
	Bihar	7.004		Bihar	7.486
	Total	33.949		Total	36.071

Middle income States benefit when 1971 population is used as a criterion where as Low income States benefit when 2011 population is used. Similarly, when 2011 population is used for scaling Revenue Gap, the share of the Middle Income States falls in contrast to when scaling is done using 1971 population. Not only does the share of Low Income States rise but also the share of the High Income States also rises, when 2011 population is used (See Tables 5 and 6). This needs to be examined further on the basis of demographic trends in the High Income States since 1971.

5. Disbursement of Grants- Some Suggestions

Finance Commissions since the Fourth have restricted themselves to the area of non-plan grants, except for a marginal attempt made by the Ninth Finance Commission, though the Finance Commissions are not Constitutionally mandated to do so. In fact, grants by bodies other than the Finance Commissions are under Article 282 which deals with “Miscellaneous Purposes”. The Centrally Sponsored Schemes with rigid allocation criteria have not only cut into the fiscal space of the States through requirement of matching contributions but also impeded operational flexibility needed according to State specific conditions. It is suggested that the grants under Centrally Sponsored Schemes and Central Schemes should be progressively phased out. In their place, grants devolved through Finance Commission recommendations by fixing broad priorities, leaving operational flexibility to States and local self governments.

Constitutionally, the grant disbursing body is the Finance Commission. But over a period of time, substantial amount of grants began to be disbursed by the Planning Commission and the Central ministries. Flagship programmes in social sector became Centrally Sponsored with allocation criteria by the Centre. The States are not getting the needed flexibility considering diversity and State specific conditions.

It is suggested that these schemes can be changed in such a manner that certain nationally acceptable goals are set and operational flexibility is left to States and local self governments. Sector specific grants can be disbursed by the Finance Commissions. In social sectors like education and health, for States lagging behind the Nationally Acceptable Minimum Standards, (NAMS) (which can be set based on goals to be achieved at the national level during a time period), a normative standard of expenditure can be estimated based on the necessity to achieve the set standards. The gap between their actual spending and spending normatively estimated can be disbursed as grants. These should be block grants with flexibility of implementation for the States and local self governments. Outcomes can be periodically monitored by a mechanism recommended by the Finance Commission.

States which have achieved more progress shall be given maintenance and upgradation grants based on individual assessment. Transparent criteria like deficiencies in social and economic criteria can be laid down for grant disbursement out of this pool. It will be the backward and low income States that will benefit maximum in such a scenario.

It is also suggested that an indicative ceiling of overall devolution of Central resources to the States can be raised from 37.5 percent to 55 percent, so that there is enough space for the Finance Commissions to recommend sector-specific grants.

If there is still deficit in Balance in Current Revenues (BCR) or the non-plan revenue account, after tax devolution and normative estimates of expenditure to meet Nationally Acceptable Minimum Standards, grants under Article 275 can be granted to make good this gap. But grants under social and economic sectors by the Finance Commissions need not be restricted to non-plan account only. Even plan projections can be included and if Planning Commission provides separate grants, this can

be netted from the Finance Commission grants for the same sector. For this to happen, the synchronisation of the Plan period and Finance Commission award will become necessary. Recommendations to this effect need to be considered by the Finance Commission.

5. Highlights In lieu of Conclusion

The focus of the paper is on issues in horizontal devolution of divisible pool of the Central taxes and methodology of disbursement of grants among the States in India by the Finance Commissions. Besides this, we have briefly looked into the issues of tax devolution and grant disbursement to States. The decentralisation to the third tier has not been part of the province of this paper as it merits a separate discussion. The process of political and fiscal decentralisation in India has been complex though these have happened under the same Constitutional framework over the last six- and half decades. The terms of reference of the Finance Commissions have expanded in a way that they have to take upon themselves the task of imposing hard budget constraints, restricting expansion of public sector and to insulate pricing of public utilities from policy fluctuations. The paper briefly mentions theoretical background of the changing mandates of the Finance Commissions since the Eleventh, as can be seen from their terms of reference.

For horizontal tax devolution and grant disbursement normative criteria have been suggested. For tax devolution Population and Revenue Gap are taken as the criteria. The latter, which has been explained in the paper, attempts to equalise the per capita revenues of States. This is suggested in the place of distance criterion based per capita GSDP of States, which has been used by the Finance Commissions, as there have been doubts whether GSDP is the right measure for fiscal capacity of a State. While using Revenue Gap criterion, normative per capita tax revenue is estimated to eliminate perverse incentive for lack of revenue effort by some States Non tax revenues are excluded as there are wide variations due to resource bases of States. Methodology for grant

disbursement has been suggested so that each State can achieve Nationally Accepted Minimum Standards through social sector spending.

The aim of the suggestions is to keep the criteria for horizontal devolution of taxes, from divisible pool of the Centre, simple and ones which would address the fiscal need and fiscal capacity of a State. As far as cost disabilities are concerned, it is felt that they can be determinants for specific grants. The paper suggests that the methodology of grant disbursement needs to be streamlined with objective criteria.

***R. Mohan** is from the Indian Revenue Service and was formerly a researcher with Centre for Development Studies, Thiruvananthapuram*

***Dr. N. Ramalingam** is Associate Professor with Gulati Institute of Finance and Taxation (GIFT), Thiruvananthapuram*

***D. Shyjan** is Assistant Professor with John Mathai Centre, Thrissur, Kozhikode University, Kerala*

References

- Bagchi Amaresh. 2002. 'Review Article' Public Finance and Public Choice: Two Contrasting Visions of the State by James M. Buchanan and Richard A. Musgrave, on Public Finance The MIT Press, Cambridge, Massachusetts, 1999; pp. 272, *ICRA BULLETIN, Money & Finance* October–December.
- Bagchi Amaresh and Pinaki Chakraborty. 2004. 'Towards a Rational system of Centre-State Revenue Transfer in India: An Exploration' NIPFP Working Paper No. 16, April.
- Bhaskar V and P S Subrahmanyam . 2014. 'Population as a Criterion for Horizontal Devolution by the 14th Finance Commission', *Economic and Political Weekly*, Vol. XLIX, No. 5, February 01.
- Chakraborty Pinaki and Bharatee Bhusana Dash. 2013. 'Fiscal Reforms, Fiscal Rule and Development Spending: How Indian States have Performed?' National Institute of Public Finance and Policy, Working Paper No. 122, April.
- Government of Bihar. 2013. Memorandum to the Fourteenth Finance Commission.
- Government of India, Reports of the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Finance Commissions.
- Government of India, National Accounts Statistics, Central Statistical Organisation, Various issues.
- Government of India, Report of the Commission on Centre-State Relations, Chairman Justice M M Punchi. 2010. Centre-State Financial Relations and Planning, Volume III.
- Government of India, Report of the Kelkar Task Force on Implementation of FRBM Act, 2003, Chairman Dr. Vijay Kelkar.
- Government of Kerala. 2013. Memorandum to the Fourteenth Finance Commission.

- Oates Wallace. 2005. 'Toward a Second-Generation Theory of Fiscal Federalism', *International Tax and Public Finance*, 12.
- Rangarajan C and D. K. Srivastava. 2008. 'Reforming India's Fiscal Transfer System: Resolving Vertical and Horizontal Imbalances,' Working Paper 31, Madras School of Economics, April.
- Rao Govinda and Nirvikar Singh. 2001. 'Federalism in India's Political Economy and Reform' Conference on "India: Ten Years of Economic Reform", at the William Davidson University of Michigan, September.
- Rao Govinda M. 2000. *Contours in Indian Fiscal Federalism*, Institute of Social and Economic Change, Bangalore.
- Rao, Govinda M. 2002. 'Dynamics of Indian Federalism', Working Paper No. 140, Centre for Research on Economic Development and Policy Reform, Stanford University, July.
- Reserve Bank of India, *State Finances, A Study of Budgets*, Various issues.
- Weingast. 1995. 'The Economic Role of Political institutions: Market Preserving Federalism and Economic Development', *Journal of Law Economics and Organisation*, Vol. 11, No. 1, April.

PUBLICATIONS

For information on all publications, please visit the CDS Website: www.cds.edu. The Working Paper Series was initiated in 1971. Working Papers from 279 can be downloaded from the site.

The Working Papers published after April 2007 are listed below:

- W.P. 456 PRAVEENA KODOTH**, *Who Goes ? Failures of Marital Provisioning and Women's Agency among Less Skilled Emigrant Women Workers from Kerala*, March 2014
- W.P. 455 J. DEVIKA**, *Land, Politics, Work and Home-life at Adimalathura: Towards a Local History*. January 2014.
- W.P. 454 J. DEVIKA**, *Land, Politics, Work and Home-Life in a City Slum: Reconstructing History from Oral Narratives*, October 2013.
- W.P. 453 SUNIL MANI**, *Changing Leadership in Computer and Information Services, Emergence of India as the Current World Leader in Computer and Information Services*, September 2013.
- W.P. 452 VINOJ ABRAHAM**, *Missing Labour Force or 'De-feminization' of Labour Force in India ?* May 2013.
- W.P. 451 SILVIA MASIERO**. *Transforming State-citizen Relations in Food Security Schemes: The Computerized Ration Card Management System In Kerala* December 2012
- W.P. 450 K. C. ZACHARIAH, S. IRUDAYA RAJAN**, *Inflexion In Kerala's Gulf Connection Report on Kerala Migration Survey 2011*, September 2012.
- W.P. 449 TAPAS K. SEN** *Recent Developments in Kerala State Finances*, July 2012.
- W.P. 448 SUNIL MANI ANDARUN M**, *Liberalisation of Technical Education in Kerala: Has a Significant Increase in Enrolment Translated into increase in Supply of Engineers?* March 2012.
- W.P. 447 VIJAYAMOHANAN PILLAI N**. *Modeling Optimal Time-Differential Pricing of Electricity Under Uncertainty: Revisiting the Welfare Foundations*, March 2012.

- W.P. 446 D. NARAYANA** *The Pricing Problem of Public Transport in Kerala*, September 2011.
- W.P. 445 PRAVEENA KODOTHAND V.J. VARGHESE** *Emigration of Women Domestic Workers from Kerala: Gender, State Policy and the Politics of Movement*, September 2011.
- W.P. 444 SUNIL MANI** *The Mobile Communications Services Industry in India: Has it led to India Becoming a Manufacturing Hub for Telecommunication Equipments?* April 2011.
- W.P. 443 K. C. ZACHARIAH, S. IRUDAYA RAJAN**, *From Kerala to Kerala Via The Gulf; Emigration Experiences of Return Emigrants*. March 2011.
- W.P. 442 VIJAY KORRA**, *Short Duration Migration in India: An Appraisal from Census 2001*. March 2011.
- W.P. 441 M.PARAMESWARAN**, *Financial Crisis and Kerala Economy*. January 2011.
- W.P. 440 P.L. BEENA**, *Financing Pattern of Indian Corporate Sector under Liberalisation: With Focus on Acquiring Firms Abroad*. January 2011.
- W.P. 439 RAJEEV SHARMA** *Diversification in Rural Livelihood Strategies: A Macro-Level Evidence from Jammu and Kashmir*, December 2010.
- W.P. 438 APARNA NAIR**, *The indifferent many and the hostile few: An Assessment of Smallpox Vaccination in the 'Model Native State' of Travancore 1804-1941*. November 2010.
- W.P. 437 VINOJ ABRAHAM**, *The Effect of Information Technology on Wage Inequality: Evidence from Indian Manufacturing Sector*. September 2010.
- W.P. 436 S. IRUDAYA RAJAN, D. NARAYANA**, *The Financial Crisis in the Gulf and its Impact on South Asian Migrant Workers*. August 2010.
- W.P. 435 ANUP KUMAR BHANDARI**, *Total Factor Productivity Growth and its Decomposition: An Assessment of the Indian Banking Sector in the True Liberalised Era*. August 2010

- W.P. 434 BEENA SARASWATHY**, *Cross-Border Mergers and Acquisitions in India: Extent, Nature and Structure*. July 2010.
- W.P. 433 VIJAY KORRA**, *Nature and Characteristics of Seasonal Labour Migration: A Case Study in Mahabubnagar District of Andhra Pradesh*. July 2010
- W.P. 432 K.C. ZACHARIAH S. IRUDAYA RAJAN**, *Impact of the Global Recession on Migration and Remittances in Kerala: New Evidences from the Return Migration Survey (RMS) 2009*. June 2010.
- W.P. 431 GARGI SANATI**, *Integration of India's Financial Markets on the Domestic and International Fronts: An Empirical Analysis of the Post-Liberalisation Period*, June 2010.
- W.P. 430 SUNIL MANI**, *Has China and India Become more Innovative Since the onset of Reforms in the Two Countries?* May 2010.
- W.P. 429 T. R. DILIP**, *School Educational Attainment in Kerala: Trends And Differentials*. April 2010.
- W.P. 428 SUNIL MANI**, *The Flight from Defence to Civilian Space: Evolution of the Sectoral System of Innovation of India's Aerospace Industry*. April 2010.
- W.P. 427 J. DEVIKA, V. J. VARGHESE**, *To Survive or to Flourish? Minority Rights and Syrian Christian Community Assertions in 20th Century Travancore/Kerala*. April 2010.
- W.P. 426 ANUP KUMAR BHANDARI**, *Global Crisis, Environmental Volatility and Expansion of the Indian Leather Industry*. March 2010.
- W.P. 425 P L. BEENA, HRUSHIKESH MALLICK**, *Exchange Rate and Export Behaviour of Indian Textiles & Clothing Sector: An Enquiry for Major Destination Countries*. March 2010.
- W.P. 424 K. C. ZACHARIAH, S. IRUDAYA RAJAN**, *Migration Monitoring Study, 2008 Emigration and Remittances in the Context of Surge in Oil Prices*. March 2010.

- W.P. 423 VIJAYAMOHANAN PILLAI N**, *Loss of Load Probability of a Power System: Kerala*. February 2010.
- W.P. 422 JAYASEKHAR S, C. NALIN KUMAR**, *Compliance, Competitiveness and Market Access: A Study on Indian Seafood Industry*. February 2010.
- W.P. 421 S. IRUDAYA RAJAN, V.J. VARGHESE, M.S. JAYAKUMAR** *Overseas Recruitment in India: Structures, Practices and Remedies*. December 2009.
- W.P. 420 V.J. VARGHESE**, *Land, Labour and Migrations: Understanding Kerala's Economic Modernity*, December 2009.
- W.P. 419 R. MOHAN, D. SHYJAN** *Tax Devolution and Grant Distribution to States in India Analysis and Roadmap for Alternatives*, December 2009.
- W.P. 418 WILLIAM JOE & U. S. MISHRA** *Household Out-of-Pocket Healthcare Expenditure in India Levels, Patterns and Policy Concerns*, October 2009.
- W.P. 417 NEETHI P** *Globalisation Lived Locally: New Forms of Control, Conflict and Response Among Labour in Kerala, Examined Through a Labour Geography Lens*. October 2009.
- W.P. 416 SUNIL MANI** *High skilled migration from India, An analysis of its economic implications*, September 2009.
- W.P. 415 SUNIL MANI** *Has India Become more Innovative Since 1991? Analysis of the Evidence and Some Disquieting Features*, September 2009.
- W.P. 414 WILLIAM JOE, PRIYAJIT SAMAIYAR, U. S. MISHRA** *Migration and Urban Poverty in India Some Preliminary Observations*, September 2009.
- W.P. 413 K. N. NAIR, T.P. SREEDHARAN, M. ANOOPKUMAR**, *A Study of National Rural Employment Guarantee Programme in Three Grama Panchayats of Kasaragod District*, August 2009
- W.P. 412 B.S. SURAN, D. NARAYANA**, *The Deluge of Debt: Understanding the Financial Needs of Poor Households*. July 2009

- W.P. 411 K. NAVANEETHAM, M. KABIR, C.S. KRISHNAKUMAR** *Morbidity Patterns in Kerala: Levels and Determinants.* April 2009.
- W.P. 410 ARINDAM BANERJEE,** *Peasant Classes, Farm Incomes and Rural Indebtedness: An Analysis of Household Production Data from two States.* March 2009.
- W.P. 409 SUNIL MANI,** *The Growth of Knowledge-intensive Entrepreneurship in India, 1991-2007 Analysis of its Evidence and the Facilitating Factors.* February, 2009
- W.P. 408 M. S. HARILAL,** *Home to Market: Responses, Resurgence and Transformation of Ayurveda from 1830s to 1920.* November 2008
- W.P. 407 HRUSHIKESH MALLICK,** *Do Remittances Impact the Economy ? Some Empirical Evidences from a Developing Economy.* October 2008.
- W.P. 406 K.C.ZACHARIAH, S.IRUDAYA RAJAN,** *Costs of Basic Services in Kerala, 2007, Education, Health, Childbirth and Finance (Loans)* September 2008.
- W.P. 405 SUNIL MANI** *Financing of industrial innovations in India How effective are tax incentives for R&D?* August 2008.
- W.P. 404 VINOJ ABRAHAM** *Employment Growth in Rural India: Distress Driven?* August 2008.
- W.P. 403 HRUSHIKESH MALLICK,** *Government Spending, Trade Openness and Economic Growth in India: A Time Series Analysis.* July 2008.
- W.P. 402 K. PUSHANGADAN, G. MURUGAN,** *Dynamics of Rural Water Supply in Coastal Kerala: A Sustainable Development View,* June 2008
- W.P. 401 K. K. SUBRAHMANIAN, SYAMPRASAD,** *Rising Inequality With High Growth Isn't this Trend Worrisome? Analysis of Kerala Experience,* June 2008

- W.P. 400 T.R. DILIP**, *Role of Private Hospitals in Kerala: An Exploration*, June 2008
- W.P. 399 V. DHANYA**, *Liberalisation of Tropical Commodity Market and Adding-up Problem: A Bound Test Approach*, March 2008
- W.P. 398 P. MOHANAN PILLAI, N. SHANTA**, *ICT and Employment Promotion Among Poor Women: How can we Make it Happen? Some Reflections on Kerala's Experience*. February 2008.
- W.P. 397 K.N. NAIR, VINEETHA MENON**, *Distress Debt and Suicides among Agrarian Households: Findings from three Village Studies in Kerala*. December 2007
- W.P. 396 K.N. NAIR, C.P. VINOD, VINEETHA MENON**, *Agrarian Distress and Livelihood Strategies: A Study in Pulpalli Panchayat, Wayanad District, Kerala* December 2007
- W.P. 395 K.C. ZACHARIAH, S. IRUDAYA RAJAN**, *Migration, Remittances And Employment Short-term Trends and Long-term Implications*. December 2007
- W.P. 394 K.N. NAIR, ANTONY TO PAUL, VINEETHA MENON**, *Livelihood Risks and Coping strategies: A Case Study in the Agrarian Village of Cherumad, Kerala*. November 2007
- W.P. 393 S. IRUDAYA RAJAN, U.S. MISHRA**, *Managing Migration in the Philippines: Lessons for India*. November 2007.
- W.P. 392 K.N. NAIR, R. RAMAKUMAR** *Agrarian Distress and Rural Livelihoods, a Study in Upputhara Panchayat Idukki District, Kerala*. November 2007.
- W.P. 391 PULAPRE BALAKRISHNAN**, *Visible hand: Public policy and economic growth in the Nehru era*. November 2007.
- W.P. 390 SUNIL MANI**, *The Growth Performance of India's Telecommunications Services Industry, 1991-2006 Can it Lead to the Emergence of a Domestic Manufacturing Hub?* September 2007.

- W.P. 389 K. J. JOSEPH, VINOJABRAHAM**, *Information Technology and Productivity: Evidence from India's Manufacturing Sector*. September 2007.
- W.P. 388 HRUSHIKESH MALLICK**, *Does Energy Consumption Fuel Economic Growth In India?* September 2007.
- W.P. 387 D. SHYJAN**, *Public Investment and Agricultural Productivity: A State-wise Analysis of Foodgrains in India*. July 2007.
- W.P. 386 J. DEVIKA**, *'A People United in Development': Developmentalism in Modern Malayalee Identity*. June 2007.
- W.P. 385 M. PARAMESWARAN**, *International Trade, R&D Spillovers and Productivity: Evidence from Indian Manufacturing Industry*. June 2007.
- W.P. 384 K. C. ZACHARIAH, S. IRUDAYA RAJAN** *Economic and Social Dynamics of Migration in Kerala, 1999-2004 Analysis of Panel Data*. May 2007.
- W.P. 383 SAIKAT SINHA ROY** *Demand and Supply Factors in the Determination of India's Disaggregated Manufactured Exports : A Simultaneous Error-Correction Approach*. May 2007.