Jobless Growth-A District-Level Analysis of Tamil Nadu: 2001-05

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Using the district data on industrial production for the organised manufacturing sector (OMS) in Tamil Nadu the paper identifies areas which have experienced jobless growth. Examining the inter-district variations in the performance of OMS units in the state, the paper identifies districts which have fared better both in terms of labour productivity and employment gains, distinguishing in the process the districts which have lagged behind in this regard. The findings of the study support the hypothesis of job displacement expected to prevail in an atmosphere of competitive economic environment. Some data problems requiring policy attention have been identified which, if addressed, contribute to a more effective generation of data at the district level.

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The Study

The phenomenon of jobless growth is identified with high growth in value-added with low growth in employment. It is also associated with the hypothesis of job displacement implying that the net creation of employment is either negligibly small or even negative (i.e. a decline) as job creation in some regions/industries is offset by job losses in others. In this context, the study of sub-national regions at the level of a state and at its further disaggregation in to districts is useful for focused policy attention aimed at achieving balanced regional development. This paper presents the findings of a district level data analysis on the organised manufacturing units in the state of Tamil Nadu (TN). The study is confined to the first quinquennium of the new millennium (2001-05) in view of the availability of data for this period. The results are expected to reveal the impact of reforms initiated in the early years of 1990s having allowed a reasonable gap of time period for adjustment. The job creation during the period in OMS should ideally be compared with the corresponding trends in their unorganised counterpart viz. the unorganised manufacturing sector

(UMS)[1]. This has, however, been presently constrained by the non-availability of data for the UMS for 2005-06 to permit a comparative analysis of the growth therein for the two time points[2].

Data Base & Methodology

The district level data used in the study are drawn from the state's BES (Bureau of Economics & Statistics) which collects them for the Annual Survey of Industries (ASI) of CSO. The data, published for 31 districts, have been reorganised by effecting two mergers to yield a data set of 29 districts[3] for the study. The methodology adopted comprises simple techniques/tools like: deflation, univariate/bi-variate frequency distributions, percentage growth rates, labour productivity ratios and elasticities. The analysis is based on data for four variables viz. number of units, employment, fixed capital and value-added. The two value based variables, fixed capital and value-added, are deflated (to base 1993-94) by using the all India Index for Machinery and Tools and Wholesale Price Index (WPI) respectively so as to enable temporal assessment of data over time. The growth rates[4] have been calculated

1. This is owing to the fact that the forward-backward linkages between the OMS and the UMS would lead to employment expansion in the UMS which also acts as a factor for the employment contraction in the OMS (e.g. ancillarisation). The phenomenon of jobless growth must therefore be viewed in totality, not restricting it only to the OMS, particularly because the share of the organised sector itself in general has been stagnant at around 7 percent in the overall economy in India. Indeed, the employment in the total manufacturing sector (TMS) had increased by 1.7 percent over the period 1995-2001 as compared to (-) 0.8 percent growth during the years 1985-95. In particular, the UMS during 1995-01 had registered an employment growth of 2.3 percent as against a decline of 0.3 percent in the OMS during the period 1995-01 (Prakash 2006; 34).

2. The district level data for UMS for the state of T.N. is presently available only for the year 2000-01. When the data for 2005-06 becomes available, the corresponding increase/growth in employment in UMS can be studied between the two points of time.

3. Two mergers are effected in the database for the study [one Krishnagiri with Dharmapuri and another Ariyalur with Perambalur] to make the dataset correspond with the published UMS district-profile for the State

4. (a) The logarithmic value of the variable is regressed over the time variable taken in chronological order with the coefficient of the time variable yielding the instantaneous growth rate. This is converted into compound growth rate by effecting the antilogarithmic transformation. We may mention in passing that there is an absolute convergence (read identical) of the growth rates obtained by taking either of the two logarithmic transformations viz. to base 10 or base 'e' which is empirically verified for all the cases in the study. This fact is, however, as yet a matter of debate as the observed empirical convergence is not unambiguously supported by theoretical validation. A brief 4-part theoretical explanation, which does not answer the question conclusively but offers explanation on why they could be different, provided by Prof. D. N. Rao is available with the authors. The authors express their gratitude for inputs provided by Prof. U. Sankar, Prof. D. N. Rao and Prof. Arup Mitra in this regard.

(b) There have been a few cases where the values of GVA (i.e. output minus inputs) for some time points were negative. Since the logarithm for negative values are not straightaway defined (i.e. they are defined as complex numbers and not as real numbers) in such cases the growth rates have been calculated either by the point to point method or by leaving out the negative values for the specific time points.

by using the trend method so as to have the advantage of taking into account each of the values in the time series as opposed to the point-to-point method which ignores the intermediate time values. The phenomenon of jobless growth is examined for its two profiles viz. the absolute and the relative gains/losses in employment in which the latter is examined with the 'per unit' values so as to reveal an average picture prevailing in the state[5]. One commonly used method for assessing the changing levels of employment is to consider the change in employment elasticity (with reference to either value-added or capital) over time. The method, however, makes for meaningful interpretation when the growth rates in both the variables under consideration are positive; in other cases (i.e. when either of the two variables or both register negative growth rates) their interpretation is misleading, to avoid which one has to specify the different scenarios and appropriately classify the districts[6] into each. To accom-modate all variants of this situation and help in arriving at a decision on the acceptance or rejection of the jobless growth hypothesis for the State, a classification of employment elasticity is made into five categories viz. (a) employment creating growth (in which both employment and output are positively growing), (b) employment displacing growth (i.e. employment growth is negative but GVA's growth is positive), (c) districts which are stagnating (i.e. both employment growth and GVA growth are negative), (d) employment creating but not with accompanied output growth (i.e. employment growth is positive but output growth is negative) and (e) districts registering not only positive growth in both employment and output but also that the employment elasticity is greater than unity (i.e. employment growth as compared to output growth is higher). The identification of the best performing districts from others is made on the basis of a classification of the districts into 'positive employment growth' registered on the one hand and 'positive labour productivity growth' on the other.

Employment Growth

Table 1 presents the employment growth rate registered by districts. The overall growth for the State is an impres-

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5. The relative profile of jobless growth is assessed to drive home the lack of homogeneity in the industrial performance/spread in the state. An added rationale is that in a period of industrial competition, capital would be relatively more invested in regions which have better infrastructural facilities. While this contributes to some regions developing more than the others, this carries implications on the availability of skill sets in the labour force. Further, the mortality of units or its expansion/contraction owing to demand and market considerations would also impact on variations in employment levels. While one might take the view that employment generated anywhere is good for the state, its implications on enhancing the ability for labour mobility and skill development (the latter vis-à-vis educational facilities in the state/district) carry specific policy implications.

6. See a note on 'making sense of employment elasticities' in Kannan & Raveendra (2009:83). See also Mazumdar & Sarkar (2004:3019), particularly for their observation that there was evidence of 'an end of the experience of jobless growth' during the period of reforms. They base this conclusion on observed employment elasticity in organised manufacturing which had registered a turnaround from - 0.16 in 1980-86 to + 0.33 in 1986-96.

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sive 4 percent per annum over the five year period. As many as 14 out of 29 districts, accounting for 48.3 percent of State, have registered an absolute employment growth of more than the State's average of 4 percent.

Table 1: Performance of Districts by Growth* in Employment: 2001-05

Range of Employment Growth (%)	Districts (actual growth rate within brackets for positive growth registered districts)	No. of Districts	Percent**
Negative	Tiruvannamalai, Namakkal, Tiruchy, Cuddalore, Nagapattinam, Tiruvarur, Thanjavur, Sivagangai, Virudhnagar, Tuticorin, Kanyakumari	11	23.9
0-2	Perambalur/Ariyalur (0.6), Tirunelveli (1.3)	2	2.1
2-5	Chennai (3.4), Kancheepuram (3.2), Vellore (4.8), Dindigul (4.7), Madurai (4.8)	5	27.4
5-10	Tiruvallur (5.3), Salem (5.4), Theni (5.6), Erode (5.8), Villupuram (6.6), Pudukkottai (6.7), Ramnad (8.7), Nilgiris (8.9)	8	23.3
Above 10	Coimbatore (10.3), Dharmpuri (11.3), Karur (15.8)	3	23.3
	Total	**29**	**100.0**
	Average Growth Rate for the State (%)		**3.98**

Notes: * Unless specified otherwise, by growth is meant growth estimated by considering absolute values. This is as opposed to 'relative growth' for which 'per unit values' are considered.
** Percentage in column 4 is the cumulative percentage share of employment in the districts figuring in column 2.

> **As many as 14 out of 29 districts, accounting for 48.3 percent of State, have registered an absolute employment growth of more than the State s average of 4 percent.**

Two more districts have scored more than 3 percent annual employment growth including which the proportion of better performing districts in the state rises to 55.2 percent. Between them, these 16 districts have a total employment share of 74 percent in the State.

While this is the brighter side, as many as 11 districts (accounting for a significant 38 percent of the State but only 24 percent share in employment) who have registered negative growth rate in employment. It thus follows close to two-thirds of the districts in the State (62 percent by including Perambalur/Ariyalur and Tirunelveli which have also registered positive employment growth) have registered positive growth rate in employment. The situation in this respect is, however, less bright when the relative position of employment generated in the

State is considered[7]. While this is not altogether unexpected, as capital which is crucial for units in the OMS has a tendency to gravitate towards areas/districts better endowed with superior infrastructure, its implications for skill development and labour mobility facilitating measures[8] are areas where specific policy initiatives are merited.

Employment & GVA Growth

Growth in employment without growth in GVA amounts to 'output-less growth'. In the present times of globally competitive policies such a growth path may not be desirable. Table 2 presents the performance of districts read in conjunction

> **About 14 districts, accounting for close to half of the total in the State (48.3%), have registered positive growth rate in both employment and GVA.**

7. The State's relative employment growth (i.e. employment growth by considering the per unit values) is low at 0.3 percent. The total no. of districts which have registered higher than this relative average is 8 accounting for a total of 27.6 percent of the State. From this perspective, the sharp decline from 62 percent performance (when considered by the absolute employment generation) to 28 percent in relative terms is noteworthy. It is significant to note that 6 districts [viz. Tirunelveli, 4.3%; Nilgiris, 4.5%; Coimbatore, 5.1%; Vellore, 5.5%, Karur, 8.4% and Theni, 9.7%] have registered employment growth in the range of 4 to 10 percent by this yardstick.

8. The implications can be pointed out by way of state-run working persons hostel facilities, particularly for women, to aid such inter-district movement.

with both these variables. About 14 districts, accounting for close to half of the total in the State (48.3%), have registered positive growth rate in both employment and GVA. The share of GVA from among these 14 districts is a significant 71 percent of the total GVA in the State. Further, as many as 10 of these 14 districts have registered higher than the State's average growth rate in GVA of 5 percent. Evidently, these are the districts which have performed in a manner that is worthy of emulation for best practices. For this, specific studies like identification of the industry groups which have cornered higher shares in employment and GVA are warranted. There is a wide variation in the growth rates registered in GVA by these 10 districts ranging from 5.5 percent to 35.3 percent. In addition, there are equally significant 5 districts, amounting to 17.2 percent of total districts in the State, which have registered impressive growth rate in GVA although with negative growth rate in employment. With these five districts included, the cluster of districts which have performed well with respect to GVA accounts for a significant two-thirds of the districts in the State (65.5%). Particular policy focus on industrial performance, however, needs to centre on 6 districts of the State which have registered negative growth rate both in employment and GVA. More importantly, as many as 13 districts amounting for 45 percent of the total districts in the State have registered higher than the State's average relative growth rate (1.3 percent) in GVA[9].

9. Out of these 13 districts which have registered higher than the relative growth rate in GVA for the state, 11 districts (leaving aside Pudukkottai and Ramnad) are the same as those which have registered higher than the state's average absolute growth rate in employment.

Table 2: Performance of Districts by Growth in Employment and Gross Value-added: 2001-05

Growth in Employment and GVA	Districts (figures within brackets are growth rate in GVA)	No. of Districts	Percent**
Negative Growth in both Employment and GVA	Tiruvannamalai, Tiruchi, Thanjavur, Virudhnagar, Tuticorin, Kanyakumari	6	11.3
Negative Growth i in Employment but Positive Growth in GVA	Sivagangai (6.9), Cuddalore (17.7), Nagapattinam (29.8), Tiruvaraur (31.2), Namakkal (41.3)	5	4.3
Positive Growth in Employment but Negative Growth in GVA	Erode (-5.8), Theni (-6.5), Chennai (-6.6), Dindugul (-10.8)	4	13.5
Positive Growth in both Employment and GVA	Villupuram (0.3), Vellore (0.6), Ramnad (3.2*), Tirunalveli (4.0), Perambalur/Ariyalur (5.5), Salem (5.7), Tiruvallur (7.6), Kancheepuram (7.7), Madurai (9.0), Pudukkottai (15.0), Karur (16.6*), Dharmapuri (16.9), Nilgiris (24.2), Coimbatore (35.3).	14	70.9
	Total	29	100.0
	State's Absolute Growth Rate in GVA		5.0
	State's Relative Growth Rate in GVA		1.3

Note: * marked districts growth rate (GR) are relative GR as their absolute growth rate were abnormally high or low casting doubt on the data. This point is elaborated in the section on 'data problems'.
** Percentage in column 4 refers to cumulative percentage share of GVA in the districts figuring in column 2.

Growth in Employment & Fixed Capital

Unlike in the case of GVA where output-less employment growth was not considered desirable in the present competitive world, districts with positive employment growth but negative growth in capital could be regarded as ideal for a labour surplus economy like ours. Table 3 presents the profile of districts for these two variables considered together for their growth profiles. The three districts of Kancheepuram, Nilgiris and Madurai are

> **Districts with positive employment growth but negative growth in capital could be regarded as ideal for a labour surplus economy like ours.**

notable for registering positive growth rate in employment (to recall the two districts of Kancheepuram and Madurai have registered employment growth in the range of 3 to 5 percent and Nilgiris 8.9 percent growth in employment) with negative growth rate in FC. This is suggestive of a fairly large number of industrial establishments in these three districts to have pursued labour intensive methods of production techniques. Further, a significant number of 15 districts, accounting for 51.7 percent of districts in the State, have registered positive growth rate both in employment and fixed capital. These 15 districts have also shared among themselves a total of 60.5 percent of FC in the State. Together, therefore, as many as 18 districts in the State (or 62 percent of districts in the State) have faired extremely well both in attracting significant investment to the districts (totalling 82.2 percent share in FC) as also in contributing to employment (76.1 percent share of employment in the State among them). The State's average growth in FC is also a high 6.4 percent with even the relative average growth

Table 3: Performance of Districts by Growth Rate (GR) in Employment & Fixed Capital (FC): 2001-05

Growth in in Employment and FC	Districts (figures within brackets are growth rate in FC)	No. of Districts	Percent
Negative Growth in both Employment and FC	Tiruvannamalai, Thanjavur, Kanyakumari	3	1.0
Negative Growth in Employment but Positive Growth in FC	Sivagangai (3.5), Nagapattinam (5.7), Tiruchi (9.0), Namakkal (11.2), Tuticorin (11.6), Tiruvarur (18.4), Virudhunagar (18.8), Cuddalore (24.0)	8	16.8
Positive Growth in Employment but Negative Growth in FC	Madurai (-1.0), Kancheepuram (-5.9), Nilgiris (-7.3)	3	21.7
Positive Growth in both Employment and FC	Vellore (0.9), Chennai (2.1), Perambalur/Ariyalur (2.6), Tirunelveli (4.2), Dindigul (6.3), Villupuram (6.4), Salem (7.3), Pudukkottai (8.3), Coimbatore (9.4), Theni (9.5), Erode (11.7), Tiruvallur (11.9), Ramnad (12.2), Dharmapuri (12.4), Karur (27.2),	15	60.5
	Total	29	100.0
State's Absolute Growth Rate in GVA		6.4	
State's Relative Growth Rate in GVA		2.7	

Note: Percentage in column 4 indicates the cumulative share of FC in the districts figuring in column 2.

rate a significant 2.7 percent. Viewed comprehensively by taking all the three key variables of employment, GVA and FC, therefore, the conclusion that close to three-fifths of the State (i.e. more than 60 percent) have faired well is thus empirically supported. We note, however, that isolating the districts which have commonly performed well with respect to an ideal employment augmenting variable/indicator like labour productivity and employment elasticity, distinguishing thereby the best performing districts from the poor performing ones, is now required. We now turn our attention in this direction.

Employment Elasticity

Table 4 presents the employment elasticity for the districts classified into five groups based on the sign or direction of growth in employment and GVA. 11 districts accounting for 37.9 % of the total districts in the state, in which the employment content of the output growth registered vary from a low of 0.11 to a high of 0.95, are classified for their employment creating growth characteristic. Another 2 districts (viz. Vellore and Villupuram), whose employment elasticity is above unity, are also classifiable to this group.

Table 4: Employment Elasticity w.r.t. GVA for Districts Classified for Employment Creating/ Displacing & Other Characteristics

A. Employment Creating Growth i.e. Both Employment and GVA have Positive Growth Rate Registered

(i)	Perambalur/Ariyalur	(0.11),	(ii)	Karur	(0.22),
(iii)	Coimbatore	(0.29),	(iv)	Tirunelveli	(0.33),
(v)	Nilgiris	(0.37),	(vi)	Kancheepuam	(0.42),
(vii)	Pudukkottai	(0.45),	(viii)	Madurai	(0.53),
(ix)	Dharmapuri	(0.67),	(x)	Tiruvallur	(0.70),
(xi)	Salem	(0.95)			

B. Employment Displacing Growth i.e. GVA has Registered Positive Growth Rate but Employment has Registered Negative Growth Rate

(i)	Dindigul	(- 0.44),	(ii)	Sivagangai	(- 0.36),
(iii)	Cuddalore	(- 0.32),	(iv)	Nagapattinam	(- 0.31),
(v)	Tiruvarur	(- 0.03)			

C. Stagnating Districts i.e. both Employment and GVA have Negative Growth Rate

(i)	Tiruvannamalai	(0.02),	(ii)	Tuticorin	(0.10),
(iii)	Kanyakumari	(0.24),	(iv)	Tiruchy	(0.50),
(v)	Virudhnagar	(1.10),	(vi)	Tanjavur	(2.81)

D. Both Employment and GVA have Positive Growth Rate Registered with Employment Elasticity above Unity and Very High i.e. Employment Growth Rate Much Higher Than GVA Growth Rate

(i)	Vellore	(8.00),	(ii)	Villupuram	(22.0)

E. Employment Growth Rate is Positive but GVA Growth Rate is Negative

(i)	Theni	(-0.86),	(ii)	Ramnad	(- 0.21),
(iii)	Chennai	(- 0.52),	(iv)	Erode	(- 1.00)

Employment Elasticity for the State as a whole During the Period is: 0.80

Note: Figures within brackets are values of employment elasticity.

> **The conclusion that there exists enough empirical evidence to reject the hypothesis of jobless growth for the State in general is supported.**

Combining these two groups the proportion of districts characterised by employment creating growth is 44.8 percent in the state. The two other classifications with negative employment elasticity [viz. (i) employment growth is positive but output growth is negative and (ii) output growth is positive but employment growth is negative in which the latter is characterised by its 'employment displacing' feature] carry positive feature due to which they cannot be considered from an altogether negative perspective; rather, they need to be focused with policy initiatives for improving their infrastructural and educational base which would then give the required fillip for converting their potential into employment creating districts. Thus, although about six districts have evidenced stagnating characteristics, having registered negative growth rate in both employment and GVA, the State as a whole has registered an impressive aggregate employment elasticity of 0.80. On the basis of this indicator, therefore, the conclusion that there exists enough empirical evidence to reject the hypothesis of jobless growth for the State in general is supported.

Employment Growth with Growth in Labour Productivity

The demands of competitive industrial environment require that industrial growth should be facilitated by the creation of right atmosphere needed for its expansion and growth. From this point of view, it is realistic to take a look at those districts which have performed well both in terms of employment growth and labour productivity (LP). Table 5 presents a classification of districts in this regard. About 62.1 percent of the districts (i.e. 18 districts) in the State have registered positive growth rate in labour productivity. These 18 districts have together contributed 75.3 percent of LP share in the state. However, seven out of these 18 districts have registered negative growth rate in employment. Thus, 11 districts out of 29 or about 38 percent of total districts in the State have registered positive growth rate both in employment and LP. They also share a significant 74.2 percent of LP share among themselves. While these 11 districts could be considered among the best performers, in particular, five districts viz. Dharmapuri, Coimbatore, Karur, Pudukkottai and Ramnad are notable for their 'above 5 percent' growth rate registered in both employment and LP. On the other side of this success story, are the four districts of Kanyakumari, Tiruvannamalai, Tiruchy and Tuticorin for having registered negative growth rates in employment and LP.

Data Problems

Wide Year-to-Year Fluctuations: Due to many reasons, year-to-year variations in data collected and published by the government agencies generally prevail. It appears that while they are controlled after due checking for more aggregate level data like national/ states, at district level it perhaps is done less meticulously. One is therefore left with the

Table 5: Performance of Districts in terms of Growth in Employment & Labour Productivity (LP): 2001-05

Range of Labour Productivity Growth (%)	Districts in the Range of Absolute Employment Growth (%)				No of Districts	Percent*
	Negative	0-2	2-5	Above 5		
Negative	Kanyakumari Tiruvannamalai Tiruchy Tuticorin		Chennai Dindigul	Vellore Villupuram Erode Nilgiris Theni	11	24.7
0-2	Virudhnagar				1	1.1
2-5		Tirunelveli	Kanchee -puram	Tiruvallur Salem	4	14.9
Above 5	Namakkal Cuddalore Nagapattinam Tiruvarur Thanjavur Sivagangai	Perambalur/ Ariyalur	Madurai	Dharmapuri Coimbatore Karur Pudukkottai Ramnad	13	59.3
			Total		29	100

Note: The absolute growth rate in LP for the State is 1 percent. Its relative growth rate is - 2.5 percent.
 * Percentage in column 7 is the cumulative percentage share in labour productivity in the districts figuring in columns 2 to 5.

option of either using the data published as it is or make such adjustments as techniques of research methodology may permit sometimes. We point out three such instances of severe data trough for GVA in the database used for the study[10] in which, as mentioned in footnote 4 (b), we have proceeded to skirt around the problem by leaving out the negative values. But why do such data problems arise and what can be done about it is relevant for us to con-

sider here. One factor is the major under-reporting by data furnishing establishments to the official survey like ASI. Another reason, as Sastry (2003) terms it, is due to 'agency bias'[11]. Better training to persons engaged in collecting data in the BES particularly on substituting non-responding units would help in this respect.

Inconsistency Between Sum of Deflated District-wise Total and Directly Deflated Total of State's ASI Total: It is observed that there is wide difference between the sum of deflated values for the

10. Data for Villupuram on GVA, expressed in lakhs of rupees, was 10013, 11077, -29846, 9888 and 13166 for the 5 years during 2001-05. Likewise, for Salem it was -7684, 63749, 86574, 76813 and 93581; and for Tiruvarur it was -368, 307, 390, 573 and -347.

11. Sastry (2003:410) suggests "before pooling state and central samples, it should be ensured that divergence between state and central estimates is

districts and the directly deflated total of State's ASI total. Theoretically, such huge difference is unexplainable. There is no detail furnished by other researchers working on disaggregate level data on such aspects of data behaviour. There is one related information mentioned by an author which is mentioned in the subsequent point below.   It is felt that dissemination of experience on such aspects would be useful in handling such data problems.

Inconsistency Due to Different De-flators Used: One could use different deflators available for deflating a single value based variable like GVA (e.g. WPI, IIP, GDP deflators, etc.). This would yield altogether different results in the estimated growth rates. An acknowledgement of this problem was mentioned by Sidhu (2007:175). Data on deflators, needed for estimating TFP values, are particularly lacking which can be greatly improved by some accommodation in data publishing policies. A brief account on this was provided by Prakash (2006$_a$:45-46). If worked

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11 Contd.

not significant at the district level. In case of wide variations, pooling of the estimates may not be advisable and may worsen the estimates. As a rule of thumb, pooling may be undertaken if difference between the central and state estimates at district level is within 30 percent of pooled estimates. The other necessary conditions for obtaining pooled estimates are: (i) data entry layout for both state and central samples should be identical, or at least compatible; and (ii) estimates should be generated at the district level. If any district is composed of more than one stratum, estimates are to be generated first at stratum level and then at district level by combining the stratum estimates" . Sastry's observations were on the NSS data on monthly per capita expenditure but its relevance for district level data in general remains.

on, it would amount to major improvement in data availability.

Variation in Results Due to Different Grouping of Districts: The present study has merged two districts in two cases reducing the total number of districts for which data was originally published from 31 to 29 for Tamil Nadu. One objective for this particular merger was to make the data set compatible with those of the UMS. Geographical proximity, economic homogeneity of units disturbed due to recent political decision on division of districts in the state, etc. also guided the present merger made for the study. What is important to mention, however, is that depending on the merger, results of estimated growth rates would change remarkably. A situation of rejection of jobless growth hypothesis arrived at on the basis of the results of the present database might change if some other merger scheme of districts is followed! Details on such data related issues, shared by researchers, therefore would amount to important exchange on aspects of data management and their implications. The points outlined in this subsection are made with this auxiliary objective in view.

Conclusion

The analysis presented in the paper rejects the jobless growth hypothesis for Tamil Nadu based on the observed aggregate employment elasticity for the State and the percentage of districts which have registered significant growth profiles in variables like employment and labour productivity. The evidence, however, supports the hypothesis of job displacement widely reported to prevail in situations of extreme

industrial competition in liberalised policy regimes. Districts which have faired poorer and need to be focused with industry specific promotional policies are identified. Implementation of suitable measures for expansion of educational and training facilities, through flexi-community oriented models/approaches (Prakash 2003: 397, 2004: 89, 2006$_b$:1-17) would go a long way in improving the labour market situation in the state.

Acknowledgements

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