

# INEQUAL DEVELOPMENT IN AGRICULTURAL SECTOR OF TAMIL NADU

K Rajalakshmi M.A., M.Phil.,  
Assistant Professor, Department of Economics,  
C T T E College for Women, Chennai 600011

**Abstract:** This paper is determined to study the Development Disparities among the districts of Tamil Nadu. The study focused on agricultural disparities in Tamil Nadu. The study used secondary sources of data such as Village Directory and District, Statistical Hand Book, and Economic Appraisal, State Planning Commission, Performance budget of all departments of Tamil Nadu Government and also computer internet website. To analyse the data, the study used Weightage Index Method and Deprivation Method. The main objectives of the study are to examine the regional growth of food grains in agriculture productivity and to examine the state disparity in agriculture sector. Study concluded that, there are coherent relationship in ranking the agricultural sector by using Weightage Index Method and Deprivation Method

**Keywords:** Development, Agriculture, Disparity, District Domestic Product, Weightage Index Method, Deprivation Method, etc.

## I Introduction

Development is a continuous process. It is based on the basis on some factors: economic, social, psychological, cultural and political. Development refers to improvements in a variety of indicators such as literacy rates, life expectancy, and poverty rates.

Disparity and Development are juxtaposing terms. In literacy, disparities have been considered in terms of economic backwardness across the states or districts in a state. Development of a state is judged keeping in view the part played by disparity side by side with development.

Economic activities are classified into different groups using some significant criterion. These groups are recognized as sectors of economy. There are three sectors in the economy viz., Agriculture, Industry and Service. The present study focused on primary sector of Tamil Nadu. The study compared the food grains productivity in agricultural sector. The study period covered the years from 2000 – 2012. Due to non availability of data, the study excluded Krishnagiri, Ariyalur and Tiruppur District. Since Chennai District comes under urban and is one of the metropolitan district in India, there is no possibility of Agriculture in this District. Taking this fact into consideration the study has excluded Chennai District.

## II Review of Literature:

Review of Literature on the study enables to know the methodology, analytical tools used, interpretation and the area covered. It also helps to recognize the research gaps in the area of study to point out the scope for future research. The indicators chosen and the conclusions arrived at can also be examined. This study has reviewed the following studies by keeping the above in view.

Noorbakhsh (2003) examined regional disparities amongst major states in India and to find out if they are on a convergence or divergence course. The analysis is comprehensive to the evolution of disparities amongst the states with respect to huge set of socio-economic indicators specially Human Development Index, a number of regional composite indices are constructed from the chosen indicators and analysed for their validity.

A.K. Agrawala and P.Hazarika [2002] took up the study on the inter district development disparities among the districts of Assam. The study tried to illustrate the development disparities of the state economy in three different sectors. The study used Equal weightage index method, Ranking method and Method of Principal Component Analysis. The study found that 10 districts out of 23 as relatively developed. The rest 13 districts are categorized as backward. According to Deprivation method three districts placed as moderately developed and the remaining 20 districts as backward. The Principal Component Analysis had classified 6 districts to be moderately developed 6 districts are classified as developing 6 districts are as backward and 5 districts as very backward. In all three methods Dhemaji came out as backward district and Kamrup, N.C.Hills and Jorhat as developed relatively or moderately.

## III Study Area

The present study estimated (DDP) District Domestic Product to compare the variations in development in Tamil Nadu Districts. Domestic Product is a total financial values of goods produced in various economic activities during a particular period which covers all the services also. The present study focused on primary sector of Tamil Nadu.

### III Objectives of the study

In the present study an attempt has been made to measure the development disparities in the districts of Tamil Nadu.

1. To examine the regional growth in food grains productivity agriculture.
2. To examine the regional disparity in agriculture sector.

### IV Data and Method

The study is extensively based on secondary data sources which are collected and through perusal of the various governments' reports such as Village Directory and District Statistical Hand Book and Various Volumes of Economic Appraisal, State Planning Commission, Performance budget of all departments of Tamil Nadu Government. Various publications and computer internet website was put in use for the effort done on the study. The study period was 2001 to 2012 for which published data is available. The data which are not available has not been taken in this study is the limitation of this study.

Description of tools and the formulas used for data analysis is given below:

➤ Equal Weightage index method

Under Weightage Index Method, all the chosen indicators are given equal weights and are converted into its index value. For the entire indicator, the year 2006-07 was considered as base year. Since the data was not published by the statistical department of the government from the year 2009 onwards for the industries, 2003-04 was considered as base year for this case.

➤ Deprivation method

There are three steps to construct Composite Economic Development Index, in the first step, maximum and minimum values of each of the chosen indicator are calculated, to identify the deprivation indicator of a particular district for a particular variable. Its value is deducted from the maximum value of that variable among all the districts

Symbolically,  $I_{ij}$  is the deprivation indicator for the  $i^{\text{th}}$  variable.

$$I_{ij} = \frac{\text{Max } X_{ij} - X_{ij}}{\text{Max } X_{ij} - \text{Min } X_{ij}}$$

In the second step, the average deprivation indicator  $I_{ij}$  is calculated by summing up the deprivation values of the selected indicators for the  $J^{\text{th}}$  district and dividing it by the total number of indicators. Thus,

$$I_j = \sum_{i=1}^n I_{ij}$$

Where 'n' is the number of indicator.

In the final step, the average deprivation indicator  $I_{ij}$  are given equal weights and the ranks were assigned to all the districts.

### V Results and Discussion:

An attempt has made here to measure the regional disparity in production and yield of main crops in the districts of Tamil Nadu, with the help of Weightage Index Method. Major food crops are rice, ragi, bajra, maize, and pulses. Cotton, sugarcane, coconut, tea and coffee as well as a number of horticultural products like bananas and mangoes are cash crops while ground nuts, sesame, sun flower are important oil seeds crops. The total cropped and gross production of principal crops depends on the quantum and spread of rainfall during the north-east monsoon and south-west monsoon periods. Food grains represent a vital source for the food and livelihood security. It accounted for 73 per cent of the total crops in the State. Index of agricultural production is a measure of the performance of agriculture sector. Adoption of new agricultural strategy (green revolution technology) in mid-1960s started with a shift in area from traditional varieties to high-yielding crop varieties. In 1987-88, high-yielding varieties of cereals were grown on 55 per cent of total area under cereals in the country. The results obtained for the disparity in area under cultivation have shown in the table no. 1.

**Table 1 Ranking of Agricultural Productivity in Tamil Nadu Districts by using Weightage Index Method**

S.no.	District	Agriculture
1	Chennai	-
2	Coimbatore	28
3	Cuddalore	23
4	Dharmapuri	3
5	Dindigul	11
6	Erode	17
7	Kancheepuram	12

8	Kanniyakumari	9
9	Karur	5
10	Madurai	18
11	Nagapattinam	27
12	Namakkal	7
13	Nilgiris	6
14	Perambalur	24
15	Pudukkottai	22
16	Ramanathapuram	16
17	Salem	2
18	Sivaganga	1
19	Thanjavur	20
20	Theni	10
21	Thiruvallur	15
22	Thiruvarur	25
23	Thoothukkudi	14
24	Tiruchirappalli	21
25	Tirunelveli	19
26	Tiruvannamalai	13
27	Vellore	4
28	Viluppuram	8
29	Virudhunagar	26

Source: Compiled from secondary data

The table 1 illustrates that in the agricultural sector, the productivity of food grains in Sivagangai district is high, which indicates the increase of output from each unit in the production process followed by Salem, Dharmapuri, Vellore and Karur Districts. Hence these districts can be considered as developed. Whereas in Coimbatore, Nagapattinam, Thiruvarur and in Virudhunagar districts the productivity of food crops is considerably low as these districts have become developed in providing infrastructural facilities to satisfy the people. Hence these districts were assigned 29<sup>th</sup>, 28<sup>th</sup>, 27<sup>th</sup>, 26<sup>th</sup>, and 25<sup>th</sup> ranks and also these districts can be notified as less developed in case of agricultural productivity. District-level data have revealed that poverty, fertilizer-use, irrigation and rainfall cause significant variations in productivity across districts. Chennai is the Capital of Tamil Nadu and it is a cosmopolitan district where there is no agricultural productivity, so Chennai cannot be ranked. The following table depicts the ranking of the agricultural productivity in Tamil Nadu by using Deprivation Method.

Fig no 1 Ranking of Agricultural Productivity in Tamil Nadu Districts by using Weightage Index Method

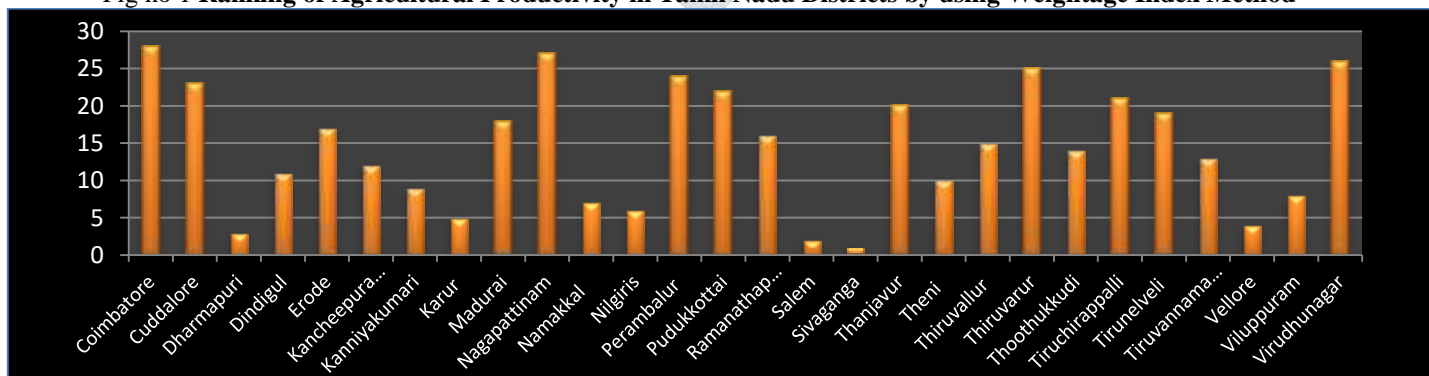


Table no 2 Ranking of Agricultural Productivity in Tamil Nadu Districts by Deprivation Method

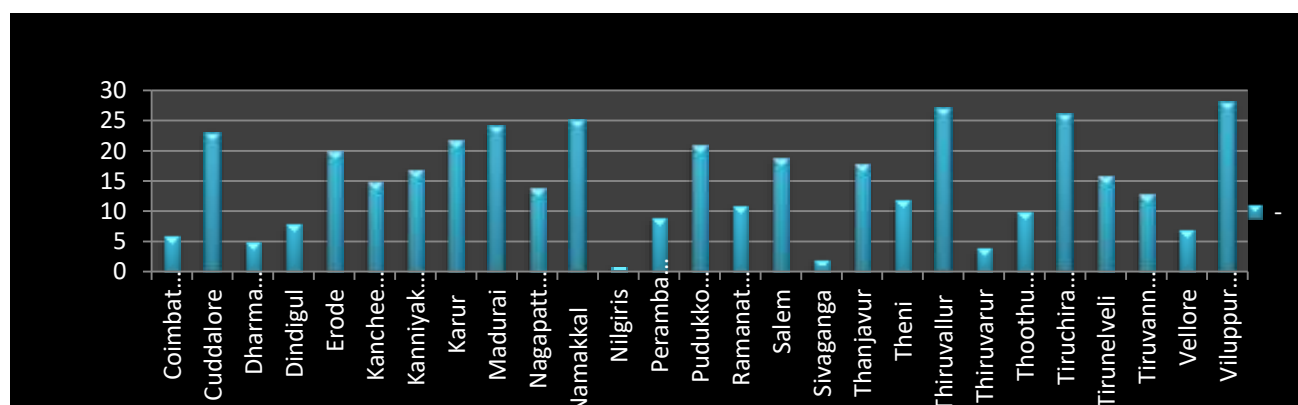
S.no.	District	Agriculture
1	Chennai	-

2	Coimbatore	6
3	Cuddalore	23
4	Dharmapuri	5
5	Dindigul	8
6	Erode	20
7	Kancheepuram	15
8	Kanniyakumari	17
9	Karur	22
10	Madurai	24
11	Nagapattinam	14
12	Namakkal	25
13	Nilgiris	1
14	Perambalur	9
15	Pudukkottai	21
16	Ramanathapuram	11
17	Salem	19
18	Sivaganga	2
19	Thanjavur	18
20	Theni	12
21	Thiruvallur	27
22	Thiruvarur	4
23	Thoothukkudi	10
24	Tiruchirappalli	26
25	Tirunelveli	16
26	Tiruvannamalai	13
27	Vellore	7
28	Viluppuram	28
29	Virudhunagar	3

Source: Compiled from secondary data

The Table 2 shows that in the agricultural productivity of food crops in Nilgiri district is high, and this district is ranked first, which indicates the increase of output from each unit in the production process followed by Sivagangai, Virudhunagar, Thiruvarur and Dharmapuri Districts. Whereas in Viluppuram, Thiruvallur, Tiruchirappalli and in Namakkal districts, the productivity of food crops is considerably low and these districts are ranked as 29<sup>th</sup>, 28<sup>th</sup>, 27<sup>th</sup>, 26<sup>th</sup>, and 25<sup>th</sup> respectively.

Fig no 2 Ranking of Agricultural Productivity in Tamil Nadu Districts by using Deprivation Method



### Comparison between the results of Weighted Index Method and Deprivation Method:

The table 1 demonstrates that in the agricultural sector, the productivity of food crops in Sivagangai district is high, so this district is ranked first, followed by Salem, Dharmapuri, Vellore and Karur Districts. Table 2 inferred that in the agricultural sector, the productivity of food crops in Nilgiris district is high, so this district is ranked first, which indicates the increase of output from each unit in the production process followed by Sivagangai, Virudhunagar, Thiruvallur and Dharmapuri Districts.

It is observed that, there are coherent relationship in ranking the agricultural sector by using Weightage Index Method and Deprivation Method. Both Thanjavur and Kanniyakumari districts were assigned ranks between one and five.

Table 1 also clearly states that Coimbatore, Nagapattinam, Thiruvallur and in Virudhunagar districts the productivity of food crops is considerably low as these districts have become developed in providing infrastructural facilities to satisfy the people, these districts were ranked 29<sup>th</sup>, 28<sup>th</sup>, 27<sup>th</sup>, 26<sup>th</sup> and 25<sup>th</sup> respectively. Whereas in Table 2, Viluppuram, Thiruvallur, Tiruchirappalli and in Namakkal districts, the productivity of food crops is considerably low, so these districts were ranked 29<sup>th</sup>, 28<sup>th</sup>, 27<sup>th</sup>, 26<sup>th</sup>, and 25<sup>th</sup> respectively. There is no constant relationship between these districts according to Weightage Index Method and Deprivation Method.

### VI Suggestion

In order to reduce disparity in the development of Tamil Nadu state, the Government must provide more incentives to the farmers on regular basis instead of giving subsidies to them by selling the raw materials at the concessional price.

### VII Conclusion

The productivity of food grains has shown vast variations across districts within the states. This evidently calls for a regionally differentiated strategy for future growth and development of the agriculture sector in the districts of Tamil Nadu. The analysis has highlighted important features of those districts that have been stuck in low productivity. In general, the districts having very low and low productivity have been characterized by low rainfall and low irrigated area which also results in a lesser amount of fertilizer use.

### References

- Agarwala, A. K., Hazarika, P. Regional disparities in Economic Development in Assam, A District level study, *Indian Journal of Regional Science*, 2002.
- Alois Kutscherauer et al. "Regional Disparities, Disparities in country regional development - concept, theory, identification and assessment", *Regional disparities in regional development of the Czech Republic, - their occurrence, identification and elimination*, Ostrava 2010, Pg 1-120.
- Anneli Kaasa, *Factors Influencing Income Inequality In Transition Economies*, University of Tartu, ISSN 1406-5967, ISBN 9985-4-0326-6, Pg: 1-40, 2003.
- Arjun Atmaram Lakhe, *Growth and Disparities of Agricultural Development in Maharashtra (1961-2007)*, Thesis, Shivaji University, February 2012, Pg: 1-182.
- Barindra Das, *Demographic Disparities in the Districts of Assam, A Composite Index Analysis*, IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, P-ISSN: 2321-5925. Volume 7, Issue 4. Ver. I (Jul. - Aug. 2016), Pg: 07-10 [www.iosrjournals.org](http://www.iosrjournals.org)
- Bhujanga Rao C & D.K. Srivastava, *Inter-state Imbalances in Essential Services: Some Perspectives*, working paper 42/2009, January 2009, Pg 1-37.
- Deeba jahangir, *Regional Disparities In Economic Development In The Post-Reform Period*, Thesis, Aligarh Muslim University, 2011, Pg: 1-196.
- Kurian, N.J, "Widening Regional Disparities in India" Vol. 35, Issue No. 07, 12 Feb, 2000, *Economic Political Weekly*, Pg: 538-550.
- Manish Tiwari & M K Mathur, 'Study on Inter- Regional Economic Disparities in Rajasthan', Shiv Charan Mathur Social Policy Research Institute, Pg: 1-64, Volume 2 September, 2010.
- Monika Chobotova, Zuzana Palova, *Social Disparities in Relation to Sector Specialization*, *International Journal of Humanities Social Sciences and Education (IJHSSE)* Volume 2, Issue 7, July 2015, Pg: 176-182 ISSN 2349-0373 (Print) & ISSN 2349-0381 (Online).
- Nair K.R.G., 'Economic Reforms and Regional Disparities in Economic and Social Development in India', Centre for Policy Research, Dharma Marg, Chanakya Puri, New Delhi, (Report of a Research Project funded by the SER Division of the Planning Commission of the Government of India), Pg:1-61, August 2004.
- Noorbakhsh, Farhad Human Development and Regional Disparities in India- Research Paper presented in the United Nations World Institute For Development Economics. *Research Conference on inequality, poverty and human well-being*, Helsinki, Finland, 30-31, May, 2003.
- Patil B.D, *Regional Disparities in Levels of Agricultural Development in Dhule and Nandurbar Districts, India*, *Research Journal of Agriculture and Forestry Sciences*, ISSN 2320-6063 Vol. 1(5), June 2013, Pg: 9-12.
- Peter H. Lindert & Davis Jeffrey G. Williamson, 'Globalization and Inequality: A Long History', World Bank Annual Bank Conference on Development Economics - Europe, Barcelona (June 25-27, 2001), Pg:1-44, April 2001.

- Raja J Chellaiah & K R Shanmugam “Some Aspects of Inter District Disparities in Tamil Nadu” Working Paper No.1,2001, Pg 1- 15, <https://www.researchgate.net/publication/259378128>.
- Ramesh Chand S S Raju Sanjeev Garg Lal Mani Pandey, Instability and Regional Variation in Indian Agriculture, Policy Paper 26, National Centre for Agricultural Economics and Policy Research, June 2011, Pg:1-157.
- Sudhir Varma, ‘A Study on Inter-Regional Economic Inequalities in Rajasthan’ Research Paper, Social Policy Research Institute, Jaipur, 2004, Pg. 1-133.
- Tawheed Yousuf, Tawseef Yousuf And T.A.Raja, ‘Regional Disparities in Socio-Economic Development – A Statistical Evaluation of Kashmir Valley, J&K’, European Academic Research Vol. I, Issue 10/ January 2014, ISSN 2286-4822 [www.euacademic.org](http://www.euacademic.org), Pg: 3731- 3744.

**Government Publications:**

- Economic Appraisal 2000-2001 to Economic Appraisal 2012-13.
- Statistical Handbook of Tamil nadu.

**Websites**

- [https://en.wikipedia.org/wiki/List\\_of\\_districts\\_in\\_Tamil\\_Nadu](https://en.wikipedia.org/wiki/List_of_districts_in_Tamil_Nadu)

