A QUANTITATIVE REVIEW OF THE RURAL ECONOMY OF TAMIL NADU: 1960-2011

Rasikha Venkat

A project report submitted in partial fulfilment of the requirements for the Degree of Master of Arts in Development Studies

School of Development Studies
Tata Institute of Social Sciences
Mumbai
2013
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DECLARATION

I, Rasikha Venkat, hereby declare that this dissertation entitled ‘A Quantitative Review of the Rural Economy of Tamil Nadu: 1960-2011’ is the outcome of my own study undertaken under the guidance of Dr. R. Ramakumar, Associate Professor, Centre for the Study of Developing Economies, School of Development Studies, Tata Institute of Social Sciences, Mumbai. It has not previously formed the basis for the award of any degree, diploma, or certificate of this Institute or of any other institute or university. I have duly acknowledged all the sources used by me in the preparation of this dissertation.

11th March 2013

Rasikha Venkat
CERTIFICATE

This is to certify that the dissertation entitled ‘Quantitative Review of the Rural Economy of Tamil Nadu: 1960-2011’ is the record of the original work done by Rasikha Venkat under my guidance and supervision. The results of the research presented in this dissertation/thesis have not previously formed the basis for the award of any degree, diploma, or certificate of this Institute or any other institute or university.

11th, March 2013

Dr. R. Ramakumar

Associate Professor

Centre for the Study of Developing Economies,

School of Development Studies
Acknowledgment

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Finally, I’d like to thank those that made the journey at TISS so memorable, you know who you are. An acknowledgment would be inadequate to express the immense gratitude and love I have for you.
Abstract

A Quantitative Review of the Rural Economy of Tamil Nadu: 1960-2011 would look at the structural transformation that the economy has undergone through the years. The study would aim to show the changes that have taken place during the period of study in the sectors of the economy via development indicators and secondary data values. Focus would also be placed on the changing agrarian scenario and the primary sector would be studied; problems and challenges ahead for the sector would be highlighted. The study would provide a glimpse into the entire metamorphosis of the state from 1960 to 2011, bringing out the major changes and policy advancements in the manufacturing sector that impacts the growth and development of the agricultural sector in Tamil Nadu.
# Contents

List of Tables vii

List of Figures viii

Chapter 1 1

Introduction 1

1.1 Introduction of the Land Tenure Systems 2

1.2 Tamil Nadu: 1960-2011 4

1.3 Sources of Data 6

Chapter 2 8

Macro Economy of Tamil Nadu: 1960-2011 8

2.1 Urbanisation in Tamil Nadu 13

2.2 Sectoral Transformation in Tamil Nadu: 1960-2011 17

2.3 Poverty and Inequality in the State 19

Chapter 3 24

Rural Economy of Tamil Nadu: 1960-2011 24

3.1 Tamil Nadu- Ecotype and Farming Conditions 25

3.2 Land Use in Tamil Nadu 25

3.3 Agriculture: 1960-2011 30

3.3.1 District Wise Production of Principal Crops 32

3.3.2 Usage of Farm Implements 38

3.3.3 Fertiliser Usage and Subsidy Provision 40

3.3.4 Irrigation Facilities and Patterns 42

Chapter 4 45

Summary and Conclusions 45

References 51


**List of Tables**

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 2.1 Tamil Nadu Development Indicators</td>
<td>8</td>
</tr>
<tr>
<td>Table 2.2 Growth Rate at 1980-81 Prices; Tamil Nadu (NSDP) and India (GDP)</td>
<td>9</td>
</tr>
<tr>
<td>Table 2.3 Sectoral Contribution of the Secondary Sector</td>
<td>10</td>
</tr>
<tr>
<td>Table 2.4 Principal Industrial Indicators, Tamil Nadu as on 2008-09</td>
<td>11</td>
</tr>
<tr>
<td>Table 2.5 Distribution of Workers by Economic Activities, 2004-05</td>
<td>12</td>
</tr>
<tr>
<td>Table 2.6 Labour Force Participation Rates – Usual Status for Tamil Nadu and all India (in parentheses), 1983 to 2009-10, percent</td>
<td>15</td>
</tr>
<tr>
<td>Table 2.7 Sectoral Composition of GSDP, Tamil Nadu, Select Years, Shares in Percent</td>
<td>17</td>
</tr>
<tr>
<td>Table 3.1 Average Size of Land Holdings in Tamil Nadu (ha)</td>
<td>27</td>
</tr>
<tr>
<td>Table 3.2 Area Coverage and Production Figures for Tamil Nadu, 2008-09</td>
<td>31</td>
</tr>
<tr>
<td>Table 3.3 Annual Compound Growth Rate (ACGR) for Crops, 1960-61 to 1995-96, Tamil Nadu</td>
<td>32</td>
</tr>
<tr>
<td>Table 3.4 Percentage of Gross Cropped Area under Major Crops, 1960-61 to 1973-74, Tamil Nadu</td>
<td>35</td>
</tr>
<tr>
<td>Table 3.5 Production (‘000 tonnes) and Productivity (in kg per hectare) of major crops, 1960-61 to 1975-76, Tamil Nadu</td>
<td>36</td>
</tr>
<tr>
<td>Table 3.6 Amount of Subsidy Paid to Fertiliser Producing Units in Tamil Nadu (1997-2000)</td>
<td>41</td>
</tr>
</tbody>
</table>
List of Figures

Figure 2.1 Secondary Sector Performance 1981-2011, (2004-05 Prices) 11

Figure 2.2 Workers and Non-Workers in Tamil Nadu (in numbers), 1961-2001 14

Figure 2.3 Per Capita Income Distribution disaggregated as Top 5 and Bottom 5 Districts, Tamil Nadu (2003) 20

Figure 3.1 Use of Agricultural Implements in Tamil Nadu, 1961-2004 39

Figure 3.2 Irrigation Systems in Tamil Nadu, 1989-2008 42

Figure 4.1 Secondary and Tertiary Sector Performance as a Percentage of the NSDP, Tamil Nadu (1960-61 to 2005-06) 46
Chapter 1

Introduction

Any study that explores the rural economy will begin with an explanation of the reasons and the objectives to do so. This chapter will provide a brief introduction to the study explaining in necessary detail the contents and the projected aim of the study. A look into the rural economy on a quantitative basis will require data. The study focuses on the data obtained, the methods of obtaining such data and proceeding chapters that will delineate the study and its course. But before further details on the forthcoming contents, a brief introduction to the colonial structure that existed in Tamil Nadu or the erstwhile Madras Presidency would be necessary to understand the progression of the state since Independence.

Interesting to note is that land in pre-colonial India was not seen as a single entity; it was taken in relation to certain other privileges enjoyed by the communities, such as the rights to exert local authority, to receive temple honours, to use certain emblems, etc. The right to ‘enjoy’ land was a part of the rights that were bestowed upon by a king or some superior authority. The pre-colonial structure of a ‘free’ land market didn’t allow for purchase of land from outside a certain community. The understanding of pre-colonial landholding structures would have to be studied keeping the relational and caste equations in mind. (Dirks, 1986; p.311)

Dirks in his study on the land holding patterns in Tamil Nadu, also delineated an important term that was used to denote the proprietary rights over land, namely the ‘ksatra’. He uses Rober Lingat’s quote on the King’s mastery over land:

“…Ksatra is power of a territorial character, exercised within a given territory and stopping at the frontier of the realm. ... Of the same nature as property, it implies a direct power over the soil. That is why the king is also called svamin, a word which can be applied equally to a proprietor as to a husband or a chief, and which denotes an immediate power over a thing or over a person…” (Robert Lingat in Dirks, 1981; p. 312)

Direct and absolute rights over land and property were bestowed upon the ksatra, who was praised to be a demi-god who has infallible powers of ownership towards land, property and sometimes even people. Further,

“…Gifts of rights to land, titles, emblems, and honors by kings to their subjects became in cultural terms the dynamic medium for the constitution of political relations.’ These gifts linked individuals, and also corporations, symbolically, morally, and politically with the sovereignty of the king…” (Dirks, 1986; p. 314)

These subjects would be the nattanmaikararas or the local figure head of a panchayat or a tehsil who would be granted gifts, emblems and honours by the King as a symbol of their allegiance to the ruling classes. Such grants were made to a select few the King earmarked as allies. When there would be
insufficient cultivable land to be given away as ‘inam’\(^1\), the non-registered and the garden-lands would be given away levying greater burden on the cultivators and the owners of land.

### 1.1 Introduction of the Land tenure Systems

The introduction of the Permanent Settlement into the Madras Presidency was against a backdrop of warfare with the British; sole motive to extract greater revenues and wage war against the palaiyakarars or the little Kings resulted in victory for the British after years of battle. However, it must be noted that despite the introduction of the Permanent Settlement, there still remained pockets in Madras where the kings continued to rule with power and authority (Dirks, 1986; p. 313).

The Permanent Settlement in Madras was however not as favoured or welcomed as was the far more original and successful Ryotwari system that the British had earlier established in the Presidency. A direct association and settlement with the cultivators, removed any middlemen as was the case in the Bengal settlements. The need for a ‘zamindar’ was not favoured upon by the southern advocates of the ryotwari systems. Subramanyam Reddy in his study on the Ryotwari system explains:

> “…The ryotwari settlement depended on a regular survey ascertaining the real extent of land cultivated, its description, including the tenure by which it was held and kinds of produce it yielded, the quantity of yield, extent of uncultivated or waste land, and the share of the producer and the Government. The object of the ryotwari settlement was to fix a defined tax in money on each field, whether wet or dry, instead of on the crop, and the assessment on the lands was determined by the average payments, whether in money or in grain, in the last ten years…” (Reddy, 1988; p. 36)

The Ryotwari system established in the erstwhile presidency of Madras, with the notion to extract as much surplus from land resulted in settlements made directly with the cultivators. Land tenure systems revamped the previously existing modes of exaction and instituted highly unequal modes of rent and tax exaction from the ryots.\(^2\) While the unregistered or the ‘illicit’ lands were earlier exempted from tax payments, the newly instituted Ryotwari survey (introduced by Collector Cockburn in Fasli 1213)\(^3\) ensured that the ryot, deprived of the means of production from his registered lands would be forced to pay high rents on his unregistered lands as well.

This Ryotwari system that was introduced sought the following:

> “…(1) to prevent fraud in receiving shares of the produce; (2) to discover productive land not registered by karnams; (3) to promote 'prosperity of revenue'; (4) to protect the cultivators from 'undefined or inmoderate exaction'; (5) to ascertain the 'truer' produce and profits enjoyed by renters; (6) to substitute money rents for payments in grain; (7) to fix the rent on equitable principles and in a permanent manner; (8) to limit the rent by patta or written engagements; (9) to 'emancipate the lower

\(^1\) Inam refers to the tax free land that was tax-free. Between 60-80 percent of cultivable lands in Tamil Nadu during the eighteenth century were given away as inam lands.


\(^3\) Fasli 1213 +590 would account to the Christian era.
classes' of ryots; (10) to secure the rights 'to stimulate industry'; (11) to 'reward the labour of the 'ryot' or to secure to the 'inferior ryots' the 'profits' (or 'benefit') or the 'fruits' of their 'labour'; and (12) to fetch a 'stable revenue to the Government or to secure the revenue of Government from defalcation…” (Reddy, 1988; p. 36)

This entailed various reforms that would put the land situation of the state firmly in the hands of the colonial powers and would extract maximum revenue from the ryot. In fact, point no. 4 in the quote above shows how Reddy has defined the fallacies in the implementation of the system. One of the agendas of the Ryotwari system was to protect the cultivators from ‘undefined or immoderate exaction’; the British rulers defined the Kings and the territorial landlords as ‘undefined or immoderate exaction’ while they could exact as much revenue from the ryot themselves. This system thus proves that while one from of exploitation, namely the little Kings or the usurious landlord was replaced by the British, it also gave way for another and more extreme form of exploitation by way of the Ryotwari system.

In fact, previously unregistered and non-cultivable lands were also brought under the purview of the Ryotwari system, where:

“…unregistered lands, that had been secretly cultivated and exempted from tax, were newly registered and newly assessed and the ryot, who was thus deprived of the means he formerly possessed for paying a high rent on his registered lands, was now called upon by the Government to pay the same high rent on his unregistered fields also…” (Reddy, 1988; p. 38)

Previously unheard of levels of rent and revenue were exacted under this system and in money form. This period also saw great fluctuations in the prices of paddy and the ryot, already under pressure from his revenue exaction would be forced to sell his paddy at lowered prices. Further, in certain parts like the Chittoor pollams, the assessment was made on a yearly basis and not as an average of several years. Adding to this usurious exaction was also the rent that was levied on the type of soil and not on the kind of produce, be it cultivable land or the garden-lands (Reddy, 1988; p. 39).

These exactions, sometimes increased by augmentations to his land reduced the ryot to produce under force and compulsion. What little remained of the ryot produce would be insufficient to meet his needs, and production under such circumstances would be futile. However, due to the persistence of the British to continue revenue exaction, the ryot had to produce his crop, mostly paddy and suffer the consequences of rent exaction. This situation continued until the ‘poligars’ decided to revolt against the unfair practices followed by the British. While the pre-colonial governments used to tax the lands and even augment the assessments, the British era further imposed several strict conditions on land and ensured that the poligars and other ryots didn’t benefit from their production.

The usurious rent exaction and the unfair inclusion of ‘kavali’ lands under the ryotwari system was subject to several revolts by the ‘poligars’ whose lands were being taxed. The lands belonging to the communities, the temple lands, mirasi and inam lands, etc. were also brought under the Ryotwari
system; the Chittoor poligars were instrumental in revolting against the unfair imposition of rents on their resumed and waste lands and villages and were supported by the other communities who were deprived of their privileges. Under such circumstances and more instances of revolt by the local communities emerge the Independence struggles to overthrow the ruling regime and establish a functioning government headed by the locals and eradication of the land tenure systems that were existent.

1.2 Tamil Nadu: 1960-2011

After Independence and effective state formation in 1957-59, Tamil Nadu was poised to develop into one of the most successful states in the country. Under the leadership of Annadurai, the state implemented several welfare schemes that saw the abolition of the Ryotwari system, the introduction of Tenure Acts and the distribution of land by way of the ‘Thanjavur’ peasant movements in the state. From the decade starting the 1960s, the state was set to achieve a growth target of 4.0-5.0 percent per annum, driving away from the ‘Hindu’ growth rate that the country was clasped in. At that time, the agricultural sector of the economy was its most prominent and successful sector. Paddy was the most cultivated crop, accounting for more than 20,000 hectares of land spread over four districts, namely Ramanathapuram, Thanjavur, Thiruvarur and Villupuram. It should be noted that during the period 1960-61, Tamil Nadu only comprised of 12 districts and the cultivation of paddy in 1/3rd of those districts spoke of its production capabilities and land usage in the state.

Within the first decade, i.e., 1960-1970 Tamil Nadu experienced the ‘Green Revolution’. The introduction of the High-Yielding Variety (HYV) seeds and the subsequent subsidisation of the seeds in the state were a result of the 1966 implementation (Government of Tamil Nadu, Policy Document on Agriculture, 2011). Several authors (Swaminathan, M., Vaidyanathan, A., Kosalram, S.A., etc.) have compiled evidence on the success of the Green Revolution in the state. While the magnitude of the success can be varied according to the indicators taken into account, the fact remains that the economy did experience a boom during the 1966-69 period and it had its repercussions on the economy. The ultimate stagnation and non-revival of the Green Revolution reforms have also been traced by Hazell and Ramaswamy, Hariss-White and Janakarajan and Swaminathan, M., in their studies. The paper will look at the Green Revolution implementation and its aftermath in some detail in Chapter 3 that deals with the Rural Economy: 1960-2011.

---

4 The poligars formed a distinguished community who enjoyed vast access to land. They owned the kavali and the inam lands, while the kattubadi inam lands were managed by their kattubadi peons. Relatives of the poligars also had access to land. While formulating the Ryotwari system, the peons were excluded since the British availed their services for administrative purposes, thereby over-estimating the taxation for the poligars, leading to revolt.
Further, the production, cropping pattern and the allocation of the lands in the hands of the small, medium and large farmers were put to test in the state. With increasing concentration of lands in the hands of a few well established upper castes and classes, the cultivation and revenue from such lands were narrowed to only a certain section of the population. In fact, Athreya et al., in their book, *Barriers Broken: Production Relations in Agriculture* talk of the caste based distribution of land in certain villages of Tamil Nadu. The wet and dry villages were classified by them and they showed how the land was distributed according to the castes, categorised as Brahmins, Pallans, Vellalans, Muthuraja, etc. The land and ecotype thus play an important role in determining the ownership and the caste category the owner belongs to. More details on the same would be dealt with in Chapter 3.

With the IIInd Five Year Plan, the focus of the country shifted to industrialisation. Industrialisation in Tamil Nadu has grown manifold in the decades of the study. Between 1970 and 2010, the state saw a 3-4 percent growth in the incomes from the secondary sector. (Government of Tamil Nadu, Policy Note on Industries, 2012) In fact, the growth in incomes is not the only measure of the rapid development in the sector. The ultimate shift of focus in government policies, subsidy allocations and employment indicators show a shifting trend towards industrialisation in the state. By industrialisation, we don’t mean the narrow definition that pertains to the establishment of more factories and labour absorption in the same. The secondary sector growth, with emphasis on manufacturing and the tertiary sector development in the decades starting the eighties have been the highlights in the transformation of the economy. In fact, incomes from the tertiary sector contributed nearly 30.0 percent to the total NSDP as of 2009-10, while in the sixties, the contribution accounted for approximately 20.0 percent. However, it is the remarkable growth in the manufacturing sector that has to be considered.

Growth in the industries should necessarily be followed by absorption of the labour force into the secondary sector. The employability, the skill requirements and the levels of unemployment in the state shall also be brought in Chapter 2: Macro Economy of Tamil Nadu: 1960-2011, apart from the changes in the secondary and tertiary sectors. This chapter will also look at the patterns of urbanisation induced by rural-urban migration (Rukmani, R.1994, Kurien and James, 1975) and the reasons for the same. In respect of the aforementioned, several development indicators such as population growth, literacy and sex ratio would also be mentioned as guiding factors to further explain the phenomenon of structural transformation and migration. Tamil Nadu’s changing urban scenario, the inability of the agricultural sector to absorb the growing rural labour force and the ultimate transformation of the economy by way of rural-urban linkages would form the crux of Chapter 2.

The contents of Chapter 3 were previously touched upon earlier. However, it is Chapter 3 that forms the crucial part of the study, entailing the rural transformation of the economy between 1960 and
Kurien, C.T and Athreya et al., have laid the basis for the same in their illuminating works on *The Structural Transformation of the Rural Economy of Tamil Nadu* and *Barriers Broken: Production Relations in Agriculture*. These books served as guidelines to base the study on. The period of study was an amalgamation of Kurien (1980) and Athreya et al., (2008) who had studied the economy in its rural interface until the eighties. An extension to their studies would be attempted; however, the limitation of this study would have to be pointed out. While the quoted studies utilised primary data sources, this study would be based on secondary data sources entirely. Moreover, this chapter will also deal with how the transition to the secondary sector has impacted the primary sector, the changes in the process of agricultural growth.

One interesting aspect of this entire study would be to show the transition of the state from its stages post-Independence. The transition from its pre-modern or traditional means of farming, the usage of increased mechanised inputs and the effect of such implementation on the farm economy will be studied. Further, Tamil Nadu as a whole has undergone a remarkable shift from its primary sector to its secondary sector, inviting several investments in the secondary sector and slowly decreasing subsidies accorded to the primary sector. The reasons for the same shall be studied in the third chapter and the final conclusions of the study shall be detailed in the fourth. However, before an attempt to do the same, the sources of data would have to be established.

### 1.3 Sources of Data

The study will purely be based on secondary data obtained from several sources, namely The Department of Economics and Statistics that publishes the Season and Crop Reports of Tamil Nadu, the Tamil Nadu Economic Appraisal: various years. These were the main sources of data for the agricultural component of the study. Further details regarding agricultural landholdings, population growth, etc. were compiled from Census data through the years and also the Quinquennial Livestock Census.

Since the study focuses on the rural transformation of the Tamil Nadu economy from 1960-2011, it was only valid that the structural transformation of the economy through the years also be studied, apart from an in depth analysis of the primary sector. For that purpose, data pertaining to the NSDP, PCI and the Sectoral transformation were collated via the Tamil Nadu Economic Appraisal and [www.tamilnadustat.com](http://www.tamilnadustat.com). Data was also obtained from the Indian Economy Database (Chandokh, 1990); years of structural transformation through income changes in the primary, secondary and tertiary sectors was obtained from the Database. Industrial policies pertaining to the state were adapted from the Policy Note on Industries released by the Government of Tamil Nadu. Moreover, development indicators pertaining to overall growth of the economy were necessary to present a complete picture of the transformation of the economy. Migration, population growth, literacy and
growth in income would be dealt with in Chapter 2 and data for the same were sourced from Census (1961, 1971, 1981, 1991 and 2001) data and Tamil Nadu Development Reports, various years.

As regards the primary sector, apart from the production and productivity of crops which were adapted from the Season and Crop Reports and certain portions from the Policy Notes on Agriculture, the data pertaining to the subsidies and the crop diversification (if any) were taken from the Tamil Nadu Agricultural University and its publications.

Limitations arising out of data errors, coding errors, inflated figures and missed years would be accounted for. The study wishes to show the economy in its existing structure based on data collected via secondary sources; errors pertaining to calculations would be present and therefore, distortions to any situation should be taken as a limitation arising out of reliance on secondary data. While primary data surveys would have provided a more realistic understanding of the situation, it would have also been redundant in the light of several studies already published about the same in Tamil Nadu. Dating as far back as 1920s when the Slater villages were studied and collated, re-surveys and further studies have been attempted in Tamil Nadu. The author aimed to study the entire economy and not any one particular aspect; emphasis remains on the rural transformation of the economy (if any).
Chapter 2

Macro-Economy of Tamil Nadu- 1960-2011

Any analysis of an economy will have to encompass all macro-economic indicators. This chapter will take a look at the existing macro-economy of Tamil Nadu and the changes it has undergone with respect to its primary, secondary and tertiary sectors. The structural transformation of the economy will be studied through the indicators of State Domestic Product (SDP), Per Capita Income (PCI) and the resultant effects on the sectors of the economy.

An overview of the Tamil Nadu economy can be seen from Table 2.1 presented below:

**Table 2.1: Tamil Nadu Development Indicators**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Census Year</th>
<th>Population (In Millions)</th>
<th>Literacy Rate %</th>
<th>Proportion of SC&amp;ST</th>
<th>Rate of Urbanisation</th>
<th>Sex Ratio Females per 1000 males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TN</td>
<td>India</td>
<td>TN</td>
<td>India</td>
<td>TN</td>
</tr>
<tr>
<td>1</td>
<td>1961</td>
<td>33.69</td>
<td>439.2</td>
<td>31.4</td>
<td>28.3</td>
<td>18.8</td>
</tr>
<tr>
<td>2</td>
<td>1971</td>
<td>41.2</td>
<td>548.2</td>
<td>39.5</td>
<td>34.5</td>
<td>18.5</td>
</tr>
<tr>
<td>3</td>
<td>1981</td>
<td>48.41</td>
<td>683.3</td>
<td>46.8</td>
<td>43.6</td>
<td>19.4</td>
</tr>
<tr>
<td>4</td>
<td>1991</td>
<td>55.86</td>
<td>846.3</td>
<td>62.7</td>
<td>52.2</td>
<td>20.2</td>
</tr>
<tr>
<td>5</td>
<td>2001</td>
<td>62.41</td>
<td>1027</td>
<td>73.5</td>
<td>65.4</td>
<td>20.0</td>
</tr>
</tbody>
</table>


A close look at the table shows that Tamil Nadu has done consistently well in the human development indicators of literacy and sex ratio. The literacy levels in the state, of both male and female are one of the highest amongst other states in India and Tamil Nadu has also shown favourable and better sex ratios through the years starting 1960, performing better than the national average always. The rate of urbanisation and the level of population growth can be taken causally; the declining rate of growth of population when compared to the rate of population growth at the national level can be a reason for the decelerated growth in the urbanisation process since 1980. Nevertheless, the state is one of the most urbanised next only to Maharashtra and Gujarat; the details of which shall be explored further into the chapter.

An important component for the development of the economy is the State Domestic Product and Tamil Nadu has fared consistently well in Net State Domestic Product (NSDP) indicators, with the NSDP showing a steady increase over the years, starting 1960 onwards. The decade after 1960 definitely showed better improvement than the preceding years; however growth considerably slowed down starting the decade of the 1980s. The per capita income of the state has been consistently
increasing since 1960, even if the performance of the state vis-à-vis GSDP has been poor when compared to the other states. Tamil Nadu showed increased levels of per capita income during 1980-90 since the population growth was considerably slower than other states.

**Table 2.2: Growth Rate at 1980-81 Prices; Tamil Nadu (NSDP) and India (GDP)**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Plan Period</th>
<th>Tamil Nadu (% per year)</th>
<th>India (% per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1st Plan (1951-56)</td>
<td>4.45</td>
<td>3.6</td>
</tr>
<tr>
<td>2</td>
<td>2nd Plan (1956-61)</td>
<td>2.90</td>
<td>4.0</td>
</tr>
<tr>
<td>3</td>
<td>3rd Plan (1961-66)</td>
<td>1.58</td>
<td>2.2</td>
</tr>
<tr>
<td>4</td>
<td>4th Plan (1969-74)</td>
<td>3.40</td>
<td>3.3</td>
</tr>
<tr>
<td>5</td>
<td>5th Plan (1974-79)</td>
<td>7.00</td>
<td>5.2</td>
</tr>
<tr>
<td>6</td>
<td>6th Plan (1980-85)</td>
<td>6.01</td>
<td>5.2</td>
</tr>
<tr>
<td>7</td>
<td>7th Plan (1985-90)</td>
<td>4.94</td>
<td>5.8</td>
</tr>
<tr>
<td>8</td>
<td>8th Plan (1992-97)</td>
<td>5.97</td>
<td>6.8</td>
</tr>
<tr>
<td>9</td>
<td>9th Plan (1997-2002)</td>
<td>5.4</td>
<td>5.34</td>
</tr>
<tr>
<td>10</td>
<td>*10th Plan (2002-2007)</td>
<td>7.59</td>
<td>8.00</td>
</tr>
<tr>
<td>11</td>
<td>*11th Plan (2007-2012)</td>
<td>8.05</td>
<td>8.15</td>
</tr>
</tbody>
</table>

*current prices; Source: Tamilnadu Human Development Report, Government of Tamilnadu

The NSDP indicators for the state show a steady increase up until the 1960s; with the beginning of the Third Plan period, there was a decline in the NSDP but it soon reached tremendous levels in the Fourth Plan period, exceeding the national GDP level. However, starting 1980, the NSDP has increased at a very slow rate, reasons for which can be attributed to declining rates of growth in the agricultural sector.

If we look at the manufacturing sector alone, the returns from the sector have been continuously increasing, with a phenomenal increase in contribution and production between the IVth and the Vth Five Year Plans. The contribution from the manufacturing sector to the NSDP during 1974-75 was Rs. 84,500 lakh, an increase of roughly 20,000 lakh rupees from the previous year. This could be attributed to the emphasis on industrialisation that was evinced in the initial plan periods.

Manufacturing sector in Tamil Nadu comprises of several sub-sectors, of which textiles, wearing apparels, leather, chemicals, non-metallic minerals, automobile, transport equipments, wood products, basic metals, software and IT hardware are the most demanded final goods for local consumption and for export purposes. Tamil Nadu specialises in the export of fabric and cotton garments with Tiruppur
being famous for its cotton textile hub, enabling a shift to non-agricultural occupations among the households (Government of Tamil Nadu, 2008).

The latest estimate of the Tamil Nadu government’s Policy Note shows the share of the manufacturing industries to the secondary sector to be around 19.5 percent. Further, Tamil Nadu’s share to the national production by way of the manufacturing and services sector can be disaggregated as follows:

**Table 2.3: Sectoral Contribution of the Secondary Sector**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobiles and Components</td>
<td>30-35</td>
</tr>
<tr>
<td>Textiles</td>
<td>20-25</td>
</tr>
<tr>
<td>Leather Products</td>
<td>35-40</td>
</tr>
<tr>
<td>Electronic Hardware</td>
<td>20-25</td>
</tr>
<tr>
<td>Software and IT Enabled Services</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: Tamil Nadu Government (2012-13)

A panel study conducted over 25 years by V. Athreya, Djurfeldt, Lindberg and et al., in six villages around the Karur and Tiruchirapalli districts shows that non-farm income has increased from 34 percent in 1980 to around 64 percent in 2008. Secondary and tertiary sectors play a major role in determining the incomes, with agrarian households having at least one member engaged in non-farm activities (Athreya, Djurfeldt, Lindberg, et al., 2008; p.113). A look at the secondary sector performance can be gathered from Figure 2.1 depicted below.

Given that the 2004-2005 prices are the most recent and adjusted for inflation, we can see how the contribution of the secondary sector has changed from the 1980s and has assumed a steady growth trajectory in the nineties and 2000s. Given the industrial stagnation in India during the early 1980s, the overall production of the secondary sector barring the manufacturing sector was lower than the preceding years. The overall production figures for the annual plan year 1979-80 from the secondary sector was close to 26,000 lakh rupees while that for 1980-81 dropped close to 20,000 lakh rupees. The difference in the two years can only be indicative of the lowered production nation-wise and can also be attributed to the process of modernisation that was instilled in the industrial sector starting the late 1980s.

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5 Agrarian households refer to those households that receive some portion of their income (positive) from cultivation or agricultural wage labour or other income from agriculture (Athreya, Djurfeldt, Lindberg, et al, 2008; p.120)

6 2004-05:100 taken as base year, the figured from the previous decades have been converted to 2004-05 prices to adjust for inflation.
Figure 2.1: Secondary Sector Performance 1981-2011, (2004-05 prices)

Source: Indian Economy Database (Various years)

If we were to take only the contribution of the manufacturing sector to the Gross State Domestic Product (GSDP), we can see a slight deceleration in the growth patterns from this sector. While the production figures have been steadily increasing, there has been a declining rate of growth in the mid-2000s. According to a policy note on industries, “the share of manufacturing sector in the overall GSDP is hovering around 20 per cent from 1999-2000 onwards as against 27 per cent to be achieved during 2011.” (The Industrial Policy 2006-07, Tamil Nadu)

Tamil Nadu stands first in the number of factories established as well as in the total persons engaged in industries. Some of the other indicators can be seen from Table 2.4:

**Table 2.4: Principal Industrial Indicators, Tamil Nadu as on 2008-09**

<table>
<thead>
<tr>
<th>State</th>
<th>Share in (%)</th>
<th>Number of Factories</th>
<th>Fixed Capital</th>
<th>Total Persons Engaged</th>
<th>Gross Value of Output</th>
<th>Net Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamil Nadu</td>
<td>15.17</td>
<td>9.94</td>
<td>14.88</td>
<td>9.96</td>
<td>23.84</td>
<td>8.97</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>13.35</td>
<td>16.80</td>
<td>13.66</td>
<td>19.58</td>
<td>15.35</td>
<td>6.70</td>
</tr>
<tr>
<td>Gujarat</td>
<td>10.03</td>
<td>19.70</td>
<td>9.74</td>
<td>16.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karnataka</td>
<td>5.59</td>
<td>7.20</td>
<td>7.04</td>
<td>6.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>11.27</td>
<td>6.20</td>
<td>7.11</td>
<td>6.18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Computed by Department of Economic Analysis and Research (DEAR)
While figures show a robust picture of the industrial growth in Tamil Nadu, post-liberalisation indicators have shown a slowing down of growth as opposed to the inflow of investments and fixed capital increases envisaged by policy makers in the country. Structural changes in the economy having taken place, there was still a lack of employment opportunities in the industries as employment figures decreased (as a growth percentage) post-liberalisation. Between 1977-78 and 1990-91 the employment grew at 11.16 percent compounded annually and the rate lowered to 10.07 percent between 1991-92 and 2005-06. The situation is similar in the case of fixed capital inflows as well, a slowing down by 1 percent instead of the intended increase by way of incoming foreign investments and de-regulations anticipated by the liberalisation regulations (Government of Tamil Nadu, 2008).

**Table 2.5: Distribution of workers by economic activities, 2004-05**

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Tamil Nadu</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, etc</td>
<td>No. of workers</td>
<td>%</td>
</tr>
<tr>
<td>(in thousands)</td>
<td>12,668</td>
<td>41.19</td>
</tr>
<tr>
<td>Mining &amp; Quarrying</td>
<td>100</td>
<td>0.33</td>
</tr>
<tr>
<td>Primary Sector</td>
<td>-</td>
<td>41.52</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>6,488</td>
<td>21.10</td>
</tr>
<tr>
<td>Electricity, Gas and Water</td>
<td>83</td>
<td>0.26</td>
</tr>
<tr>
<td>Construction</td>
<td>1,933</td>
<td>6.29</td>
</tr>
<tr>
<td>Secondary Sector</td>
<td>-</td>
<td>27.65</td>
</tr>
<tr>
<td>Trade, Hotels, Restaurant etc</td>
<td>4,049</td>
<td>13.17</td>
</tr>
<tr>
<td>Transport, Storage &amp;</td>
<td>1,525</td>
<td>4.96</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Services</td>
<td>3,907</td>
<td>12.70</td>
</tr>
<tr>
<td>Tertiary Sector</td>
<td>-</td>
<td>30.83</td>
</tr>
<tr>
<td>Total</td>
<td>30,753</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Ramaswamy (2007b)

Agriculture is the most populated occupation, with close to 41.52 percent engaged in agriculture and allied activities. The growth of the secondary and tertiary sectors notwithstanding, the growth of employment in these sectors has been lesser compared to the primary sector. With fewer labourers employed in the secondary and services sector, Tamil Nadu garners higher revenue from them than it does from the agricultural sector, where close to 12,668 thousand workers are engaged. One of the reasons for such development could be attributed to the increased migration and influx of workers into the industrial units. Urbanisation has had a positive effect on the industrial sector with the migrant workers contributing to its growth and expansion.
2.1: Urbanisation in Tamil Nadu

R. Rukmani states that there are four phases to the urbanisation process in Tamil Nadu, beginning in early 1900. However, the phase of agglomerisation is the most crucial to the study as the period covers the years 1941-71, where there was an increase in the urbanisation process by 5.0 percent in the 1940s and by 6.0 percent in the 1960s (Rukmani, 1994; p. 3263). Class I, II and III towns have grown at a moderate pace during 1921-41 while the lesser urbanised towns grew at a slower pace during the same period.

The large-scale migration was absorbed by the industrial agglomerations in the regions of Madras and Coimbatore as early as 1970. Urban centres were concentrated in a few regions and the highly urbanised districts grew as a result of the presence of a few highly urbanised taluks and not by the spread of urban characteristics over it (Kurien and James, 1975; p. 361). The implementation of the Green Revolution towards the end of the 1960s also saw a shift in the population movement; the dry and the wet land areas showed distinct differences in the migratory patterns. The districts of Thanjavur and Salem were studied by Kurien and James and the conclusions were that the urbanisation in the wet land areas tends to be lower owing to the yearlong cultivation process that enables stability of employment, hence lack of initiative to migrate. In the dry areas however, the urbanisation is characterised by the presence of industries that are rapidly growing and spatially distributed so as to account for the loosely mobile population lacking stability of employment and seeking new avenues of income generation (Kurien and James, 1975; p. 365-367).

Seeing that urbanisation concentrated in a few agglomerations spread across industrialised towns in and around the city of Madras (in the early 1970s), we can deduce that the migration influenced by lack of stability of employment was absorbed by the industrial sector. This brings us to the conclusion that agricultural labourers from dry areas were prone to seek employment outside the agrarian sector due to aforementioned instability in employment. This could be one of the possible explanations for the reduced presence of an agriculture-oriented workforce in Tamil Nadu as against the national average. Despite the lowered figures, Tamil Nadu has fared better in the production of food grains and has developed better technologies of cultivation, the details of which shall be explored in the next chapter.

Since migration has played an important role in determining the role of the industrial development in the state, we take a closer look at the migration figures and the diversification along occupational lines amongst the migrated males and females since 1960. As on 1961, there were 70 male cultivators to every female migrant to the city of Madras (Census, 1961; D-IV), out of which 34 males were in the

---

7 Class I, II and III refer to the Very Highly Urbanised, Highly Urbanised and Low Urbanised towns respectively. For more, refer C.T. Kurien and Josef James (1975, p. 361).
age group 15-34 years while the female migrants belonged to the age group 35-59. This trend shows that more males within the working age migrated towards the city in search of industrial occupations.

It would be interesting to note that 160 male agricultural labourers migrated to every 12 female agricultural labourers in the same period. When compared, agricultural labourers are more illiterate than cultivators, with all 12 females being illiterate. By 1971, there were 4.97 percent cultivators in urban regions and 8.21 percent agricultural labourers of which the males and females accounted for 11 percent cultivators and 21.0 percent agricultural labourers roughly, with female agricultural labourers constituting 18.92 percent in urban centres alone (Census, 1971; B-I). By 1991, the main and marginal workers segregation within the Census enabled better enumeration of the migration within the state. Within the 15-30 age group, there were 1,51,825 literate male and 27,111 literate female migrants to the urban areas as on 1991. The same year also saw 16,08,237 male and 1,41,574 female main workers belonging to all age groups and 8,316 and 6,812 male and female marginal workers in Tamil Nadu. Despite an initial increase in the migrant population and subsequent stagnation, there has been a continuous increase in the unemployment levels in the state. Figure 2.2 below depicts the ratio of workers to non-workers present in the state between 1961 and 1991.

**Figure 2.2: Workers and Non-Workers in Tamil Nadu (in numbers), 1961-2001**

![Figure 2.2: Workers and Non-Workers in Tamil Nadu (in numbers), 1961-2001](image)

Source: Census (Various Years)

Figure 2.2 is indicative of the rising levels of unemployment that has resulted; employment only grew by 2.5 percent between 1961-71\(^8\) and 1971-81 (Rukmani, 1994; p.3270). The state underwent a declining rate of urban growth during the decade 1970-80, where the agglomerations and the isolated

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\(^8\) Annual Compound Rate of Growth between the years 1961-71 was 7.7 percent after which the following decade saw a compounded growth of 2.5 percent.
towns\(^9\) were growing at decreased rates. The reasons for the urbanisation spurt declining over the years has been characterised by Rukmani as follows:

"...After Independence, in Tamil Nadu- as elsewhere in the country- the role of episodic factors has declined considerably: the changed socio-political context and the state policies obviously have a lot to do with it. The spurt in urbanisation in a context like this- as in the 1960s of Tamil Nadu- may be largely due to the state-induced agricultural and industrial growth. But even this spurt would have a transient character since the absence of a basic structural transformation in agriculture acts as a constraint...and hence on the level of urbanisation..." (Rukmani, 1994; p. 3272)

The fact that there has been a declining rate of urbanisation is also a result of the lack of employment opportunities that can be a direct consequence of the lack of structural transformation in the economy. In fact the rate of the unemployed rural males is greater than the all-India figure for the same; while that of the urban females is much lower than the national average. The rural female unemployed ratio is also very high in Tamil Nadu at 13.5 percent among the educated population. Tamil Nadu fares better in employment figures when it comes to its educated population; the rates for the educated unemployed are much better with the state reporting the lowest level of unemployment country-wise, as on 1999-2000 (Tamil Nadu Development Report, Planning Commission, Government of India).

Table 2.6: Labour force Participation Rates- Usual Status for Tamil Nadu and All- India (in parentheses), 1983 to 2009-2010, per cent

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Year</th>
<th>Rural Male</th>
<th>Rural Female</th>
<th>Urban Male</th>
<th>Urban Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1983</td>
<td>69.9</td>
<td>52</td>
<td>65.3</td>
<td>25.3</td>
</tr>
<tr>
<td>2</td>
<td>1987-88</td>
<td>60.4 (54.9)</td>
<td>47.7 (33.1)</td>
<td>59.5 (53.4)</td>
<td>24.3 (16.2)</td>
</tr>
<tr>
<td>3</td>
<td>1993-94</td>
<td>61.3 (56.1)</td>
<td>48.1 (33)</td>
<td>60.1 (54.3)</td>
<td>24.7 (16.5)</td>
</tr>
<tr>
<td>4</td>
<td>1999-2000</td>
<td>61 (54)</td>
<td>48.4 (30.2)</td>
<td>58.5 (54.2)</td>
<td>22.7 (14.7)</td>
</tr>
<tr>
<td>5</td>
<td>2004-2005</td>
<td>60.4</td>
<td>46.7</td>
<td>61.1</td>
<td>25.3</td>
</tr>
<tr>
<td>6</td>
<td>2009-2010*</td>
<td>612 (548)</td>
<td>401(208)</td>
<td>582 (556)</td>
<td>192 (128)</td>
</tr>
</tbody>
</table>

*LFPR as no. of persons in the labour force per 1000 persons

Source: 1) NSSO, various rounds; 2) TNDP, Government of India

Unemployment has increased since the decade of 1960, especially in the primary sector on which the population of the state is largely dependent. Despite the growth of the secondary and the tertiary sectors in the 1980s and the 1990s, there hasn’t been sufficient absorption in the primary sector that

\(^9\) Isolated towns are different from agglomerations in that they are seen as separate towns that have urban characteristics and have developed due to the presence of some industrial development. For more details, see Kurien and James, 1975 and Rukmani, 1994.
has resulted in the deteriorating levels of employment in the state, with figures of employment growing only by 1.49 percent in 1981-90 and further declining to 0.34 percent in 1991-2000 (Tamil Nadu Development Report, Government of India).

A look at Table 2.6 depicts a steady rate of labour force participation among the males in both the rural and urban areas. The female labour force participation interestingly is higher in the rural areas, with almost 50 percent of the females engaged in some income generating activity while only close to 25 percent of the urban female population is engaged in the labour force. The rates of employment however have slowly declined in both the rural and the urban areas for males; urban female participation has remained somewhat constant in this context.

The female labourers are mostly marginal workers, with rates as on 1991 showing that there were 6.5 percent female marginal workers to only 0.4 percent male workers in the rural areas. By 2001, this figure had increased to 11.2 percent as against a corresponding 7.2 percent increase in the male workers as well. Between the years 1991-2001, there has been a tremendous increase in the marginal workers population, showing that there has been lesser absorption of the labour force in the urban areas, with marginal workers in the urban areas accounting to 3.5 percent (females) and 2.4 percent (males) respectively. These figures are still lower than the national averages for both decades.

The above mentioned only prove the disparity in the absorption of the labour force despite figures for the secondary and tertiary sectors showing increasing production and revenue generation figures since 1980. The persistently high rates of unemployment could be due to several factors. A study conducted by Athreya, Djurfeldt, et al., conclude that one of the reasons for the unemployment figures being higher than the national average could result from the prevalence of acute landlessness and an increased proportion of labour households than most other states in the country (Athreya, Djurfeldt, et al., 2008; p. 55). Moreover, with increased mechanisation of agriculture, the need for physical and manual labour has gone down, affecting most adversely the female work force. Athreya, Djurfeldt, et al., quote that ‘... [mean days of employment] for women has been more substantially reduced, from 171 to 134 days, or about 22 per cent...’ (ibid, 2008; p. 55)

The aforementioned can be corroborated by the high levels of out-migration, particularly amongst the small landowners and the landless labourers, who have been pushed away from the over populated agrarian sector. Moreover, Tamil Nadu has also seen a declining rate of population growth and an increase in the revenues from the three sectors, leading to an increase in the per capita incomes in the hands of the population. The distribution of such income has also been skewed, with industrialised and urban centres gaining heavily and the rural population forced to migrate due to lack of adequate livelihood provisions (Athreya, et al., 2008; p. 59). The per capita SDP/ income of Tamil Nadu calculated at 1993-94 prices was Rs. 8955, lower than Maharashtra, Punjab, Haryana and Gujarat. The PCI increased to Rs. 13,999 (calculated at 2004-05) prices during 1993-2005. The increase as
discussed earlier could stem from the lowered rate of population growth and greater income accumulation.

2.2: Sectoral Transformation in Tamil Nadu: 1960-2011

An overall review of Tamil Nadu reveals a skewed development against agriculture starting 1960. The indicators for the same can be analysed from Table 2.7 presented below:

Table 2.7: Sectoral Composition of GSDP, Tamil Nadu, Select Years, Shares in Per Cent

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary</td>
<td>43.51</td>
<td>34.79</td>
<td>25.92</td>
<td>23.42</td>
<td>17.51</td>
<td>13.91</td>
</tr>
<tr>
<td></td>
<td>Agriculture&amp; allied Activities</td>
<td>42.46</td>
<td>32.78</td>
<td>24.56</td>
<td>21.85</td>
<td>15.12</td>
<td>11.59</td>
</tr>
<tr>
<td>2</td>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unregistered manufacturing</td>
<td>7.91</td>
<td>10.16</td>
<td>12.47</td>
<td>7.95</td>
<td>6.86</td>
<td>6.89</td>
</tr>
<tr>
<td></td>
<td>Electricity, Gas and Water Supply</td>
<td>0.17</td>
<td>0.31</td>
<td>0.43</td>
<td>2.03</td>
<td>2.81</td>
<td>1.66</td>
</tr>
<tr>
<td>3</td>
<td>Tertiary</td>
<td>36.22</td>
<td>38.33</td>
<td>40.59</td>
<td>43.48</td>
<td>53.06</td>
<td>57.61</td>
</tr>
<tr>
<td></td>
<td>Trade, Hotels&amp; Restaurants</td>
<td>16.55</td>
<td>15.81</td>
<td>16.87</td>
<td>16.51</td>
<td>15.40</td>
<td>16.36</td>
</tr>
<tr>
<td></td>
<td>Transport</td>
<td>2.69</td>
<td>4.43</td>
<td>4.75</td>
<td>4.68</td>
<td>6.82</td>
<td>6.97</td>
</tr>
<tr>
<td></td>
<td>Communications</td>
<td>0.35</td>
<td>0.64</td>
<td>0.95</td>
<td>0.93</td>
<td>1.94</td>
<td>3.92</td>
</tr>
<tr>
<td></td>
<td>Banking&amp; Insurance</td>
<td>1.56</td>
<td>2.11</td>
<td>3.25</td>
<td>5.77</td>
<td>7.21</td>
<td>8.03</td>
</tr>
<tr>
<td></td>
<td>Real Estate&amp; Business Services</td>
<td>3.96</td>
<td>4.02</td>
<td>4.99</td>
<td>5.53</td>
<td>6.63</td>
<td>8.01</td>
</tr>
<tr>
<td></td>
<td>Public Administration</td>
<td>0.97</td>
<td>1.66</td>
<td>3.56</td>
<td>4.26</td>
<td>5.40</td>
<td>5.04</td>
</tr>
</tbody>
</table>

Table 2.7 presents the overall changes that have resulted in the macro economy of Tamil Nadu since 1960. While agriculture was the most sought after occupation and the largest contributor to the NSDP in 1960-61, the growth of the sector has drastically decreased with a mere 13.9 percent contribution as on 2005-06 compared to 1960-61 contribution of 43.5 percent. The growth of the secondary sector has been eventual and steady, with marginal increases since 1960. As on 2005-06 the secondary sector contributes close to 29.0 percent - a 9.0 percent increase from its 1960-61 levels. Following on the heels of the secondary sector is the steadily growing tertiary sector, contributing 57.6 percent to Tamil Nadu’s economic achievements (Government of Tamil Nadu, 2012).

A 20.0 percent increase has taken place in the tertiary sector since 1960-61 with banking & insurance and real estate showing the most growth. Banking & Insurance has in fact increased vastly by 8 percent as opposed to a mere 1.5 percent presence in the 1960s. Liberalisation and de-regulation have enabled more loans and credit disbursement to the industrial sections, ensuring greater borrowing and income generation to that sector. Real estate bubble has expanded in Tamil Nadu with land acquisitions undertaken to construct industrial and commercial complexes in the state. Recent MoUs signed by the Chief Minister have released several acres of land to the multi-national industrial houses to enable better and faster development of Tamil Nadu as one of the leading developmental states in India.10

Tamil Nadu’s ambitious growth policy can be corroborated by the state’s 2012-13 policy document on industries that states,

“....for the first time in Tamil Nadu, to prepare a Vision Document “Tamil Nadu Vision 2023” for the State as a strategic plan for achieving overall development. This Vision Document envisages Gross State Domestic Product (GSDP) at constant prices to grow at 11 percent or more per annum in the next 10 years - about 20 percent more than the expected growth rate of India’s Gross Domestic Product (GDP) over the same period. This warrants manufacturing sector in the State to grow by about 14 percent per annum between 2012 and 23...” (Tamil Nadu, Policy document, 2012-13)

These provisions come at the cost of the slowly deteriorating agrarian sector. With a substantial population engaged in the primary sector and lack of adequate employment opportunities, the sector’s growth is hampered. Continued allocation of developmental resources to the secondary and tertiary sectors relegates the primary sector and especially cultivators and agricultural labourers to despair. In such circumstances, there needs to be a focussed devolution of funds for the betterment of the agrarian sector and a through structural transformation of the primary sector will have to be undertaken to improve its existing situation and to improve the employment standards of the state. The growth of the economy is a chain effect and if the primary sector performs better, the employment, per capita income and migration levels would be bettered within the state.

10 MoUs were signed in November 2012 with 12 leading industrial companies to the tune of 28,000 crores. For further details, see The Hindu, November 5, 2012 issue.
2.2. Poverty and Inequality in the State

According to the Tamil Nadu Human Development Report 2003,

“…An HDI has been constructed for 29 districts in the State using the UNDP methodology. As indicated above, the HDI for the State is 0.657. This value varies from 0.757 to 0.584 at the district level. Chennai district takes the top position while Dharmapuri is placed at the bottom. The high per capita income of Chennai has considerably influenced its HDI value. Chennai’s literacy rate and life expectancy are also fairly high. However, this district cannot be a representative district for Tamil Nadu because of its urban character. The gap between the HDI value of Chennai, the first ranked district and Kanniyakumari, the second ranked district is substantial (0.045). In the case of other districts, the gap in achievement is not very wide. Eleven districts have an HDI value above the State HDI value…” (Tamil Nadu Human Development Report, 2003; p. 34)

The same study also dissects the other districts of Tamil Nadu based on the HDI indicators of longevity, per capita income and literacy levels. Chennai district fares well in all three indicators, achieving the highest HDI amongst the thirty districts; however, its predominantly urban nature discounts it from being a yardstick of measurement of the state’s performance in HDI values. Following Chennai is the district of Kanyakumari which records a value of 0.045, a mid-level between the better performing and the worst performing districts. The difference in HDI values between urban Chennai and Kanyakumari is said to be substantial and hence Kanyakumari’s performance is said to be more realistic and indicative of the HDI measurements. Dharmapuri places last amongst all districts surveyed. With very low indices for longevity and literacy and GER ratios, Dharmapuri’s abysmal performance in the HDI is only followed by Villupuram that has very low per capita income indicators. (Tamil Nadu Development Report, 2003; p. 35)

However it must also be kept in mind that this HDI study also placed eleven districts that fared better than the state in terms of their HDI values; with figures exceeding the 0.657 that the state recorded, these states fare lower than Chennai, but better than Dharmapuri and Villupuram in overall HDI calculations. Figure 2.3 presents the top five and the bottom five districts divided on the basis of the per capita incomes of the regions. The figure shows the top five districts of Chennai, Kancheepuram, Madurai, Coimbatore and Thootukudi marked in green as the better performing states in terms of their per capita income. Similarly, the bottom five districts of Villupuram, Thiruvannamalai, Sivagangai, Thiruvarur and Thanjavur are marked in red to indicate the low per capita income that arises from these regions.

While the boundaries of division between the districts might be thin, in terms of per capita income, there is a vast disparity that is evident. While income is definitely an indicator of the level of development, literacy and gross enrolment ratio are also important factors of the HDI. In terms of literacy and GER, the districts can again be divided on the basis of the top five and the bottom five, with Chennai performing the best, followed by Kanyakumari. Thoothukudi and Madurai districts also show steady development in the knowledge indicators. Trichy district fares well in terms of the literacy rates; interesting to note is that this district is also a hub for institutes of higher education,
with one Indian Institute of Management having found a place in the district. Theni district also performs well in terms of the combined GER. (Tamil Nadu Human Development Report, 2003; p. 34-36).

**Figure 2.3: Per Capita Income Distribution disaggregated as Top 5 and Bottom 5 Districts, Tamil Nadu (2003)**

![Map of Tamil Nadu with districts colored green and red showing income distribution.](source)

Source: Tamil Nadu Human Development Report, 2003

It must be noted that this segregation of the states based on their per capita incomes is only an overview of the income distribution in the districts. These indicators by no means capture the extent of poverty or the inequality prevalent in the state. In fact, Himanshu in his paper *Recent Trends in Poverty and Inequality: Some Preliminary Results* points out the variations in the poverty and inequality levels amongst the different states in India. He goes so far as to account for the severity and the depth of poverty in these states by way of the poverty gap and the squared poverty gap respectively. By these calculations, Tamil Nadu fares better in rural areas, where there’s a reduced poverty gap between 1983 and 2005, better than the poverty gap recorded in the urban areas for the same period.
The headcount ratio fell from 54.8 in 1983 in the rural areas to 22.7 in 2004-05, with the poverty gap reducing from 17.39 in 1983 to 3.7 in 2004-05. It is remarkable that within a span of twenty years, there was a massive reduction in the poverty gap levels in the rural areas. During the same period, the urban region saw a reduction from 51.9 to 21.4 in terms of the headcount ratio and a drop from 15.4 to 5.3 in the poverty gap for the same period. Despite the levels of poverty being different in the rural and urban areas, rural Tamil Nadu showed better results in terms of poverty gap reduction than urban Tamil Nadu for the study period (Himanshu, 2007; p. 498). In terms of the squared poverty gap that shows the difference in poverty levels within a section of the population, rural Tamil Nadu showed figures decreasing from 7.52 in 1983 to 0.96 in 2004-05. K.P. Kannan, in his 2011 study on the regional differences in the poverty of the country, shows how the poverty is classified amongst population groups within a state.

By way of such classification, Tamil Nadu’s poverty profile has been divided into population groups comprising the extremely poor at 5.4 percent of the population, poor at 12.4 percent, 19.8 percent of marginal population and 35.1 percent of the vulnerable section of the population. The middle income and the high income groups constituted 22.0 and 5.2 percent of the population respectively as of 2004-05. Amongst the population division, we can see that the vulnerable section is the most stricken by poverty at 35.1 percent (Kannan, 2011; p. 61). The extremely poor and the incredibly rich comprise 10.0 percent of the total poverty profile. Therefore, the inequality in the distribution of resources, assets, etc. is concentrated in the middle groups that are more vulnerable to changes in price levels and inflationary tendencies.

This inequality concentrated in urban and rural areas can be studied by the difference posited in Himanshu’s study. The urban areas showed an increase in the inequality levels. There was an increase from 35.1 to 36.1 by 2004-05, a one percent increase in the inequality levels. This number might be small, but the increase in inequality further widens the unequal distribution of resources between the urban residents. In fact, the study proves that after 1993-94, there has been a deceleration in the rates at which poverty and inequality have reduced in the states. While the aforementioned figures pertained to the official poverty line estimates, the headcount ratio in the rural and urban areas increased if calculated via the Usual Status Methods. Poverty in the rural areas increased by 2.5 percent and in the urban areas by 0.5 percent.

Another interesting measure to calculate the poverty levels or in this case the deprivation levels would be by way of accounting for the real increases (or decreases) via the Monthly Per Capita Expenditure (MPCE). While the nominal MPCE increased from Rs. 294 (URP) and Rs. 296 (MRP) in 1993-94 to RS. 602 (URP and MRP) in 2004-05, the real MPCE only increased to Rs. 326 (URP) and Rs. 325 (MRP) between the same period (Himanshu, 2007; p. 502). This shows that while the money income increased between the periods, there was also an increase in the prices, accounting for the decelerated
increase in the real values. This can be corroborated by the increase in the headcount ratio in the rural and urban areas and the fact that between 1999 and 2005, there was a 2.3 percent increase in the levels of unemployment in the state. In such a scenario, increased price levels would further handicap the growth of the economy and bring more people under the ‘BPL’ category, enhancing the already existent inequality in the state. This categorisation of the poor under the BPL and the APL category, by estimating a ‘poverty line’ has its fallacies as pointed out by Kannan, 2011:

“...the problem of poverty in India is not just a matter of crossing a “line”, given the fact that, a substantial segment of the population cluster around the poverty line and hence the categories of “marginally poor” and “vulnerable” become important. By combining the categories of extremely poor, poor, marginally poor and vulnerable, we get the category of poor and vulnerable. The upper limit of this category (equal to two times the official poverty line) is only marginally above the international poverty line of $2 in PPP terms. We estimated that 76.7% of the population in India belonged to this poor and vulnerable category in 2004-05…” (Kannan, 2011; p. 62)

The above sentence corroborates the fact that an official estimation of poverty is yet to be achieved in the country that can substantiate for the 76.7 percent of the population that are accounted ‘poor’. However, Kannan uses a ‘Poor and Vulnerable’ (P and V) criterion to estimate the changes in the poverty profile of the states between 1993-94 and 2004-05. By that measure, the decadal changes in the poor and vulnerable sections of the population may be studied. Tamil Nadu comprised nearly 82.4 percent of its population in the P and V sections in 1993-94, against the national average of 81.8 percent. By 2004-05 this figure had reduced to 72.7 percent in Tamil Nadu, an impressive 9.7 percent decrease in the total vulnerable sections; the national average for the same period was only around 76.7 percent, a 5.1 percent decline. Therefore, Tamil Nadu along with other better performing states such as West Bengal, Kerala, Gujarat, Maharashtra, Karnataka and Jammu and Kashmir comprised the middle-level states, in its poverty reduction schemes (Kannan, 2011; p. 64).

However, while there might have been a reduction in the poverty levels amongst the P and V groups, Tamil Nadu still ranked the highest at number one in terms of its inequality gap among social groups (P and V). With 61.0 percent as the difference in the social groups, the inequality levels in the state are the highest. In fact, the differences amongst the social groups such as the SCs/STs, Muslims, OBCs and others can also be studied from Kannan’s paper. He shows how the regional variations in treatment of the social groups affect the total P and V population in the state. Tamil Nadu has always been divided by way of its caste classification. The Muslims comprise nearly 96.0 percent of the informal workers in the P and V section, followed by the OBCs at 95.4 percent, SCs/STs at 93.0 percent and others at 84.1 percent (Kannan, 2011; p. 67). Informal sector in the state has contributed to the further accumulation of the P and V population and the wages and salaries provided do not relieve the population from extricating itself from this group.
In conclusion, we can say that the poverty in the state and the national level cannot be studied as a binary set with segregation as below poverty line and above poverty line population (Kannan, 2011; p. 69). In fact, Kannan, quotes:

“…People belong to different poverty levels or poverty bands, suggesting a gradation of poverty. The simple fact of the reduction in poverty achieved so far is largely, if not only, a matter of transition from being “more poor” to “less poor” but poor nevertheless if we factor the notion of vulnerability…” (Kannan, 2011; p. 69)

The situation of poverty cannot be encapsulated in a single figure that enumerates the myriad differences that cause and are sometimes the effect of the poverty in the country. This is also the same case with inequality that is prevalent in the country. Tamil Nadu with its extremely high figures of inequality will have to account for certain regional, cultural and caste biases before implementing poverty alleviation programmes and reducing inequality. In fact, Kannan utilises Sengupta’s 2008 study to quote the following:

“…the regional inequality in poverty and vulnerability is overwhelmed by social inequality. The social dimension of “systemic and hierarchical segmentation” in poverty and vulnerability and its related correlates at the national level is found to be equally valid for an overwhelming majority of states in India…” (Kannan, 2011; p. 70)

The regional diversities and the inequalities however, were varied across states. With some states showing better performances in the reductions in inequality and others showing staggering figures, the poverty and inequality profile of the country is drive by the social exclusion even in the midst of increasing rates of reduction in the poverty and vulnerability in the country. The state of Tamil Nadu will have to work hard at removing these social barriers before attempting to rid its inequality levels and achieve a more stable and balanced growth rate.
Chapter 3

Rural economy of Tamil Nadu, 1960-2011

Tamil Nadu constitutes only 7 per cent of the nation’s population, with average rainfall per year of 921.50 mm, much lower than the national average of 1200 mm annually. This is also a concern for increased irrigation; however the irrigation facilities are heavily stressed as the water bodies of Tamil Nadu constitute less than 3 per cent of the total water sources in India. The agricultural scenario can be captured by the decreasing size of per capita land holdings in the state with only 0.83 ha owned in 2005-06 as compared to 1.25 ha during 1976-77. The state’s expenditure on the sector is remarkable, particularly with respect to crop management and farming systems; enabling new technology and efficient means of crop management, relief assistance in the face of natural calamities and unforeseen losses due to inclement weather conditions (Government of Tamil Nadu, Policy Note, 2012-13; p. 1-4).

Tamil Nadu’s agrarian scenario has more or less been on an increasingly positive trend. Even before the advent of the Green Revolution reforms, Tamil Nadu’s productivity concentrated in a few districts always managed to retain self-sufficiency and aided the state’s growth. Based on soil, weather and rainfall, Tamil Nadu has been categorised into 7 agro-climatic zones. The productivity from these zones depends on the indicators of soil quality, rainfall measure and weather conditions. There is only one district in the Heavy rainfall Zone- Kanyakumari and the productivity from the region can be linked to a large extent on the rainfall conditions.

Before analysing the changes that have taken place in the agricultural sector in Tamil Nadu, a brief overview of agriculture in India post-Independence can be gained from the following:

- Output of five major crops, namely- rice, wheat, groundnut, sugarcane and cotton grew tremendously
- Coarse grains, tea, jute, pulses and tobacco didn’t fare too well compared to the principal crops, posting below average growth
- Population was growing geometrically; food grain production was always sufficient enough to meet the raising levels of the population even if not growing at proportionate levels as the population rates. (Vaidyanathan, A, as cited in K. Basu (ed) 1994)

Expansion in area under cultivation led to greater levels of output initially, post-Independence. The non-food crops constituted 60 percent of the crop output with the food grain production fluctuating between 35-40 percent. Output growth can be attributed to the yield improvement of the crops that varies across states. Interesting to note is that there is no great association between the crop area growth and the total output growth, despite there being a tendency for states to have increased crop
output per hectare having a greater total output. This can be attributed to the locational shifts of crops from low yielding to high yielding hectare areas (Vadiyanathan, A, 1994; p. 21).

3.1: Tamil Nadu- Ecotype and Farming conditions

Tamil Nadu is divided into the wet and dry ecotype zones. While the prominence of wet land farming cannot be avoided, it should be noted that before the Green revolution, there was a steady flow of income from dry land cultivation as well. The differences between the two ecotypes have been discussed by Athreya et al., (1986). Primary difference between the wet and the dry ecotypes as regards the class structure- the wet area is prone to more intensive cultivation of irrigated crops- rice, wheat, maize, etc. The dry ecotype is constituted of rainfed tracts of land where the majority of the cultivation includes coarse grains, sorghum, etc. While the wet ecotype has a more pronounced proletarianisation and polarisation, the dry ecotype is more balanced with only 4.0 percent of the total population being surplus appropriators, as regards the class structure of land owning in these areas.

This classification can be derived from Athreya et al., (1986) where they deliberate on the differences between the agrarian and the total population, categorising the surplus appropriators and the proletariat and hypothetically providing a rank basis in order to understand the depth of the difference between the categories. While wet land farming is more prone to the capitalist farmers and the rich landlords, dry land farming can be undertaken even by the small and poor peasant. In fact, interesting to note is that the dry ecotype region still has 3/4ths of its population, namely the proletariat farming their own land. The reverse situation exists in the wet ecotype, where the proletariat are usually landless agricultural labourers. However, the wet ecotype accounts for more in the total production and productivity as regards food grains. This stark contrast has been brought about by studying two panchayat unions of Kulithalai and Manaparai in the Thanjavur belt.

3.2: Land Use in Tamil Nadu

The net area sown has been continuously on the decline since 1950 onwards and after liberalisation in the 1990s, the net sown area and the cultivable areas decreased. According to Government of Tamil Nadu statistics, there has been an increase in the land put to ‘non-agricultural purposes’ where the figure was 9.8 percent in 1950 and it increased to 14.73 percent in 1990 and further raised to 16.4 percent in 2005-06. This indicates a fall in the net sown area and an increased shift to non-agrarian occupations that have been followed in the years since liberalisation. This trend has also been captured by Athreya et al., in their “Agrarian Change and Social Mobility in Tamil Nadu”. In that study, the authors conduct a panel study over 25 years in the former Thiruchirapalli district in Tamil Nadu and analyse the shift in the occupational tendency of the villagers. They conclude that,
“...the overall effect seems to be a centripetal tendency in agrarian structure, with a movement towards a strengthened position for family farming and for the underdogs in the old agrarian society to leave agriculture altogether...” (Athreya, et al., 2008; p. 50)

This statement is corroborated by Government figures for the same that show an increased industrialisation and tendency of the rural population to migrate towards urban agglomerations. The previous chapter had dealt in detail on the structural transformation of the state and therefore, detailed analysis of the same would be redundant. The repeated failure of the monsoons along with the aforementioned factors have resulted in a shift from agricultural to non-agricultural use of fertile land along with transfer of water resources and labour for the same (Government of TN, p. 62). It would be interesting to bear in mind that the state faces a heavy stress on irrigation facilities and this move towards non-agricultural usage of land would in fact be a welcome relief to the authorities.

However, it should also be noted that the state is one of the leading producers of paddy and its varieties along with several other principal crops. The stress on irrigation facilities notwithstanding, the state has indulged in several programmes that would benefit the small, medium and large farmers respectively, apart from investing in large scale public sector irrigation facilities.

In fact, Tamil Nadu was one of the states where the Green Revolution met with a modicum of success. Starting with the implementation of the IRDP programme and its aftermath, the state has shown considerable progress in the fields of agricultural growth. Madhura Swaminathan in her study, “Village Level Implementation of IRDP: Comparison of West Bengal and Tamil Nadu” brings out several interesting facets in the working of the IRDP programme in the state. In a study of two villages, namely Gokilapuram and Konur in Madurai district, the author delineates the distribution of the IRDP resources (1983-85) and the usage of the same in varied agriculture and allied activities:

“...in both the selected blocks of Madurai district, animal husbandry schemes received more than half the total allocation. The District Credit Plan for Madurai district (1983-85) allocated more than 89 per cent of funds to agriculture and allied activities...” (Swaminathan, M., 1990; p. A24)

We can see that in Tamil Nadu, even in the early phases of liberalisation, the stress on agriculture as a primary occupation was declining and more importance was given to its allied activities. In the study, Madhura Swaminathan points out the flaws in the implementation of the programme, citing a lack of local-level planning body as a major reason for the failure to promote more agriculture related activities. While ISBs and milch cattle loans were provided extensively and the land-owning population received their loans with very little leakage, there still remained a sizeable population outside the target group that needed assistance by way of these schemes; mostly the landless and the women (Swaminathan, M., 1990; p. A23).

These allied activities have been continuously stressed on since there has been a decline in the gross cropped area in Tamil Nadu since the 1950s. The total cropped area has decreased to 51.91 lakh ha in
2005-06, an all-time low from 73.8 lakh ha sown in 1970-71. This has also brought down the net sown area, with only 40.3 percent of the total geographical area sown in 2005-06. The initial growth in the net sown area during 1950-71 was a result of the massive public and private investments in irrigation; however, the continuous decline in the cropped area could not be curtailed by increasing irrigation sources (Government of Tamil Nadu; p. 63). In fact, Tamil Nadu performs unfavourably in net sown area compared to other agriculturally stable states such as Karnataka (56%), Punjab (82%), Kerala (58%) and Maharashtra (58%); any increase in agricultural production can thus be attributed to increased productivity of the crops and not an increase in the cropping intensity; at 115-116 percent, lower than the national level of 133 percent during the last two decades.

The decrease in the cropped area comes into question, considering there has been a steady increase in the average size of land holdings, especially those of the large holdings of more than 10 hectares. Table 3.1 captures the average size of landholdings in the state and encapsulates the increase or the decrease in the size. One can see that there has been an increase in the large holdings; since 1970-71 there has been an increase of 3-4 hectares of close to 21.68 hectares in 1995-96 and a slight fall to 19.48 hectares in 2000-01, higher than 16.94 ha in 1970-71.

Table 3.1: Average Size of Holdings in Tamil Nadu (ha)

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<tr>
<td>Marginal (&gt;1 ha)</td>
<td>0.42</td>
<td>0.41</td>
<td>0.38</td>
<td>0.37</td>
<td>0.36</td>
<td>0.38</td>
<td>0.37</td>
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<tr>
<td>Small (1-2 ha)</td>
<td>1.42</td>
<td>1.41</td>
<td>1.41</td>
<td>1.41</td>
<td>1.41</td>
<td>1.40</td>
<td>1.39</td>
</tr>
<tr>
<td>Semi-Medium (2-4 ha)</td>
<td>2.75</td>
<td>2.75</td>
<td>2.77</td>
<td>2.74</td>
<td>2.73</td>
<td>2.73</td>
<td>2.72</td>
</tr>
<tr>
<td>Medium (4-10 ha)</td>
<td>5.83</td>
<td>5.77</td>
<td>5.78</td>
<td>5.78</td>
<td>5.72</td>
<td>5.60</td>
<td>5.68</td>
</tr>
<tr>
<td>Large (&lt;10 ha)</td>
<td>16.94</td>
<td>17.28</td>
<td>17.97</td>
<td>18.78</td>
<td>18.44</td>
<td>21.68</td>
<td>19.48</td>
</tr>
<tr>
<td>Total</td>
<td>1.45</td>
<td>1.25</td>
<td>1.07</td>
<td>1.01</td>
<td>0.93</td>
<td>0.95</td>
<td>0.89</td>
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Source: Agricultural Census reports of TN (various issues)

However, the land in the hands of the farmers is continuously shrinking, with small and semi-medium holdings showing decreasing sizes between 1970-71 and 2000-01. According to the Government of Tamil Nadu findings, the per capita availability of land per rural resident has decreased to 0.19 ha in 2000-01 from 0.22 in 1970-71. Furthermore, in the smaller holdings, the farming is usually for
sustenance or primarily family farms as has been pointed out by Athreya et al., in their study. What’s interesting to note is that the government considers the growth of the small and marginal farmers’ increased hold on land as an impediment to ‘modernizing agriculture’ and alleviating them from their below poverty line existence. The quote reads as follows:

“...The share of total land operated by small and marginal farmers has increased from 42 percent to 55.5 percent during the same period. The growth in number and extent of small and marginal farmers is a major hurdle in promoting capital investment in agriculture sector and hence modernizing [the agriculture sector]. Fragmentation of land results in uneconomic land holdings and low productivity. Given this major constraint, any restructuring of the strategies has to address. The problem of improving the productivity of the land and at the same time ensuring that farmer income is enhanced to lift the small and marginal farmers above the poverty line...” (Government of Tamil Nadu; p. 64)

In the light of such a notion by the government, it stands to test how the agricultural production of the state flourishes. Athreya et al., (2008) in their study continuously point to the shifting patterns in the small and medium farmers opting towards family farms and the established landlords moving out of agriculture altogether. If evidence and data from the study are touted to be testimony of the same, we can thus conclude that the government of Tamil Nadu has indeed been short sighted in relegating the growth of holdings of the small and medium farmers as an impediment to the agricultural growth of the state.

In fact, Athreya et al., in *Barriers Broken: Production Relations in Agriculture* show the distribution of the agrarian population in the dry and wet ecotypes divided on caste lines. While the villages surveyed had a very small but prominent proportion of the Brahmin population (3.0 percent) in the wet ecotype, the predominant in the villages were the Pallan Moopan (30.0 percent), previously and to some extent still existing ‘Untouchables’. The Muthurajas are the following populous category of agrarian population (29.0 percent); they form the mid-level between the Brahmins and the Pallan Moopans on the hierarchy scale. They were traditionally the descendants of the ‘poligars’ previously explained in the study and are landless or small peasants. The Vellalas form the next category of the agrarian population who were previously known to belong to the ‘Sudra’ caste (Athreya et al., 1990; p. 24).

The Brahmins still to some extent follow the ‘Brahmadeya’ nature of existing in a separate colony demarcated for their habitation and livelihood, removed from the other villages, especially those inhabited by the Harijans. The Harijans, now composed of the Pallan Moopan, Padayachi and the Paraiyan Valluvan are the agricultural labourers on land and they predominantly work for the Soliya Vellalars. Vellalars are the generally known aristocratic group in the villages, owning vast tracts of land and employing hired labour to cultivate their fields, while also engaging in manual labour occasionally.
In the dry areas, the Muthurajas still occupy a majority of the population (12.0 percent), maintaining their mid-level status and are labourers on land. The Udaiyars and the Urali Kavundans (26.0 percent) comprise the majority of the population; however they differ in their behaviours and customs and functions on land. While the Udaiyars are the upper caste, land owning, aristocratic farmers, the Urali Kavundans are landowners who are scorned by the Udaiyars and the Brahmins and placed bottom most on the caste hierarchy in these villages. The Harijans aren’t as populous in the dry area as they are in the wet area, but the Paraiyans outnumber the Pallans and the Valluvans. The big difference between the wet and dry ecotype would be that the dry landowners such as the Udaiyars and the Uralis aren’t averse to manual labour and cultivation as the wet ecotype land owners seem to be and the difference is brought out by the labour hired in these ecotypes. There is no real landless counterpart for the wet ecotype in the dry areas and there’s lesser inequality in the distribution of the agrarian population in the dry ecotype (Athreya, et al., 1990; p. 27).

More evidence of growing ‘proletarianisation’ of landholdings in the villages has been brought out by studies conducted in the Slater village of Iruvelpattu through the decades since Independence. The latest study, conducted in 2008 by John Harris et al., reveal evidence of a growing concentration of land in the hands of the big landlord (being a caste Hindu)\(^1\) and owning more than \(1/3\) of the land in the village. This phenomenon isn’t restricted to the village of Iruvelpattu alone; Athreya, Djurfeldt and Lindberg also point out growing ‘proletarianisation’ of villages in their study of the Thiruchirapalli district over 25 years. (Harris, et al., 2008; Lindberg & Djurfeldt, 1975)

Bearing in mind the aforementioned, it becomes interesting then to note how the state has progressed with its agricultural development, since most of the big landowners lease out their land to other agricultural activities and depend on non-agricultural sources of income. The small and medium farmers owning less than 10 acres of land and primarily engaging in family farming contribute more to the agricultural sustenance of the state.

Interestingly, this study also notes the changes that have occurred in the households as regards occupation between 1981 and 2008. While there has been a general reduction in the number of cultivating and agricultural households amongst the caste Hindus, there has been an increase in the Dalit households that are involved in cultivation; the figures for the same work up to 21 cultivator households amongst the Dalits in 2008 as against a mere 6 cultivating Dalit households in 1981. Further, there has been a remarkable increase in the number of households that are involved in non-agricultural labour in 2008. Caste Hindu non-agricultural labour households had increased to 113 in

\(^1\) Harris et al, (2008) re-surveyed Iruvelpattu and found that the concentration of land still rests with the big landlord; his activities and claim on land decreased with the imposition of the land ceiling restrictions enabling the Dalits to own a certain amount of land, still amounting to less than 5 percent of the total land owned. Evidence for the same can be found in previous re-surveys of the same village by Guhan and Mencher (1983) and the Thomas and Radhakrishnan re-surveys of 1936-37. For more on the same, refer to Harris et al., (2008).
2008 from 68 labour households in 1981 (44.3 percent of the households roughly involved in non-agricultural labour). The Dalit non-agricultural labour households accounted for 35.5 percent (50 households) in 2008 as against just 11.1 percent (10 households) in 1981 (Harris et al., 2008).

The numbers quoted show a remarkable shift in occupational tendency amongst the population of the village. If this were taken to be true for the state as a whole, we can conclude that agricultural labour and its allied activities have become secondary vis-à-vis the non-agricultural labour activities that the rural population involves itself in. In such a case, the evidence for increased productivity can be deduced only as results of increased mechanisation, effective utilisation of farming inputs (seeds and fertilisers), more irrigation facilities and increased area under cultivation. The caste component of the agrarian structure in the villages and the state will not be delved into in this study; agrarian scenario in Tamil Nadu as regards production, productivity and input utilisation would be the focal area.

3.3: Agriculture: 1960-2011

The existing condition of agriculture in Tamil Nadu particularly after liberalisation has decelerated. The agricultural incomes of the state after 1991 are testimony to the fact that there has been a declining rate of growth of the primary sector. Arguments about the validity of agriculture income being a measuring yard can be flouted; however, it stands to reason that unless production and productivity show increasing tendencies, the incomes from the same would decrease. Therefore, taking agriculture income as one of the barometers of change, we see that agriculture income declined from 24.82 percent in 1993-94 to 18.16 percent in 1999-2000, whereas the share of income from secondary and tertiary sectors improved from 33.72 percent to 34.12 percent and from 41.46 percent to 47.72 percent respectively. In per capita terms, this means that the average output per worker in the primary sector increased only marginally compared to other sectors where significant increases were noticed. (Tamil Nadu Human Development Report; p.26)

When we compare the crop cultivation post-liberalisation, we can see well-defined differences in the cultivation pattern of the crops. While paddy used to be the most productive crop in the early phases of the 1990s, it has now been replaced by sugarcane production. As of 2009-10, sugarcane production stood at 2,9,58,209 tonnes compared to a mere 56,65,258 tonnes of paddy. It is also interesting to note that the area under cultivation of these crops has also showed changes from 1990-91 to 2009-10. While area under cultivation for paddy and sugarcane only amounted to 18,55,741 hectares and 2,32,928 hectares in 1990-91 respectively, the figures declines to 18,45,553 hectares in the case of paddy, but increased marginally to 2,93,329 hectares for sugarcane in 2009-10. Taking into consideration these changes, however minute, we can see a shift in the cultivation process carried out in the state after liberalisation reforms. The demand for the crops has taken a different course; more commercial crops are in demand and the coarse grains and cereals, including paddy have evinced declining rates of growth. Commercial crop cultivation however, hasn’t increased on the whole. While sugarcane
cultivation and production has increased tremendously, crops like cotton, groundnut, gingelly and castor show declining rates of growth. The area under cultivation and the production figures during the decade show a steady deceleration for these crops.

Therefore, it becomes difficult to conclude if there has been a generalised demand for commercial crops in the state post the 1991 policy implementation. Coarse grains and cereals, such as Cholam, Cumbu and Ragi take up close to a sixth of the gross cropped area in the state. However, pulses have shown the most increase in terms of production figures and have consistently increased over the years. Close to a tenth of the gross cropped area is occupied by pulses and the rate of growth has been close to 3 percent per annum during the last three and half decades. While it was stated that the gross cropped area of paddy might have reduced,\textsuperscript{12} it still holds true that the crop has gained in production figures by way of its productivity increases over the years.

The Government of Tamil Nadu’s document on subsidies for agriculture details the various concessions provided for the betterment of the sector. Tamil Nadu Agricultural University, in its extensive research also outlines the various subsidies, production figures according to districts and changes in the pattern of agricultural sector growth in the state over the years.

**Table 3.2: Area Coverage and Production Figures for Tamil Nadu, 2008-09**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Area (L.Ha.)</th>
<th>Production (L. MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achievement</td>
</tr>
<tr>
<td>Paddy</td>
<td>21.50</td>
<td>20.72</td>
</tr>
<tr>
<td>Millets</td>
<td>12.00</td>
<td>10.64</td>
</tr>
<tr>
<td>Pulses</td>
<td>12.00</td>
<td>8.27</td>
</tr>
<tr>
<td>Total Food Grains</td>
<td>45.50</td>
<td>39.63</td>
</tr>
<tr>
<td>Oilseeds</td>
<td>10.00</td>
<td>7.23</td>
</tr>
<tr>
<td>Cotton (L.Bales)</td>
<td>1.50</td>
<td>1.12</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>3.50</td>
<td>3.14</td>
</tr>
<tr>
<td>Total</td>
<td>60.50</td>
<td>51.12</td>
</tr>
</tbody>
</table>

Source: Tamil Nadu Agricultural University, Policy Note, 2012; p. 2

\textsuperscript{12}The growth of the principal crops in the study can be studied by several indicators of area under cultivation (cropping pattern), production and productivity of the crops. While there has been lowered acreage of certain crops, productivity increases by way of better utilization of inputs and mechanization has contributed to the higher production figures. However, the sector on the whole has shown decelerating rates of growth, growing only by 2.4 percent between 1960-91; lower than the national figure of 2.7 percent for the same period. (Department of Economics and Statistics, Chennai)
Table 3.2 shows that achieved figures have been considerably lesser than the targeted figures for all crops, including sugarcane. Millets was the only crop that showed higher production than the targeted figures, but the increase was marginal.

### 3.3.1 District Wise Production of Principal Crops

Paddy cultivation is most abundant in the districts of Thanjavur, Thiruvarur, Ramanathapuram and Nagapattinam. Villupuram shows the highest acreage under sugarcane production followed by Erode and Cuddalore districts. It’s interesting to note that only two coastal districts, namely Nagapattinam and Ramanathapuram show high production figures for paddy; irrigated paddy therefore becomes the most produced crop in Tamil Nadu, especially in Thanjavur. Sugarcane too is highly irrigated, especially in Villupuram and Erode. Cuddalore, falling closer to the Pondicherry union territory might be categorised under rainfed-cultivation zones, however, the majority of the cultivation is undertaken via irrigation as is evident from the figures.

Groundnut is produced extensively in the Thiruvannamalai district followed by Villupuram and Vellore districts. These districts are known for their harsh conditions in the summer months and are suitable for the cultivation of groundnuts. The rainfall conditions of 500 to 1000 mm or their irrigation equivalent are sufficient for its cultivation and being primarily a dry land crop, this crop benefits a large number of farmers in these districts.

### Table 3.3: Annual Compound Growth Rate (ACGR) of Crops, 1960-61 to 1995-96, Tamil Nadu

<table>
<thead>
<tr>
<th>Crop</th>
<th>ACGR (%)</th>
<th></th>
<th></th>
<th>Crop</th>
<th>ACGR (%)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area</td>
<td>Yield</td>
<td>Production</td>
<td>Area</td>
<td>Yield</td>
<td>Production</td>
<td></td>
</tr>
<tr>
<td>Food Grains</td>
<td>Rice</td>
<td>-0.4</td>
<td>2.4</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coarse Cereals</td>
<td>-2.2</td>
<td>1.3</td>
<td>-1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pulses</td>
<td>1.9</td>
<td>1.4</td>
<td>3.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Food Grains</td>
<td>-0.7</td>
<td>2.1</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Food Grains</td>
<td>Cotton</td>
<td>-1.3</td>
<td>2.1</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Groundnut</td>
<td>0.7</td>
<td>0.9</td>
<td>1.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sugarcane</td>
<td>4.4</td>
<td>1.2</td>
<td>5.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Non-Food Grains</td>
<td>0.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Tamil Nadu Economic Appraisal (various issues); Department of Economics and Statistics, Chennai-6

Dindigul has extensive area under cholam, close to the 35,878 hectares, followed by Thiruchirapalli and Karur. On the whole, Nagapattinam shows the most extensive area under cultivation for cereals, with more than 1,54,045 hectares under total cereals. This varies widely with the acreage of rice, cholam, cumbu, ragi and other cereals that are distributed across different districts in the state. When it comes to the production of the principal crops, there is a difference in the districts that show the
maximum production. Villupuram shows the highest production figures for paddy, with 4,80,329 tonnes produced as of 2008-09. This is followed by Thanjavur and Thiruvarur that show 4,76,964 and 3,11,306 tonnes of produce in 2008-09. Ramanathapuram that had extensive area under paddy cultivation shows one of the lowest production figures with only 29,879 tonnes produced in the same period. Sugarcane and groundnuts were the only crops that had production figures from the same areas as that of cultivation, namely Villupuram at 57,87,278 tonnes followed by Erode at 52,86,610 tonnes as on 2008-09 in the case of sugarcane. Thiruvannamalai produced 2,04,788 tonnes of groundnuts in 2008-09, followed by Villupuram at 1,32,891 tonnes.

The crop production in the state is thus not curtailed to any one district and has its acreage and production varied. It has served well in the state’s case, as recent cyclones and storms have caused havoc in the coastal areas; production from the interior regions thus accounted for the loss of crop from such natural calamities. In fact, the principal crops, namely rice, coarse cereals, pulses, cotton, sugarcane and groundnut comprise close to 80 percent of the gross cropped area in the state. The remaining 20 percent is accounted for by the non-food grains, condiments, spices, fruits and vegetables. In fact, the annual compound growth rate of the food grains production from 1960-61 to 1995-96 can be seen from Table 3.3 given above.

The ACGR shows the percentage changes in the crop area, yields and production over the last five decades. Figures show a clear picture of declining growth averages over the years, especially with respect to area under cultivation. Over the years, there has been a steady decline in the acreage, with only sugarcane showing positive improvements in area under cultivation. When analysed, sugarcane is the only crop that has performed over the last 50 years vis-à-vis rice, coarse cereals and other non-food grains. In fact, rice has shown a decrease of 0.4 percent since 1960-61. As on 2009-10, the figures would have declined still further. Coarse cereals, occupying close to a sixth of the acreage also showed declining trends with close to a 2.2 per cent decline as of 1995-96.

Interestingly, yield figures for all crops, food grains and non-food grains, showed increasing figures. The change over the years has been positive, enabling better production figures as can be seen in the indices given. Coarse cereals however, showed lowered production figures due to drastic reductions in acreage over the last five decades at a negative 1.0 per cent decline as on 1995-96.

In the case of the non-food grains, there has been a general increase, albeit moderate, over the years. Sugarcane, as we have already discussed has performed better in comparison to other food grains. Groundnut has registered sluggish levels of improvement at a mere 1.6 percent increase and an even lower 0.9 percent increase in yield. Cotton has declined in terms of acreage, with over a 1.0 percent decrease between 1960-61 and 1995-96. However, non-food grains on the whole registered a positive change in terms of area under cultivation with close to a 1.0 percent increase in the last 50 years. While non-food grains constitute close to a tenth of the gross cropped area, the remaining acreage is
covered by the category ‘other’ crops, consisting of condiments, spices, fruits and vegetables. These ‘other’ crops take up a fifth of the total acreage and their contribution, vis-à-vis production to the state has also steadily increased over the years, with figures estimating over a 1.3 percent increase.13

The agricultural sector growth upto 1995-96 can be described as one of growth and fluctuations. While the early phases, from 1960-61 to 1973-74 saw a steady growth, there was a period of stagnation until 1985 and then a ‘recovery’ phase upto 1995-96. The first phase of growth of the food grains sector can be divided into two periods: Pre- Green Revolution and the Green Revolution. The period 1960-1969 was the initial stage of growth dominated by stagnation and sluggishness of production and low areas under cultivation, thereby leading to lowered yields. However, with the advent of the Green Revolution there came about increased production and the years between 1969 and 1974 witnessed high yields and greater production. The High Yielding Varieties (HYV) of seeds introduced in different districts by way of the IADP worked almost successfully in the state and progress by way of utilising HYV seeds was fathomed (Athreya et al., 2008; Kurien, C.T., 1980 Swaminathan, M., 1990).

A detailed study of the transformation of Tamil Nadu’s rural economy was undertaken by C.T. Kurien in his, “Dynamics of Rural Transformation” in which the years between 1950 and 1975, Tamil Nadu have been analysed. The author also chronicles the advent of the Green Revolution in the state and its immediate effect on the economy, vis-à-vis, production and subsequently, rural transformation. Kurien writes that, “Any appreciation and evaluation of change has to be essentially ‘total’. But in something as complex as society or economy, that undefined totality can be approached only in terms of parts” (Kurien, C.T., 1980; p.365).

Proceeding along the lines of what Kurien extrapolated, we can look at the rural economy changes in the state between 1960 and 1980. Kurien himself studied the changes in the rural economy and provided a conclusive database for further studies on the rural transformation of the state. Table 3.4 provides an account of the percentage of gross cropped area of the major crops cultivated in Tamil Nadu between 1960 and 1974. Paddy has shown steady growth, increasing its gross cropped area over the years (except for a slight fall in 1973-74); other cereals, like Cholam, Cumbu and Ragi face a decline in their cropping patterns due to the increased emphasis on paddy that has and is the most important crop in the state. Total cereals production on the whole, including paddy has shown a decline from 1960-61 levels at 63.86 percent to 57.54 percent in 1973-74. It should be noted that the

13 The category ‘others’ was specified as these are also crops that constitute acreage, contribute to the production and vary their yields depending on the demand. Figures for the same only prove that these crops are in constant need and production increased by way of acreage and productivity increases evinced in the state. For more on the same, refer TNAU document, 2012.
Green Revolution was initiated in the early years of the seventies. Therefore, it can be concluded that the impact of the Green Revolution was only seen in the case of paddy and not for other cereals.

**Table 3.4: Percentage of gross cropped area under major crops, 1960-61 to 1973-74, Tamil Nadu**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>34.39</td>
<td>35.41</td>
<td>37.07</td>
<td>35.35</td>
</tr>
<tr>
<td>Cholam</td>
<td>10.57</td>
<td>10.74</td>
<td>10.12</td>
<td>8.38</td>
</tr>
<tr>
<td>Cumbu</td>
<td>6.68</td>
<td>5.66</td>
<td>6.61</td>
<td>5.24</td>
</tr>
<tr>
<td>Ragi</td>
<td>4.97</td>
<td>4.66</td>
<td>4.35</td>
<td>3.44</td>
</tr>
<tr>
<td>(Total cereals)</td>
<td>63.86</td>
<td>63.23</td>
<td>61.76</td>
<td>57.54</td>
</tr>
<tr>
<td>Pulses</td>
<td>5.82</td>
<td>5.63</td>
<td>6.35</td>
<td>8.67</td>
</tr>
<tr>
<td>Groundnut</td>
<td>11.90</td>
<td>13.52</td>
<td>13.47</td>
<td>14.85</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>1.11</td>
<td>1.43</td>
<td>1.76</td>
<td>2.43</td>
</tr>
<tr>
<td>Cotton</td>
<td>5.41</td>
<td>4.54</td>
<td>3.99</td>
<td>3.91</td>
</tr>
<tr>
<td>Other crops</td>
<td>11.90</td>
<td>11.65</td>
<td>12.67</td>
<td>12.60</td>
</tr>
<tr>
<td>Grand Total</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Total Gross Cropped Area (in ‘000 hectares)</td>
<td>7,321</td>
<td>7,066</td>
<td>6,914</td>
<td>7,650</td>
</tr>
</tbody>
</table>

Source: Season and Crop Reports and Tamil Nadu: An Economic Appraisal (various issues) as cited in Kurien, C.T., 1980, p.371

Pulses performed better, as did groundnut and sugarcane. The total gross cropped area by 1973-74 was close to 7,650 (‘000 hectares) and these major crops accounted for close to 85 percent of the cropped area. Other crops, including condiments, spices, fruits and vegetables also showed marginal increases in cropped area over the decade.

Groundnut and pulses registered maximum increases in terms of non-cereal crops. Table 3.5 will show the production and productivity figures for the crops during the same years. Paddy has shown remarkable increases since the sixties, with more than a three-fourth increase in production figures. (Kurien, C.T., 1980; p.375) This is followed by sugarcane and ragi; sugarcane especially has shown continuous increases in production figures between 1960-61 and 1975-76. Cholam has been the least productive crop with declining production figures between the same years. As of 1975-76, Cholam accounted for only 465 thousand tonnes, a reduction of more than 2000 tonnes since 1960-61. Cumbu cotton and groundnut have more or less followed a similar trajectory; with decreases in the period
immediately after 1960-61 and a revival and steady increase since until 1975-76. When it comes to productivity, the crops show different figures. Paddy and ragi have been the most productive crops between the years.

**Table 3.5: Production (‘000 tonnes) and Productivity (in kg per hectare) of major crops, 1960-61 to 1975-76, Tamil Nadu**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paddy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>3559</td>
<td>3524</td>
<td>5595</td>
<td>5867</td>
</tr>
<tr>
<td>Productivity</td>
<td>1413</td>
<td>1409</td>
<td>2035</td>
<td>2182</td>
</tr>
<tr>
<td><strong>Cholam</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>631</td>
<td>513</td>
<td>563</td>
<td>465</td>
</tr>
<tr>
<td>Productivity</td>
<td>816</td>
<td>675</td>
<td>995</td>
<td>864</td>
</tr>
<tr>
<td><strong>Cumbu</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>301</td>
<td>285</td>
<td>297</td>
<td>342</td>
</tr>
<tr>
<td>Productivity</td>
<td>616</td>
<td>588</td>
<td>1025</td>
<td>745</td>
</tr>
<tr>
<td><strong>Ragi</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>360</td>
<td>292</td>
<td>287</td>
<td>473</td>
</tr>
<tr>
<td>Productivity</td>
<td>989</td>
<td>889</td>
<td>1191</td>
<td>1521</td>
</tr>
<tr>
<td><strong>Groundnut</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>1057</td>
<td>823</td>
<td>1163</td>
<td>1271</td>
</tr>
<tr>
<td>Productivity</td>
<td>1217</td>
<td>860</td>
<td>1050</td>
<td>1174</td>
</tr>
<tr>
<td><strong>Sugarcane</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>686</td>
<td>955</td>
<td>1373</td>
<td>1478</td>
</tr>
<tr>
<td>Productivity</td>
<td>8454</td>
<td>7363</td>
<td>9205</td>
<td>9597</td>
</tr>
<tr>
<td><strong>Cotton</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>374</td>
<td>301</td>
<td>341</td>
<td>386</td>
</tr>
<tr>
<td>Productivity</td>
<td>167</td>
<td>169</td>
<td>202</td>
<td>265</td>
</tr>
</tbody>
</table>

Source: Season and Crop Reports and Tamil Nadu: An Economic Appraisal (Various issues); Kurien, C.T., 1980, p.373

However, it is interesting to note that groundnut, being a ‘commercial crop’ with increases in cropped area has shown declining figures of production and productivity. (Kurien, C.T., 1980; p.375) Cotton too hasn’t revealed any remarkable figures of growth during this period. Cholam and cumbu followed similar patterns of decreasing productivity in 1965-66 and revival from 1973-74 onwards, with cholam recording decreasing figures for the entire period. Sugarcane however projected increased productivity, albeit a decrease in 1965-66.

The revival between 1965-66 and 1973-74 of almost all crops can be attributed to the Green Revolution implementation in the state. While paddy showed the most favourable outcome, sugarcane and other coarse cereals, namely ragi also performed well. The production and productivity indicators for the same reveal that there have been increases since the 1970s onwards, with the highest figures for productivity being achieved during 1975-76. As regards area under cultivation, only paddy revealed steadily increasing statistics for the entire period, starting 1960. Sugarcane and groundnut also showed increased acreage, but the Green Revolution programme confined itself to bettering
performances of staple crops, such as paddy and hoped to increase production in other cereals as well. The entire period staring 1960 up until the mid-1970s has been summarised by Kurien as follows:

“...The sixties show stagnation in agriculture in area, production and productivity. The seventies reverse the pattern and would appear to have started an upward trend especially in productivity and consequently in output. During the entire period a shift of land from dry to wet crops is also discernible...” (Kurien, C.T., 1980; p. 375)

It can be analysed further that this change in production can be attributed to the area under cultivation that has shown a tremendous increase from 1950 onwards. During the sixties, the total geographical area of Tamil Nadu was close to 130 lakh hectares, out of which net sown area accounted for nearly 46.0 percent in 1960-61 (almost 60 lakh hectares), an increase of around 6 percent from 1951-52. By the seventies, this figure had increased to almost 62 lakh hectares of net sown area (around 48.3). Kurien pointed out that the State Planning Commission’s Task Force on Agriculture had stated that 'the scope of bringing additional area under the plough is limited'. Yet, the state had shown increases in acreage, production and productivity in the decades of the sixties and the seventies.

Further, several studies conducted across districts of Tamil Nadu record the impact of the Green Revolution in the state. Barbra Harris-White and Janakarajan in their study tracing the importance of the Green Revolution impacts in the state quoted the following:

“...North Arcot performed better as far as paddy cultivation goes. With the introduction of the IRRI/TNAU varieties of IR36 and 50 and other cross varieties, rice cultivation increased tremendously. Where previously North Arcot was contributing only 10 per cent (half a million tonnes) of Tamil Nadu’s rice, with the HYV seeds introduction, paddy cultivation increased manifold from the same district...” (Harris-White and Janakarajan, 1997; p. 1470)

A study by Hazell and Ramasamy (1991) disaggregating the yields for under and over a hectare showed an increase in the yields of those producers with less than one hectare of land. Their yields increased by 43 per cent between 1973-74 and 1982-83 from 2.1 tph (ton per hectare) to 3.04 tph. However, Harris et al., note that the years 1982-83 was the third year of severe draughts in Tamil Nadu. In stating so, they also quote Hazell and Ramasamy (1991) and state:

“...By the time of the second survey in 1982-84, there had been a rapid rise in fertiliser use, particularly on HYVs and in navaarai season. New IRRI varieties had been adopted: IR36 and 50 and a generation of IRRI/TNAU crosses was widely available. Adoption had spread to small producers and the social extent of HYV adoption was no longer an interesting question. Over the decade 1973-74 to 1983-84 rice production had increased by 38 per cent...” [Hazell and Ramasamy op cit: 14] (as cited in Harris-White and Janakarajan, 1997; p. 1471)

The study by Harris-White et al., contradicts this statement made by Hazell and Ramasamy. The authors believe that the figures quoted by Hazell and Ramasamy may be misleading as Tamil Nadu underwent the third year of severe draughts in 1983-84 and rice/paddy cultivation was restricted to well-irrigated lands and the two highest yielding minor seasons. (Janakarajan & Harris-White, 1997;
The authors track the failure of the Green Revolution reforms in the decade on the nineties and list out the following:

a) Continuously modified provision of fertilisers, which adversely affect the soil quality,

b) Problems in electricity distribution impacting irrigation (Harris-White, Janakarajan, 1997; p. 1469)

Another inference some scholars have mistakenly (contentious) drawn is that of the scale factor in agriculture that plays an important role in production and productivity. Athreya, Kurien, Djurfedlt, Linberg, at al., have studied this in various capacities and found the arguments to be incorrect. They pitch an effective argument stating that statistical relationships need to be probed further to analyse such inverse relationships, citing Krishna Bharadwaj (1974) on the same. The 'efficiency implications' - small farms are touted to be more productive than larger farms - are negated at the crop level.

As regards the correlation with productivity, there seems to be little to no relationship between farm size and productivity in the wet area. The correlation is near to zero and even if statistically significant, it explains very little of the scale factor. According to the authors, in the wet ecotype almost all land is irrigated but there arises a difference in the quality, especially in terms of the level, location and soil fertility (Athreya, et al., 1986; p. A10). In such a situation, the uniformity of an assumption of a smaller farm size leading to a larger productivity stands negated, vis-à-vis the other farm, non-farm, labour and non-labour inputs that factor into the determination of productivity.

In the same vein, the authors point out the necessity of efficiently utilised inputs in determining the yield and the productivity of the crops. The authors infer that the intensity of inputs and class structure are more important to the question of productivity than are the general notions of farm size and value of inputs. This has been concluded after extensive research conducted on the two ecotypes, the existent class structure analysis and the inputs utilised in the cultivation of the different crops. This can thus be said to be conclusive evidence to the fact that farm size has little bearing on the productivity and general stereotypes of a scale-factor have been dismissed in such agrarian discussions.

3.3.2: Usage of Farm Implements

Before we analyse the failure of the Green Revolution reforms, we can study the provision of fertilisers and the subsidies provided to the fertiliser usage and production in the state. Besides studying the fertiliser usage, it should also be borne in mind that irrigation was one of the important factors that aided the continuous growth of the agricultural sector in the years since 1950. Well, tank and canal irrigation have amply supported the agricultural farmers and have provided a considerable
support to the further development of the sector, in fact being instrumental in the shift from dry to wet land farming in the sixties. Farming implements and the level of mechanisation also play an important role in the cultivation process. A closer look at the input utilisation-farming implements, mechanisation, fertiliser usage and irrigation shall be studied in the following sections.

It must be borne in mind that usage of inputs, whether irrigation, fertilisers and pesticides or irrigation facilities are closely linked to one another. The analysis of one factor always affects the usage or the implementation of the others and agriculture in Tamil Nadu cannot be studied by accounting for just one of the input factors. The agricultural implements utilised in Tamil Nadu can be understood from the following figure. Figure 3 shows the utilisation of agricultural implements over the years, starting 1961, chronicled by the Quinquennial Livestock Census of Tamil Nadu.

From Figure 3.1 we can clearly see the pattern of agricultural implement usage in Tamil Nadu over the years. Ploughs stand to be the most utilised in terms of mere numbers. While their usage has reduced over the years, it is still very evident that ploughs are the most relied implements in farming and cultivation. Their figures show a drastic decline from 34,30,102 ploughs used in 1961 to a mere 7,55,183 ploughs used in 2004, after having increased initially in 1966. Carts have always been lesser utilised than ploughs, but more than pumps, tractors and oil engines. They have shown a steady decline since 1961 onwards, reducing to 1,55,857 carts in 2004 from 6,64,544 carts in 1961. Tractors, pumps and oil engines have started to be used frequently only since 1994. As of 1989, electrical pumps became the second most used farm implement after ploughs. Tractors in usage were very erratic; while they showed steady growth until 1994, the numbers increased tremendously in 1997 to 1,95,845 tractors and drastically declined to 69,391 in 2004.

Figure 3.1: Use of Agricultural Implements in Tamil Nadu, 1961-2004

Source: Quinquennial Agricultural and Livestock Census, Tamil Nadu (various years)
On a more detailed level, we can see that the entire utilisation of farming equipments has reduced since 1961. This only indicates that the level of farming activity on the whole has reduced in the state. 1966 saw a general increase in almost all farm implements, except for carts utilisation. This was the year of the Green Revolution implementation and all farm equipments grew steadily during that period. The more modern farming implements, such as tractors, oil engines and electrical pumpsets saw a general increase in their numbers since the Green Revolution period. Mechanisation of farming would have been possible had there been better incentives for farmers. Those with large tracts of land couldn’t effectively cultivate with ploughs and carts; tractors and pumps would involve greater costs and electricity utilisation. Subsidies will have to be provided, if increased levels of farming are envisaged to the state. However, this situation looks dreary as was pointed out by Harris-White and Janakarajan, when they said:

“...The Indian state is poised to privatisate certain state electricity boards and to remove the considerable subsidies to agricultural electrification. Meanwhile subsidies on fertiliser have been partially removed and its price structure reorganised. Rural banking is to be deregulated with concessional credit more tightly targeted. The price bias against agricultural products is being rectified, with increases in the prices at which food is purchased by state agencies, though there is little sign of any more radical change in the provisioning role of the state...”(Harris-White and Janakarajan, 1997; p. 1469)

3.3.3: Fertiliser Usage and Subsidy Provision

In the case of fertilisers, there seems to be moderate growth since the sixties. According to Kurien, C.T., (1980),

“...consumption was very low in the early fifties and shows rather slow increase upto early sixties. With the introduction of high yielding varieties programme in the mid-sixties there was a visible increase in the use of fertilisers which picked up again substantially by 1973-74. Per unit of cropped area, the consumption of fertilisers was only around 2 kg per hectare in 1951-52, and by the beginning of the sixties had only gone up to a little over 6 kg per hectare. In the next five years there was a big jump to 22 kg per hectare which increased to almost 26 kg per hectare by the end of the decade. The seventies again saw a substantial increase in the use of fertilisers, the final figure being 44 kgs per hectare...” (Kurien, 1980; p. 377)

By the 1990s, fertiliser usage, especially that of Nitrogenous fertilisers had increased steadily. As of 1990-91, Nitrogenous fertiliser component amounted to 4.56 million tonnes and the phosphate and potash fertiliser components showed figures of 1.87 and 2.09 million tonnes respectively. Maintaining the NPK ratio of applying fertilisers, we can see that the increase in the quantity of Nitrogenous fertiliser produced exceeds that of the phosphate and potash fertilisers (liquid). Aiding this would also be the subsidies provided by the government; however, as there has been a considerable drop in the government subsidies and price increases, the rate of increase in production has decelerated. However, the fertiliser usage remains one of the most prominent features in Tamil Nadu agriculture. Attempts at ‘organic farming’ and e-farming are in place by the government to revive the floundering sector (Government of Tamil Nadu, Policy Document on Agriculture, 2012-13).
Table 3.6: Amount of Subsidy Paid to Fertiliser Producing Units in Tamil Nadu (1997-2000)

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<tbody>
<tr>
<td></td>
<td>Tamil Nadu</td>
<td>NLC, Neyveli</td>
<td>45.51</td>
<td>51.83</td>
<td>63.97</td>
<td>25.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPIC, Tuticorin</td>
<td>206.02</td>
<td>332.59</td>
<td>352.2</td>
<td>436.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MFL, Madras</td>
<td>34.67</td>
<td>49.62</td>
<td>170.67</td>
<td>321.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EID Parry</td>
<td>0.92</td>
<td>0.48</td>
<td>0.65</td>
<td>4.31</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>-</td>
<td>4743</td>
<td>6600</td>
<td>7473</td>
<td>8670</td>
</tr>
</tbody>
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Compiled from the statistics released by: Rajya Sabha Unstarred Question No. 3427, dated 25.08.2000; accessed at www.tamilnadustat.com

Table 3.6 reveals that with the exception of SPIC, Tuticorin and MFL, Madras, the fertiliser subsidy provided to the remaining production units was paltry and has shown very little growth over the years and has in fact declined in the case of NLC, Neyveli. In a span of three years, the subsidy provision had declined from 45.51 crore rupees in 1996-97 to a mere 25.32 crore rupees in 1999-2000. In the case of SPIC, Tuticorin however, there seems to an increase in the total subsidy provided, even if in real terms the provision has increased only marginally. However, in the production unit based out of Madras, namely MFL, there seems to be a drastic increase in the provision of subsidy. While in 1996-97 and 1997-98, the increase in provision was believable, the exponential increase in 1998-99 is surprising. Given the decreased agricultural activity in the state during the period, this sudden impetus to one producing unit remains baffling. The increase was in 1998-99 was more than four times the provision within a span of two years. One possible explanation that was provided by the state in its Budget Document (2000-2001) was that a total subsidy of 25 percent was sanctioned to fertiliser producing units to eradicate Ipomoea weed growth in irrigation channels in the Cauvery delta (Government of Tamil Nadu, Budget Document, 2000-01). The interesting fact is that fertiliser subsidy increase in the remaining units was more gradual, vis-à-vis MFL, Madras. In fact, even during 1999-2000 there was a decline in the NLC units, while there were still further increases in the MFL unit and a gradual but steady increase in the SPIC and EID, Parry units.

On the whole, fertiliser subsidy provision in Tamil Nadu has reduced, with erratic changes in the increases in production quantities. While the liquid fertilisers remain the more abundantly produced, the dust and liquid pesticides produced also showed steady increases, especially between 1990-91 and 2008-09. The pesticides growth also showed remarkable increases in the years 1998-99 and 2000-01. Both dust and liquid fertilisers have shown an increasing trend with 2,870 tonnes in 1990-91 to 6,408 tonnes in 2008-09 in the case of dust pesticides; liquid fertilisers also showed improved figures starting at 3.78 lakh litres in 1990-91 and increasing to 4.44 lakh litres in 2008-09 (Season and Crop Reports, Tamil Nadu (various years)). On the whole, while there has been a general decline in the total provision of subsidies to fertilisers and pesticides as cited by Harris-White and Janakarajan, there has also been a decrease in the irrigation facilities that have been closely linked to the fertiliser.
provision. The next section will analyse the irrigation facilities that have been undertaken in the state over the years.

3.3.4: Irrigation facilities and patterns

Tamil Nadu has been divided into compact irrigation zones as follows:

The tank irrigated areas are predominantly in the Cauvery delta; the main area of which stretches from Pudukottai right until Ramanathapuram. On the other hand, the well irrigated areas are concentrated in areas where there’s a predominance of red and black soils. Dry areas are also to be found along the coastal areas and by the Karnataka border. However, the socio-economic conditions in the rural areas predetermine the irrigation facilities which are also determinants for the settlement and absorption of the labourers. Excessive groundwater usage has led to a fall in the water levels and over irrigation has resulted in soil salinisation (Guilmoto, 2002; p. 1228).

Commercialisation of agriculture has become intrinsic to what can be termed as ‘cultured development’, however mainstream the idea. A case in point is the cultivation of ‘tapioca’ or ‘sweet cassava’ in the Koli Hills for the sugar processing factories in the lowlands. The villagers receive a perception of being cultured\(^{14}\); tapioca is highly dependent on rainfall, there’s a lesser requirement of labour and irrigation facilities need not be exercised. However, the return from such crops and the flexibility of crop cultivation is lost in such a case as there is very little to expand upon if the rainfall conditions don’t suit the needs of the villagers.

**Figure 3.2: Irrigation Systems in Tamil Nadu, 1989-2008**

![Irrigation Systems in Tamil Nadu, 1989-2008](image-url)

**Source:** Season and Crop Report, Tamil Nadu (Various issues)

\(^{14}\) This perception of culture arises from the fact that the majority of the population do not involve themselves directly in manual agriculture. Processing factories utilise labour and the presence of such factories enables belief of being cultured and ‘developed. For more on the same, refer Guilmoto, 2002.
As regards the irrigation facilities in the state, the canal and tank irrigation facilities have shown consistency in numbers ranging between 2000 and 2500 canals between 1989-09. Direct-to-irrigation purpose wells are the only sources that range greater than 16,00,000 in Tamil Nadu. This shows the dependency on wells for irrigation purposes. By that measure, tube wells have also been highly utilised in Tamil Nadu. Figure 3.2 shows the irrigation facilities in Tamil Nadu as of 2008.

As of 2007-08 there are 2,99,892 tube wells, an increase of over 2 lakh tube wells in a span of nearly 20 years since 1990. The tremendous dependence on well irrigated lands can be seen from these figures. However, the number of irrigated wells has reduced from 16 lakh wells in 1989 to close to 14 lakh wells in 2008. The previously explained irrigation shortage in the state is further corroborated by a TNAU study on the River Basins in Tamil Nadu that explains how out of the 1.8 million wells in Tamil Nadu, approximately 10.0 percent of those wells are defunct (Palanisami, Ranganathan, et al., 2011; p. 37). This could attribute to the decline in the well irrigated facilities in the state. Further it must be noted that it is the big and large farmers and landlords who have the access to private wells and irrigation facilities; small, medium farmers and landless labourers are at the disposal of the government fed tank irrigated lands. Figure 3.2 depicts that since 1989 onwards tank irrigation has remained stagnant at less than 2 lakh tanks operating throughout the state.

The tank and canal irrigated areas being primarily in the Cauvery delta and in the coastal areas don’t need excessive irrigation as has been evinced by their steady figures, growing only marginally in the decades after liberalisation. Crops that rely on rainfall have taken a back seat and irrigated crops have taken predominance in the crop cultivation in the state. However, the per capita water availability in the state has drastically reduced to 723 per capita cubic meter in 2001 from higher levels at 1333 per capita cubic meter in 1961. This has also caused a depletion of surface water in Tamil Nadu from 717 per capita cubic meter in 1961 to a mere 389 per capita cubic meter in 2001. The reasons for such depletion can be attributed to the population explosion in the state and an increased usage of water in the industrial sectors (Palanisami, Ranganathan, et al., 2011; p. 38). The authors further state that,

“...The age old structures, inadequate maintenance, encroachment in the catchments and foreshore areas, large scale siltation, the live practice of fragmentation of holdings, lack of institutional arrangements for the supply of water, widespread deviations from the intended cropping pattern, seepage, percolation, evaporation, diversion of ayacut for non-agricultural purposes, excessive drawal in the upper reaches, unauthorized drawal etc. have caused a wide gap between the potential created and its utilization in the case of surface flow sources of irrigation in the State...” (Palanisami, Ranganathan, et al., 2011; p. 40)

Not only has the surface water declined drastically, urging water resource management in the state, but the groundwater resources are also critically utilised. The latest figures for groundwater usage stand at 86 percent of its potential. However, the distribution of the untapped groundwater potential is also distributed according to safe (tapping potential over 70 percent), semi-critical (tapping potential varies between 70-90 percent) and critical blocks (tapping potential less than 100 percent but greater
than 90 percent). The 183 blocks in the state that fall under the critical category have over exploited
the groundwater potential and thereby, the state on the whole shows a general over usage of its
groundwater resources reducing the recharge capacity of the state (TNAU, 2011; p. 42).

These statistics have been provided only to show the declining water capacities and how the shortage
of water facilities will impact irrigation in the state. In such situations, expecting small and medium
farmers to fend for themselves will only urge them towards pursuing non-agricultural occupations. An
interesting study shows that big farmers who can afford private well irrigation facilities also lack
initiative and incentive to manage the tanks, leading to a fall in the collective management of the
tanks (Kajisa, Palanisami, Sakurai, 2006; p. 3). Therefore, farmers who have access to private wells
manage to sustain and receive higher yields, enabling them to employ those without such access as
labourers on land. However, if incentives are greater in non-agricultural occupations, then those who
can ill-afford private wells opt to move out of agriculture.

On the whole, the primary sector has seen more reductions in the growth process than an actual
positive performance over the years. With heavy mechanisation and improved and efficient farming
practices, the need for the agricultural labourers has reduced, contributing to the increase in the
landless and the previously described ‘proletariat’ of the primary sector. This has also resulted in the
overall stagnation in the primary sector; a second ‘Green Revolution’ as envisaged by the existing
government would be impossible to implement in the light of such glaring distortions in the
production and the performance of the sector.
Chapter 4

Summary and Conclusions

Over the course of three chapters, we have analysed and dissected the economy of Tamil Nadu from its pre-colonial stages to its most recent achievements until 2011. A consolidation of the economy; its transformation from being a primary sector driven economy to one flourishing on secondary sector incomes and tertiary sector growth will be presented by way of the author’s findings and analyses. Further, the rural economy as was studied in the third chapter will also be looked at. The final inferences drawn will solely be on the observations of the trends in the growth trajectories of the state and the studies conducted on such changes through the years.

Industrial growth has been of immense importance to the state, starting the decade of the 1980s. Following the period of stagnation in the seventies, preceded by a period of slow growth, the eighties was a new decade for the state that saw improvements in the secondary sector performance. This can be categorised as follows:

First, the entire contribution of the secondary sector to the NSDP of the state increased to the tune of 30.0 percent as of 2011-12. The secondary sector contribution can be divided along the lines of several industries that have since then flourished in the state.

Second, the composition of the secondary sector has taken a drastic turn with heavy emphasis on the manufacturing sector. Contributions from the Automobile and Components industry has increased to 30-35 percent and the Leather and Tanning industries have also increased their contribution to the secondary sector incomes by 35-40 percent of the total NSDP. This has steadily increased the overall incomes of the secondary sector, from 20.27 percent in 1960-61 to 28.48 in 2005-06. The contribution of the manufacturing sector (registered and unregistered) increased from 14.76 percent in 9160-61 to 20.11 in 2005-06.

Further, the tertiary sector has also played an important role in augmenting the incomes of the state in the light of the lowered performance of the primary sector. Incomes from the IT and Enabled Services sector has increased to 15 percent as of 2011-12. Services such as banking and insurance and transport and communications have increased since the 1960s with figures for the same at 8.03 percent, 6.97 percent and 3.92 percent respectively as on 2005-06 from their 1960-61 levels. The total contribution of the sector has thus increased from 36.22 percent in 1960-61 to 57.61 in 2005-06.

Figure 4.1 depicts the growth in the secondary and the tertiary sectors between 1960-61 and 2005-06. We can see that the growth in the tertiary sector has overtaken the growth in the secondary sector and has been more stable over the years. Secondary sector performance has definitely been increasing over the years, albeit a slight fall in growth rates starting 1999-00.
However, with increased industrialisation and transition into a tertiary sector growth driven economy, there hasn’t been a subsequent change in the employment, poverty and inequality levels in the economy. The acute landlessness and the obsolete agricultural sector in the state could be one of the reasons for the non-absorption of the labour force in the secondary and the tertiary sectors and the over-population in the primary sector (Athreya et al., 2008; p. 55).

Another valid reason for such increasing labour force rates could also be the result of the population explosion in the state. Between 1961 and 2001, the state’s population has grown from 33.69 to 62.41 million. This staggering growth in the population has also led to an increase in the category of the population that is seeking employment. However, surveys done by the NSSO as on 2009-10 show that the LFPR in the rural and urban areas has drastically reduced for the females. The gender disparity in the employment patterns still exist to a very large extent in Tamil Nadu, with unequal wage structures and exclusion of female employees in several secondary and tertiary sector occupations that are gender neutral. The overall LFPR for the state has also decreased in 2009-10, with male LFPR only accounting for 612 rural male labourers as against 582 urban male labourers in 2009-10.

These factors have severely constricted the economy’s poverty alleviation and increased the inequality levels. It doesn’t come as a surprise that Tamil Nadu thus rates as the most unequal state in terms of the levels of inequality between social groups. Himanshu (2007) and Kannan (2011) in their studies chronicling the poverty and inequality trends in the country also profiled the status of Tamil Nadu with respect to the poor and vulnerable sections of the population. Results of Himanshu’s study showed that different poverty indicators place states in different position vis-à-vis poverty alleviation.
However, it has come to be clear that Tamil Nadu has achieved a mid-level status in the alleviation or the reduction of poverty through the years. While there has been an actual reduction in the headcount ratio, from 54.8 in 1983 to 22.7 in 2004-05, the levels of inequality have remained stagnant and in some cases even increased through the same period. Kannan’s study on the poor and vulnerable sections (P and V) of the population places Tamil Nadu at the foremost position in terms of the existing inequalities between the social groups. In fact, the inequality could arise as a result of the very high engagement of the socially backward classes and minorities involved in the informal sector of the state. Close to 95.0 percent of the state’s SCs/STs, Muslims, OBCs and Other castes are involved in the informal sector.

This diversity in the distribution of incomes can be seen across the districts of Tamil Nadu as well. There are distinct categories of better performing and low performing districts in the state, with Chennai, Kancheepuram, Madurai, Coimbatore and Thootukudi as the highest grossing districts in terms of their PCIs; Villupuram, Sivagangai, Thanjavur, Thiruvarur and Thiruvannamalai as the least grossing districts. It is interesting to note here that Thanjavur and Thiruvarur are districts known for their extensive acreage in terms of the cultivation of paddy and certain other cereals. It is revealing therefore that incomes from these regions are the lowest in the state, indicating a clear shift in the state’s income generation avenues. Chennai and Kancheepuram are textile hubs in the state, with retail and up-market chains present in these regions; agricultural growth from these regions is negligent and in the case of Chennai not applicable; yet the incomes from these regions are the highest recorded in the state.

This can be studied by the declining productivity figures in the state for the principal crops such as paddy, cholam, cumbu, other cereals, groundnuts and pulses. Sugarcane however, has shown increasing rates of growth over the years starting the 1960s, with close to 392.50 lakh metric tonnes produced in 2009-10. The increasing area under sugarcane cultivation in the regions of Erode and Villupuram has constantly led to greater production from these regions. It is thus evident that despite increased production and yield from these regions, the incomes from such production were insufficient to meet the PCI expectations of the state. It remains to be seen if the agricultural incomes would suffice to be sustaining in the long run, with increased migration and expansion in the secondary and tertiary sectors.

In the light of the aforementioned, it is important to understand that the agricultural sector has shown declining figures since the 1970s. Even with the implementation of the Green Revolution and its initial success in the state, there has been a subsequent stagnation in production and consequent decline in the sector’s performance overall. This can be seen from the annual compound growth rate of crops between 1960-61 and 1995-96 that only saw a 1.4 percent increase in the production of total food grains, even while the area under these food grains reduced by 0.7 percent. Similarly, in the case
of the non-food grains, the growth was only a 0.8 percent increase in terms of the area under cultivation. It can be categorically stated that the ‘commercial crops’ and the non-food grains found more demand over the years than did the traditionally demanded crops, save for paddy (rice).

The lowered incomes from the regions of Thanjavur, Thiruvarur, Sivaganga and Villupuram thus are the results of the non-absorption of the production and yield of the primary sector into the economy’s income generation avenues. Further, the acute landlessness in the state and the decreasing size of land holdings only contribute to the lowered performance of the primary sector. As of 2000-01, the average size of land holdings had diminished to 0.89 hectares from 1.4 hectares in 1970-71. With decreased sizes, decreased acreage for most crops, except for sugarcane and decreased incomes from yields, the agricultural sector performance in the state has become worrisome despite showing signs of growth in the initial phases of growth.

Moreover, increased mechanisation and adoption of technologically advanced methods of farming have reduced the incomes of those farmers who can ill-afford the expensive implements and irrigation facilities. In fact, the reliance on the tank irrigated facilities has collectively declined in the state due to the non-management of the tanks and the desire to move out of agriculture by the small and medium farmers. Further, an acute depletion of the groundwater resources in the state has also heavily stressed the small and medium farmers who are dependent on the government for the tank and canal irrigated facilities. Large farmers and big landlords who have access to the private tanks and wells may implement their resources for cultivation, thereby further decreasing the opportunity for the small and medium farmers to flourish. In fact, the overall irrigation facilities in the state are heavily stressed as there is an acute water shortage in the state, led by alarming levels of depletion of groundwater resources with 183 blocks in the state having over exploited their groundwater resources.

Having understood the existing scenario of the rural economy of the state, we can also state that the agricultural incomes have steadily declined during the period of study. While the money wages may have shown increasing figures, the increased prices and the non-proportionate growth in the consumption expenditure have severely drained the real wages of the labourers. Landlessness, gender disparity in the provision of the incomes and an overall stagnation in the primary sector have collectively reduced the sector’s performance on almost all important fronts. This can also be one of the reasons for the increased migration seen in the state that has led to the urban characterisation of certain regions.

While Chennai’s urban nature can be characteristic of its growth and development, contribution to the overall NSDP of the state, its non-performance in the agricultural sector is evidence of the growing reliance on the secondary and tertiary sector incomes in the state. It is thus conclusive of the fact that several rural economy oriented regions such as Thanjavur, Thiruvarur, Erode, Salem, etc., that have some of the most extensive acreage and production figures for paddy and sugarcane don’t find a place
among the highest grossing districts in the state. Increased urbanisation and growing industrialisation have replaced the decelerating primary sector in terms of income, and welfare indicators get overshadowed by high income figures.

Further characterisation of this income disparity and overall welfare indicators can be studied from the Tamil Nadu Human Development Report, 2003. The study profiles regions based on not only their income levels but also on the basis of the literacy and GER ratios along with the longevity indices. The latter indices show a different picture of the highest performing districts. Chennai’s high income still places it as one of the better performing states in terms of all three HDI indicators, followed by Kanyakumari. However, Coimbatore, Madurai and Thiruchirapalli also show high indices for longevity and literacy.

In conclusion, we can say that the rural transformation of the economy has been erratic over the years, with increased tendency towards industrialisation. Agricultural success has thus become a luxury of the rich farmers and the big landlords who have distinct caste labels attached to their occupations. The social transformation in the rural areas is yet to happen; provided the inequalities in the distribution of incomes and the occupational diversification reduce, the social transformation thus leading to a positive transformation of the rural economy in Tamil Nadu would be impossible. Agriculture remains stagnant and the reasons have been encapsulated above. In the words of C.T. Kurien,

“…the changes in the rural areas have been induced changes. Frequently the changes came as a result of decisions taken outside the rural areas…” (Kurien, 1980; p. 389)

This can be characteristic of the small and medium farmers, especially in the rural areas who have been pushed out of agriculture and have become agricultural labourers or have engaged in allied activities. The rural structure of the Tamil Nadu economy cannot be captured by just the changes in the agricultural sector but will also have to be seen in terms of exogenous factors driving the growth of the economy. In this case, it is the growth of the secondary and the tertiary sectors. Growth in these sectors resulted due to the redundancy in the primary sector, induced by migration of the rural people. Skilled labour moving out of agriculture and involving themselves in allied occupations boosted the incomes of the secondary sector.

“…The totality of changes that we have observed has been brought about essentially through a transformation into modernity of traditional agriculture via technological innovation. But technology has had differential impact on different sections in rural society. The problem, however, has not been of technology itself. Making water available, increasing the productivity of land through better farming practices, etc. are in themselves beneficial. We have seen also that the technology adopted in Tamil Nadu was essentially scale neutral. The problem really is that technology is seldom socially neutral…” (Kurien, 1980; p. 390)

While Kurien studied the transformation of the rural economy in the eighties and postulated the above mentioned, the situation holds true for the state even in recent times. Change without an actual
structural transformation still exists in several pockets of the state. Industry induced changes have severely affected the growth dynamic, making Tamil Nadu an unbalanced state in terms of its growth profile. While on the one hand, industry and the tertiary sector are growing at a fast pace, there is also a declining primary sector that still employs a substantial percentage of the rural population. Female participation in labour in the state is still heavily concentrated in the primary sector. Several such indicators further handicap the proper transformation of the rural economy.

While there is abundance in the more modern sectors of the economy, informal sector occupations employing close to 95.0 percent of the socially backward castes in the state speaks volumes of the social inequality that is prevalent. Without proper social mobility and transformation, there cannot be a complete structural transformation and the case of Tamil Nadu tests true for the same. Upward mobility in caste and class levels still remains rigid in the state; concentration of land in the hands of the upper castes and the socially dominant castes, inherent caste based discrimination and the non-flexibility of the system to account for changes in the ownership patterns further hinder any progressive step towards bettering the agrarian scenario in the state. In fact, as Athreya at al., (2008) show that despite the smaller congregation of the Brahmins and the other dominant castes in terms of absolute numbers in the agrarian population, their dominance in the cultivation and the hierarchy in the agrarian population remain undisputed in the rural areas. A deeply entrenched reverence towards the upper and the dominant castes in the minds of the lower castes (who invariably are the landless agricultural labourers, the ‘proletariat’) doesn’t allow for the complete social neutral structural transformation of the state.

Therefore, in conclusion we can say that, while the state has shown remarkable performances in the secondary and tertiary sectors, its rural economy has become stagnant and in some cases, deteriorated over the years. Production and yield figures might have increased in figures, but the real growth has reduced between 1960 and 2011. In fact, even extreme figures of production in the state, vis-à-vis principal crops (sugarcane) remain insufficient to meet with the increased income figures projected by the other sectors in the state. Therefore, despite efforts by the government to boost the fading primary sector, the rural economy remains backward calling for immediate and efficient policy implementation to bring about an actual transformation, not only monetarily but also on a social level.
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