WORKING PAPER

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GANGAIKONDAN 1916-
CHANGE AND STABII

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Chapter I: Introduction

In the large and growing literature on economic development in rural India, an important place is occupied by micro level 'Village Studies'. Recently there has been a spate of such studies.[1] The present study relates, however, to a set of village studies carried out much earlier. Twelve villages belonging to the Madras Presidency were studied in the year 1916 by students of Dr.Gilbert Slater, then Professor and Head of the Department of Economics, University of Madras, under his guidance.[2] Eight of these villages were surveyed again in 1936-37 and one in 1934.[3] Five of the villages which were thus resurveyed are located in Tamil Nadu.[4] Recently all these five villages have been studied again.[5] The study being reported here is that of the village of Gangaikondan located on the Tirunelveli-Madurai national highway at a distance of twelve miles from Tirunelveli.

This study of Gangaikondan was carried out in 1983-84. The fieldwork commenced in October 1983, but was repeatedly interrupted due to a number of unforeseen reasons. The fieldwork was completed only in June 1984. Altogether ten man-months of investigator time was expended in the field work. Mr.R.Vidyasagar, Mr.G.Jothi and Mr.Janardhanam did the fieldwork. I visited the field twice and also guided the investigation through periodic discussions with the investigators.

Methodology

The methodology adopted in this study is somewhat different from both those adopted in the earlier studies of this village and from those used in the recent resurveys of the other four villages. The first and second surveys of the village, carried out in 1916 and in 1934 were based

largely on unstructured interviews and observation by the investigators. A third survey carried out in 1958-60 involved a census of all households in the village and systematic collection of economic data from all households.[6] The recent resurveys of the other four villages - Iruvelpattu, Palakurichi, Vadamalaipuram and Dusi - used a census-type houselisting inquiry, and followed it up with detailed studies on a sample basis of various specific aspects of the village economy such as the conditions of agricultural labourers, costs of cultivation, forms and terms of tenancy etc. In the present study it has not been possible to conduct a complete economic census of all households. Even the brief houselisting questionnarie has been canvassed only on a sample basis. This is because of the rather large size of the village - 1403 households and a total population of 6333 as per the 1981 census - and the limited time and resources available to the project of which this study forms a part. However, a fairly large sample -- one-third of all households- has been taken. On the basis of the results from the houselisting inquiry, small sample studies of specific aspects of the village economy were carried out. Included among these aspects were tenancy, costs of cultivation, conditions of agricultural labour and land distribution.

Overview

Nearly seven decades have elapsed since the first survey of Gangaikondan was carried out in 1916. One would naturally expect significant economic and social changes to have occurred during this period, and especially since Independence. In the succeeding chapters, an attempt is made to provide both a picture of the changes that have occurred and a picture of the economy and society of the village at present. However, in view of the differences in both scope and method between the present and earlier surveys, it has not been possible

to provide a thorough comparative account. Secondly, in view of the large size of the village and the constraints of time and resources within which this work had to be carried out, it has also not been possible to provide a comprehensive picture of the society and economy of the village as of the present.

The study is divided into eight chapters, of which the present constitutes the introduction. In the next chapter, we examine the trends in the population of the village since the time of the first survey. We then study the changes in the structure and composition of the labour force. The fourth chapter reviews the changes in the social infrastructure of the village, covering mainly literacy and education, health and sanitation, and transport, communications and other services. We then turn to an analysis of agriculture, the major sector of the economy of the village. The analysis looks at irrigation, cropping patterns, costs of cultivation and returns to agricultural investment. Subsequently the distribution of land and other assets, and the nature of tenancy relations are examined. This is followed by a study of changes in the conditions of agricultural labour over the decades and the changing nature and importance of non-agricultural activities. The concluding chapter seeks to assess from an overall perspective the major economic and social changes that have occurred in the village over the last several decades.

Acknowledgements

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ICSSR for the financial assistance provided and the MIDS for the administrative, clerical and other assistance extended by them. Apart from this, I should especially like to thank Dr.C.T.Kurien, Director, MIDS, and Mr.S.Guhan, Senior Fellow (and Project Director), MIDS. I am also indebted to Dr.A.Vaidyanathan, Senior Fellow, MIDS, for comments on an earlier draft.

The material for the present study has been obtained through the painstaking and thorough field work performed by the project investigators Mr.R.Vidyasagar, Mr.G.Jothi and Mr.T.Janardhanam. I am grateful to them for their research assistance. I am also grateful to Mr.J.Robinson of MIDS for typing assistance and to Mr.V.Mohan of MIDS for cyclostyling the final product.

My debt to the people of Gangaikondan -- in particular, the sample respondents -- is immense. I am also grateful to government officials at the district, taluk and village levels for the assistance provided.

Last and most important, it gives me immense pleasure to acknowledge gratefully the most detailed and helpful comments made by Dr.K.Nagaraj of MIDS on parts of an earlier draft. Constraints of time and data limitations have prevented me from fully benefiting from Dr.Nagaraj's comments and incorporating his suggestions.

The responsibility for all the shortcomings that remain is entirely mine.

1. See S.Guhan, Village Studies in Tamil Nadu, MIDS Digest Series No.1, MIDS, Madras, 1980, for a good bibliography.

2. Gilbert Slater (ed), Some South Indian Villages, Oxford University Press 1918.

3. P.J.Thomas and K.C.Ramakrishnan (ed), Some South Indian Villages: A Resurvey, University of Madras, 1940.

   The village of Gangaikondan was surveyed in 1954 by B.Natarajan. It had been surveyed in 1916 by P.S.Lokanathan.

4. These are Dusi (North Arcot), Gangaikondan (Tirunelveli), Iruvelpattu (South Arcot), Palakurichi (Thanjavur) and Vadamalaipuram (Ramnad).

5. These studies are reported in the following:

   i) S.Guhan and Joan P.Mencher, Iruvelpattu Revisited Madras Institute of Development Studies, Working Paper No.28, September 1982.

   ii) S.Guhan, Palakurichi: A Resurvey, Madras Institute of Development Studies, Working Paper No.42, November 1983.

   iii) V.B.Athreya, Vadamalaipuram: A Resurvey, Madras Institute of Development Studies, Working Paper No.50, August 1984.

   iv) S.Guhan and K.Bharathan, Dusi: A Resurvey, Madras Institute of Development Studies, Working Paper No.52, December 1984.

6. "Gangaikondan : A Survey of a Suburban Village in Tirunelveli District, Tamil Nadu", Agricultural Economics Research Centre, Department of Economics, University of Madras 1969, hereafter referred to as AERC report.

Chapter II : Population Trends

Gangaikondan is an unusually large revenue village. According to the 1981 census, the total area of the village comes to 6488-89 hectares. It consists of ten hamlets which do not form a close cluster but are scattered around the main hamlet of Gangaikondan proper. Over the years, the population of Gangaikondan has grown steadily. As per the census of 1981, there were 1403 households occupying 1401 residential houses and making up a population of 6333, consisting of 3110 males and 3223 females. The population estimate for 1984 based on an one third sample of the households is 6501 consisting of 3210 males and 3291 females. Table 1 presents figures of the population of Gangaikondan for the census years from 1881 to 1981, and for the four survey periods of 1916, 1934, 1958-60 and 1984. The decadal variations in the population figures for Gangaikondan, Tirunelveli taluk and the district as a whole between 1901 and 1981 are shown in Table 2.

It is evident from Table 1 that the population of the village has grown steadily since 1941. However, the growth rates for the decades 1921/31, 1931/41, 1941/51 and 1951/61 would seem to be well below the natural rate of growth. The growth has been rapid only since 1961. The picture prior to 1941 is rather different. The population grew slowly between 1881 and 1901. The growth from 1901 to 1921 was rather rapid. But this was followed by a sharp decline between 1921 and 1931, and it was only towards the end of the nineteen fifties that the population level reached and began to exceed the figure for 1921. Natarajan suggested in 1934 that the decline in population between 1921 and 1931 was to be accounted for mainly by the emigration to towns, arising from the decline in the fortunes of village handicrafts, the pressure on land, and the imparting of education

to rural youth which could have 'afforded a townward attraction'.[1] The AERC survey report of 1969 noted that the process of emigration continued upto the time of the survey of 1958-60. While both birth and death rates fell between 1934 and 1958, the latter fell more steeply, with the result that the net groth rate per hundred of population per year rose to 1.4 for the quinquennium 1954-58 from 0.9 for the period 1926-30.[2] Despite this, the population of the village grew only by 2.85 per cent between 1951 and 1961, a decade during which the population of the taluk rose by 14.81 per cent, thus reinforcing the argument that emigration from the village must have continued upto the end of the nineteen fifties.

The period since 1961 has been one of rapid population growth. The growth of the village population has been at more or less the same rate as that of the taluk. The last two decades or so have seen a significant growth in the non-agricultural sector as well as some degree of modernisation of agriculture. Both these developments go to explain the stable growth of population since 1961. A decline in mortality rates would probably constitute an additional factor of some importance in this regard, but in the absence of reliable evidence in birth and death rates, one cannot be categorical.[3]

Caste Composition

The castewise distribution of households and population in Gangaikondan in 1934 is shown in Table 3. The information provided in this table, together with data on the changes in the caste composition of the village shown in Table 4, enables us to obtain a clearer picture of the population trends. At the time of the 1916 survey, Pallars, Thevars (Maravas), Brahmins, Konars and Noopanars (Betalmen) constituted the major castes in numerical terms. The picture

had not changed very much in 1934 when the first of the resurveys was completed, although the share of Brahmin households had declined a little while those of Thevars (Maravas) and Pallars had correspondingly increased. It must, however, be borne in mind that the decline in the share of Brahmin and Kaikolar (weaver) households took place in the context of a sharp decline in population between 1921 and 1934.[4] As Natarajan noted, the 'exodus to towns' was the greatest among Brahmins. Next in importance, with regard to emigration, were weavers, other artisans and Konars.

By 1958-60, distinct changes in the caste composition are evident. The decline in the share of Brahmin and Moopanar households is significant as is the increase of Pallar households. While the number of households nearly doubled between 1934 and 1958-60 from 569 to 1088, the number of Brahmin households increased only from 75 to 97 and of Pillais from 30 to 39, while those of Moopanars (betelmen) declined from 40 to 24.[5] These trends contrast sharply with the increase of other cultivating caste households between 1934 and 1958-60: Konar (from 50 to 117), Pallar (from 161 to 350), Nadar (from 18 to 54) and Thevar (Maravar) (from 105 to 218). The contrasting trends reflect the process of continuous emigration of Brahmins (and to a lesser extent, of Pillais) to towns, seeking urban occupations, especially those requiring formal education. The process of emigration of Brahmin households has simultaneously been a process of acquisition of land from these households by the cultivating castes referred to above, many of whom (especially among the Pallars) were earlier tenants of Brahmin and Pillai landowners. The decline in the number of Moopanar households between 1934 and 1958-60 is the expression of the decline of betelnut cultivation, the reasons for which are not altogether clear.

The trends that operated between 1934 and 1958-60 have continued, and in the case of Brahmins, even accelerated. Our estimates for 1984 in Table 3 show only 36 Brahmin households, a decline of more than sixty per cent from the figure of 97 Brahmin households in 1958-60. Other communities which have virtually disappeared from the village are Kaikolars, traditionally weavers, Velars, traditional earthenware makers and Pagadais, traditional leather-workers. Moopanars have continued to decline in importance, while the number of Asari households (defined to include carpenters, blacksmiths and goldsmiths) has declined marginally from 43 in 1958-60 to 39 in 1984. At the other end, a process of caste consolidation has taken place, with the numbers of Pallar, Thevar (Maravar), Konar and Nadar households having increased rapidly. Particularly rapid has been the increase of Christian Pallar and Christian Nadar households. As will be seen subsequently, these communities — Pallar, Thevar, Konar and Nadar-are also the major landholders in the village, followed by the Pillais.

Finally, on the caste composition, a word must be said about the share of scheduled castes in the population. The data are available only for the censuses of 1961, 1971 and 1981, the present survey in 1984 and the survey of 1916. The definitions adopted differ both as between the two surveys and as between the surveys and the censuses. The figure for 1916 refers to "Depressed Classes", which included both Hindu and Christian Pallars, Parayers, Pagadais, and 'Shanars' (now called Nadars), as also a few Ezhuva and Kudumba households. By 1961, 'Nadars' were no longer classified as 'depressed', but had become a 'forward' community. Also, convert Harijans were not classified as scheduled castes in the censuses. This largely explains why the share of Harijans in the population in 1961 census was only 22.3 per cent while that of the 'Depressed classes' was 31.43 per cent in 1916, although Harijan households had increased

greatly in number between 1916 and 1961. If one includes both Hindu and Christian Harijans among scheduled castes, the share of these households was nearly 35 per cent in 1958-60. If one also includes Nadars, the figure is around 40 per cent. By 1984, the latter figure works out to 45.31 per cent. Since the average household size for the Harijans and Nadars taken together is almost the same as the average size for all households, the proportion of households can be taken to represent the proportion of persons as well.[6] If one excludes Nadar households, then the proportion of Harijan households to the total works out to about forty per cent.

The rapid increase of Harijan and Marava population and the steep decline in the Brahmin population are expressions of a process of transition from Brahmin (and Pillai) landlordism to owner cultivation by the 'agricultural castes', including especially the Harijans.

Migration

The sample data on migration into the village is presented in Table 5. In our sample of 448 households, there were eighty-eight which reported themselves as migrants.[7] Of these, sixty households -- nearly 13.4 per cent of the sample households -- had migrated into the village after 1961. The process of migration into the village seems to be continuing with vigour, as can be seen from Table 5. 45 of the 88 migrant households -- just over half of them -- have migrated into the village after 1971.

The castewise breakdown of immigrants shows interesting features. All the minor castes -- Naidu, Muthuraja, Gounder, Nair, Muslim, Christian and Kamber -- turn out to be immigrants. Practically all of them have migrated into the village after 1961. The other aspect of the picture is that a majority of households belonging to long-established

communities of the village like Brahmins and Pillais are also recent migrants. Out of the 22 Pillai households in the sample, more than a third -- eight - have migrated into the village after 1961. Four of the twelve Brahmin households in the sample have migrated into Gangaikondan after 1971. By contrast, immigration is insignificant among the major landholding communities of Pallars, Maravars and Konars. Even the few immigrant Harijan households are, along with the Muthuraja and Goundar households, repatriates from Sri Lanka settled here in 1973. Pillais and Brahmins have migrated mostly on account of employment, although an additional factor in Brahmin immigration has been the emptying of 'agraharams' (traditional Brahmin quarters) in the villages nearby. Apart from employment, other factors in immigration have been the presence of relatives and the desire to settle in one's native place after retirement.[8]

Age and Sex Composition

The data on sex ratio expressed as females per 1000 males is shown in Tables 6 and 7. The data in Table 7 pertain to castewise sex ratios for 1984. The data in Table 6 pertain to all census years from 1881 to 1981, apart from data for the 1958-60 and 1984 survey periods. The data are separately available for Harijans only for the census years 1961, 1971, 1981 and the present survey year of 1984. The figures do not show any clear trend. Confining ourselves to the period since the last survey in 1958-60, we find that the overall sex ratio declined significantly between 1961 and 1971, but rose again between 1971 and 1981. There is a slight decline between 1981 and 1984. Interestingly, the sex ratio for Harijans has throughout this period moved in a direction opposite to that of the overall ratio. However, in the absence of additional information on such aspects as migration patterns, sex-wise mortality, health status, age

distribution etc. for the period under consideration, one is unable to probe this issue. But the absence of significant waves of immigration into the village and the near-completion of the gradual exodus of Brahmin households, would seem to imply the emergence of a fairly stable demographic structure. The data on the age distribution of males and females for various castes in 1984, shown in Tables 8 and 8a, would appear to support this view. In all the major castes -- Harijans, Thevars and Konars -- the difference between the number of males and the number of females in each age group interval of ten years is quite small.[9,10]

Household Size

Data on the average household size of the population of Gangaikondan for various census years from 1881 to 1981, and for the two surveys of 1958-60 and 1984 are presented in Table 9. The castewise figures on household size are presented in Table 9a.

Average household size declined from 5.27 in 1916 to 4.29 in 1951, possibly reflecting the trend towards nuclear families. Subsequently, the average household size has shown an upward trend (except for 1958-60) upto 1984. The castewise figures for 1984 do not show much variation. Leaving aside the numerically unimportant castes such as Velar, Pandithar and Asari, only the Nadars among the major castes have a significantly bigger household size than the average. In fact the major castes of Pallars (both Hindu and Christian), Thevar, Konar and Pillai have household sizes remarkably close to the mean size of 4.8.

The stability in household size and in other demographic characteristics may be taken to reflect the relative stabilisation of the economy of the village in the post-Independence period.

1. P.J.Thomas and K.C.Ramakrishnan (ed); 'South Indian Villages: A Resurvey', p.58. Dr.K.Nagaraj has pointed out to me that the sharp decline in population between 1921 and 1931 might in part represent movement back to other places (towns) nearby of people who had migrated to this village in the second half of 1911-21 decade during the Influenza epidemic.

2. "Gangaikondan", village survey report No.56, Agro-Economics Research Centre (AERC), University of Madras, 1969, p.113.

3. The data records on births and deaths maintained in the village are most unreliable. Data for 1980, for instance, record 149 births but only 2 deaths. The data for 1978 record 148 births and 36 deaths. The birth rate figures, it would seem, are perhaps less unreliable. The birth rate works out to roughly 2.5 per hundred persons per year, down from an average of 3.5 for 1911-1930 and of 2.8 for 1954-58 reported in the AERC survey. The death rate for 1978 at 36 persons works out to 0.6 per hundred persons, which seems rather lone. The simple annual average rate of population growth of 1.5 per cent for the decade 1971-81, worked out from Table 2, would suggest a somewhat higher death rate. One is inclined to conclude that perhaps both births and deaths are under-reported, the latter to a much greater extent.

4. It must be further noted that even where the number (or share) of caste households did not decline, emigration could have taken place while subdivision of the families remaining in the village would have kept the number (or share) intact or even increased it. Natarajan specifically pointed this out in his report.

5. AERC Survey Report, p.118, Table VII.3.

6. The exact ratio of Harijans and Nadars taken together to the total number of persons, for 1984, is 44.9 per cent. If one excludes Christian Pallars, and sticks to the definition of scheduled castes used in the census, the proportion of SCs to total population in 1984 becomes 21.65 per cent, very close to the average figures for Rural Tamil Nadu at 21.85 per cent and Rural Tirunelveli District at 20.03 per cent in 1981.

7. A household has been defined as migrant if the (present) head of the household is a migrant.

8. The following table suggested by Dr.K.Nagaraj, brings out sharply the points made in the text regarding castewise migration:

Caste	No. of migrant households	Migrant households as a per cent of households in the caste	
I) High proportion of immigrants:			
1. Pillai	14 (15.91)	63.64%	*: Muthuraja, Gounder, Muslim, Christian, Nair, Kambar
2. Brahmins	7 (7.95)	58.33%	
3. Others*	14 (15.91)	100.00%	
II) Moderate proportion of immigrants:			
1) Pallar (C)	15 (17.05)	20.55%	
2) Konar	9 (10.23)	18.00%	
3) Pallar (H)	14 (15.91)	14.43%	
III) Low proportion of immigrants:			
1. Thevars	8 (9.09)	8.08%	**: Parayar, Pagadai, Vannar, Pandithar, Moopanar, Nadar (H), Christian
2. Others**	7 (7.95)	8.06%	
All classes	88 (100.00)	19.64%	

9. However, if one takes the age group 15-39, one finds a significantly larger proportion of women. There are 445 women in this age group, but only 387 men. This is reversed in the age group 40 and above, with 292 men to 267 women. Given the inaccuracies generally encountered in the reporting of age, and the unavoidable arbitrariness in the demacration of age groups, one cannot read too much into these figures.

10. A word may be added here on dependency ratios. Defining the dependency ratio (DR) as

$$\frac{\text{(Population in (0-14) age group)} + \text{(Population in age group 60 \& above)}}{\text{(Population in age group 15-59)}}$$

the average DR for the village works out to be 77.62% as against the Tamil Nadu average in 1981 of 70.56%. The castewise picture shows much higher dependency ratios for Nadars (both Christian and Hindu) and Padayachis, mostly accounted for by a much higher than average proportion or children in the age group 0-14. This would indicate higher fertility level for these castes. Brahmins show a low dependency ratio, mainly on account of a very low proportion of children. The proportion of Brahmins aged 60 and above to their number in the age group 15-59 is, however, much higher at 25% than the village average of 14.1%. This would strengthen the hunch that the phenomenon of return migration after retirement is a significant phenomenon among the Brahmins.

On a related note, a crude measure of fertility -- the child-woman ratio (CWR) - defined as $\frac{\text{(population in age group 0-4)}}{\text{women in age group 15-49}} \times 1000$ shows a much higher than average figure for Nadars, Asaris, Pallars and Padayachis, and much lower figures for Konars, Pillais and Brahmins.

Table 1: Population of Gangaikondan, 1881-1984, selected years

Year	No. of HHs	Total Population			S.C. Population		
		Males	Females	Total	Males	Females	Total
1881	555	1423	1438	2861	NA	NA	NA
1891	647	1495	1476	2971	NA	NA	NA
1901	660	1514	1551	3065	NA	NA	NA
1911	NA	1675	1820	3495	NA	NA	NA
1916	663	NA	NA	3493	530	568	1098
1921	NA	2193	2169	4362	NA	NA	NA
1931	NA	1879	1852	3731	NA	NA	NA
1934	569	NA	NA	NA	NA	NA	NA
1941	NA	1937	1953	3890	NA	NA	NA
1951	998	2091	2186	4277	NA	NA	NA
1958-60	1088	2151	2257	4408	(No. of SC HHs: 375)**		
1961	984	2149	2250	4399	496	488	984
1971	1201	2699	2659	5358	569	595	1164
1981	1403	3110	3223	6333	815	814	1629
1984*	1344	3210	3291	6501	1266	1233	2499

* Population estimates obtained by blowing up sample figures.

** Includes 350 Pallar, 16 Parayar and 9 Chakkiliar households. 54 Shanar households and 2 Kuruvan households have been excluded.

NA - Not Available

Table 2: Decadal Variations in Population, 1901-1981

(Per cent)

Year	Gangaikondan	Tirunelveli Taluk	Tirunelveli District
1901	--	--	--
1911	14.03	8.67	7.97
1921	24.81	4.50	6.19
1931	-14.47	7.32	7.30
1941	4.26	8.61	9.67
1951	9.95	14.27	9.33
1961	2.85	14.81	-23.04
1971	21.80	23.96	70.02
1981	18.20	18.08	11.21

Table 3: Castewise Distribution of Households and Population -- Gangaikondan - 1984 (Estimates)

Caste	Total No. of HHs.	Population		
		Males	Females	Total
Pallar (Hindu)	291	696	696	1392
Pallar (Christian)	219	489	513	1002
Parayar	21	36	42	78
Pagadai	6	12	15	27
Thevar	297	708	750	1458
Konar	150	381	333	714
Pillai	66	144	171	315
Brahmin	36	57	90	147
Asari	39	114	120	234
Vannar	15	36	39	75
Velar	9	39	24	63
Pandithar	15	51	39	90
Moopanar	24	45	57	102
Nadar (Hindu)	51	153	138	291
Nadar (Christian)	21	69	60	129
Chettiar	18	45	30	75
Padayachi	18	36	66	102
Naidu	21	33	45	78
Kaikolar	3	6	6	12
Others*	24	60	57	117
Total	1344	3210	3291	6501

Note: Estimates of households and population have been obtained by blowing up data from an one-third sample.

*: Include 6 Muthuraja, 3 Thondaman, 3 Gounder, 3 Nair, 3 Kambar, 3 Muslim and 3 Christian households.

Table 4: Share of Different Castes in the Population of Gangaikondan in different survey years (per cent of Households)

CASTE	YEAR			
	1916	1934	1959-60	1984*
Brahmin	15.08	13.18	8.92	2.68
Pillaimar	4.68	5.27	3.58	4.91
Thevar	15.38	18.45	20.04	22.10
Shepherd (Konar)	9.05	8.79	10.75	11.16
Pandithar	0.75	0.53	1.01	1.12
Oilmongers	1.81	1.41	0.64	1.34+
Moopanar (Betelmen)	7.54	7.03	2.21	1.79
Artisans**	2.26	2.11	3.95	2.90
Vannar	0.45	0.35	1.56	1.12
Velars	1.51	1.05	1.19	0.67
Padayachi	3.02	3.51	1.93	1.34
Kaikolar	3.02	1.05	0.74	0.22
Shanar (Nadar)	1.20	3.16	4.32(H)	3.79(H)
			0.65(C)	1.56(H)
Pallar	26.39	28.29	20.59(H)	21.65(H)
			11.58(C)	16.30(C)
Parayar	1.2	1.41	1.47	1.56
Pagadai	2.11	0.88	0.83	0.45
Naidus	0.0	0.0	0.0	1.56
Others++	4.55	2.55	4.05	1.78
	100.00	100.00	100.00	100.00

* Based on data from an one-third sample.
** Includes carpenters, blacksmiths and goldsmiths
\+ Includes Chettiars
++ 'Others' include the following castes: i) For 1916: Thondaman, Kamber, Devadasi, Kshatria, Kurava, Ezhuva, and Mohammedan households. ii) For 1934: Same as in 1916, except that there were no Devadasi households. iii) For 1958-60: includes apart from the castes included in these categories in 1934, Muthurajas, Gounders, Nairs and Christians, but excludes Ezhuvas. iv) For 1984: same as in 1958-60, except that there are no Kuravas.

Note: The figures for Shanars (Nadars) and Pallars have been given separately for Hindus(H) and Christians(C) in 1958-60 and in 1984.

Table 5: Caste and Immigration

Caste	Number of Sample Households migrating into Gangaikondan					
	Before 1950	Between 1951 & 1960	Between 1961 & 1970	Between 1971 & 1980	After 1980	Total
Pallar (Hindu)	0	1	4	7	2	14
Pallar (Christian)	3	2	7	3	-	15
Parayar	-	-	-	-	1	1
Pagadai	-	1	-	-	-	1
Thevar	1	4	-	2	1	8
Konar	1	1	2	3	2	9
Pillai	3	3	1	2	5	14
Brahmins	3	-	-	2	2	7
Vannar	-	-	-	1	-	1
Pandithar	1	-	-	-	-	1
Moopanar	1	-	-	-	-	1
Nadar (Hindu)	1	-	-	-	-	1
Chettiar	1	-	-	-	-	1
Naidu	-	-	1	3	3	7
Muthuraja	-	-	-	2	-	2
Gounder	-	-	-	1	-	1
Muslim	-	-	-	1	-	1
Christian	-	-	-	-	1	1
Nair	-	-	-	-	1	1
Kamber	-	1	-	-	-	1
	15	13	15	27	18	88

Note: Total number of sample households = 448

Table 6: Females per 1000 males, Gangaikondan 1881-1984

Year	Overall	Among Harijans
1881	1011	NA
1891	987	NA
1901	1024	NA
1911	1087	NA
1921	989	NA
1931	986	NA
1941	1008	NA
1951	1045	NA
1958-60	1049	NA
1961	1047	984
1971	985	1046
1981	1036	999
1984	1025	1026+
		1013*

+ Includes Pallar Christian, Pallar Hindu, Parayar and Pagadai houscholds.

* Excludes Pallar Christian households.

Table 7: Castewise Sex Ratio - Females per 1000 Males - Gangaikondan 1984 (Estimates)

Caste	Total No. of Households	Sex Ratio
1. Pallar (Hindu)	291	1000
2. Pallar (Christian)	219	1049
3. Parayar	21	1166
4. Pagadai	6	1250
5. Thevar	297	1059
6. Konar	150	874
7. Pillai	66	1188
8. Brahmins	36	1578
9. Asari	39	1052
10. Dhobi	15	1083
11. Velar	9	615
12. Barber	15	765
13. Moopanar	24	1267
14. Nadar (Hindu)	51	902
15. Nadar (Christian)	21	870
16. Chettiar	18	667
17. Padayachi	18	1833
18. Naidu	21	1364
19. Others	27	955
Total	1344	Overall village sex ratio 1025

Table 8: Caste and Age Group Distribution: Gangaikondan - 1984

Share of Population (%)

Castes	0-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60-60	70 and above	Total	Remarks
1. Pallar (H)	11.42	13.36	10.56	10.56	14.00	13.80	8.62	7.12	6.25	4.31	100.00	
2. Pallar (C)	11.08	11.38	14.67	11.38	16.77	10.78	10.18	6.58	4.79	2.39	100.00	
3. Parayar	11.54	11.54	11.54	11.54	3.85	15.37	19.23	11.54	-	-	100.00	
4. Pagadai	-	-	22.22	11.11	22.22	11.11	11.11	11.11	11.11	-	100.00	
5. Thevar	9.67	12.14	15.02	12.14	12.96	11.93	11.53	6.79	5.35	2.47	100.00	
6. Konar	5.88	14.29	15.13	10.92	17.23	11.76	11.34	7.15	4.62	1.68	100.00	
7. Pillai	8.57	11.43	13.33	13.33	15.24	10.48	11.43	9.52	3.81	2.86	100.00	
8. Brahmin	4.08	8.16	6.12	14.29	16.33	8.16	16.33	10.20	4.08	12.25	100.00	
9. Asari	10.26	14.10	15.38	10.26	21.79	6.41	10.26	5.13	5.13	1.28	100.00	
10. Vannar	8.00	4.00	8.00	8.00	28.00	12.00	8.00	16.00	8.00	-	100.00	
11. Velar	9.52	14.29	14.29	9.52	9.52	4.76	19.05	14.29	4.76	-	100.00	
12. Pandithar	6.67	23.33	13.34	10.00	3.33	26.67	6.67	3.33	3.33	3.33	100.00	
13. Moopanar	5.88	14.71	5.88	14.71	11.76	11.76	2.94	17.65	14.71	-	100.00	
14. Nadar (H)	12.38	11.34	16.49	11.34	14.44	11.34	11.34	3.09	5.15	3.09	100.00	
15. Nadar (C)	16.28	13.95	27.91	6.98	4.65	13.95	9.30	4.65	2.33	-	100.00	
16. Chettiar	-	4.00	8.00	24.00	20.00	4.00	20.00	20.00	-	-	100.00	
17. Padayachi	23.53	5.88	5.88	8.83	29.42	5.88	2.94	2.94	11.76	2.94	100.00	
18. Naidu	11.54	11.54	7.69	7.69	30.77	15.38	11.54	-	3.85	-	100.00	
19. Others	16.28	11.64	9.30	9.30	20.93	9.30	9.30	13.95	-	-	100.00	Muthuraja, Gounder, Nayar, Thondaman, Kamber Muslim, Christian
Per cent share of Age Group on population	10.06	12.32	13.38	11.49	15.14	11.77	10.52	7.34	5.21	2.72	100.00	

Table 8a: Age Composition, Gangaikondan 1984
(Sample figures)

S. No.	Caste	0-4		5-9		10-14		15-19		20-29		30-39	
		M	F	M	F	M	F	M	F	M	F	M	F
1.	Pallar (Hindu)	24	29	35	27	25	24	26	23	26	36	33	31
2.	Pallar (Christian)	15	22	20	18	27	22	19	19	28	28	18	18
3.	Parayar	2	1	0	3	2	1	1	2	0	1	2	2
4.	Pagadai	0	0	0	0	1	1	0	1	1	1	0	1
5.	Thevar	26	21	22	37	39	34	27	32	30	33	21	37
6.	Konar	9	5	19	15	19	17	12	14	21	20	13	15
7.	Pillai	5	4	4	8	8	6	3	11	9	7	3	8
8.	Brahmin	1	1	2	2	0	3	3	4	2	6	2	2
9.	Aasari	5	3	4	7	2	10	7	1	8	9	3	2
10.	Dhobi	1	1	0	1	0	2	1	1	3	4	3	0
11.	Velar	2	0	2	1	2	1	2	0	1	1	1	0
12.	Barber	1	1	4	3	4	0	1	2	0	1	4	4
13.	Moopanar	1	1	1	4	1	1	2	3	1	3	3	1
14.	Nadar(Hindu)	6	6	4	7	13	3	4	7	9	5	4	7
15.	Nadar (Christian)	6	1	1	5	7	5	1	2	1	1	1	5
16.	Chettiar	0	0	1	0	2	0	4	2	3	2	0	1
17.	Padayachi	2	6	0	2	0	2	1	2	4	6	1	1
18.	Naidu	1	2	1	2	1	1	1	1	3	5	2	2
19.	Muthuraja	0	0	0	1	0	1	1	0	1	1	0	0
20.	Thondaman	0	0	1	0	0	1	0	1	0	0	0	1
21.	Kaikolar	0	0	0	0	0	0	0	1	1	0	0	0
22.	Gounder	0	0	0	0	0	0	1	0	1	1	0	0
23.	Nayar	1	0	1	0	0	0	0	0	0	1	0	0
24.	Kamber	1	1	0	0	0	0	0	0	0	1	1	0
25.	Muslim	1	1	1	0	0	0	0	0	0	1	1	0
26.	Christian	0	2	0	1	2	0	0	0	0	1	1	0
		110	108	123	144	155	135	117	132	153	175	117	138

contd...

S. No.	Castes	40-49		50-59		60-69		70-above		Total		Total
		M	F	M	F	M	F	M	F	M	F	
1.	Pallar (Hindu)	19	21	17	16	13	16	11	9	232	232	464
2.	Pallar (Christian)	16	18	13	9	5	11	2	6	163	171	334
3.	Parayar	1	4	3	0	0	0	1	0	12	14	26
4.	Pagadai	1	0	0	1	1	0	0	0	4	5	9
5.	Thevar	34	22	15	18	15	11	7	5	236	250	486
6.	Konar	16	11	9	8	6	5	3	1	127	111	238
7.	Pillai	7	5	5	5	3	1	1	2	48	57	105
8.	Brahmin	2	6	4	1	1	1	2	4	19	30	49
9.	Aasari	4	4	2	2	3	1	0	1	38	40	78
10.	Dhobi	1	1	2	2	1	1	0	0	12	13	25
11.	Velar	1	3	1	2	1	0	0	0	13	8	21
12.	Barber	2	0	0	1	1	0	0	1	17	13	30
13.	Moopanar	0	1	2	4	4	1	0	0	15	19	34
14.	Nadar(Hindu)	4	7	2	1	3	2	2	1	51	46	97
15.	Nadar (Christian)	4	0	1	1	1	0	0	0	23	20	43
16.	Chettiar	2	3	3	2	0	0	0	0	15	10	25
17.	Padayachi	0	1	0	1	3	1	1	0	12	22	34
18.	Naidu	2	1	0	0	0	1	0	0	11	15	26
19.	Muthuraja	1	1	1	0	0	0	0	0	4	4	
20.	Thondaman	1	0	0	0	0	0	0	0	2	3	
21.	Kaikolar	0	0	1	1	0	0	0	0	2	2	
22.	Gounder	0	0	1	1	0	0	0	0	3	2	
23.	Nayar	1	0	0	0	0	0	0	0	3	1	
24.	Kamber	0	0	0	0	0	0	0	0	2	2	
25.	Muslim	0	0	0	0	0	0	0	0	3	2	
26.	Christian	0	0	0	1	0	0	0	0	3	5	
		119	109	82	77	61	52	30	29	1070	1097	2197

Table 9: Average HH Size, 1881-1984 Selected Years, Gangaikondan

1881	5.15
1891	4.59
1901	4.64
1916	5.27
1951	4.29
1958-60	4.05
1961	4.47
1971	4.46
1981	4.51
1984	4.84 (estimated)

Table 9a: Caste and Household Size, Gangaikondan, 1984

Caste	Average household size (estimated)
1. Pallar (Hindu)	4.8
2. Pallar (Christian)	4.6
3. Parayar	3.7
4. Pagadai	4.5
5. Thevar	4.9
6. Konar	4.8
7. Pillai	4.8
8. Brahmins	4.1
9. Asari	6.0
10. Vannar	5.0
11. Velar	7.0
12. Pandithar	6.0
13. Moopanar	4.3
14. Nadar (Hindu)	5.7
15. Nadar (Christian)	6.1
16. Chettiar	4.2
17. Padayachi	5.7
18. Naidu	3.7
19. Other	4.8
Average for all households	4.8

Other castes include Muthuraja, Gounder, Thondaman, Kaikolar, Nayar, Kamber, Muslims and Christians.

Chapter III : The Labour Force

The surveys of 1916 and 1934 do not contain a great deal of information on the sectoral distribution of the workforce. The more recent survey of 1958-60 does provide some information, but does not use any standard (e.g. as in the census) scheme of classification. These limitations naturally make it difficult to carry out a detailed comparative study of changes in the sectoral distribution of the workforce over the decades that have elapsed between the first survey and the present one. Nevertheless, it is easy to discern some striking changes that have taken place. The most obvious of these changes is the growth of employment in modern manufacturing. In 1916 and 1934 there was no modern industry in or near the village. By 1958-60, a cement factory had come up in Thalaiyuthu, six miles from the village, and a chemical plant to manufacture calcium carbide within a mile of the cement factory. Since then, some more industrial units have come up, important among them, a textile mill located in the village itself.

Workforce participation rates are not available for 1916 and 1934. The data for 1958-60, the census years of 1961, 1971 and 1981 and the present survey year of 1984 are shown in Table 10.

Problems of comparability do exist, both between the censuses and the surveys, on account of definitional differences.[1] These differences do not seem to affect the male participation rate very much, which incidentally also remains fairly stable throughout the period. But they do affect the female participation rate. It is of course well known that the 1971 census grossly undercounts female workers. The discrepancy between the census figure of 1981 and the survey figure of 1984 for the female participation rate, however,

is enormous. .The latter is almost double that of the former. This is the case despite the fact that the marginal workers have been included in calculating the figure for 1981. To a lesser extent, a similar discrepancy can be observed between the 1958-60 survey figure and the 1961 census figure for female workforce participation. It is of course possible that our survey data have overestimated the female participation rate, in as much as they have recorded even women with minimal participation in own cultivation (often supervisory) and not hiring out as workers. But such instances can explain only a small part of the discrepancy. The major reason for discrepancy, one is inclined to conclude, must be that the census of 1981 also systematically under counts female workers.[2] Our survey figures are certainly closer to reality, and reflect the numerical preponderance in the village of cultivating castes, with a tradition of female participation in cultivation and agricultural labour, such as Harijan and Thevars.[3]

Sectoral Distribution of the Workforce

We turn now to the changes in the industrial composition of the workforce between 1961 and 1984. The data relate to three census years and 1984, and are presented in Table 11. An abbreviated comparison of 1981 and 1984 figures with 1981 figures for rural Tamil Nadu, rural Tirunelveli district and rural Tirunelveli Taluk is given in Table 11a. Several interesting changes have taken place over this period of a little more than two decades. First, as already noted, there is a significant increase in manufacturing employment. This is especially the case for women, of whom only one was reported as working in manufacturing, processing, servicing and repair, including household industry in 1961, and none in 1971. We do not have a detailed breakdown for 1981. But in 1984, we find that 183 women constituting nearby a sixth of the female labour force were employed

in this sector. Many of these women are employed as casual workers in the textile mill recently started in the village. The other important sources of employment in manufacturing are a modern giant rice mill, beedi making, construction work and basket making. The men find employment in the rice mill, the textile mill and in the cement factory at Thalaiyuthu. As in the case of women, almost one sixth of the male workforce is also employed in the manufacturing sector.

The other important change that has taken place is with regard to employment in agriculture. The share of this sector in total employment has come down from 61.64 per cent in 1961 to 53.30 per cent in 1984. There has clearly been a shift of the labour force from agriculture to other sectors, in particular manufacturing. Secondly, there has been a shift within agriculture. The share of cultivators has declined from 55.86 per cent of the workforce in 1961 to 33.77 per cent in 1984, while that of agricultural labour has increased during the same period from 5.78 per cent to 19.53 per cent. Clearly, this shows that the increase in population and the consequent pressure on land have made it necessary for members of cultivator households to seek employment on others' farms. The rather limited opportunities for non-farm employment have also contributed to this. The absolute number of persons reporting themselves as cultivators has declined, in the case of both males and females between 1961 and 1984. But the numbers of male and female agricultural labourers has on the other hand, increased, sharply from 45 and 72 in 1961 to 234 and 342 respectively in 1984. While the 1961 figures are possibly under estimates, there is no gainsaying the fact that there has been a significant increase in the number of agricultural labourers.[4]

A third interesting feature is the increase in the number and the share of workers employed in forestry, fishing and livestock maintenance. This reflects the emergence of

dairying as an important economic activity, of which we will have more to say in a subsequent chapter. Turning to Table 11a, two points emerge.[4a] Firstly, the village has a much higher proportion of the workforce in non-agricultural occupations than either rural Tirunelveli or rural Tamil Nadu. Particularly noteworthy is the much lower proportion of agricultural labourers. Secondly, even between 1981 and 1984, there is a sharp increase in the proportion of male workers in nonagricultural occupations, with an almost equal decline in the proportion of male workers reporting themselves as agricultural labourers. This is mainly on account of a sudden jump in the number of workers in manufacturing brought about by the establishment of a textile mill in 1982 which employed around 300 workers in 1983. Though the mill workforce was nearly equally divided into men and women, it is to be noted that the male workers were mostly 'locals' while a good proportion of the women workers were recruited from towns in neighbouring taluks.

Caste and Occupation

Table 12 shows the sectoral distribution of the sample workforce broken down by caste.

An attempt is made to compare the sectorwise and castewise distribution of the workforce in 1984 with that in 1958 using an abridged and partial classification scheme in Table 13. Data on occupations of heads of households for 1958-60 and 1984, for some major castes and occupations, in Table 14.

The AERC report of the 1958-60 survey does not provide a detailed classification of the workforce along the lines of the censuses. In fact, it speaks mostly in terms of "the occupation of the household", which it defines as follows:

> '....the household has been taken as the unit, and the occupational pattern is determined on the basis of the occupation of the head of the household.'[5]

This is rather arbitrary. It also makes impossible a direct comparison between 1958-60 and 1984. However, some information is available in the AERC report on the number of workers in some sectors.[6] This had been made use of in compiling Table 13.

There is a problem with the 1958-60 figures on agricultural labourers. The figures are far in excess of the figures reported in the 1961 census of 45 male and 72 female agricultural labourers. It is not clear from the AERC report whether the figures of 629 female agricultural labourers also include female cultivators who may occasionally go out to work for someone else. This seems plausible since the census for 1961 reports 483 female cultivators. Leaving aside these figures what emerges quite clearly is that the number of factory workers has increased more than eleven times between 1958-60 and 1984. The share of factory employment in total employment has increased from hardly one per cent to 8.65 per cent in 1984. The share of persons in government employment has also increased significantly.

These changes have had their impact on the relation between caste and employment. An idea of this can be had from Table 14. We find that in all the major castes (except Konar) the proportion of household heads working in factories has increased by a large amount. Equally interesting is the change within agricultural employment. In the case of each of the three major cultivating castes -- Pallar, Thevar and Konar -- the proportion of household heads reporting themselves as cultivators has increased sharply while the proportion reporting themselves as agricultural labourers has decreased equally sharply. This no doubt reflects the process of acquisition of land by these cultivating castes from absentee landlords, mainly Brahmins, many of whom have sold off their land over the two and a half decades since the last survey. The increase is especially noticeable among Hindu Pallar and Thevar households.

The other major arena of diversification in the occupations of heads of households is that of government service. Employment in government has become especially important for Hindu Nadars, and to a lesser extent, for Konars.

The employment pattern of heads of households provides only a partial, and possibly even misleading picture. A look at the distribution of the workforce by occupations for the major castes is therefore provided in Table 15. Similar information is, however, not available for 1958-60.

The data in Table 15 bear out the picture of greater diversification suggested by Table 14. The diversification has been particularly pronounced in the case of male workers. However, even in 1984, agriculture --taking both cultivations and agricultural labourers together -- still accounts for more than half the workforce in the case of all the major castes. The share of agriculture in total employment remains very high for Hindu Pallars, accounting for more than three fourths of the labour force, and even in the case of males, for seven-tenths.

Important occupations included in the category "other" in Table 15 are quarry work (almost completely dominated by Pallar Christians) and cattle tending (mostly accounted for by Konars and Thevars).

Among the remaining castes, a majority of Asaris are carpenters, while nearly a third of the Pillai workers are in government service. Vannars and Velars are almost entirely confined to their traditional occupations of washing of clothes and pot making respectively. There has also been no change in the occupation pursued by Parayars who are now, as in 1958, solely employed in basket-making.

Workforce participation and workers per household

The workforce participation rates (WPR) for males and females, broken down by caste, is provided in Table 16. As may be expected, the cultivating castes exhibit a high WPR for both females and males. The rather high figures for the male WPR shown by Vannar, Padayachi and Moopanar households is related to their peculiar age composition, which is most likely the outcome of the rather small number of sample households from these castes. But the lower female WPR for Thevar households is somewhat surprising. True to tradition, the women of the upper castes such as Brahmins and Pillais show a much lower WPR. Interestingly, the female WPR is rather low for Asans and Hindu Nadars.

In Table 17, the data on average number of workers per household and the ratio of non-workers to workers is shown for various castes. At one extreme are Vannars, with the highest average number of workers per household. This results from the fact that of the sample population of 25 vannars, only 5 are below the working age. At the other extreme are Pillais and Brahmins, no doubt partly because the women of these households do not generally enter the labour force, but partly also because the young males in the working age remain students for longer than in other castes. The cultivating castes show values close to the average, with Konars and Hindu Pillais showing somewhat higher values.

Turning to dependency, expressed here as the ratio of non workers to workers, we find as may be expected that Pillai and Brahmin households show high dependency ratios. The hard working cultivator households, together with Vannars and Moopanars, show much lower dependency ratios. Christian Nadars and Asaris, despite having a more than

average number of workers per household end up showing much higher ratios of non workers to workers, because of their larger household size.

Child Labour

To what extent does child labour figure in the labour force as a whole and in each of the castes? The relevant data is shown in Table 18.

The incidence of child labour is the highest among Thevars. Of the 23 Thevar child-workers in the sample consisting of twelve males and 11 females, ten of the males and six of the females are employed in cattle tending. While the incidence of child labour in Gangaikondan is small in comparison to that in some other villages - such as Vadamalaipuram in Ramnad, another 'Slater' village - it is nonetheless not insignificant at 11.3 per cent of persons in the age group 5-14 years, and at 12.9 per cent for females.[7] Where do these children work? Table 19 provides the details for the child workers in the sample.

It is evident that livestock tending for male children and livestock tending and beedimaking for female children constitute the main fields of child labour. As for the distribution across castes, Thevars and Konars account for most of the children engaged in livestock tending while most of the beedi workers among the children come from the minor castes.

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1. For a discussion of inter-censal definitional differences, see V.K.Ramachandran, 'Agricultural Labourers in the Working Population in Tamil Nadu', Bulletin of the MIDS, Vol.X, No.3, March 1980.

2. The same phenomenon has been observed in our study of Vadamalaipuram as well. See V.B.Athreya, 'Vadamalaipuram : A Resurvey' Working Paper No.50, Madras Institute of Development Studies, Madras, August 1984.

The 1984 WPR figures for Gangaikondan from our survey compare well -- even for female WPR -- with those in 1981 for rural Tamil Nadu, rural Tirunelveli district and rural Tirunelveli Taluk:

	WPR for		
	Males	Females	Persons
Rural T.N. (1981)	59.24	33.55	46.48
Rural Tirunelveli District (1981)	56.57	38.36	47.20
Rural Tirunelveli Taluk (1981)	55.07	33.07	43.76
Gangaikondan (1981)	53.67	19.76	36.41
-do- (1984)	54.77	36.19	45.36

This would imply that the 1981 census figure for the female workforce in Gangaikondan specifically was a gross undercount. It is interesting to speculate it this has to do with some specific characteristics of the female workforce in the village. When one considers the fact that in 1981 the proportion of marginal workers in the female labour force was as high as 50.7 per cent for Gangaikondan, it appears plausible that the census enumerators might have left out a number of female (marginal) workers (to avoid an embarassingly high proportion of marginal workers), leading to a gross undercount. I owe this point to Dr.K.Nagaraj.

The figure for 1958-60 at 43.2 per cent and for 1961 at 35.9 per cent also provide support to this view.

These are some significant discrepancies with respect to the figures for female cultivators and for male and female agricultural labourers as between the 1981 census data and our survey data for 1984. With respect to females - both cultivators and agricultural labourers - the much lower census figures probably reflect both the exclusion of marginal workers and the tendency of the census to undercount female workers. The latter aspect is seen again in the much lower count of female workers in non-agricultural sector by the 1981 census (assuming, not unreasonably, that most of the 'marginal' female workers would be employed in agriculture).

4a. The suggestion to include Table 11a came from Dr.K.Nagaraj, who also kindly supplied the data. The discussion and interpretation of the data in Table 11a owe a great deal to Dr.Nagaraj.

5. AERC Report p.45

6. AERC Reports, Table V-6, p.99 and Table III 9, p.56.

7. The ratio for Vadamalaipuram works out to 24.62 per cent. See V.B.Athreya, op.cit, Table 19, p.39 and Table 9, p.21.

Table 10: Workforce Participation rates Gangaikondan (1958-1960) - 1984

Year	Population			Workers			Ratio of workers to population per cent		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1958-60	2151	2257	4408	1205	975	2180	56.02	43.2	49.46
1961	2149	2250	4399	1216	807	2023	56.6	35.9	46.0
1971	2699	2659	5358	1454	292	1746	53.9	11.00	32.6
1981	3110	3223	6333	1669+	637++	2306	53.67	19.76	36.41
1984*	3210	3291	6501	1758	1191	2949	54.77	36.19	45.36

* 1984 figures are estimates

\+ includes 45 marginal workers

++ includes 323 marginal workers

Table 11: Changes in the Sectoral Distribution of the Workforce, Gangaikondan 1961-1984

Year	Cultivators			Agric. Lab.		
	Male	Female	Total	Male	Female	Total
1961	647 (53.21)	483 (59.85)	1130 (55.86)	45 (3.7)	72 (8.92)	117 (5.78)
1971	768 (52.62)	187 (64.04)	965 (54.7)	201 (13.82)	80 (27.4)	281 (16.09)
1981[d]	586	50	636	428	130	558
1984	585 (33.28)	411 (83.77)	996 (13.31)	234 (28.72)	342 (19.53)	576

Year	Livestock etc.			Mining and Quarrying		
	Male	Female	Total	Male	Female	Total
1961	43 (3.5)	20 (2.48)	63 (3.11)	80 (6.58)	50 (6.32)	131 (6.48)
1971	9 (0.62)	1 (0.34)	10 (0.57)	2 (0.14)	0 -	2
1981[d]			610	males and		134
1984	114 (6.48)	69 (5.79)	183 (6.21)	54 (3.07)	57 (4.79)	108 (3.66)

Year	Manufacturing			Construction		
	Male	Female	Total	Male	Female	Total
1961	73 (6.0)	1 (0.12)	74 (3.66)	14 (1.15)	1 (0.12)	15 (0.74)
1971	197 (13.55)	-	197 (11.28)	14 (0.96)	-	14 (0.80)
1981[d]						744 persons[b]
1984	273 (15.53)	183 (15.37)	456 (15.46)	63 (3.58)	3 (0.25)	66 (2.24)

contd...

Year	Trade and Commerce			Transport, Storage & Communication		
	Male	Female	Total	Male	Female	Total
1961	43 (3.5)	19 (2.36)	62 (3.06)	32 (2.6)	-	2 (1.58)
1971	61 (4.2)	3 (1.02)	64 (3.67)	29 (1.99)	-	29 (1.66)
1981[d]	72 (4.10)	15 (1.26)	87 (2.95)	33 (1.88)	- (0.0)	33 (1.12)
1984	72 (4.10)	15 (1.26)	87 (2.95)	33 (1.88)	- (0.0)	33 (1.12)

Year	Other Services		
	Male	Female	Total
1961	239 (19.65)	160 (19.83)	399 (19.72)
1971	173 (11.90)	21 (7.19)	194 (11.11)
1981[d]			
1984	330 (18.77)	111 (9.32)	441 (14.95)

Notes: Figures in paranthesses are quantities expressed as percentage shares of the corresponding total, e.g. 647 male cultivators out of a total male workforce of 1216 in the year 1961 constitute 53.21% of the male workforce.

a: Includes 42 workers in household industry

b: These figures exclude 45 males 323 females reported as marginal workers, who thus constitute respectively 2.7 per cent of the total male labour force and 50.70 per cent of the total female labour force.

c: The figures for 1984 are estimates obtained by blowing up data from an one-third sample.

Table 11a: Percentage Distribution of Main Workers, 1981 and all workers 1984

		Cultivators	Agrl. labs	Rest
All main workers	Rural TN	38.28	40.28	21.44
	Rural Tirunelveli District	31.82	36.97	31.21
	Rural Tirunelveli Taluk*	39.67	33.10	27.23
	Gangaikondan, 1981	32.82	28.79	38.39
all workers	Gangaikondan, 1984	33.77	19.53	46.70
Male main workers	Rural TN	43.82	30.95	25.23
	Rural Tirunelveli District	38.28	29.67	32.05
	Rural Tirunelveli Taluk*	43.90	25.22	30.88
	Gangaikondan, 1981	36.08	26.35	37.57
all male workers	Gangaikondan, 1984	33.28	13.31	53.41
Female main workers	Rural TN	26.50	60.07	13.43
	Rural Tirunelveli District	21.74	48.38	29.88
	Rural Tirunelveli Taluk*	32.22	46.95	20.83
	Gangaikondan, 1981	15.92	41.40	42.68
all female workers	Gangaikondan, 1984	34.51	28.72	36.77

Table 12 - Sectoral Distribution of the sample workforce, Gangaikondan 1984

Caste	Cultivators				Agri Labourer				Livestock etc				Mining, Quarrying				Manufacturing			
	Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
S.C.	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Pallar (Hindu)	1	66	2	56	1	23	-	37	3	2	1	-	-	2	-	2	-	9	-	4
Pallar (Christian)	-	33	1	32	-	6	-	13	2	1	4	1	1	13	2	15	-	11	-	4
Parayar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	9
Chakkili -yar	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Caste Hindus																				
Thevar	-	52	-	24	1	24	2	32	10	3	6	2	-	-	-	-	-	20	2	4
Konar	-	22	1	17	1	10	-	18	4	13	2	6	-	1	-	-	-	9	1	1
Pillai	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	1
Brahmin	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
Moopanar	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	1	5
Nadar (Hindu)	-	5	-	-	-	5	1	4	-	-	1	-	-	1	-	-	-	8	-	4
Nadar (Christian)	-	1	-	-	-	5	-	2	-	-	-	-	-	-	-	-	-	-	4	4
Chettiar	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Naidu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	3
Padayachi	-	6	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Aasari	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2	1
Velan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	5
Vannar	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Pandithar	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	-	1
Others	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2
Total	1	194	4	133	3	75	3	111	19	19	14	9	1	17	2	17	0	91	11	50

NOTES: A - Below 15 years of age
B - 15 years of age and above

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Caste / S.C.	Constructing				Trade and Commerce				Transport				Other Services				Non-Worker			
	Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Pallar (Hindu)	-	1	-	-	-	2	-	-	-	2	-	-	-	18	1	7	79	23	76	46
Pallar (Christian)	-	-	-	-	-	1	-	-	-	-	-	-	1	10	-	4	58	26	55	40
Parayar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	5	-
Chakkiliyar	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	2
Caste Hindus																				
Thevar	-	-	-	-	-	4	-	3	-	3	-	-	1	19	1	7	75	24	81	86
Konar	-	2	-	-	1	2	-	1	-	1	-	-	-	12	-	5	41	8	31	28
Pillai	-	-	-	-	-	5	-	1	-	2	-	-	-	10	-	2	17	8	18	35
Brahmin						1								4		2	3	7	6	22
Moopanar	-	1	-	-	-	3	-	-	-	1	-	-	-	3	-	-	3	-	5	7
Nadar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Hindu)														1			23	8	14	22
Nadar (Christian)	-	-	-	-	-	-	-	-	-	-	-	-		1	-	-	14	2	7	3
Chettiar	-	-	-	-	-	2	-	-	-	-	-	-		4	-	-	3	4	-	10
Naidu	-	-	-	-	-	-	-	-	-	-	-	-		1	-	-	3	1	5	7
Padayachi	-	-	-	-	-	1	-	-	-	-	-	-		1	-	-	2	1	10	9
Aasari	-	13	-	-	-	-	-	-	-	1	-	-		8	-	3	11	4	18	14
Velan	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	6	1	2	1
Vannar	-	-	-	-	-	-	-	-	-	-	-	-		9	1	4	1	1	3	3
Pandithar	-	-	-	-	-	-	-	-	-	-	-	-		4	-	-	8	3	4	7
Others	-	4	-	1	-	2	-	-	-	1	-	-	-	2	-	-	8	2	7	10
Total		21	0	1	1	23	0	5	0	11	0	0	2	108	3	34	360	124	348	352

Table 13: Number of Workers in some Major Occupational in Gangaikondan 1958-60 and 1984

Occupation	1958-60			1984		
	Male	Female	Total	Male	Female	Total
Cultivators	NA	NA	NA[1]	585 (33.28)	411 (34.51)	996 (33.77)
Agricultural labourers	378 (31.37)	629 (64.51)	1007[2] (46.19)	234 (13.31)	342 (28.72)	576 (19.53)
Government Service	NA	NA	81 (3.72)	144 (8.19)	6 (0.50)	150 (5.09)
Factory Workers	NA	NA	22 (1.01)	207 (11.77)	48 (4.03)	255 (8.65)
Trade	NA	NA	46 (2.11)	42 (2.39)	3 (0.25)	45 (1.53)
Teaching	NA	NA	27 (1.24)	30 (1.71)	18 (1.50)	48 (1.63)
All occupations	1205	975	2180	1758	1191	2949

NA - Not available

1. 201 heads of households pursued cultivation as the primary occupation in 1958-60. In addition, 259 heads of households pursued it as a secondary occupation.
2. In addition, 174 males and 51 females pursued both agricultural and non-agricultural labour as their occupations in 1958-60.

   It needs to be highlighted here that the figure of 1007 agricultural labourers is not really comparable with either census data or our survey data for 1984. The 1961 census gives a figure of 117 agricultural labourers. The truth must be somewhere between these two figures, but much closer to the 1961 census figure.

Notes: (i) Figures in paranthesses are percentage shares of the number of workers in the respective occupations to the corresponding workforce total.

(ii) The data for 1984 are estimates obtained from a sample.

Table 14: Caste and Occupation of Heads of Households, Gangaikondan 1958-60 and 1984, Some Major Castes and Occupations

Caste	Per cent share of Heads of Households of the Given Caste pursuing:					
	Cultivation	Agrl. labour	Factory worker	Govt. Service	Teaching	Other
Hindu Pallar						
1958-60	30.80	57.59	1.34	0.89	0.89	8.49
1984	53.61	20.62	7.22	3.09	2.06	13.40
Thevar						
1958-60	19.73	45.87	1.38	7.34	0.46	25.22
1984	43.43	22.22	12.12	4.04	0.0	18.10
Konar						
1958-60	17.09	34.19	0.84	8.55	2.56	30.77
1984	30.0	20.0	6.0	16.0	4.0	24.0
Hindu Nadar						
1958-60	26.09	15.22	2.17	0.0	2.17	54.35
1984	17.65	0.0	11.76	23.53	0.0	47.06
Christian						
1958-60	31.34	36.57	2.99	4.48	2.99	21.63
1984	33.75	10.0	8.75	6.25	3.75	37.50
Pillai						
1958-60	1.79	0.0	0.0	25.0	8.93	64.28
1984	9.09	0.0	13.64	31.82	4.55	40.90
Brahmin						
1958-60	9.28	0.0	0.0	21.43	12.50	56.79
1984	16.67	0.0	8.33	0.0	8.33	66.67

Notes: 1. Figures for 1984 are based on a sample of 448 households which includes the following:

Caste	No of Sample Households
Hindu Pallar	97
Thevar	99
Konar	50
Hindu Nadar	17
Pillai	22
Brahmin	12
Christian Pallar	73
Christian Nadar	7

2. In order to facilitate comparison with 1958-60 data, Christian Pallar and Christian Nadar households have been lumped together in the table under the head "Christian".
3. Data for 1958-60 are based on a census of households

Table 15: Caste and Occupation Gangaikondan 1984: Some Major castes and important occupations

Caste	Per cent share of caste workforce pursuing					
	Cultivation	Agrl. labour	Factory worker	Govt. servant	Teaching	Other
Pallar Hindu						
Male	51.54	18.46	6.92	5.38	1.54	16.16
Female	52.73	33.64	3.64	0.00	0.91	9.08
Total	52.08	25.42	5.42	2.92	1.25	12.91
Pallar Christian						
Male	41.77	7.59	13.92	2.53	2.53	31.66
Female	43.42	17.11	5.26	0.00	1.32	32.89
Total	42.58	12.26	9.68	1.29	1.94	32.35
Thevar						
Male	37.96	18.25	13.87	3.65	0.00	26.27
Female	28.92	40.96	2.41	1.20	0.00	26.51
Total	34.55	26.82	9.55	2.73	0.00	26.35
Konar						
Male	28.21	14.10	11.54	11.54	2.56	32.05
Female	34.62	34.62	1.92	0.0	5.77	23.07
Total	30.77	22.31	7.69	6.92	3.85	28.46

Note: 1. Figures for 1984 are based on a sample of 448 households which includes the following:

Caste	No. of sample HHs
Hindu Pallar	97
Thevar	99
Konar	50
Hindu Nadar	17
Pillai	22
Brahmin	12
Christian Pallar	73
Christian Nadar	7

2. Total sample workers in the above castes are as follows:

	Male	Female	Total
Pallar Hindu	130	110	240
Pallar, Christian	79	76	155
Thevar	137	83	220
Konar	78	52	130

Table 16: Caste and Workforce participation Rate Gangaikondan 1984 (estimate)

Caste	WPR, per cent		
	Male	Female	Total
Hindu Pallar	56.03	47.41	51.72
Pallar Christian	48.47	44.44	46.41
Thevar	58.05	33.20	45.27
Konar	61.42	46.85	54.62
Pillai	47.92	7.02	25.71
Brahmin	52.63	6.67	24.49
Hindu Nadar	39.22	21.74	30.93
Christian Nadar	30.43	50.0	39.53
Asari	60.53	20.0	39.74
Vannar	83.33	53.85	68.0
Padayachi	75.0	13.64	35.29
Moopanar	80.0	36.84	55.88
All castes	54.77	36.19	45.36

Note: Data for numerically minor castes have not been shown. In the figures given for "All castes", however, these have been taken into account.

Table 17: Workers per household and ratio of non workers to workers, Castewise, Gangaikondan 1984 (estimates)

Caste	Average no. of workers per household	Ratio of non-workers to workers
Pallar, Hindu	2.47	0.93
Pallar, Christian	2.12	1.15
Thevar	2.22	1.21
Konar	2.60	0.83
Pillai	1.23	2.89
Brahmin	1.00	3.08
Nadar, Hindu	1.76	2.23
Nadar, Christian	2.43	1.53
Asari	2.38	1.52
Vannar	3.40	0.47
Padayachi	2.00	1.83
Moopanar	2.38	0.79
All castes	2.19	1.20

Note: Data for numerically minor castes have not been shown. In the figures given for "All castes", however, these have been taken into account.

Table 18: Child Workers by Caste, Gangaikondan, 1984

Caste	No. of child workers (estimates)		
	Male	Female	Total
Pallar, Hindu	15	12	27 (8.1)
Pallar, Christian	12	21	33 (12.6)
Thevar	36	33	69 (17.4)
Konar	18	12	30 (14.3)
Others	0	30	30 (6.4)
Total	81 (9.7)	108 (12.9)	189 (11.3)

Note: 1. Figures in parantheses show the proportion of child workers to the corresponding population in the age group 5-14 years expressed as a percentage.

2. The category 'others' includes: 12 Nadar-Christian child workers, 6 child workers each from Nadar-Hindu and Asari castes, and 3 child workers each from 'Vannar and Moopanar castes. These are no child workers in the remaining castes in the remaining castes included in the category 'others'.

Chapter IV: The Social Infrastructure

We turn now to an examination of the changes that have taken place over the decades since the first survey of 1916 in the spheres of education, health, housing and transport and communications facilities. Let us begin with education.

Education

In line with the general improvements in the provision of social infrastructural facilities in the economy as a whole, especially since Independence, educational facilities available in the village have also improved over the years. This has had its impact on literacy. Literacy figures have not been provided in the surveys of 1916 and 1934, Nor are they available from the census reports prior to 1951. So the available data relates only to the period 1951 to 1984, and is presented in Table 20.

It is evident that there has been a steady increase in the percentage of literates to total population over the years, and this increase holds for females as well as males. In fact, the rate of female literacy has grown even more rapidly, and the gap between the male and female literacy rates has narrowed. Nevertheless, the average literacy rate in 1981 at 43.99 per cent was still below the state average for that year of 46.76 per cent. The 1984 literacy rates, estimated from a simple random sample of 448 households constituting one third of all households, are however, higher by nearly ten percentage points for both females and males over those of 1981. A part of this difference arises from the definition of literacy adopted in our survey. We have taken all persons who have been to primary school and those presently attending primary school as literates. This definition would overestimate literacy since it ignores

the relapse into illiteracy and also counts children attending first standard or above as literate. If one treats twenty per cent of those with primary education or presently in primary school as illiterate, the literacy rate comes down to 42.1 per cent in 1984, fairly close to the 1981 figure. Given that these have been no major population movements of any kind into or outside the village, the 1984 figures cannot be significantly different from those of 1981.[1] In sum, we can say that literacy rates have shown a steady improvement between 1951 and 1984.

Caste and Literacy

Data on literacy in each caste is not available for the earlier survey years. Some general information is, however, available. Lokanathan noted in 1916 that 'A large percentage of Brahmin male adults are able to read and write the vernacular; among others about 10 per cent. Among the Panchamas about four or five persons can read and write.'[1a]

The situation had not changed very much in 1934. We hear from Natarajan that:

'Many of the tenants and labourers, especially of the lower castes, like shepherds, Maravars and Pallars are illiterate. But among the Brahmins and Vellalas there is practically no man who is not versed in the three R's. Among women, most of the Brahmin ladies - particularly of the younger generation - can read and write and but this cannot be said of the Vellala women.'[2]

Thus, such improvement in literacy as had occurred was modest and the greater part of it had occurred among Brahmin women. By 1958-60, there had been some progress, but not a great deal. The over-all literacy rate had risen to 27.4 per cent. But the castewise breakdown is not available. It is possible, however, to get a reasonable, good idea of the

castewise breakdown at least for the major castes, by using the information provided in the AERC report on hamletwise literacy rates in view of the fact that each hamlet is dominated numerically by one or the other of the major castes.[3] The following emerges from such an analysis: In 1958-60, Gangaikondan hamlet dominated by Brahmins and Pillais had a literacy rate of 65.8 per cent. Aladipatti, dominated by Pallar Christians had a literacy rate of 35.5 per cent. All others had literacy rates below 24 per cent, lower than the overall rate of 27.4 per cent. The lowest rate of 12.2 per cent was recorded in Anaithalaipacheri, inhabited almost entirely by Hindu Pallars. It can thus be concluded that even as late as 1960, the literacy rates among Thevars, Hindu Pallars and Nadars were very low. The rate was somewhat higher among Pallar Christians, but only among Brahmins and Pillais did it really reach respectable levels.

Viewed against the background described above, the progress recorded between 1958 and 1984 is indeed quite good. The data on the percentage of <u>illiterates</u> to the population for various castes in 1984 is shown in Table 21. The rate of illiteracy has declined in all castes. The overall rate itself is only 46.19 per cent, and the maximum rate among the major castes which occurs for Hindu Pallars, is 54.09 per cent. What is, however, disturbing is the large gap in literacy between males and females seen in all the major cultivating castes. The fact that our estimates of illiteracy tend to understate the real extent of it by not taking relapse into illiteracy into account and by treating all those in primary school as literate, would suggest that to the extent these are likely to lead to a greater underestimation of female than of male illiteracy, the gap is truly alarming.[4]

We may conclude our discussion of literacy by examining the prospects in the near future. Table 22 presents data for various castes on the number of children in the age group of five to sixteen years and on the number of them attending school.

It is evident that schooling upto the end of the secondary school level is almost universal among Pillais and Brahmins, and among Hindu Nadar males. In the case of most other communities, close to one third of males and two fifths of females drop out of school before completing secondary education. It would appear, then, that formal education upto the high school leaving stage is not likely to become universal for quite some years to come.[5]

The difference between females and males in the percentage of children in the age group 5-16 years going to school works out at 13.63 percentage points for the population as a whole. This is considerably less than the gap in the degree of literacy between male and female population in general at 21.28 percentage points. This points to some closing of the gap in literacy rates between the two sexes over time. Looking at the comparative figures castewise, however, we find that the gap between the percentages of male and female children in the age group 5-16 years attending school is alarmingly large for Thevars, Konars, Nadars (both Hindu and Christian) and Christian Pallars. By contrast, the gap has been almost eliminated among Hindu Pallars. This is a phenomenon worth probing further but we have not been able to go into it on account of time and resource constraints.

Education beyond high school is relatively rare among the residents of the village. Out of 1392 persons in the sample aged fifteen years and above, only 68 persons including 19 females had studied beyond high school.

School Facilities

School facilities in Gangaikondan have improved beyond recognition since the time of the first survey in 1916. There were three primary schools then, one managed by the Local Panchayat Board, one by a Catholic mission and another by a Protestant mission. By 1934, the Protestant mission school no longer existed, but the other two schools had considerably expanded enrolment. In 1916 only 105 boys and 35 girls went to school. In 1934, the Local Board school alone had more than 200 pupils while the Catholic school had 56 pupils on its rolls. By 1960, there were five elementary schools and one secondary school in the village. Enrolment in the elementary schools had increased to 465 persons, of whom as many as 216 were girls. The high school had on its rolls 241 students in 1960, of whom 111 were from outside the village. In 1984, there were six primary schools and one high school in the village. Enrolment in primary schools had increased to 814 persons, consisting of 400 boys and 414 girls. The enrolment in the high school was 601 persons, of whom only 191 were girls. The details of enrolment in 1984 are shown in Table 23.

The expansion in enrolment in both primary and secondary schools reflected the expansion of education among several of the cultivating castes who had hardly participated in the formal educational system in 1916. Harijans, for instance, were not at all enrolled in the Local Board school in 1916, although a few of them were studying in the two mission schools. Even in 1934, only 21 Harijans were in school. By 1960, the position had changed considerably. Of 241 students in the high school, as many as 86 were Harijans. Moreover, the standards of education in the primary school were rather poor, so much so that only 28 students of the village went to secondary school that year. It can be seen from Table 23

that in 1984, of 814 students in primary schools, as many as 351 were Harijans. Even more significant these 351 Harijan students consisted of 178 males and 173 females, whereas in 1934, the number of Harijan girls in school was only seven. Similarly, of 601 students in high school in 1984, as many as 342 were Harijans. The distribution between the sexes was, however, much more biased. There were 225 Harijan boys in high school but only 117 Harijan girls.

In 1934, there were four teachers in the Local Board school, of whom one was a woman. In 1958, a total of 18 teachers in five primary schools provided instruction to 465 students. In the high school 9 teachers and four other instructors of physical education, music, weaving and tailoring had under them 241 wards. The student-teacher ratio at the primary school level had worsened somewhat by 1984 with 25 teachers to 814 students. The ratio for the high school stood at 28 teachers (including instructors for tailoring, drawing, weaving and physical education) for 601 students, more or less the same ratio as in 1958.

The physical infrastructural facilities available in the schools are rather modest. The high school has a pucca building, but the space available is inadequate. It has practically no furniture to speak of, and there is only one laboratory for Physics, Chemistry and Biology. Noon meals are not served in the high school.

Almost all the primary schools are poorly off in respect of buildings and furniture. There are no instruments required for the teaching of Science subjects in any of these schools. But the nutritious meal scheme of the state government is functioning well in all these schools. Including a Balwadi which provides noon meals to 100 children of pre school age, noon meals are being provided to about 650 students studying in the primary schools of the village.

Housing

In 1916, the Brahmins lived exclusively in one street. The practice of people of a given caste living on the same street applied to most other castes as well. We are told, however, that '..... the depressed classes live in the same block along with caste men - only, they live a little apart.'[6]

As for the conditions of housing, about 170 houses out of a total 740 were tiled and the rest thatched. The ratio of tiled houses to all houses was close to a third among caste Hindus but less than ten per cent among the depressed classes. Plenty of unoccupied space existed, especially in the Brahmin quarters. A house site of 1620 square feet fetched a price between sixty and hundred rupees. We have little information on housing conditions in 1934. By 1960, housing conditions had improved a good deal. Of 898 houses, as many as 379 or about 42 per cent had tiled or terraced roofs. In the main hamlet of Gangaikondan project, only 44 out of 161 houses were thatched. As many as 145 houses had electricity. In Gangaikondan 80 out of 161 houses had been electrified.

The position for 1984 is shown in Table 24.

It is obvious from our sample data that housing conditions have further improved since 1960. More than half the sample households possessed electricity connection in 1984. Less than a quarter of the households lived in houses with thatched roofs while more than a third lived in terraced houses. The progress has however, not been uniform across castes. Pillais, Brahmins, Asaris, Chettiars and Naidus are much better off in terms of housing, with all of them living in electrified houses, and most of them in terraced houses. By contrast, the housing conditions of Harijans and Thevars, as well as those of other minor castes are still quite poor,

with nearly a third of such households still living in houses with thatched roofs, and with a majority of them living in houses still not electrified. Especially poorly off are the twelve Parayar, Chakkiliar and Velar households, none of whom lives in electrified houses. All these households live in thatched houses. Konars are better placed than Harijans and Thevars, with 70 per cent of them living in electrified houses and more than half in terraced houses.

Health and Sanitation

Lokanathan observed in 1916 that the village was '..... a very healthy one ..... Little disease of an infectious kind exists.'[7] He also observed, rather contradictorily, that Cholera visited the village once in ten years and small pox once in five or six years. Further, every fifth infant died due to want of proper medical assistance during delivery. The village possessed three native doctors but little else by way of health facilities. The river provided drinking water, and wells the water for other household uses. Nothing much is known of sanitary conditions in 1916 except that nightsoil disposal was not a problem.

Natarajan's report of the survey carried out in 1934 does not provide any information on health and sanitation in the village. But it is evident from the AERC report of the 1958-60 that there was hardly any improvement in the health infrastructure of the village between 1916 and 1960. The only improvement in sanitation was the appointment of a few scavengers by the Panchayat Board. Drinking water was obtained in 1960 from 20 open draw wells and 5 tubewells, scattered in different hamlets. Each well was to be exclusively by persons belonging to a given caste. The water in the wells was generally unclean and not really fit for drinking. There was no drainage worth the name in 1960. The medical facilities were also very poor. The nearest dispensary rather poorly

equipped, was nearly 10 kilometres away at Kayathar. We are told that '..... one homeopath, three quacks and one untrained midwife' ..... were available in the village, and that they were not popular. A first aid centre maintained by the women's social welfare board attended to some maternity cases, but most people in need of serious medical attention had to go to the district headquarters hospital twenty kilometres away from the village.[8]

Despite modernisation in several sectors of the economy, Gangaikondan remained extremely backward in respect of health facilities even in 1984. The position was only marginally better than the situation in 1958-60 described earlier. The marginal improvement has occurred in respect of the supply of drinking water. Except for the four hamlets of Pappankulam, Kottaiyide, KK Nagar and Punganur, all the other hamlets of Gangaikondan receive protected drinking water from Tirunelveli supplied through public taps. However, even here several problems exist. First, the supply is far from adequate. Second, only one tap connection is provided in each hamlet (with the exception of the hamlet of Rajampathy). This has led to a situation where a self appointed "water supply controller" has emerged in Gangaikondan hamlet, who regulates the supply of water charging one rupee per user household per month. For the four hamlets not receiving the protected water, the situation is really difficult. Borewell pumps intended to provide drinking water are not functioning, and people are put to great hardship.

The sanitary conditions continue to remain poor, with no proper drainage facilities. The hamlets of Anaithalaiyur and Rajampathy are especially badly off, with a large number of livestock contributing to worsening of environmental hygiene.

There is still no primary health centre in Gangaikondan. The nearest PHC is 36 kilometres away at a place called Ugranpatti. Recently a maternity and child welfare centre

and a dispensary have been constructed, but these have so far remained unused. Even now, the nearest functioning dispensary is at Kayathar, ten kilometres away. There is a qualified private doctor residing in the village, and a community health worker who is a leprosy assistant. The health worker also 'treats' all illnesses and dispenses allopathic medicines. For any decent medical attention, people still have to go twenty kilometres to Tirunelveli.

Other Social Services

The main hamlet of the village lies along the trunk road from Tirunelveli to Madurai. The village is extremely well connected to Tirunelveli and Koilpatti, the two important towns nearby. Buses ply in the northern direction towards Madurai and the southern direction towards Tirunelveli practically every twenty minutes. The village also has a railway station but its remoteness and the frequency of bus transport have rendered it not very popular. Transport facilities by road and rail have been quite good in this village even from the time of the first survey in 1916, and they are now very good. But roads and transport facilities within the village - to go from one hamlet to another, for instance - are generally quite poor, and this causes problems especially in the rainy season, given that the hamlets are rather widely spread out.

Communications facilities have improved considerably. In 1958, there was neither a telegraph office nor a telephone service. The local post office was only a branch post office, and the nearest telegraph office was ten kilometres away at Talaiyuthu. Now the post office has been upgraded into a sub post office. The village also has a telegraph office and a telephone service.

There is a public library in the village. This branch library of the Tirunelveli local library authority began functioning in the village from March 1958. In 1960 it had 658 Tamil and 196 English books. 18 persons had acquired membership in the library. The library used to get, though not very regularly, 3 Tamil and 2 English dailies and 25 periodicals of which 21 were Tamil periodicals. The library has expanded a great deal. It now has 5271 books in Tamil and 337 books in English. Its membership now stands at 616, mostly male. On an average, 90 persons - again mostly males - use the library every day. The annual sanction for periodicals is Rs.500/-. Unlike in 1960, the library is now electrified.

In 1960, there was a community radio for the village located in the main hamlet, and hardly used. The AERC report had suggested that the radio should be shifted to some other electrified hamlet where it would be used by the public to a greater extent. Now, there are seven community radios distributed over the seven hamlets, but these are also not being used to any great extent.

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1. The literacy rates for Gangaikondan as per 1981 census at 43.99% overall tally very closely with 44.01% for rural Tirunelveli taluk. The figure is lower than that for rural Tirunelveli district (47.17%) but higher than that for rural Tamil Nadu (38.56%). This is even more true for female literacy in 1981:

   Female Literacy Rate, Rural Tamil Nadu - 25.80%
   " " Tirunelveli District - 35.94%
   " " Tirunelveli Taluk - 31.87%
   " " Gangaikondan - 33.32%

1a. Gilbert Slater (ed), Some South Indian Villages, Madras, 1918, p.73.

2. P.J.Thomas and K.C.Ramakrishnan (ed), Some South Indian Villages: A Re-survey, Madras, 1940, p.114.

3. AERC Report, Table I-9, p.25 and TableI-10, p.27.

4. Overall, the decline in illiteracy works out to be from 72.60% in 1958-60 to around 56% in 1981. The figure for 1984 cannot be very different if the census definition of literacy is used.

5. It may be noted here that the literacy rate among the SCs in the village (excluding Christian converts) works out at 53.63% for males, 33.86% for females and 43.69% overall. These figures are substantially higher than the corresponding overall figures for rural Tamil Nadu (25.92%) and rural Tirunelveli District (32.96%) in 1981.

6. P.S.Lokanathan in Slater op.cit., p.65

7. Slater op.cit., p.71.

8. AERC Report, pp.7-9.

Table 20: Literacy Rate in Gangaikondan Various Years, Per Cent

Year	Percentage of Literates		
	Male	Female	Total
1951	29.12	8.55	18.61
1958-60	NA	NA	27.40
1961	41.88	19.16	30.26
1971	47.80	23.81	35.89
1981	55.05	33.32	43.99
1984	64.58	43.30	53.81

Note: 1) Literacy rates for 1984 have been calculated by treating all persons who have at least been to (or are presently in) primary school as literates. Children attending 'Pre-school' and children who have not attained school age have been excluded. The number of literates has been expressed as a percentage of the total population in the category (male, female, total).

2) The figures for 1984 are estimates obtained from a one-third sample.

Table 21: Illiteracy and Caste, Gangaikondan 1984

Caste	% Illiterate		
	Male	Female	Total
Pallar Hindu	43.10	65.09	54.09
Pallar Christian	35.58	60.23	48.20
Thevar	38.56	61.20	50.21
Konar	33.86	62.16	47.06
Nadar, Hindu	29.41	71.74	49.48
Nadar, Christian	52.17	40.0	46.51
Pillai	12.50	22.81	18.10
Brahmin	10.52	10.0	10.20
Asari	21.05	30.0	25.64
Vannar	25.0	69.23	48.0
Pandithar	17.65	46.15	30.0
Velar	92.31	87.50	90.48
Moopanar	13.33	36.84	26.47
Chettiar	0.0	30.0	12.0
Padayachi	41.67	63.64	55.88
Naidu	9.09	26.67	19.23
Others	47.37	60.0	53.85
Overall average	35.42	56.70	46.19

Note: The percentage of illiterates has been obtained by dividing the number of illiterate persons, including in this category children below school going age and children going to "preschool" by the total population for the category (male, female, total).

Table 22: School-going children in the age group of 5-16 years, Gangaikondan 1984

Caste	Total number of children in the age group 5-16 years			Children of the age group attending school		
	Male	Female	Total	Male	Female	Total
Hindu Pallar	67	61	128	46 (68.66)	40 (65.57)	86 (67.19)
Christian Pallar	53	49	102	40 (75.47)	30 (61.22)	70 (68.63)
Thevar	71	83	154	46 (64.79)	36 (43.37)	82 (53.25)
Konar	43	35	78	30 (69.77)	17 (48.57)	47 (60.26)
Hindu Nadar	19	11	30	17 (89.47)	6 (54.55)	23 (76.67)
Christian Nadar	8	11	19	5 (62.5)	5 (45.45)	10 (52.63)
Pillai	14	16	30	14 (100.0)	16 (100.0)	30 (100.0)
Asari	10	17	27	7 (70.0)	14 (82.35)	21 (77.77)
Brahmin	2	6	8	2 (100.0)	5 (83.33)	7 (87.5)
Others	31	33	64	23 (74.19)	20 (60.6)	43 (67.19)
All castes	318	322	640	230 (72.33)	189 (58.70)	419 (65.47)

Note: Figures in parantheses show the percentage of children in the age group 5-16 years attending to school for males, females and persons in each.

Table 23: School enrolment data, Gangaikondan 1984

Name of School	Total students			of which SCs		
	Boys	Girls	Total	Boys	Girls	Total
1. Panchayat Union Elementary School Gangaikondan	99	105	204	6	7	13
2. Panchayat Union Elementary school Turaiyur	48	39	87	47	37	84
3. Panchayat Union Elementary school Vadakarai	54	62	116	5	10	15
4. Paranthamas Hindu elementary school, Rajampathy	52	72	124	2	5	7
5. Roman Catholic Primary School Anaithalaiyur	107	110	217	82	90	172
6. Tirunelveli Diocesans Trust Association(TDTA) Elementary School Aladipathy	40	26	66	36	24	60
Total	400	414	814	178	173	351
High school Gangaikondan	410	191	601	225	117	342
Grand total	810	605	1415	403	290	693

Table 24: Housing Particulars, Gangaikondan 1984 (Estimates)

Sl. No.	Caste	Total No. of HHs	Number living in			
			Terraced Houses	Tiled Houses	Thatched Houses	Electrified houses
1.	Pallar Hindu	291	66	120	105	117
2.	Pallar Christian	219	93	96	30	87
3.	Parayar	21	0	0	21	0
4.	Chakkiliar	6	0	0	6	0
5.	Thevar	297	84	102	111	138
6.	Konar	150	78	54	18	105
7.	Pillai	66	48	15	3	66
8.	Brahmin	36	33	3	0	36
9.	Asari	39	24	6	9	39
10.	Vannar	15	6	3	6	9
11.	Velar	9	0	0	9	0
12.	Pandithar	15	0	12	3	6
13.	Moopanar	24	9	12	3	18
14.	Nadar, Hindu	51	9	27	15	36
15.	Nadar, Christian	21	6	3	12	9
16.	Chettiyar	18	12	6	0	18
17.	Padayachi	18	3	9	6	12
18.	Naidu	21	15	3	3	21
19.	Kaikolar	3	0	3	0	0
20.	Others	24	12	12	0	6
	Total	1344	498	486	360	723
	% to total no. of Households	(100.0)	(37.05)	(36.16)	(26.79)	(53.79)

Chapter V: Agriculture

Some degree of economic modernisation notwithstanding, agriculture continues to be the single largest economic activity in Gangaikondan. In the present study, it has not been possible to investigate this sector of the economy thoroughly. We have only been able to obtain some primary data on costs of cultivation and some secondary data on cropping patterns, together with some general information on agriculture in the village.

Climate; rainfall, soil

The climate in the village is fairly dry. The rains come mostly during September-December from the North East monsoon. Annual rainfall rarely exceeds 75 cms, the average being around 60 to 65 cms. Dry lands predominate in the village. Much of the soil of the dry lands is red sand. Next in extent is ordinary black loam. Much of wet land consists of inferior black loam soil.

The land use pattern for some recent years as per the village records is shown in Table 25. To what extent the data reflect the reality on the ground is, however, a matter of conjecture, since the methods by which they are collected leave a lot to be desired. Nevertheless, one feature comes out sharply from the data, namely the big increase in area classified as 'other fallows', which consists of lands lying fallow for more than a year but less than five years. This increases from less than 300 acres in the mid-late seventies to more than 2000 acres in 1981-82. This increase most likely reflects the severe impact of the drought years 1979-81. A comparison with figures for 1957-58 from the previous survey shows a sharp decline in net area cultivated. Whereas the net sown area for 1957-58 was 3619.61 acres, the annual

average for 1974-78 is only 1944.39 and that for 1981-82 is 1792.84 acres. Going back further, average annual gross cultivated area was 4081.86 acres for the five year period 1912-1917 and 4020.70 acres for the period 1927-32. According to the Census of 1951, the annual average cultivated area for five Faslis ending 30th June 1951 was 3384 acres for the village. The same source states that, for a normal year, area cultivated would be 4615 acres. Taking double cropping into account, gross cultivated area was 4516.35 acres in 1957-58. But the annual average gross cultivated area for the five year period 1974-75 to 1978-79 works out to only 2807.18 acres and the figure for 1981-82 is even lower at 2295.83 acres. The data would thus appear to suggest that there has been a secular decline in area cultivated, both net and gross.

Cropping Pattern

The major crop in Gangaikondan is paddy. Other crops have varied in importance over the years. In recent years areas under kambu and cotton have shown a decline while cholam has acquired greater importance. The relevant information has been brought together in Table 26.

Data for recent years could not be obtained due to the fact that village records are in shambles consequent upon the abolition of the traditional administrative posts in the village and their replacement by the new 'village administrative officers'. The most recent year for which some, incomplete information is available is 1981-82. The gradual decline in cropped area is attributed by some of our respondents to poor monsoons, arratic changes in the seasonal pattern and poor returns from agriculture. The data shows a trend towards a mono-crop agriculture from what was a fairly diversified crop pattern even as late as 1957-58. With some improvement

in irrigation, double cropping of paddy has been extended, but the picture for all other crops is discouraging. One might add that with the emergence of non-agricultural activities, cultivation on some of the poorer soils has ceased to be worthwhile, and this has primarily affected non-paddy crops, especially inferior cereals like kambu, ragi etc.

Irrigation

The major source of irrigation is the river Chittar. The water from the river is stored in a large tank known as Sirukulam. There are also three other tanks, of which two have very small ayacuts. An additional source of irrigation is provided by wells.

Data on irrigation is not readily available for all years. Data for selected years is shown in Table 27.

Figures on area irrigated more than once are not available for 1916 and 1934. In 1958, 862.56 acres were double cropped, and 17.09 acres treble cropped. One cannot assume that these represent area irrigated more than once, since some double cropping might involve a wet crop in combination with an unirrigated crop.

The most important change between the situation obtaining during the previous survey and that obtaining during the present survey with respect to irrigation has been the substantial addition to irrigation sources through a new tank known as 'Parakkirama Pandian tank'. This tank came into use from around 1965. (Apparently this tank had been used much earlier, but had fallen into disuse long ago). As a result of this addition to irrigation facilities, gross area irrigated increased significantly. In 1977-78, a year of excessive rainfall, the irrigation provided by this tank covered an area of 906.21 acres. In 1978-79, a more 'normal' year, the gross area irrigated by this tank was 547.33 acres.

A second additional source of irrigation is provided by wells which had an independent ayacut of 126.12 acres in 1981-82, a little over four times the figure for 1957-58. However, wells continue to remain a relatively minor source of irrigation. In 1981-82, there were 89 irrigation wells of which 64 had independent ayacut and 25 supplemented other irrigation sources, mainly the tanks. Only 27 of these 89 wells were operated using electric pumpsets. Oil engines were used in another 24 wells, but 42 wells - nearly half of all wells - were operated using the traditional Kamalai method.[1] In 1916, there were 47 irrigation wells. Natarajan reported in 1934 that only 20 wells were really usable, of which 7 were on wet lands, and that no wells had been dug in the village for more than a decade prior to his survey. It was noted in 1960 that lift irrigation '.....is not popular and only 30.00 acres are irrigated by this method'.[2] Attitudes towards well irrigation have changed a little since than, with more wells being constructed, but the change is far from being dramatic.

Crop Calendar

The crop calendar observed in the surveys of 1916 and 1934 is reproduced below.

Crop	Period of cultivation	
	First Crop	Second Crop
Paddy	June to September	October to February
Senna	April to September	(in dry) October to January
Cholam and Kambu	(in wet) April to September	(in dry) October to January
Ragi	(in wet) May to August	(in dry) October to December

Crop	First crop	Second crop
Cotton	September- February	--
Pulses	September-December	--
Sugarcane	May-March	--

Although the calendar appears crowded, it is difficult to say how busy the seasons were, since we do not know the extent of double cropping. In 1957-58, however, double cropping was not extensive. The cropping intensity was 1.24, which means roughly a quarter of the area was double cropped. The AERC report states that mostly only a single crop of paddy was raised, which would mean that on irrigated land (on which alone two crops could be raised), the usual practice was to combine a (wet) paddy crop with a (dry) crop, usually of cholam or cumbu.

The crop calendar for 1984 is reproduced in Table 28. In addition to what is noted in the calendar, one may add the various paddy operations for lands on which a second paddy crop is raised between Chithirai and Avani (mid April to mid September).

A comparison of the crop calendars of 1916-1934 and 1984 shows some significant changes. In 1916 and 1934, the main paddy crop was essentially a summer crop commencing in June and ending in September. Here is how Natarajan puts it:

'It is not in all years that paddy is raised on double crop wet lands both during Kar and Pishanam seasons. A dry crop mainly cholam ... is raised in the pishanam i.e., in the period from October to February. It is difficult to raise paddy a second time in the year. Apart from the principle of rotation, during pishanam strong winds set in and the tender paddy plants cannot stand them. Water too is not available in sufficient quantity during this season..'[3]

In 1984, the situation was entirely different. The main paddy crop ran from September-October to February-March. The millet crop was raised (on lands where paddy had been harvested) from April to June. The reason seems to be that water supply is now more secure for the pishanam season. The frequent failure of the monsoons might imply a weak storage position in the major river-fed tanks by the beginning of April. There might be other reasons as well, but we have not been able to probe very much into this.

Cotton which was earlier cultivated from September to February is now grown from February-March to August-September. The millet crops on dry land, which used to be grown from October to January continue to be grown in the same season now.

As we will see later on, the pattern of agricultural activity indicated in the crop calendar does not ensure year-round employment for agricultural labourers.

Changes in technique

In 1916, the cultivators did not use chemical fertilisers at all. Lokanathan noted that the ploughs used were '... only of the common country type'.[4] Organic manures were extensively used, ten cartloads of cattle dung per acre of wet land being

common for the first (kar) crop, with another five to six cartloads for the pishanam crop, which got additionally green manure and sheep dung. An acre of garden land received twenty cartloads of cattle dung while an acre of dry land received only four to five cartloads.

Natarajan has written at length on the techniques of cultivation that prevailed in 1932. Both quick maturing ('Avasara samba' 25-35 days in nursery plus 75 days in the field) and long duration (Kadaikulathan, 130 days) varieties of paddy were in vogue. The hard working tenants grew other more nutritious varieties including one known as 'Uvar venran (meaning victor of saline soil).... believed to have been evolved by repeated process of selection by experienced cultivators'.[5] The millets were grown using traditional methods. Crops which have now totally disappeared such as betelvine and senna, were grown on a sizeable scale in 1932. Then as now, the most important commercial crop was cotton. But interestingly enough, we are told that the crop '...is mostly raised by two big landholders in the whole village. The cultivation of this crop by petty landholders or by petty tenants is entirely unknown in the village'.[6] But ryots of the neighbouring village did cultivate cotton, using the traditional seed variety and traditional methods.

As in 1916, only the primitive type of ploughs were in use in 1932. '... the rich and the poor, the educated and the ignorant go on in their hoary way of ploughing with the primitive wooden ploughs used since the days of their fore-fathers'.[7] Again, as in 1916, cattle dung continued to be the main manure, with green manure applied additionally on wet lands. Chemical fertilisers, which were not in use in 1916, had been introduced into the village in the mid nineteen twenties, and after a harvest or two, '...these became popular as the yield went up to an appreciable degree'.[8] But later on they were given up on the ground that '....in the long run, they

tell on the native properties of the soil'.[9] The crash in produce prices during the depression might have also been a factor. In any event no chemical fertilisers were being used in 1932. Thus practically no change in agricultural technique had taken place between 1916 and 1932.

Methods of cultivation had not changed very much in 1957-58. Ploughing was still being done with the same old wooden ploughs drawn by bullocks, and the seed used was farm-produced. In fact, there had been something of a setback in the sense that an agricultural depot '...which was serving this village for a long time with improved seeds, implements, pesticides etc. has been shifted to Tirunelveli town... the cultivators of this village have been deprived of this facility. To add to their difficulties the improved seeds are not readily available even at the Tirunelveli depot.[10]

Chemical fertilisers, however, had come to stay. They accounted for nearly ten per cent of the cost of cultivation of paddy. They were still not universally applied, for we are told: 'Chemical fertilisers like ammonium sulphate, super-phosphate, nitrate are applied, if available; otherwise manure mixture is applied.'[11] But much more farmyard manure was being applied: an average of 24 cartloads per acre of paddy as compared to 10 cartloads in 1916. Apart from this, 30 to 50 head loads of green manure and 2 bags of groundnut cake were being used. The only other crop which received manure was chillies.

In the twenty five years since the survey of 1958-60, there have been quite a few changes in the methods of production. While ploughing is still done largely in the traditional way, tractors have also arrived. More striking are the changes with respect to the use of fertilisers and pesticides. In a sample of 20 cases of paddy cultivation, we found that

expenditure on fertilisers and pesticides averaged around 46 per cent of total expenditure (excluding the imputed value of family labour). In a couple of cases, it exceeded 60 per cent and in only two cases did it fall below one third of total cost (and rather narrowly at that, the minimum figure being 31.3 per cent). Further, in sharp contrast to the situation obtaining in 1958, chemical fertilisers were extensively used in the cultivation of crops like cotton. Expenditure on fertilisers and pesticides varied between 30 and 50 per cent of the total expenditure incurred in the cultivation of cotton, and between two fifths and two thirds in the case of chillies. Unlike in 1958, seeds are now mostly purchased. Cash expenses on seeds account for anywhere between five and fifteen per cent of total cash cost of cultivation.

The changes between 1958 and 1984 may be summarised thus: some degree of modernisation of agriculture has taken place, and the level of commoditisation has increased greatly, with practically all inputs being purchased and a good proportion of output therefore necessarily sold.

Yields

The major crop being paddy, our discussion will mainly concern this crop. An additional reason for this is the paucity of data.

In 1916, paddy yield in the one case presented was 980 kgs. per acre.[12] In 1936, a tenant's accounts showed 21½ kottahs of paddy yield on 2 kottahs of land. A kottah of paddy weighs 140 kgs, while a kottah of land has an area of 1.68 acres. The yield thus works out to 896 kgs per acre. Given that we have only one case for each of the first two survey years, we cannot read much into the decline in yield between 1916 and 1936. For 1958-59, we have the information

that the total production of paddy on 695.28 acres was 10,404 bags, each bag weighing 70 kgs. This works out to a yield of 1047 kgs per acre.

For 1984, we have twenty observations for paddy. The yields net of harvest wages range from a minimum of 700 kgs per acre to a maximum of 1960 kgs per acre. The mean works out to 1356 kgs per acre, and most of the sample yields are clustered fairly closely around this figure in a band between 1000 and 1700 kgs per acre.[13]

These data would suggest that yields have improved by about 50 per cent between 1958-59 and 1984.[14] The average figure of 1356 kgs per acre for 1984 is higher than the state average.[14a]

The other important crop in the village is cotton. We do not have figures on cotton yields for 1916 and 1936. In 1958-59, the average yield works out at 183 pothis on 262 acres or roughly 79 kgs per acre.[15] Most - perhaps all - of the cotton cultivation must have taken place on rain-fed land. By 1984, high yielding cotton varieties had arrived, and cotton was being raised largely as an irrigated crop. In our sample of five cases, cotton yields per acre were 300, 400, 500 and 600 kgs. The weighted average yield was 456 kgs per acre, a nearly six fold increase over 1958-59.

A third crop of some importance in the village is chillies. Chillies were not cultivated on any significant scale in 1916 and 1936. In 1958-59, the yield of chillies was reported as 34.2 Thulams per acre, which works out to 3.1 quintals per acre. In 1984, we had three observations on chillies yields which were 6.25, 8.0 and 6.0 quintals, which is more than double the figure for 1958-59.[16]

In sum, yields of all crops have generally increased, but paddy yield increases have been far less spectacular than those of cotton and chillies.

Costs and Returns

Lokanathan reports per acre gross revenue at Rs.70 and per acre costs including land revenue at Rs.40.50 for paddy cultivation in 1916 leaving a net return of Rs.29.50 per acre, or nearly 4.2 quintals of paddy in terms of prices than prevailing. Costs and returns data are not available for other crops in 1916. We also do not have such data for 1934, although Natarajan suspects that net returns would have declined sharply between on 1916 and 1934 on account of a steep fall in produce prices. Neither do we have costs and returns data for 1958-59. So our discussion below is confined to data from the present survey.

In the case of paddy, per acre cost (excluding the value of family labour) varies from a low of Rs.540 to a high of Rs.1355.5. The average cost works out to 1111.33 rupees per acre. Expenditure on land revenue, seeds, fertilisers, pesticides hired labour and other inputs have been included, but interest charges and depreciation excluded from the cost figure. Depreciation is negligible since little fixed capital is used. Data on interest paid specifically for loans incurred on account of cultivation is hard to obtain. It can, however be safely said that in our sample, these are not likely to be significant since the crop is of short duration and in only one case (where a diesel pumpset is used) do we have fixed investment of any magnitude. Diesel expenses have of course been included in this case. In one other case, a tractor has been hired and the hire charges included in the cost calculation. The cost figures we have obtained appear to be quite reliable.

The cost and returns data for 20 cases of paddy cultivation are shown in Table 29. Although paddy is a labour intensive crop, the impact of the new technology has led to a much

greater role for non labour inputs. It must of course be recognised that the exclusion of family labour understates the true share of labour inputs into the cost of production. Nevertheless, the increase in the use of fertilisers and other purchased inputs that has occurred with the spread of new technology is evident from the data. Non labour costs now account for five eighths of the total cash cost of paddy cultivation. Of this, the major share is expense incurred on the purchase of fertilisers. The value of output (including by product) per acre have been calculated using the then ruling paddy price of Rs. 165 per quintal and a price of rupee five per bundle of hay. These gross returns vary from a low of Rs. 1230 per acre to a high of Rs. 3359 per acre. The weighted average works out to Rs. 2355 per acre. Average net returns per acre come out to be Rs. 1244.

In the case of cotton, we have five sample observations. Costs per acre range from a minimum of Rs. 781 to a maximum of Rs. 1755. The weighted average figure is 1407.57 per acre, of which labour costs account for Rs. 555.33 (39.45 per cent) and non-labour costs for Rs. 852.24 (60.55 per cent). Value of output per acre varies from Rs. 1500 to Rs. 3000 with the weighted average being Rs. 2280. Net returns per acre come out to be Rs. 872.5, which suggests that, on a per acre basis, paddy offers 1.43 times the net return offered by cotton. But the data are both meagre and non-random so one cannot confidently generalise.

We have only three observations on chillies, and the average net return per acre works out to Rs. 3047, more than three times the figure for cotton and around two and a half times the figure for paddy. Since crop durations vary, the comparison is not decisive. Quite apart from this, the small number of observations precludes any attempt at drawing any far reaching conclusion.[17]

Marketing of Agricultural Produce

Even in 1916, a good part of the agricultural produce was being traded. Millets - cumbu, cholam and ragi - and pulses were not sold, but retained entirely for own consumption. A relatively small portion of paddy - 400 kottahs out of a total production that one could estimate at around 8500 kottahs on the basis of 7 kottahs per acre on roughly 1200 acres under paddy were sold, all of it bought in the village by dealers from outside. The major commercial crops in 1916 were senna and cotton. These were partly sold to dealers on the spot and partly taken to Tuticorin port for sale abroad. As for prices, and the relations between traders and ryots, we are told: '....even the poor ryots keep the necessary seed to themselves and sell the rest of the produce.. the ryots are not in the clutches of sowcars. Except in the case of senna and cotton, the price they receive for the produce they sell is not far less than the current price in large markets. In the case of senna and cotton, the dealers get a large amount of profit and this entails a corresponding loss to the ryot'.[18]

Natarajan noted in 1934 that Lokanathan's estimate of paddy sold in 1916 at 400 kottahs was felt by village residents in 1934 to be rather low. Assuming 6 kottahs of yield per acre, with around 1000 acres under paddy, the total output in 1916 would have been around 6000 kottahs. Neither the area under paddy nor the yield per acre had changed much between 1916 and 1934. With around 700 households, assuming on an average 1 kottah (= 140 kgs) of paddy consumption per household per month, Natarajan pointed out that the local consumption itself would have been around 8400 kottahs. Even assuming an additional 1500 kottahs of local paddy production through a second crop or one quarter of the first crop area under paddy, total production would be only 7500 kottahs. Yet

it was reported by the residents in 1934 that over 80 per cent of local production or approximately 5000 kottahs of paddy were sold by ryots of the village. Natarajan notes: '..either a large number of people (were) consuming only a very small quantity of paddy supplemented by other grains or many of the ryots .. (were) below the starvation level, cultivating and producing and exporting their produce without themselves being able to consume it'.[20] Obviously both of these statements would have been true. One should perhaps add that much of the paddy produced by indigent tenants must have found its way to the product market via the landlords to whom it would have been surrendered as rent much against the interests and needs of the tenants themselves.

Natarajan noted that the timing of the revenue demand forced most of the ryots to either borrow at the rate of four paise per rupee per month (i.e., 6.25% p.m. or 75% per annum) or sell their produce at the very low prices ruling after the harvest. Only the rich could afford to wait and sell five to six months after harvest.

The report of the 1958-60 survey has little to say on the marketing of village produce. We do not have much information on marketing of agricultural produce for 1984. But a qualitative picture can be sketched. Crops such as cotton, sunflower, chillies and senna are partly sold locally to dealers who come from elsewhere, and partly taken to the market in Koilpatti, which appears to have thus replaced Tuticorin as the major market for these commercial crops. Traders do not lend to cultivators and so the latter are pretty much free to sell as they please. However, the debt obligations to the local financial institutions - especially the cooperative credit society - and to the landlords and moneylenders exert a good deal of pressure on the small farmers to sell at low, post harvest farm prices.

With respect to paddy, there is an interesting change arising primarily from two developments. One is the decline in area under millets such as cumbu and cholam. The other is that a majority of the cultivators have shifted from millet consumption to rice consumption. This is most likely a reflection of an improvement in their economic and social status consequent on their acquisition of land from the former (largely Brahmin and Pillai) landlords, under whom most of the Thevar, Konar and Harijan cultivators had been tenants and pannaiyals. As a result of these two developments, a good part of paddy produced is retained for own consumption. Such sale of paddy as occurs is to dealers who come from outside. The more substantial land owners stock their paddy and sell it months after harvest at prices ten to twenty rupees per quintal higher than the post harvest prices. Interestingly Harijan land owners sometimes store their paddy in the agraharam in the houses of their erstwhile landlords.

Livestock and Dairying

It remains to look at the role of livestock and dairying in the village economy. While crop agriculture has registered only rather modest strides over the decades, there has been a significant development of the livestock sector. Table 30 shows the livestock statistics for selected years. Before interpreting the data, it is necessary to remind ourselves that the official data are far from reliable.[21]

Nevertheless some features do emerge. With agricultural modernisation, the importance of plough bullocks has shown some decline between 1958-60 and 1984. It must of course be noted that the figures for 1984, being estimates from a simple random sample would involve some underestimation. That there is a significant decline is, however, quite evident. With lift irrigation not having expanded on any

large scale, and with tractorisation at an infant stage, the decline in plough bullocks in this village is naturally rather modest compared to villages where agricultural modernisation has involved both rapid expansion of lift irrigation and tractorisation.[22]

The major development with respect to livestock is the enormous increase in the number of milch cattle between 1958-60 and 1984. Among calves and heifers too, milch cattle account for the major part in 1984. These changes reflect the rapid growth of a market for milk, brought about through state intervention, particularly the provision of subsidies for the purchase of milch animals, earlier under the SFDA and MFAL schemes and now under the IRDP. On the demand side, the growth of Tirunelveli urban agglomeration has had a large positive impact. There are now four milk societies in Gangaikondan involving a total membership exceeding 400 persons.

In 1958-60, nearly 80,000 litres of milk were being produced annually. Of this, nearly 50,000 litres were consumed by the producers themselves and the remaining 30,000 litres were sold. The average daily sale thus worked out to around 83 litres. By 1984, of the four milk societies in the village, the two smaller ones together were supplying over 160 litres of milk every day. The two bigger societies together were supplying between 1000 and 1400litres per day depending on the season. Of the total supply from the four societies, more than three quarters was being sent to the urban milk market of Tirunelveli. Three of the societies were flourishing in 1984. The fourth, objectively quite viable, was facing a crisis brought about by mismanagement.

The decline in the number of sheeps and goats from 2897 in 1958-60 to 1572 in 1984 is puzzling. A good part of the decline may be attributed to a disease in 1983 that killed a

large number of sheep and goats. The decline might also reflect a shift from sheep and goats to milch animals, consequent on the provision of subsidies for the purchase of milch animals under the IRDP, and the expansion of a profitable urban milk market in nearby Tirunelveli. A part of the decline might simply be on account of under reporting.

A calculation of profits per milch animal based on details furnished by a reliable respondent shows an annual income of Rs.3045 from the sale of 1125 litres of milk and some farmyard manure. As against this, expenses on feed, tending and medical treatment, interest on loan and insurance come out to be Rs.1315. This leaves a net annual return per milch animal of Rs.1700. These calculations are for a buffalo. Net returns may be a little less for a cow. Practically all IRDP milch animal scheme beneficiaries go in for buffaloes. Obviously annual income per animal is quite meagre, especially when viewed against the hard work involved. Nevertheless, its usefulness as a supplementary source of income must be recognised.

There are also three sheep rearing societies in the village. The biggest of them has a membership of around 150. Of these, 70 were given IRDP loans of Rs.4000 each and 80 were given SAP (Special Animal Husbandry Programme) loans of Rs.3500 each. In both cases, subsidy amounted to a third of the loan value and the loan was to be repaid in four years. Each member has contributed a share capital of Rs.50/- with the loan. Each member would buy 20 female sheep and a male. Each year, the stock gets doubled and the males alone are sold, fetching an average income of Rs.600 to 700. The sheep are used for penning nine months in a year (excluding the rainy season lasting three months), fetching an income of around 2000 to 2500 rupees per year. Thus gross annual income from sheep rearing amounts on an average to about

Rs.3000 per number. Expenses amount to less than Rs.1000 per year, leaving a net annual return of Rs.2000, more or less the same as from a milch animal. But the investment in the latter case is a good deal less. The shift that we had hypothesised earlier from sheep to milch cattle would thus appear to have, prima facie, an objective basis.

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1. In this method, bullocks provide the power source for lifting water from the well.

2. AERC report, p.63. The report also noted that there were only three electric pumpsets in use for irrigation.

3. P.J.Thomas and K.C.Ramakrishnan, op.cit., p.75.

4. Slater op.cit., p.60.

5. P.J.Thomas and K.C.Ramakrishnan, op.cit. p.76.

6. Ibid, p.77

7. Ibid, p.82

8. Ibid, p.83

9. Ibid, p.84

10. AERC Report, p.82

11. Ibid, p.83

12. There is some uncertainty about yield figures for 1916. Lokanathan who carried out the survey reports 7 kottahs or 980 kgs per acre while Slater in a foot-note suggests on the basis of rentals then prevailing that the yield would be around 9 kottahs or 1260 kgs. per acre. We have taken Lokanathan's estimate as more reliable.

13. With regard to data for 1984, all but one of the twenty observations relate to HYV paddy. In the one exceptional case of Moongil samba, a traditional variety, the yield is 1120 kgs. per acre.

14. This is under the assumption that 1958-59 yield figures are gross of harvest wages. If they are taken as gross, then net yield rates show a rise of nearly 450 from 900 kgs in 1958-59 to 1350 kgs in 1984, assuming harvest wages at 1.5 quintals per acre.

14a. The state average for paddy yield is 1.3 tonnes per acre inclusive of harvest wages, which would imply a net yield between 1.15 and 1.20 tonnes per acre.

15. 1 pothi cotton = 247 lbs = 112.3 kgs.

16. Natarajan reports a case of 60 Thulams of chillies being obtained in 1936 from 0.56 acres. This works out to 21.4 quintals per acre, which seems incredible.

17. Figures of net return per acre for paddy, cotton and chillies available from a similar study for the village of Vadamalaipuram (VDP) that I had conducted in 1983 make interesting reading:

Crop	VDP, 1983 Net returns in Rupees per acre	GKN, 1984
Paddy	1280 (8 cases)	1244 (20 cases)
Cotton	987 (8 cases)	872.5 (5 cases)
Chillies	2078 (6 cases)	3047 (3 cases)

The rather low figure for chillies in Vadamalaipuram arises from one case of extremely poor yield.

18. Slater op.cit, p.67.

19. With five consumption units per household this works out to roughly 600 grams of rice per consumption unit per day, which is a reasonable norm.

20. P.J.Thomas and K.C.Ramakrishnan pp.101-102.

21. As Natarajan pointed out in 1934, 'Any one who has any acquaintance with the village can hardly trust the figures of the Karnam ... He simply takes the figures of the previous census and makes some alterations based on guess work. Thus the cattle census goes on, like the blind leading the blind, one error giving place to a second modified one...' (Thomas and Ramakrishnan, p.80).

22. A slow decline in the number of ploughs has occurred along with the decline in the number of plough bullocks as part of the process of slow modernisation and tractorisation of agriculture. The decline in the number of carts reflects the improvement in transportation systems for agricultural produce.

Table 25: Land Use Pattern in Gangaikondan - Selected Years

Year	Total geographical	Forest Area	Uncultivable waste	Land put to non-agricultural use	Cultivable waste	Permanent pastures and other gratis land	Current fallows	Other fallows	Net cultivable area
1974-75	11,046.46	881.25	32.92	2906.90	2925.69	216.86	2205.69	275.51	1601.64
1975-76	-do-	-do-	-do-	-do-	-do-	-do-	2177.47	275.51	1629.86
1976-77	11,046.46	881.25	32.92	2906.90	2925.69	216.86	1065.28	275.51	2742.05
1977-78	11,046.46	881.25	32.92	2906.90	2925.69	216.86	1988.25	290.60	1803.99
1981-82	11.046.46	881.25	32.92	2906.90	3082.64	216.86	8.79	2124.26	17.92.84

Table 26

	Area cultivated (acres)				Average of 1974-79	1981-82
	1915	1912-17	1927-32	1957-58		
Paddy	1163	1062.3	1189.6	1036.49	900.27	1547.61
Cholam	448	230.3	128.5	398.54	540.35	NA
Kambu	762	817.3	657.0	1197.80	515.59	NA
Pulses	257	179.8	241.9	NA	34.30	NA
Cotton	1050	965.5	944.7	1083.90	398.42	NA
Chillies	--	5.2	37.9	17.30	48.56	NA
Other	330.5	821.46	821.1	782.32	369.69	NA
Total	4010.50	4081.86	4020.7	4516.35	2807.18	2295.83

Table 27: Sources and Extent of Irrigation Gangaikondan, Various Years

Year	Sirukulam Tank	Sirukulam Canal	Parakkirama Pandian Tank	Pallankulam Tank	Pappankulam Tank	Wells
1916	793.9	215.13	Nil	5.99	24.91	30.40
1934	793.9	215.13	Nil	5.99	24.91	20.25
1958	793.5	215.34	Nil	5.99	24.91	30.00
1977-78	755.15 (+626.23)[a]	215.20 (+185.38)[a]	564.19 (+342.02)[a]	5.92 (+4.44)[a]	20.36 (+13.52)[a]	NA
1978-79	750.05 (+706.70)[a]	214.65 (+195.80)[a]	364.73 (+182.60)[a]	Nil	19.82 (+6.72)[a]	
1981-82[c]	938.95[b]	198.63	NA	NA	NA	126.12

Note: Figures refer to area irrigated in acres.

a - Figures in parantheses refer to area irrigated a second time.

b - This figure includes area irrigated by all the four tanks. No tank-wise breakdown is available.

c - In addition to the figures shown in the table, 532.28 acres were irrigated a second time.

Source: 1) Figures for 1916 are from Slater (1918)

2) Figures for 1932 are from Thomas and Ramakrishnan (1940)

3) Figures for 1977-78 and 1978-79 are from the village Statistical Register.

4) Figures for 1981-82 are from the G-returns of the village for Fasli 1391.

Table 28: Crop Calendar, Gangaikondan 1984

Month	Major Operations
Purattasi (Sep. 15-Oct. 15)	Sowing of First Crop paddy, chillies harvesting, harvesting of sunflower, Avuri etc.
Ippasi (Oct. 15-Nov. 15)	Weeding of paddy, sowing of dry millets.
Karthigai (Nov. 15-Dec. 15)	Transplanting of paddy.
Margazhi (Dec. 15-Jan. 15)	Weeding of paddy.
Thai (Jan. 15-Feb. 15)	Harvesting of dry millets.
Masi (Feb. 15-Mar. 15)	Paddy harvesting, sowing of cotton.
Panguni (Mar. 15-April 15)	Paddy harvesting.
Chithirai (April 15-May 15)	Making of furrows for chillies cultivation; sowing of millets in lands on which paddy had been harvested.
Vaikasi (May 15 - June 15)	Sowing of chillies.
Ani June 15-July 15)	Weeding of cotton and chillies, harvesting of irrigated millets.
Adi (July 15-Aug. 15)	Harvesting of cotton, chillies and Avuri.
Avani (Aug. 15-Sep. 15)	Same as Adi

Table 29: Paddy Cultivation - Cost - Structure - and Returns - Per Acre Gangaikondan - 1984

Sl. No.	Extent cultivated	Cost per acre		Percentage share in cost of		Value of output, Rs. gross (including by-product
		Labour	Non-Labour	Labour	Non-Labour	
1.	3.00	660	563.50	53.94	46.06	1400
2.	1.00	535	441	64.82	45.18	1783
3.	1.2	280	403	41.0	59.0	1803
4.	2.4	212.5	879.5	19.46	80.54	2064
5.	2.0	275	552.5	33.23	66.77	1783
6.	0.8	460	770	37.4	62.6	2707.5
7.	0.64	400	630	38.83	61.17	2014
8.	0.80	575	510	53.0	47.0	1230
9.	1.24	540	690	43.9	56.1	1965
10.	1.00	180	680	20.93	79.07	1998
11.	0.80	525	818.5	38.73	61.27	3037
12.	0.80	533.75	707.75	42.99	57.01	3285
13.	1.2	500	593.0	45.75	54.25	2430
14.	1.00	250	1032.0	19.50	80.50	2430
15.	0.72	540	775.5	41.05	58.95	2996
16.	4.00	300	914.5	24.70	75.30	3359
17.	0.62	240	300	44.44	55.56	2369
18.	1.00	138	715	16.18	83.82	2862
19.	2.16	380	560	40.43	59.57	2235
20.	6.00	540	737	42.29	57.71	2595
Average				37.45	62.55	2355.32

Table 30: Livestock in Gangaikondan, Selected Years

Year	Bullocks including He-buffaloes	Cows of the baffaloes	Calves and Heifers	Sheep and goats	Ploughs (wooden)	Bullock carts
1916[1]	569	484	405	3499	263	107
1929-30[2]	751	488	371	4346	248	99
1952[3]	445	417	191	2249	290	122
1958-60[4]	504	361	387	2897	375	73
1981-82[5]	430	423	319	3126	na	na
1984[6]	465	885	648	1572	258	60

Sources: 1 - Slater (1918)
2 - P.J.Thomas and K.C.Ramakrishnan (1940)
3 - AERC Report of 1958-60 survey
4 - Ibid
5 - Village Records
6 - Estimates from sample data for 1984.

Chapter VI : Agrarian Relations

We noted earlier that, despite the growth of the non-agricultural sector, and several other economic changes that have occurred over the decades since 1916, agriculture continues to be the largest single economic activity in Gangaikondan. There have been several changes in the level and composition of productive forces in agriculture during these decades. These have been accompanied by changes in the relations of production in agriculture. We turn now to an examination of these changes.

Size Distribution of Holdings

We may begin with the distribution of ownership holdings. The data for the years 1916, 1934 and 1958-60 are presented in Table 31. For the year 1984, we have data for a sample of households, and this is presented in Table 32, which also gives the castewise pattern of land ownership. The sample for 1984 has missed practically all the big landlords of the village, so it would not be appropriate to use the sample data alone to arrive at conclusions concerning the inter-temporal changes in size distribution of ownership holdings. Given that we have taken an one-third sample, this is rather surprising. One suspects that this might reflect gross concealment and under-reporting on the part of some respondent households. We shall use supplementary evidence that we have on big land owners not in the sample.

There are some problems in comparing the data for 1916 and 1934 with those for 1958-60 or the present survey. The former refers not to area owned by residents of the village but to the total assessed patta land in the village. The figure for 1958-60 refers to area owned by residents inside and outside the village. The large difference between the

figures of 1916 or 1934 and that of 1958-60 would therefore suggest significant absentee land ownership. While this is no doubt a part of the explanation, there are also other factors at work. Reported figures of net cultivated area (NCA) declined significantly over the period 1916 to 1960, from around 5000 acres in 1916 to around 3600 acres in 1957-58. The trend of decline in NCA has continued with only around 1800 acres being reported as NCA in 1981-82. With much of dry land lying fallow for several years continuously even from as early as the period following World War II - the average annual cultivated area for the five years ending June 30, 1951 was only 3384 acres - there would be a tendency not to report such land as being owned.[1] We find this to be certainly the case in the present survey, with many respondents not reporting their uncultivated dry land. Apart from this, there would also have been some transfer of dry patta land to non-agricultural enterprises, especially textiles, which began to come up in the village after Independence. Such transfer has certainly occurred after 1960.[2]

The difficulties with the data in Table 31 notwithstanding, some observations can be made. Between 1916 and 1934, there was a sharp decline in the number of large holdings and a proliferation of holdings in the size class 1-5 acres.[3] The figures do not of course provide conclusive proof of a lowering of the degree of concentration of landownership since information on area held in each size class is not available.

It would appear, however, that a substantial transfer of land from Brahmin land owners to others occurred during this period. Lokanathan noted in 1916 that most of the thousand or so acres of wet lands were owned by Brahmins. However in 1934, the total possession of Brahmins had '... dwindled to 250 acres of nanjai (i.e. wet-VBA) land, 100 acres of black soil (dry) land and 1000 acres of red soil (dry) land of which only 100 are cultivable.'[4]

By 1958-60, there occurs a substantial decline in the number of holdings, mainly because of the exclusion of absentee holdings. The figures of area held in each size class (see Table 34) bring out the degree of concentration of landownership. More than half the holdings (56 per cent) less than 2.5 acres in size account for only around one-ninth (11.6 per cent) of area. The top 5.7 per cent of holdings with sizes exceeding 15 acres account for 40.6 per cent of land owned. Clearly, while small holdings may have proliferated between 1916 and 1960, concentration of landownership remained high.

What about the picture in 1984? A comparison of distribution of ownership holdings in 1958-60 and 1984 is provided in Table 34. It is immediately obvious that there has been a substantial increase in both the number and the proportion of small holdings between 1958-60 and 1984. Less than 10 per cent of the two hundred and fortynine sample holdings - to be precise, 23 holdings - exceeded 5 acres in size, and of these, two holdings each exceeding 10 acres were held in far-away native villages by recent Naidu migrants. In 1958-60, 5.7 per cent of the holdings exceeding 10 acres in size accounted for as much as 40.6 per cent of area owned. In 1984, only 2.01 per cent of holdings exceeded 10 acres in size, and they accounted for only 12.84 per cent of area held. It would thus appear that between 1958-60 and 1984 there was both a large increase in the number of small holdings, and a significant reduction in the concentration of landownership. In fact the concentration ratio* declined from 0.6429 in 1958-60 to 0.4816 in 1984.

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* Defined as $\left[\sum_{i=2}^{n} P_{i-1} \; Q_i - \sum_{i=2}^{n} P_i \; Q_{i-1}\right]$

Where P_i = cumulative percentage of household upto and including the i^{th} size class and Q_i = cumulative percentage of area owned upto and including the i^{th} size class.

However, it must be remembered that the 1984 data are from a simple random sample of a third of the households. In order to supplement the picture of land distribution given by our random sample, we made inquiries in the village concerning the bigger of the landlords. These inquiries were conducted at the hamlet level in each of the hamlets, and the information so obtained was cross-checked with several informants. We believe that the list of about twenty big landlords we obtained would in all probability include a stratum that we may loosely designate as the upper percentiles (UPCS) or the top one per cent of the households in the village in terms of landholding. This list, without the names of the landowners, is shown in Table 33. The data makes it clear that our sample underestimates the degree of concentration of landownership in Gangaikondan in 1984. While the degree of concentration has in all probability declined between 1958-60 and 1984, it is most unlikely to have declined by as much as the sample data suggest.

A second observation to be made in this regard is that there has been a general under-reporting of dry land owned. Of the 492.9 acres reported as owned by sample households, as much as 293.65 acres or nearly sixty per cent of land is wet land. Less than 10 per cent of the holdings (22 out of 249) consist purely of dry land, and these account for a little more than 10 per cent of land owned. Considering that in the aggregate for the village as a whole, wet land accounts for only around 1400 acres or so, but dry land for more than thrice as much, the under-reporting of dry land is obvious. There is a good reason for this under reporting. Much of dry land is unfit for cultivation and a good portion of dry land fit for cultivation has been left fallow for several years recently because of the failure of monsoons. So, in the ordinary consciousness of the peasant, dry land

simply does not count. In the absence of village records - a result of the dislocation caused by the superseding of the erstwhile Karnams and their replacement by village administrative officers - it was not possible to get the data on ownership of dry land, nor was it possible to cross check the ownership figures reported by sample respondents with official figures.

There is, however, reason to believe that the sample data on wet land is somewhat more reliable. Blowing up the area of 293 acres of wet land in the sample, we get a figure of around 879 acres of wet land. When we add to this the 'UPC' holdings of wet land amounting to around 600 acres, we get a total around 1480 acres. This must be corrected downwards a little since we have simply added 'UPC' holdings to our random sample holdings. The broad order of magnitude tallies well with the aggregate figure for wet land in the village in official records.

Caste and Landownership

In 1916, Brahmins were the major landholders in the village followed by Pillais. The situation had not changed very much by 1934 except that, with some Brahmins emigrating and the other Brahmin landowners selling out, the share of total land held by Brahmins had declined. However, we do not have a detailed quantitative picture of caste-wise land distribution for either of these years.

By 1958-60, significant changes in the caste composition of the village had taken place, as already seen. The most important of these was the sharp decline in the share of Brahmin households. This decline would have had its own implications for the share of total agricultural land in the village owned by Brahmin households. But we have no

precise information on the caste-wise distribution of landownership in 1958-60. We do have some clues, however, Roughly a third of area owned by residents belonged to households residing in Gangaikondan main hamlet.

Now, of 240 households in this hamlet, 97 were Brahmins, 345 were Pillais and about 20 belonged to other cultivating castes. It seems not implausible that Brahmins continued to own a not insignificant extent of land. There were in fact 9 cultivator households and 22 non-cultivating ones among the 97 Brahmin households. There were other landowning Brahmin households as well, but with primarily non-agricultural interests.

In 1984, the castewise distribution of ownership holdings is rather different. The data are shown in Table 35. The major landowning castes are now Maravars, Hindu Pallars, Konars and Christian Pallars. Next come Nadars as a whole, followed by Pillais. The land distribution reflects the process of continued emigration of Brahmins, and the gradual transfer of their holdings to their former tenants, mainly Maravars and Pallars. The data on the bigger landowners presented in Table 33 confirms the position of Maravars (Thevars) and Konars as the major landholders.

Tenancy: Extent

In 1916, tenancy was a major feature of the agrarian economy of Gangaikondan. Lokanathan noted that only about 300 acres out of a wet area of over 1000 acres were owner-cultivated. A major reason for this was that the greater part of the wet lands were owned by Brahmins most of whom leased out their lands. Even with respect to dry lands, around forty per cent was cultivated by tenants. In all there were '....730 acres of wet land and 1600 acres of dry area.. cultivated by tenants'.[5] All the Harijan landowners

and most of the caste Hindu landowners other than Brahmins cultivated their lands themselves. There were about 350 tenants of whom half were Harijans and the rest Maravars and Konars. Natarajan reported that in 1934, all the ryots that he consulted were certain that '...there has been a great increase in the number of tenants in the last 15 or 20 years. The majority of them are of the opinion that 50 per cent of the total agriculturists are tenants exclusively and about 10 per cent are both tenants and petty landholders.'[6] With around 800 households engaged in agriculture in 1934, this would suggest a figure of 400 pure tenants and another 80 owner-cum-tenants, as compared with a total of 350 in 1916.

By 1958-60, the number of cultivators had declined to 483, and of these 109 or close to a fourth were pure tenants while 159 or nearly a third were owner-cum-tenants. Thus tenants constituted the majority of cultivators in 1958-60. In terms of area, more than 480 acres out of a total of 1920 acres of operated area, i.e., just about a quarter of area operated, were leased in.

In 1984, of 448 sample households 61 or about 14.1 per cent had leased in land. The area leased in by these households amounted to 60.11 acres, out of a total operated area for all sample households of 486.23 acres i.e., just about one eighth. Thus while tenants (both owner-tenants and pure tenants together) comprised 61 out of 268 operating households i.e. close to a fourth, a sharp decline from the corresponding figure for 1958-60, area leased in as a proportion of operated area has been halved from one fourth to one eighth.

Tenancy: Terms

There existed four sorts of tenancy in 1916, but all of them involved the payment of rent in kind. The first of these types was on a fixed rent basis, and required all

costs to be borne by the tenant; even a partial remission of rent in this case would take place only in a year of exceptionally poor harvest. The other three were based on share rent. The share of the landlord was two thirds of output net of harvest wages where all costs were borne by the tenant, but the landlord had to supervise the cultivation. The share of the landlord was three quarters where all the manure was supplied by him, but other costs borne by the tenant. Finally, the share of the landlord was seven-eighths of output net of harvest wages where the tenant supplied labour alone. In this last instance, the product (paddy straw, since tenancy invariably involved only paddy cultivation) would be shared by tenant and landlord. In all other cases it would go entirely to the tenant except where a rich and powerful landowner could extract a share, usually not exceeding a sixth, from a weak tenant. In all cases land revenue would be paid by the landlord.

Natarajan noted in 1934 that the kinds of tenancy observed in 1916 continued to prevail. Some minor changes had of course occurred. The type of tenancy whereby the tenant supplied only labour, but all of it, and received one eighth of net produce was replaced by a nominal tenancy where the tenant's responsibility was confined to watching and watering of crop and tending of bunds, and his share fixed at one twenty first (1/21) of net produce.[7] On inferior wet lands with saline soil, the produce net of harvest wages was shared equally, with the tenant bearing all costs and the owner involved in supervision.

While all rent was said to be paid in kind in 1916, Natarajan noted that this might have been the case only for wet lands. In dry and garden lands, cash rent had been in vogue, and in 1934, a cash rent of Rs. 25 per acre was paid on dry lands where inferior cereals were grown.

Where share cropping existed on rainfed land, the tenant got sixty per cent of output net of harvest wages.

Natarajan observed that, between 1916 and 1934, the increasing tendency to absentee landlordism had enabled the tenant to claim an increased share - often one half in place of the earlier one third - of net produce. Tenants were being sought after, and demanded a higher cash advance to meet cultivation expenses.

By 1958-60, more complex arrangements had emerged: 'In the case of wet lands with assured tank or channel irrigation, kind rent is in prevalence for the 'pissanam' crop and crop-sharing system for the 'kar' season.'[8] Also cash rent was the rule on dry land on which non-grain garden crops such as cotton and chillies were raised, with the tenant being entirely responsible for cultivation, and the landlord having no claim over the yield. However the types of tenancy which existed in 1916 and 1934 were also present in 1958-60. Terms had not changed very much either in some of these arrangements. Landlords continued to get two thirds of net produce where they supervised but tenants bore all costs; and they got three fourths where they additionally met the cost of manure. In both cases, the landlords got a third of the byproduct. On dry land, cash rent was common. On the whole, it would appear that the types and terms of tenancy had not changed very much between 1916 and 1958-60.

We found in 1984 that the predominant system of lease was one where a fixed rent in kind of between 8 and 12 bags of paddy (wt. of one bag of paddy = 70 kgs.) was paid for the first crop (usually paddy) and either half of net produce or Rs. 100 per acre was paid for the second crop (no matter what the crop)[9]. With respect to fixed kind rents, which pertain mostly to double crop wet lands, the rent for the first crop has changed rather slowly from around 7 kottas

(1 kottah = 112 Madras measures) of paddy per acre in 1916 to around 6 kottahs in 1984. Since yields have risen in the meanwhile, however, the burden of fixed rent has certainly declined over the years. Also reduction of rent to 4 kottahs per acre is common in years of poor yield.

Summing up, one can say the following. Firstly tenancy has declined in terms of both the relative size of the tenancy and the share of operated area under tenancy. Secondly, share rent systems have declined in importance and have been largely replaced by fixed kind rent and cash rent arrangements. Thirdly, the rent burden has declined.

Land Values

In 1916, an acre of wet land fetched a price ranging from Rs. 1000 to Rs. 1400, while an acre of good dry land sold for around 180 to 200 rupees. These prices, we are told by Lokanathan, were nearly double the prices which had reigned in 1900. In the boom years following the survey of 1916 and the world war, land prices are reported to have gone up pari passu with the price of produce from land. However, with the onset of depression, land values slumped sharply. In 1934, an acre of wet land sold for Rs. 750 closer to its 1900 price of Rs. 600 than the 1916 price of Rs. 1000-1400. Similarly, an acre of dry land fell in value from Rs. 180-200 in 1916 to Rs. 125 in 1934 not far from its price of Rs. 110 in 1900. Natarajan also noted, however, that the fall in land values was proportionately less than the fall in the value of produce from land.

No information is available from the surveys of 1916 and 1934 on how active the market for land in the village was. There were a lot of usufructuary mortgages in 1934, and it would appear likely that these represented a stage in the process of alienation of land by indebted agriculturists hard hit by the Depression.

The survey of 1958-60 provides some information on both land values and the level of activity in the land market. During the five year period 1955-60, Table 36 givesthe picture. Since data are not separately available for dry and wet lands, the average figures of land value are not of much help. But the distinctly higher prices realised by non-resident owners suggests that they might have been mostly selling wet lands.

In the present survey, information was collected from the sub-registrar's office on land transactions for a ten year period from 1975 to 1984. For each year, a twenty per cent sample was taken. The transactions for dry land cover both land usually left fallow and cultivated land, and therefore show wide price variation. The wet lands are relatively more homogeneous, and data on wet land transactions are summarised in Table 37. The figures for 1976, 1982 and 1984 may be ignored as they are based on one, one and two sample observations respectively. It becomes clear from the table that the value of an acre of wet land has been increasing from around 3 to 4 thousand rupees per acre in the mid seventies to around 10,000 rupees per acre in the early 'eighties. It is also obvious that the total area involved in transactions in each year is marginal. The area per transaction is consistently less than an acre, and for most of the period 1974-1984 less than half an acre. Clearly, the land market for wet land is not very active. Available data suggest that the same is the case with the market for dry land. The only active land market is that for house sites in the residential part of the village. One may also add that the value of agricultural land, wet or dry, has not probably increased in real terms between 1958-60 and 1984.

It is evident that the distribution of assets other than land is considerably less skewed than that of land. With Chittar being the major source of irrigation, there has been only a limited investment in pumpsets. There has also been little mechanisation of other agricultural tasks. Even where, for instance, tractors have been used for ploughing, they have been hired from outside. Consequently, there has been no great sharpening of inequality with respect to non-land productive assets that one observes in areas where lift irrigation and mechanisation have expanded rapidly.

The distribution of livestock-especially of milch cattle-shows clearly the impact of state intervention through IRDP and other programmes aimed at livestock and dairy development and the impact of a growing urban market for milk in Tirunelveli.

A large proportion of farmers owning 7 acres or less have availed of the milch animal subsidy scheme. Sixty six sample households owning between 2.5 and 7.5 acres possessed between them 106 milch cattle. But landless agricultural labourers for whom the milch animal scheme is especially intended as a supplementary source of income, have reported several problems in availing of the loan scheme. Since they have no land of their own, grazing land for cattle becomes a problem. Further, their resources position being extremely poor, they are unable to purchase the stipulated feed. Finally they also do not have space for housing the cattle. Very few of the landless labourers have taken loans and purchased milch cattle.

Goats and sheep are mostly held by landowners owning 5 acres or less, who account for over 80 per cent of all goats and sheep owned by sample household. Landless labour households fare rather poorly, again on account of resource

constraints, and their inability to borrow the kind of money required to get into the business of sheep rearing.

The comparison of the livestock distribution, relating to land operating households in 1958 with that relating to landowning households, to the extent that it is legitimate, shows that households in the size class 2.5-7.5 acres were doing rather better in 1984 than in 1958, especially with respect to possession of milch cattle and sheep and goats.

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1. For instance 2252 acres of land were reported as having been fallow for five continuous years in 1957-58. While net sown area at 3600 acres for that year matches closely with area owned by residents at 2993 acres, cultivable area is far higher at 6640 acres.

2. In addition, it must be noted that the land distribution data for 1916 and 1934 are not based on a systematic census, but on unstructured enquiries.

3. It must be pointed out, however, that the distribution of wet land in 1916 shows far fewer large holdings. There was only one holding with wet land exceeding 50 acres, and only 8 with wet land exceeding 10 acres, out of a total of 459 holdings owning a total of 980 acres of wet land. See Slater, p.58.

4. Thomas and Ramakrishnan, p.61

5. Slater, op.cit., p.57

6. P.J.Thomas and K.C.Ramakrishnan, op.cit. p.71

7. Natarajan also noted that the landlord took a share of byproduct in almost all cases and not occasionally as stated by Lokanathan in 1916.

8. Obviously the author means 'fixed rent' when he talks of kind rent for the first (i.e.,'pissanam') season.

9. Besides, there were instances of 'Mattu Varam' where a "tenant" would undertake to plough the land in return for the entire hay yield, and of 'irrigation tenancy' where the person looking after irrigation for the entire crop would receive 12½ "marakkals" per acre or approximately 63 kgs of paddy.

Table 31: Land Distribution in Gangaikondan, 1916, 1934 and 1958-60

Size of Holding (Acres)	Number of Holdings		
	1916	1934	1958-60
< 1.00	105	100	172
1.00-4.99	220	600	227
5.00-9.99	250	50	67
10.00-19.99	100	30	36
20.00-49.99	160	50	15
50.00-99.99	90	3	6
> 100.00	-	-	1
Total no. of Holdings	925	833	524
Total area owned:	7135.6	7345	2992.88
Of which Wet	1030.3	1031	NA
Dry	6067.3	6314	NA

Table 32: Land Ownership in Gangaikondan 1984 (Sample Data)

Sl. No.	Caste	Upto 0.99		1 to 2.49		2.50 to 4.99		5.00 to 7.49	
		No. of holdings	Area	No. of holdings	Area	No. of holdings	Area	No. of holdings	Area
1.	Pallar Hindu	27	10.56	14	16.81	12	37.40	--	--
2.	Pallar Christian	20	10.80	16	21.69	7	23.63	1	6.72
3.	Pagadai	1	0.40	-	-	-	-	--	--
4.	Maravar	23	11.74	14	19.20	17	57.88	6	33.24
5.	Konar	6	2.74	13	21.12	10	31.84	4	20.88
6.	Pillai	1	0.40	3	5.32	1	2.50	1	6.15
7.	Brahmin	2	1.13	2	3.11	-	--	--	--
8.	Asari	2	0.88	1	1.00	-	--	--	--
9.	Dhobi	3	1.05	-	--	-	--	--	--
10.	Velar	-	--	2	2.80	-	--	--	--
11.	Barber	-	--	2	3.00	-	--	--	--
12.	Moopanar	1	0.80	2	3.92	-	--	--	--
13.	Nadar Hindu	9	4.26	2	2.54	1	4.30	1	5.00
14.	Nadar Christian	1	0.24	1	1.32	2	6.80	--	--
15.	Chettiyar	1	0.56	1	1.24	-	--	1	5.00
16.	Padayachi	-	--	4	5.24	-	--	1	5.00
17.	Naidu	-	--	-	--	-	--	--	--
18.	Kaikolar	-	--	1	1.20	-	--	--	--
19.	Gounder	-	--	-	--	1	3.00	--	--
20.	Nayar	-	--	-	--		--	1	5.00
21.	Other	-	--	-	--	-	--	--	--
	Total	97	45.56	78	109.51	51	167.35	15	81.99
	Average size of Holding		0.47		1.40		3.28		5.47

Table 32 : contd..

Sl. No.	Caste	7.50 to 9.99		10.00 to 14.99		Landless	Total (excluding landless		Average
		No. of holdings	Area	No. of holdings	Area		No. of HH	Area	
1.	Pallar Hindu	--	--	3	42.40	41	56	107.17	1.91
2.	Pallar Christian	--	--	-	--	29	44	62.84	1.43
3.	Pagadai	--	--	--	--	1	1	0.40	0.40
4.	Maravar	--	--	-	--	39	60	122.06	2.03
5.	Konar	2	17.22	-	--	15	35	93.80	2.68
6.	Pillai	1	8.00	-	--	15	7	22.37	3.20
7.	Brahmin	-	--	-	--	8	4	4.24	1.06
8.	Asari	-	--	-	--	10	3	1.88	0.63
9.	Dhobi	-	--	-	--	2	3	1.05	0.35
10.	Velar	-	--	-	--	1	2	2.80	0.40
11.	Barber	-	--	-	--	3	2	3.00	1.50
12.	Moopanar	-	--	-	--	5	3	4.72	1.57
13.	Nadar Hindu	-	--	-	--	4	13	16.10	1.24
14.	Nadar Christian	-	--	-	--	3	4	8.36	2.09
15.	Chettiyar	-	--	-	--	3	3	6.80	2.27
16.	Padayachi	-	--	-	--	2	4	5.24	1.31
17.	Naidu			2	20.87	5	2	20.87	10.44
18.	Kaikolar	-	--	-	--	-	1	1.20	1.20
19.	Gounder	-	--	-	--	-	1	3.00	3.00
20.	Nayar	-	--	-	--	13	1	5.00	5.00
21.	Other	-	--	-	--	-	-	--	--
	Total	3	25.22	5	63.27	199	249	492.90	1.98
Average size of Holding			8-41		12.65			1.98	

Note: 1. Data pertain to the random sample of 448 households. 2. The category 'other' includes the following households, all landless. Parayar-7, Muthuraja-2, Kambar-1, Thondaman-1, Christian-1, Muslim-1

Table 33: Important Landowners of Gangaikondan not Captured in the Sample

Holding Sl.No.	Caste of Owner	Wet land (acres)	Dry land (acres)	Total
1.	(Pillai absentee landlord)	96	132	228
2.	(Thevar)	60	NA	NA
3.	(Konar)	65	NA	NA
4.	(Hindu Pallar)	35	NA	NA
5.	(Thevar)	30	NA	NA
6.	(Thevar)	30	NA	NA
7.	(Thevar)	30	NA	NA
8-12	(5 Konars 25 acres each)	125	NA	NA
13.	(Thevar)	15	NA	NA
14-18	(5 Thevars each 10 acres)	50	NA	NA
19.	(Harijans)	20	NA	NA
20.	(Harijans)	20	NA	NA
21.	(Harijans)	15	NA	NA
22.	(Padayachi)	10	NA	NA
23.	(Chettiyar)	10	NA	NA
24.	(Temple)	25	NA	NA

Table 34: Distribution of Ownership Holdings - Gangaikondan, 1958-60 and 1984

Size of Holding (Acres)	1958-60				1984			
	Per cent of Holdings	Per cent of Extent owned	Cumulative per cent of holdings	Cumulative per cent of extent owned	Per cent of Holdings	Per cent of extent owned	Cumulative per cent of holdings	Cumulative per cent of extent owned
0.01-1.25	37.20	4.5	37.2	4.5	52.22	16.37	52.22	16.37
1.25-2.50	18.70	7.1	55.9	11.6	18.07	15.09	70.29	31.46
2.50-5.00	20.20	14.9	76.1	26.5	20.48	33.95	90.77	65.41
5.00-7.50	7.30	9.6	83.4	36.1	6.02	16.63	96.79	82.04
7.50-10.00	5.50	10.1	88.9	46.2	1.20	5.12	97.99	87.16
10.00-15.00	5.40	13.2	94.3	59.4	2.01	12.84	100.00	100.00
15.00-20.00	1.50	5.7	95.8	65.1	-	-	-	-
20.00-25.00	1.50	7.1	97.3	72.2	-	-	-	-
25.00-30.00	0.40	2.3	97.7	74.5	-	-	-	-
30.00	2.30	25.5	100.0	100.0	-	-	-	-

Note: Data for 1958-60 are based on a household Census while those for 1984 are estimates from a sample of 448 households.

Table 35: Caste and Landownership, Gangaikondan 1984

Caste	Share of population %	Share of Area owned %	Landless households as a proportion of all households in the caste, %
1	2	3	4
Hindu Pallar	21.41	21.74	38.32
Christian Pallar	15.41	12.75	39.75
Maravar	22.43	24.76	39.39
Konar	10.98	19.03	30.0
Pillai	4.85	4.54	68.18
Hindu Nadar	4.48	3.27	66.67
Christian Nadar	1.98	1.38	23.53
Chettiar	1.15	1.06	33.33
Naidu	1.20	4.23	71.43
Padayachi	1.57	1.06	33.33
Other land owning castes*	11.95	6.18	58.82
Other landless castes**	2.59	0.0	100.0
All castes	100.00	100.0	42.19

*Includes the following:

Caste	No. of sample households	No. of owning land	Total Area owned (acres)
Asari	13	3	1.88
Brahmin	12	4	4.24
Vannar	5	3	1.05
Pandithar	5	2	3.00
Moopanar	8	3	4.72
Pagadai	2	1	0.40
Nayar	1	1	5.00
Goundar	1	1	3.00
Kaikolar	1	1	1.20

**Includes 7 Parayar HHs in the sample 2 Muthuraja HHs and one each of Kambar, Thondaman, Christian and Muslim households.

Note: Figures in cols.2, 3, and 4 are estimates based on the sample of 448 households.

Table 36

Sales				Purchase			
To Village Residents		To Outsiders		From Village Resident		From Outsiders	
Area (Ac.cents)	Value (Rs.)	Area (Ac.cent)	Value (Rs.)	Area (Ac.cent)	Value (Rs.)	Area (Ac.cent)	Value (Rs.)
85.22	92,105	70.20	84,140	95.73	121650	23.24	54,800
Average value Rs. per acre	1081		1199		1276		2358

Table 37: Estimates of Wet land Transactions 1975-84

Year	No. of transac-tions	Extent involved (acres)	Average value Rs./acre	Max. value	Min. value
1974	45	35.20	4264	6000	3251
1975	25	22.70	2742	4412	1773
1976	5	0.40	26250	26250	26250
1977	30	15.53	7459	8085	5085
1978	55	23.35	6418	8000	5000
1979	45	21.08	8252	12776	5000
1980	45	17.43	8555	18964	2500
1981	40	18.35	7706	9000	6154
1982	5	1.85	13243	13243	13243
1983	20	7.38	12385	13111	10000
1984	10	6.70	8000	10000	6538

Table 38: Land and Ownership of other Assets - Gangaikondan

1984

Size/class (in acres)	No.of HHs	Area owned	Plough bulloks	Milch cattle	Calves	Goats sheep
Landless	199 (44.42)	0.0 (0.0)	6 (3.87)	40 (13.56)	23 (10.65)	33 (6.30)
0.0-0.99	97 (21.65)	45.56 (9.24)	37 (23.87)	71 (24.07)	70 (32.41)	138 (26.33)
1.0-2.49	78 (17.41)	109.51 (22.22)	42 (27.10)	71 (24.07)	48 (22.22)	174 (33.21)
2.50-4.99	51 (11.38)	167.35 (33.95)	54 (34.84)	69 (23.39)	46 (21.30)	109 (20.80)
5.00-7.49	15 (3.35)	81.99 (16.63)	12 (7.74)	37 (12.54)	22 (10.19)	48 (9.16)
7.50-9.99	3 (0.67)	25.22 (5.12)	2 (1.29)	4 (1.35)	4 (1.85)	1 (0.19)
10.0-14.99	5 (1.12)	63.27 (12.84)	2 (1.29)	3 (1.02)	3 (1.28)	21 (4.01)

Size/class (in acres)	Electric D.Pumpsets	Carts	Ploughs	Radios	Bicycles	Fans
Landless	- (0.0)	2 (10.0)	3 (3.49)	65 (38.92)	43 (40.57)	24 (48)
0.0-0.99	- (0.0)	1 (5.0)	19 (22.09)	39 (23.35)	25 (23.58)	9 (18)
1.0-2.49	4 (17.39)	6 (30.0)	24 (27.91)	30 (17.95)	21 (19.81)	10 (20)
2.50-4.99	13 (56.52)	9 (45.0)	29 (33.72)	22 (13.17)	11 (10.38)	4 (8)
5.00-7.49	4 (17.39)	-	10 (11.63)	9 (5.39)	4 (13.77)	3 (6)
7.50-9.99	1 (4.35)	1 (5.0)	- (0.60)	1	1 (0.94)	- -
10.00-14.99	1 (4.35)	1 (5.0)	1 (1.16)	1 (0.60)	1 (0.94)	- -

Note: 1. Figures in parantheses represent percentages to column total. Totals may not add up to 100 because of rounding off error.

2. Data relate to a simple random sample of 448 households.

Table 39: Land and Ownership of Livestock among Owning/cultivating Households Gangaikondan 1958 and 1984

Size of	% of holdings	% of area owned or operated	% plough bullocks owned	% milch cattle owned	% calves owned	% of goats and sheep owned
1958	57.10	15.3	36.73	47.37	38.89	36.33
0.01-2.50						
1984	70.29	31.46	53.02	55.69	61.14	63.54
1958	29.10	17.1	23.02	18.05	16.67	10.84
2.5-5.00						
1984	20.48	33.95	36.24	27.06	23.83	22.20
1958	10.40	16.1	15.29	6.02	12.15	11.40
5.0-7.50						
1984	6.02	16.63	8.05	14.51	11.40	9.78
1958	4.60	10.0	7.03	9.40	7.64	3.13
7.5-10.0						
1984	1.20	5.12	1.34	1.57	2.07	0.20
1958	5.20	15.7	8.61	7.14	10.07	3.93
10.0-15.0						
1984	2.01	12.84	1.34	1.17	1.55	4.28
1958	3.60	25.8	9.32	12.03	14.58	34.36
15.0						
1984	Nil	Nil	Nil	Nil	Nil	Nil

Notes: 1. Landless households have been excluded.

2. Data for 1958 relates to operational holding while those for 1984 relates to ownership holdings.

3. Data for 1958 are from a census of all households while those for 1984 are estimated from a random sample of 448 households of which 199 are landless.

Chapter VII : Labour

While a third of the workforce in Gangaikondan consists of cultivators, nearly a fifth consists of agricultural labourers, and a little less than a sixth of workers in manufacturing. We take up first the situation of the agricultural labourers.

Agricultural Labour

In 1916, there were about a hundred agricultural labourers who neither owned nor cultivated any land. These labourers were by no means all 'free wage labourers' but none of them was a padiyal or serf-like labourer. Debt bondage did, however, exist as did the right of first call. Wages normally ruled at five annas per day for males and 3 annas per day for females, but would go up to 6 annas and 4 annas respectively during busy periods such as the sowing and transplanting phase in September-October.[1] Lokanathan asserted '...the utter displacement of wages in kind by wages in money!'[2] With a kottah of paddy (= 112 Madras measures) selling for Rs. 10 at that time, the male wage rate of 6 annas per day works out to 4.2 Madras measures of paddy. The female rate works out to 2.8 Madras measures of paddy per day. Information on the average number of days of employment in a year is not available for 1916 from the survey.

Natarajan's report of the 1934 survey contains little information on the conditions of agricultural labourers. In 1958-60, more than a thousand persons were working as agricultural labourers. Of these, only twenty persons were permanent farm servants and these were all males. There were 629 female and 358 male casual agricultural labourers. The permanent farm servants were mainly engaged by Brahmin landholders. Their wages varied from Rs. 15 per month and

six bags (= 6 x 56 Madras measures = 420 kgs.) of paddy per year, to Rs.30 per month and one meal per day. At the then prevailing paddy price of Rs.20 per bag of paddy, these wages range between 2.33 Madras measures of paddy per day in the former case, and 2.5 Madras measures of paddy and a meal per day in the latter case.[3] Annual earnings work out to 15 bags of paddy per year in the former case and 20 bags of paddy plus a daily meal in the latter case. Permanent servants employed in tending sheep have been classified as non-agricultural workers in the survey. They earned on an average 50 rupees per year plus three meals - two meals of ragi porridge for breakfast and lunch and a rice meal for supper - a day. The farm servant's tenure of employment was normally for one year at a time, but was generally renewable by mutual consent of landlord and labourer.

The casual agricultural labourer obtained on an average 125 days of employment in a year, the figure for males being 128 and that for females 123. Casual labourers in non-agricultural work got around seven months of employment per year. A small proportion of the labour force which sought casual employment in both agriculture and elsewhere obtained 184 days of employment (on an average) in a year the average for males being 198 and for females 135. The average annual earnings of a casual agricultural labourer work out to Rs.99, giving us a wage rate of 0.79 paise per working day, which works out to only 2.23 Madras measures of paddy per working day at the then prevailing paddy price of Rs.20 for 56 Madras measures, lower than the daily wage rate corresponding to a permanent farm servant's annual earnings. The reasons for this were noted in the AERC Report,which also gives a picture of wage rates then revailing for various operations: 'There is no dearth of labourers in the village; in fact, the labourers move to other parts of the district during the harvest season in those places. For ploughing, ridge making

and spade work, only men are employed at the rate of Re.1 per day. For most of the other operations like transplanting, weeding etc. both men and women are employed, and while men are paid Re.1, women are given between 0.50 to 0.75 paise. For all these operations, wages are paid only in cash while for harvesting, threshing and winnowing, wages are paid only in kind, consisting of 5 measures (Rs.1.90) for a male worker and 4 measures (Rs.1.50) for a female worker.'[4]

Evidently the kind wage for various harvest-related operations refers to paddy. With regard to the division of wages into kind and cash, more than three quarters of the male worker's wage was received in cash. The share of kind wages in total value of wages was higher for females at around 36 per cent. In the case of both males and females, perquisites were insignificant.

In 1984, there were no permanent agricultural labourers. With the practical disappearance of absentee landlordism and the transfer of land into the hands of the cultivating castes, the old system of permanent farm servants was already in decline in 1958. Cropping intensity has not increased much since then. Employment opportunities outside of agriculture have risen sharply, but not by so much as to create a scarcity of agricultural labour. As a result, there is a relative surplus of agricultural labour throughout the year. Such a situation has meant that landowners do not have any incentive nor find it necessary to employ permanent farm servants.

The employment pattern of a random sample of sixteen agricultural labourers, consisting of nine females and seven males, is shown in Table 40. The average number of days of employment in a year works out to 155 days for men and 151 days for women. Both are higher than the corresponding 1958 averages of 128 and 123 days. In the case of women,

this reflects, apart from some non-agricultural employment, the increased employment opportunities in weeding, transplanting and harvesting operations consequent on the cultivation of high yielding paddy varieties and the modest increase in area irrigated brought about by the construction of the Parakkirama Pandian tank in the mid 'sixties. It must be specifically noted here that only Pallar women are employed in transplanting operations. Apparently the Thevar and other caste Hindu women of this village have never acquired the skills required in transplanting work. In the case of men, one suspects that agricultural employment opportunities in operations like bunding, ridge-making and ploughing have probably not increased over the years. The higher figure of 152 days of annual employment for male labour includes non-agricultural employment in wood cutting, charcoal making, brick making and construction. These operations may account for 40 to 50 days of employment in a year. Women too go out for non-agricultural employment (e.g. in construction).

The paucity of employment opportunities in agriculture in the village is brought out clearly in our sample. Four of the sixteen labourers (two couples) reported that in Margazhi, Thai, and Masi (mid-December to mid-March) they migrate to the 'Tamraparani' delta areas for harvesting work. Apart from this, many of the sample agricultural labourers seek employment in construction work during the first three months of the Tamil year, i.e. Chithirai, Vaikasi and Ani (mid April to mid July). One agricultural labour couple are employed in a brick kiln for four months from Chithirai to Adi (mid April to mid August). Further, even during the agricultural season, workers (mostly male) go out for employment in brick kilns, in charcoal-making and in construction.

Wages are paid in cash for all operations except harvesting. The standard daily wage rates in agriculture are Rs.10 for males and Rs.4 for females. Females engaged in transplanting get Rs.5 per day while males supplying bullocks and own labour for ploughing get Rs.20/- per day. Wages for harvesting are 8 Madras measures of paddy for men and 4 Madras measures of paddy for women. The higher wage for males includes payment for the additional threshing work performed by them. Daily wages in construction work, in wood-cutting and most other casual non-agricultural employment are practically the same as in agriculture i.e., Rs.10 for men and Rs.5 for women. Wages are paid on a piece rate basis in brick-kilns with Rs.30 being the payment for 1000 bricks. A couple working the whole day - on an average, for ten hours - can produce 600 bricks and thus earn Rs.18 per day. In agriculture, a man earns Rs.10 while doing six hours of work and a woman gets Rs.5 for seven hours of work. Thus the apparently higher wage in construction conceals a much greater input of labour.

It is obvious that harvest wages have risen between 1958 and 1984, but not by very much. Women for instance continue to get the same 4 Madras measures of paddy (= 1 marakkal) that they got in 1958. But a man-woman couple get 12 Madras measures of paddy in 1984 whereas with the male wage rate of 5 Madras measures of paddy in 1958, the couple would have got only nine Madras measures.

The daily cash wage is apparently, 'high' at Rs.10 and Rs.4 or 5 for male and female labour in 1984 as compared to an average of 0.88 paise and 0.72 paise per day respectively in 1958. With paddy selling at Rs.165 per quintal, i.e. at Rs.8.25 per marakkal (marakkal = 5 kgs. pf paddy) the male daily wage works out to 1.21 marakkals or 4.84 Madras measures of paddy and the female daily wage at 1.92 to 2.45 Madras

measures of paddy. This compares with a daily wage rate in 1958 of 2.46 Madras measures of paddy for male casual labour and 2.01 Madras measures of paddy for female casual labour.

Wages for male agricultural labour in terms of paddy have thus risen substantially, more than doubling between 1958 and 1984. It should, however, be borne in mind that we have used post harvest farm prices of paddy to convert cash wages for non harvest operations into paddy equivalent. Clearly, this tends to exaggerate the value of wages reckoned in paddy over what they would be if the more appropriate retail price of rice was used, both because paddy prices themselves would be higher in non-harvest periods, and because the retail price of rice may rise independently. Ideally this should not affect the comparison between 1958 and 1984 since the same deflator has been used in both cases. But there is reason to believe (a) that the differentials between harvest prices and non-harvest prices of paddy have grown considerably in the intervening period, and (b) that average retail prices of rice have risen rather more sharply between 1958 and 1984 than have those of paddy. Having noted this, it must nonetheless be recognised that even after taking these into account, real wage rates for males would show a substantial increase between 1958 and 1984.

By contrast, there has been only a rather modest rise in the daily wage rate for female casual labour. Increased availability of non-agricultural employment appears to be an important factor behind the rise in the daily wages of male workers. Women have entered non-agricultural employment only marginally, and the bulk of their employment is still obtained through weeding, transplanting and harvesting work. In transplanting, female workers receive a slightly higher wage of Rs.5 per day equivalent to 2.45 Madras measures of

paddy as compared with Rs.0.75 or 2.1 Madras measures of paddy in 1958. Wages for weeding are lower at Rs.4 per day equivalent to 1.92 Madras measures of paddy. In 1958, women workers employed in weeding operations received half a rupee per day, equivalent to 1.4 Madras measures of paddy. On the whole, daily wage rates have increased in terms of paddy for both men and women between 1958 and 1984. The increase - substantial for men and modest for women - has been accompanied as we have already seen by an increase in the average number of days of employment. Annual real earnings of agricultural labourers from hiring out - both in agriculture and outside - have thus increased between 1958 and 1984.

Agricultural Labour Households and the Poverty Line

Assuming two workers - one male and one female - per household and a household size of four, we can work out the annual per capita income of a landless labour household. With 155 mandays and 151 woman days of employment at daily wage rates of Rs.10 and Rs.4 respectively, we get an annual wage income of Rs.2154. Net income from agriculture for land operating agricultural households is not likely to exceed a thousand rupees per year even under the most favourable circumstances. Thus a reasonable estimate of annual household income for a four member agricultural labour household would be around Rs.3000. At the upper extreme, it might reach Rs.4000. The average annual per capita house hold income would thus be around Rs.750 and at a maximum around Rs.1000.

In 1977-78 prices, the poverty line for a rural household was reckoned at a per capita monthly consumer expenditure of Rs.65. For want of a better price index, one could use the working class consumer price index to work out a monthly per capita consumer expenditure level which would define the

poverty line in 1983-84. The average consumer price index for 1977-78 was 324 (1960-61=100), while that for 1983-84 worked out to 544, based on data for the nine months from April 83 to December 83.[5] The poverty line figure works out, on this basis, to a monthly per capita income of an agricultural labour household work-out, on the basis of our calculations above, to Rs.62.50, and at a maximum to Rs.83.33. It is thus obvious that even on the most favourable assumptions, agricultural labour households - including land operating labour households - lie well below the poverty line, in fact, by at least a third and on the average by as much as forty per cent.

Non Agricultural Workers Weavers

In 1916 the major source of employment outside of agriculture was weaving. Hand spinning which had been extensively practised up until the 1890s had totally disappeared by 1916. By 1934, the handloom weaving industry had also decayed, especially under the impact of the Depression on the one hand, and the rise of the modern textile mills in Madurai and Ambasamudram on the other. By 1958, the handloom weavers were struggling for survival. There were only 8 active looms, down from 20 looms in 1934. Most weavers had emigrated and found employment in the mill sector elsewhere in the district and in Madurai. The weavers have obviously failed in the struggle for survival as handloom weavers. In 1984, there was not single weaver household.

Palmworkers

A major source of traditional employment outside of agriculture is tapping of palm trees for sweet and fermented toddy. According to a rough estimate, there are around 10,000 palm trees in the village. The owners are mostly

Konars, one of them owning 500 trees. The tappers have traditionally been Nadars. The tappers-who number between 25 and 30 - individually lease in, on an average, 50 to 100 trees each from the owners under a system locally known as 'pattam'. An illustration of the system is provided by one of our respondents. He has leased in 100 trees for a rent of 132 kgs of palm-sugar valued at Rs.594. The rent must be paid only in terms of palm sugar which means that the tapped juice and toddy must be sold, and a part of the cash utilised for purchasing the palm sugar (which cost in 1984 Rs.4.50 per kg). The net income after payment of rent and other costs worked out in 1984 to Rs.100 per tree per year, or Rs.10,000 from 100 trees. This respondent has managed to purchase 5 acres of well irrigated land with an oil engine. This seems quite an advance over 1934 when, as Natarajan remarked:

'While the toddy contractor and the Abkari department realise ample income, the man who taps does not earn more than 6 annas a day'.[6]

Obviously lifting of prohibition has boosted employment and income in this sector. It must, however, be pointed out that the work is extremely demanding and requires a high degree of rather specialised skill.

Other traditional occupations

Basket weaving, using palmyra sheath as raw material, is carried on by thirty parayar households, who alone are engaged in this occupation. Their economic condition remains extremely poor, the average income being around 160 rupees per couple per month. Other traditional industries such as pot making and oil crushing have largely disappeared. As for artisans, carpenters find fairly regular employment in the town of Tirunelveli, with their daily wages averaging between

Rs. 15 and Rs. 20. Except during a couple of months in the rainy season, the carpenter would find employment for around 25 days a month. Unlike in the case of carpenters, the clientele of the blacksmiths is derived almost entirely from the village. Payment is entirely in cash. The dramatic change with respect to the carpenters and the blacksmiths between 1958 and 1984 lies in the complete disappearance of kind payments and the traditional common payment of grain known as 'Swathanthirams'. The relations between the artisans and their clients are now entirely commercial and on a cash basis.

Charcoal Making

A new occupation that has emerged in the village is 'charcoal making'. This does not find mention in the earlier reports. There has been a rapid growth of a plant, known as 'Velikkaruvai' (which provides good fuel material.) With the rapid growth of population in and around the cement factory town of Thalaiyuthu, a market for charcoal has emerged. As a result, charcoal making has become a significant 'industry' and a sizeable source of employment mainly for male labour fetching a daily wage of Rs. 10.

Factory Workers

It may be recalled (Table 13, p.37) that the number of factory workers has grown more than eleven times between 1958-60 and 1984. As a share of the workforce, it has grown more than eight fold. The major avenues of factory employment are the cement factory (already established at the time of the previous survey in 1958-60), a giant flour mill established in 1964, and a textile mill established in 1982. The last two are owned by the same group, a close relative of the well established 'Lakshmi Machines' group of Coimbatore.

Only around 25 persons from the village (mostly men) work in the cement factory at Thalaiyuthu seven kilometres away. The flour mill employs 57 persons on a permanent basis, of whom around forty are workers. In addition the mill employs around thirty temporary workers and another twenty workers in loading and unloading on a contract basis. The mill processes wheat into flour, and has a capacity of 100 tonnes per day. But with wheat supply being rather inadequate, the mill now processes an average of 1800 tonnes in 26 working days in a month. The total investment in the unit is worth around 80 lakh rupees, and the annual working capital requirement is around 25 lakh rupees. Starting wage for workers is six rupees per day. This is raised to nine rupees per day in the second year. At the end of ten years, a permanent worker would earn around Rs.550 to 600 per month. The permanent workers are eligible for one month's salary as medical allowance. Three sets of uniforms are supplied to workers every year. There is also a subsidised mess.

The starting wage rate of Rs.6 per day works out at rather less than the 9.3 kg of paddy per day that cement factory workers were reportedly getting in 1958-60. But the permanent workers are obviously better off, though not by a great deal.

The textile mill was started only in 1982, as a subsidiary of the flour mill company. The latter itself went public in 1980, having until then been a private limited company. Obviously, the flour mill must have fetched handsome profits partly enabling the accumulation of capital for the new textile unit. The textile mill involving an investment of Rs.2 crores employs altogether around 300 persons, of whom around 250 are workers almost equally divided into men and women. Throughput in 1983 was 2600 kgs of cotton per day, giving a yarn output of 2300 kg. The unit has been expanding

rapidly, with the number of spindles having more than doubled in two years from 4850 in 1982 to 12574 in 1984. Half the workforce consists of local recruits. The rest are recruited from Koilpatti, Sivakasi and other neighbouring areas.

The starting wage is Rs.4 per day, lower than the wage for transplanting in agriculture. After 6 months of work, the daily wage is raised by 20 paise every month. This goes on for the first five years, during which period the worker remains a temporary worker. The worker may be made permanent after five years although this is not automatic. We were told by the manager that permanent workers would get a wage of Rs. 25 per day, although this remains hypothetical at present.

Interview with workers revealed a somewhat different story. The factory maintains two separate registers of employees. One pertains to 'loyal' workers, mostly recruited from outside. The other pertains to local workers. The latter are treated as contract workers. Working hours are long, averaging ten hours a day. Although a daily time-rated wage is specified, it is linked to a minimum production norm. Even if power or equipment failure makes the norm impossible to attain on a given day, the worker's wage will be cut back to the minimum of Rs.4 per day, whatever the usual rate earned by the worker may be.[7] From the evidence on wage and working conditions, it is obvious that cheap labour available locally and from nearly dry tracts such as Koilpatti, Maniyachi and Sivakasi is the major reason for the mill located in this village, besides of course the familiarity with local conditions gained by the millowning business group through their earlier and prosperous venture, the KLRF flour mill.

Quarry Workers

An important source of non-agricultural employment in the village is quarry work. There are nearly twenty quarries in and around Gangaikondan employing in all more than three hundred persons. Not all quarries are duly licensed, an unlicensed one being run, for instance, by a local ruling party leader. Most of the quarry owners are medium farmers with access to poramboke quarry land. Some have leased in land for quarry work.

The workers--often hired in pairs (a male-female couple) - are paid piece rate wages. The workers have to incur some expenditure on explosives and other tools. Net of expenses incurred, a couple may make between twenty five and thirty rupees in a day. To obtain this wage, they would have to work from six o' clock in the morning to seven thirty in the night with a half-an-hour break for lunch, i.e., for about 13 hours. The work is physically very demanding.

Debt bondage is not uncommon among the quarry workers. They often take an interest free advance of Rs.500 from the employer. If they borrow more than Rs.500 (as they often are forced by their circumstances to do), they are required to pay a rate of interest of Rs.10 per Rs.100 per month on the loan i.e., an annual rate of interest of 120 per cent. The oppressive nature of the work and the inability to repay the loans have led to many workers running away, leaving their wives and children captive in the hands of the employer. The women thus left behind must perforce continue to work for the master and in a number of instances submit to sexual exploitation by the master. We came across four instances of workers running away. In one instance, all the personal belongings left behind by the worker including cash, sarees, jewellry and a transister radio were impounded by the owner by force.

1. Elsewhere in his report, Lokanathan quotes figures of 8 annas for men, 4 annas for women and 3½ annas for male children as daily wages in the busy season with only half these rates in the slack season.

2. Ibid.

3. It has been assumed that there are 360 working days in a year for a permanent farm servant.

4. AERC Report, p.58.

5. Economic Survey 1983-84 (GOI, New Delhi, 1984) Table 5.3, p.134.

6. P.J.Thomas and K.C.Ramakrishnan, op.cit. p.99.

7. Many of the workers have had eight or more years of schooling, some having passed high school.

Table 40: Employment Pattern of Agricultural Labourers in Gangaikondan 1984 (Sample Data)

	Observation No.	Thai Jan/ Feb	Masi Feb/ Mar	Panguni Mar/Apr	Chithirai Apr/May	Vaikasi May/June	Ani June/ July	Adi July/ Aug	Avani Aug/ Sep	Purattasi Sep/ Oct	Ippasi Oct/ Nov	Karthigai Nov/Dec	Margazhi Dec/ Jan	Total
	1	15	20	20	20	20	10	10	5	5	15	15	15	170
M	2	-	15	15	10	15	10	10	5	20	10	15	15	140
A	3	-	25	25	15	15	10	10	--	15	10	5	10	140
L	4	20	30	30	--	--	10	20	15	10	20	10	10	175
E	5	-	15	15	5	12	10	10	10	30	15	-	-	122
S	6	15	20	10	20	20	20	20	-	-	25	-	10	160
	7	15	20	20	15	20	15	10	15	-	15	15	15	175
	8	-	20	20	--	--	10	10	5	5	15	30	20	130
	9	-	15	15	--	--	15	15	5	10	--	20	15	105
F	10	-	25	25	10	5	10	10	5	-	10	25	25	150
E	11	20	30	30	10	10	10	20	15	-	-	30	10	185
M	12	-	15	15	5	-	10	10	10	10	15	30	10	130
A	13	20	20	25	25	25	10	5	-	-	30	20	10	190
L	14	15	20	10	20	20	20	20	-	-	25	30	10	190
E	15	10	20	20	--	--	10	15	15	-	15	15	10	130
S	16	10	15	15	20	10	15	15	15	15	-	-	20	

Chapter VIII : Change and Stability

The foregoing chapters have traced the various economic changes that have occurred in Gangaikondan between 1916 and 1984, drawing on the evidence from four surveys collected at various points in time -- 1916, 1934, 1958-60 and 1984. It is now time to take stock of the changes and obtain an overall picture.

Demographic Stability

A review of the population trends has shown that it is only in the post-Independence period and particularly since the nineteen sixties that the village has become demographically stable. Interestingly, the period since 1960 is also the period of the introduction of high yielding varieties in agriculture as part of a process of agricultural modernisation, and of the growth of manufacturing activity in and around the village. A similar pattern of emergence of demographic stability in the period since 1960 has also been observed in our study of Vadamalaipuram.[1] The common factors at work in both cases would appear to be the general decline in mortality rates associated with improvements in health care services in the decade after Independence, the process of agricultural modernisation leading to significant increases in crop yields, and the growth of industrial activity.[2]

The period since 1916 has witnessed a continuous emigration of Brahmin households. The other important castes to have either disappeared from the village or declined considerably in numerical importance include the Kaikolars, a weaving community whose economic decline was noticeable even in 1934, and Moopanars, who specialised in the cultivation of betelvine, a crop no longer grown in the village. With the emigration of Brahmins to towns, tenancy has declined.

Most of the lands have passed into the hands of the cultivating castes. Apart from Konars and Thevars, Harijans both Christian and Hindu, have become major landowning castes in the village. In recent years, there has been some immigration of Brahmins into the village, consisting mostly of retired persons coming back to settle in their native place and of Brahmins from neighbouring villages where the traditional Brahmin quarters, the "Agraharam" have decayed beyond repair.

With respect to the industrywise distribution of the workforce, a major change has occurred since the last survey was carried out in 1958-60. This is the significant increase in manufacturing employment. Correspondingly employment in agriculture has declined relatively, with the share of the agricultural workforce in the total workforce declining from 61.64 per cent in 1961 to 53.30 per cent in 1984. Within the agricultural workforce, the share of agricultural labourers has increased, accounting for more than half of the agricultural workforce in 1984 as opposed to hardly 10 per cent in 1961. At the same time, the acquisition of land by cultivating castes from erstwhile landlord castes has led to a significant increase in the number of heads of households pursuing cultivation among Pallar, Thevar and Konar households.

The "social infrastructure" of the village has improved considerably in some respects over the nearly seven decades that have elapsed since the first survey in 1916. Literacy rates, for both males and females, have increased significantly. School facilities today are far superior to what had existed in earlier survey years. In housing too there has been a marked improvement. Health facilities have, however, remained backward, except for provision of protected drinking water to seven of the eleven hamlets. Transport and communications facilities are excellent at least as far as the main village is concerned. The local library has expanded a great deal over the decade.

The picture of remarkable improvement in social infrastructure needs to be qualified, however. The average literacy rate, going by the census of 1981, was still below the average for the State, although much higher than that for rural Tamil Nadu. Female illiteracy remains high, even though the gap between male and female literacy rates has narrowed. More disturbing, the difference between males and females in the percentage of children attending school in the age group 5-16 years is alarmingly large for Thevars, Konars, Nadars and Christian Pallars. Interestingly the gap has been almost eliminated among Hindu Pallars. This fact, taken together with the fact that the literacy rates among scheduled castes in the village (excluding christian converts) is much higher than those for Rural Tamil Nadu for males and for females, leads one to speculate whether the substantial access to land and special government educational programmes have made the difference.

While literacy rates have improved, education beyond high school is still rare. And while the number of schools have increased the physical facilities available in the schools are extremely poor.

Finally, roads and transport facilities within the village -- between the hamlets -- are quite poor, in contrast to the excellent bus services enjoyed by the main village which lies on the trunk road from Tirunelveli to Madras.

Agricultural modernisation has occurred rather slowly, and mostly since 1960. Net sown area has declined noticeably since 1916, a decline attributed by our respondents to poor monsoons, erratic changes in seasonal patterns and poor returns from agriculture. There has been a trend towards a mono-crop agriculture. Paddy is by far the most important crop. Paddy yields have increased by about fifty per cent between 1958-60 and 1985, increasing from 1042 kgs per acre

to 1506 kgs per acre, both figures being inclusive of harvest wages. Yields have increased rather more rapidly in respect of cotton and chillies. Techniques have changed with a great deal of chemical fertilisers and pesticides being used now. Nearly half the expenditure on paddy cultivation is accounted for by fertilisers and pesticides. Ploughing and other agricultural operations are still done using traditional methods, although tractors have just arrived. Returns to cultivation seem to be modest, with chilli being more profitable than paddy, and cotton the least profitable of the three. The "green revolution" has had a rather limited impact on this village, and the "pumpset revolution" even less. Irrigation is provided by the river Chittar through a canal and a tank fed by it. Wells have very little independent ayacut, and most of them are not energised.

An important development in the recent period has been the growth of dairying. While crop agriculture has registered only rather modest strides over the decades, there has been a significant development of the livestock economy. The growth was mainly in dairying, with four successful milk societies supplying milk to the urban and semi-urban areas in and around Tirunelveli as well as to Gangaikondan. There has been a phenomenal increase in the daily sale of milk from 83 litres per day in 1958-60 to around 1500 litres per day in 1984. The higher rate of return on investment in milch animals seems to have induced a shift from sheep to milch cattle. With decline in area cultivated, and the arrival of tractors, the stock of plough bullocks has, not surprisingly, declined.

The most important changes in agrarian relations are the decline in tenancy and the associated emergence of the cultivating castes of Thevars, Konars and Harijans as the important landowning castes. There has also been a significant reduction in the concentration of landownership,

with the Gini ratio declining from 0.6429 in 1958-60 to 0.4816 in 1984. While the picture of a reduction in concentration ratio cannot be taken at face value. Despite the fact that we have taken an one-third sample, we have missed out the biggest landowners. This suggests significant concealment of land held by some respondents, and the quality of our sample data must therefore remain suspect. The decline in concentration is nonetheless real, though its magnitude is exaggerated by sample data.

Area under tenancy has declined sharply from a fourth of the operated area in 1958-60 to an eighth of it in 1984. Share rent arrangements have given way to fixed cash or land rent systems. Tenancy is mainly "temple tenancy". The rent burden has declined. Also, while land values have been rising in nominal terms, the market for agricultural land is not very active.

As noted earlier, the composition of the agricultural workforce has changed. The number of cultivators has declined in absolute terms between 1961 and 1984 while that of agricultural labourers has increased nearly five times in the Same period. Since the time of the last survey in 1958-60, both real wages and the annual average number of days of employment have increased. This is true for both males and females. With respect to men, the larger quantum of employment reported includes a significant amount of non-agricultural employment in woodcutting charcoal making, brick making and construction. Employment opportunities in agriculture have declined for men while they have marginally increased for women. Wages for male labour, reckoned in terms of paddy, have more than doubled between 1958 and 1984. Those for women have increased only marginally. Despite the rise in wages and the increase in average annual days of employment, and thus in annual earnings, practically

all the agricultural labour households live well below the poverty line. The average earnings of an agricultural labour household work out to hardly three fifths of what would be required to reach the poverty line.

Between 1958-60 and 1984, factory employment, as noted earlier, has increased a great deal. Most of this is provided by a flour mill and a newly built textile mill. Wages in industrial employment are at the moment rather poor, but the expectation of higher wages on being made permanent, and the regularity of employment provide the incentive for workers. Other important avenues of non-agricultural employment are quarry work, construction and the traditional occupations of palm working and basket weaving. The basket weavers provide a classic example of a group who have been completely by passed by the developmental process in our country. Their wages and economic conditions remain as miserable as ever. The artisans -- blacksmiths and carpenters -- have diversified to serve the urban market, and have generally managed to cope with the changes in the economy that have occurred over the decades.

The changes described above, taken together, give us a picture of a process of slow modernisation in agriculture, accompanied by the disappearance of absentee landlordism. While productive forces have advanced in both agriculture and industry, the benefits of the process of development have not been widely and evenly distributed. This is hardly surprising, given the distribution of assets and the economic rules of the game which serve to reinforce inequality. Demographic pressure and the decline in cropped area have contributed to a large increase in the number of agricultural labourers. The presence of a considerable surplus of labour has helped prevent a rapid rise in wage levels,

both in agriculture and in various non-agricultural activities. Thus while changes have occurred, and commercialisation of the economy has proceeded apace, the working people of Gangaikondan have not been the chief beneficiaries. Nonetheless, their lives are changing, and with it, their perceptions as well. Unfortunately, we have not had an opportunity to investigate these latter changes.

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1. See V.B.Athreya, "Vadamalaipuram: A Resurvey", Working Paper No.50, MIDS, Madras, August 1984.

2. A similar picture has been reported for Dusi in North Arcot. See S.Guhan and K.Bharathan, Dusi: A Resurvey working paper No.52, MIDS, December 1984.

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