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EVOLUTION OF ORGANISATION OF PRODUCTION IN COIR YARN SPINNING INDUSTRY

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SECTION I

THE INTRODUCTION

Coir yarn spinning is the most important non agricultural occupation in the South Western Coastal belt of India employing between a quarter of a million to half a million workers. Though ancient in lineage its rapid expansion as the premier rural industrial occupation of the coastal belt took place with the trade boom in hard fibres during the latter half of the nineteenth century. Till then the coir had remained dormant in the modicum needs of the rural economy. The entire exportable surplus of the region in 1801 was merely 1200 tonnes.[1] But before the end of the century the shipments of the ports of Malabar Coast had increased to over 40,000 tonnes and further to over 80,000 tonnes by the thirties.[2] Spurred on by the export demand the coir yarn spinning rapidly spread along the coastal villages. To a European observer at Cochin, as early as 1861, the growth of "manufacture of (coir) yarn which (went) on all over the country" was reminiscent of "weaving in England many years ago".[3] But unlike the cotton weaving in England, the coir yarn industry of Kerala did not make the historical transition from the proto-industrialisation stage. Its destiny remained grooved to the handicraft technology and petty scale of production. It is this aspect of the industrial evolution that is the focus of our analysis in the present paper.

In an earlier work we had analysed the conditions under which the lower forms of capitalist production tends to not only persist but also accentuate overtime.[4] We had traced the path

traversed by the coir weaving industry from a structure dominated by large scale handloom manufactories to one characterised by the predominance of small-scale cottage units using labour of the self employed. Our present work on coir yarn spinning sector also shares the same concern viz. the dynamics of lower forms of capitalist production organisations and the conditions of their survival and dissolution.

Labour Surplus Economy and Residual Employment Sector

A basic consideration of such an analysis would have to be the conditions of supply of labour. The coastal region of Kerala is one of the most densely populated tracts in India. However, due to the predominance of coconuts in the cropping pattern and the relatively high incidence of wage labour relations in cultivation, there are severe limits to the labour absorption capacity of the agricultural sector of the coastal tracts. Only less than half the rural population is employed in agriculture. It is the non-agricultural sectors, such as coir industry, that have played the role of residual sector accommodating the surplus labour. The population pressure has tended to push an increasing proportion of the population into low productivity non agricultural subsistence activities.

The employment in the coir industry has more than kept pace with the expansion in the production through the century. But for the disruptions caused by the Great Wars the production of coir has more or less steadily increased from less than 45,000 tonnes at the turn of the century to around 1 lakh tonnes by the

end of twenties to a peak of 1.5 lakh tonnes during the 'sixties. The production plateaued off at this level and has tended to decline during the 'eighties.

We are handicapped by the lack of reliable data to trace the growth of the work force. The census figures, the only available source, have severe limitations, 90 per cent of the workforce in coir yarn industry are women.[5] , It is now well known how sensitive the estimates of female employment have been to changes in census definitions and efficiency of census administration going by census count, the total employment in the industry had increased from around 1,65,000 in 1921 to around 2,60,000 in 1961. Since then the census figures have shown a declining trend in employment. However such a sharp decline as is indicated by the later censuses is not corroborated by other evidences. The production of coir has begun to decline only during the 'eighties. And there have been no indications of increase in per capita days of employment. If at all the available evidence points to the contrary. Even after allowing for the changes in the concept of `worker' used for census count in 1971 and 1981 the contradictory evidences can be reconciled only by positing an accelerated marginaliation of coir work during the recent decades.

The widely accepted estimate of employment in the industry inclusive of marginal and part time workers is that of 4 lakh workers.[6] However, it has been held that even on the basis of the existing manual technology and allowing for 20 per cent leave reserve, only 1,65,000 full time workers working 300 days an year

would be required to attain the level of production achieved in the mid-'seventies.[7] It points to the severity of under employment in the industry. The same fact is even more sharply brought out if one examines the per capita value added in the industry. We had estimated that in 1979-80 the total value added in the industry including the weaving sector was only around Rs.50 crores. If 4 lakh workers were employed in the industry the per capita value added would turnout to be a meagre Rs. 1,250 per annum.[8] All these facts underline the residual nature of the industry within the regional macro economy.

What are the specific features of the coir industry that render it eminently suitable to play the accommodative role to the surplus population in the region? This question assumes special significance in the above context. Certainly, it is an issue that concerns not only coir but also a whole genre of rural industries in coastal Kerala. We intend to take it up in a systematic manner at a later time. For the present we are satisfied by merely contextualising our analysis of the labour intensive handicraft technology and the domestic self employment nature of organisation of production of coir yarn spinning within the broader macro frame work of labour surplus economies with barriers to labour absorption within agriculture.

The Handicraft Technology

Coir industry in Kerala is characterised by the most labour intensive process of coir fibre extraction and spinning that could possibly be envisaged. Let alone machine power, even the

most rudimentary tools are not employed in many of the processes. It is as if each unit of coir produced is soaked with simple human labour.

The coir fibre in Kerala is extracted from retted husks. The green coconut husks are immersed in brackish waters till the pith in which fibres are embedded decays and the tannins in the fibres are removed. The retting practices vary from immersing the green husks in shallow waters in coir nets to burying the husks in muddy pits. Whatever be the precise retting practice adopted, it has remained a natural bacteriological process. Neither chemical nor mechanical processes are anywhere employed to hasten or replace the natural process.

The retted husks are crushed by female workers with wooden or iron mallets till the fibres are seperated from the rotten pith. The fibres are then manually sifted. Fibre has to be further cleaned, dried and the slivers arranged in the same direction before spinning can start. A simple hand rotated drum with blades are used for this purpose. However, the use of even this simple contrivance is limited to the southern most districts of Trivandrum and Quilon. In the other districts the remanants of the pith and other impurities are removed by beating and sifting the slivers with simple willows.

An important innovation that was adopted in the handicraft technology with the expansion of production was the introduction of the spinning wheel or ratt in the latter half of the 19th century. Traditionaly coir yarn was spun by rolling fibre

between the palms of the hand into short lengths. These short lengths are then twisted in the counter direction to make a two-ply yarn. In the case of ratt spinning, a stationary wheel with two spindles and a moving wheel are used. The stationary wheel is rotated by a person while the spinners feed the fibre slivers to the spindles to make the strands which are then connected to the on the moving wheel to give counter twist to make the 2 ply yarn. The count of the yarn is regulated by moving a triangular piece of wood with grooves on the sides between the strands. Though majority of the ratts are two spindled, ratts with 3,4 or 6 spindles are also in vogue. Usually, 2 women are needed for feeding the slivers and one woman/child for rotating the ratt.

The ratt spinning slowly replaced the handspinning in the Travancore region. The increased demand for the hard twist yarns for manufacturing coir fabrics was an important reason for the widespread adoption of this innovation. It also increased productivity. While it required 1400-2100 mandays of work to produce a tonne of hand spun yarn only 250 to 550 mandays were needed for the production of a tonne of ratt spun yarn, depending on the variety. The earnings of the ratt spinner also was 5 to 6 times that of a handspinner in the thirties. However, despite the efforts made by the Cochin government and the Madras Industries Department, Malabar and most of Cochin continued to be under handspinning.[9]

Finally the hanks of spun yarn are bundled in a manner peculiar to each area before it is marketed. Bundling is also a manual operation and requires considerable skill.

Organisation of Production

Such being the technology and the labour intensive nature of production the industry has always been characterised by archaic relations of production. But it should be cautioned that it is not the case that the production relations in the industry remained stationary in timeless cycles of simple reproduction. There was rapid expansion of production, accumulation and growth of capital, changes in the handicraft technology as well as pressures for change of the handicraft technology itself, differentiation and pauperisation of the producers, growth of proletariat and its self conciousness and a variety of government interventions to regulate the industry. In response to the above, the production relations have also undergone significant changes. Thus we have a surprising diversity of pre-manufactory forms of industrial organisations across time and space in the coir spinning industry. The present paper is an attempt to document and explain the spectrum of organisation of production that characterised the industry in different regions and the changes that have occured overtime during the present century.

The production relations in handspun yarn and rattspun organisation are discussed separately. The hand spinning is undertaken almost entirely at the household level by women spinners under a variety of putting out arrangements. (See Section 2). There is a higher degree of differentiation in ratt spinnig and it exhibits more developed forms of capitalist organisation of production (See Section 3). We shall examine the growth of trade union movement among the workers and its

implications for labour conditions, technology and production relations in both the sectors.

The export orientation of the industry and the extremely fragmented production structure necessitated a long chain of middlemen for the collection and disposal of the yarn. Similarly the localisation of the industry along coastal belt and the dispersal of the coconut production among hundreds of thousands of small landholders spread throughout the low and mid lands required an equally elaborate system of traders for the collection and supply of husks. The structure and operations of the trading capital is subjected to rather detailed discussion in section 4.

Co-operative reorganisation of the industry has been promoted as solution to the fragmentation of the production structure and the exploitation of the middlemen and to ensure a decent level of living for the producers and workers in the industry. In Section 5 we shall survey the evolution of the cooperative production structures and the crisis they are facing today.

Certain Methodological Issues

A major limitation of the study may be confessed at the outset itself. Our field enquiries at the coir producing centres were undertaken in early 'eighties. Therefore certain important recent developments in the industry such as changes in the labour supply conditions, the new challenges in the product market, the

implications of the growth of mechanised coir production outside the traditional coastal coir belt in states other than Kerala etc. have not been incorporated into the analysis. Strictly speaking our analysis covers only the period upto the early 'eighties. However, it need not detract one from the useful insights on the dynamics of the lower forms of capitalism that can be gained from our historical analysis.

For our documentation we have mainly relied on the evidence available in the numerous published reports and studies on the industry. To a limited extent archival sources of government, private companies and trade associations have also been utilised. The only primary data used refers to a sample survey we conducted in Kadakkavoor village of Trivandrum in 1978 which has not so far been published.

Even though our discussion runs mostly at the level of handspun/ratt spun yarn sectors we shall be often be comparing and contrasting the production conditions in various regions. The coir yarn spinning is characterised by a high degree of regional specialisation in production: there are around a dozen major varieties of hand-spun and ratt-spun yarns each with further subgrades and variations. Each variety is known usually by the chief centre of its production and is distinguished from each other by the eveness of twist, colour, scorage, runnage, pith content etc. These differences result mainly from two set of factors ie. the spinning practices and the nature of fibre used. The nature of the fibre is dependent on the level of fine cleaning as well as the type of husk and the conditions and

period of retting. The ecological factors also significantly affect the nature of retting. The period of retting, sources of husk supplies and conditions in the husk market have, as we shall see later, exerted significant influence on the organisation of production. Further, the end uses of each variety of yarn are different and consequent differences in the market conditions of the coir yarn may also influence the production organisation.

Incidentally, the extreme regional specialisation in the coir yarn spinning may be viewed as a system of work sharing arrangement among the workers. There is not much synchronisation of the demand fluctuations of different varieties of coir yarn. But it is very rare for a production centre to undertake to spin a different variety for which there is market demand even if its traditional variety is facing a market slump. It may be noted that there is no insurmountable skill barrier for such product switching as far as many varieties and major centres are concerned. Thus in all regions the industrial activity is interspersed with periodic idleness. This self imposed idleness plays an important role in distributing the available employment throughout the coir belt more equitable.

To keep the paper within manageable limits we have chosen to confine the analysis to the geographical boundaries of the present day Kerala State which account for 90-95 per cent of coir yarn production. An important omission in this regard has been the Laccadive Islands. Eventhough the present contribution of the Islands to the total coir production is negligible they occupy an important position in the industrial history. The

Islands were the most importan' centre of coir production in the beginning of the 19th century accounting for as much as a quarter of the exportable supplus of coir yarn available from the Malabar Coast. The island produce was a monopoly of Ali Rajah of Canannore who bartered it from the islanders at ridiculously low terms of trade.[10] The system was continued even under the British with some minor modifications. For this and other reasons the issues related to the Laccadive coir industry deserve a separate treatment by itself. Similarly we are not examining the growth of the industry in South Canara district of Karnataka or Kanyakumari district of Tamil Nadu. The nature of government interventions and regulatory measures adopted in these regions have been very different. The establishment of a power loom coir weaving factory, supposedly the worlds largest, in the Kanyakumari district and the keen interest it has taken in the spinning practices in the region have had important consequences.[11] An analysis of these changes would require primary field enquiry which is beyond the scope of the present paper.

SECTION II

THE HAND-SPUN YARN SECTOR

The evolution of the production organisation in the handspinning sector reveals an interesting hirearchy of domination of capital in the production process. With the commercial expansion in the latter half of 19th century, the proportion of indepedent petty producers who procured husks from the landlords/husk dealers and sold the spun coir to village coir

dealers began to rapidly decline. In mid 'thirties it was estimated that only about 10 to 15 per cent of the coir workers were "working on their own account in their homes"[12] It was women of the Ezhava Caste and to a lesser extent those of the Muslim, Latin Christian and cheruma Communities that took to coir making as their chief vocation. They belonged to the families in the lower strata of society, whose "earnings of male members ...(were) too small to procure the necessaries of life for half a dozen souls"[13] Only few among the new entrants had the financial resources to purchase and ret husks on their own. The retting of husks meant locking up of considerable amount of working capital for 6 to 12 months. It also required either ownership or lease control over retting pits. Further, as the coir production expanded local husk availability proved deficient to meet the demand and hence intermediaries between the landlords in the hinterlands and producers became inevitable. All these facilitated the control of the husk merchants over the coir producers.

The Independent Domestic Production System

The independent domestic production system continued to survive only in varieties of coir yarn spun from unsoaked or partially soaked husks. The classic case is that of Beach yarn produced from partially soaked husks (upto a month) or even dry husks in Ambalapuzha-Shertallai taluks of Alleppy district. The women spinners procure small lots of husks from husk dealers or local landlords. Until land reforms, the Beach yarn producers used to receive husks as wages in kind for watering and tending

coconut trees belonging to the landlords. The husks are soaked in shallow sandy ponds in the backyard of every house. Almost the entire Beach yarn is used by the local coir weaving industry for the manufacture of cheap doormats. The producers sell the yarn to local dealers or directly to the cottage weaving establishments. Vycome Common is another handspun yarn used for the manufacture of low quality coir fabrics. It is prepared from husk rejects of inferior quality. These husk rejects, unsuitable for fine spinning, are bought by the handspinners to be worked at home. In Malabar, a predominantly handspinning area, the independent domestic production system is prevalant only in Pacha Choodi yarn prepared from raw husks. The entire production of Pacha Choodi is sold to the local provision vendors, mostly on a barter basis for daily consumables.

Exception to the rule has been the production of Alapat yarn in Karunagapally taluk of Quilon. It is a superior quality handspun yarn produced from well retted husks but prepared by self employed petty producers. The husks are purchased in small lots by the spinners from commercial retters and the daily output of spun yarn is sold to bazzar dealers of coir yarn. It is not clear why the husk dealers have not exerted more direct control over the production. It is perhaps due to the greater competitive conditions in the husk market in the region. There is abundance of local husks and retting facilities and consequently larger number of commercial retters, mostly local landholders themselves.

The Dependent Domestic Production System

It is debatable as to what extent one can describe the above arrangements as 'independent' domestic production system. The producers are dependent on the credit of the husk dealers for their daily requirement of raw materials and often on the consumption loans of the coir dealers for their subsistence. It was reported to the Banking Enquiry Commission (1928) at Calicut "... The practice at present followed by bazzar men in purchasing the yarn from the women at ridiculously low rates and paying for it in kind eg. oils and sundry articles of food etc., is vicious because they make double profit... The women have no other go but to sell their yarn at any price they can get because they live hand to mouth existence and are at the mercy of the bazzar men..."[14] Further, "most of the shopkeepers are themselves dealers in coconuts. They give husk to some of the women for soaking and they sometimes buy fibre also"[15]

The interlocking of the raw material and product markets renders the producers totally dependent on the middlemen. Even though an illusion of purchase and sale is maintained, the petty producer is reduced in reality to the status of a wage worker but without even the modicum assurance of a guaranteed return to labour. The producer's account of husks purchased on credit is settled when the yarn is sold back, her earnings being the difference between the purchase and sale prices, the terms of which the dealer is pleased to determine. We call this arrangement, reported as being widely prevelant in the Pochachoodi areas, as dependent domestic production system.

An interesting variant of the dependent domestic production system that was common in Quilandy and Beypore yarn in Malabar, even by the turn of the century, was what was known as seigniorage system. It was to be a kind of product sharing arrangement between the dealer and the producer. Two thirds of the yarn prepared by the producer from the retted husk supplied by the dealer was to be returned to the latter free of charge as seigniorage. The rest was the producer's share which was invariably purchased by the same dealer at a fixed rate.[16] After the First World War certain modifications took place regarding the sharing arrangements. Instead of a fixed share, a fixed quantity, viz. 13½ lbs of yarn for every 100 husks, was to be delivered to the merchant as seignorage. Anything in excess of this minimum was the producer's share.[17] The uniqueness of the system was the illusion of product sharing and self discipline it created on the producer. The share of the employer was fixed while that of the worker varied according to her diligence in handling the raw material.

The Domestic Hired Labour System

By the end of 'thirties, the seignorage arrangement was rapidly giving way for domestic hired labour system in the retted husk yarn varieties. As in typical putting out system the dealers began to supply raw material to the workers to be processed in their homes for wages. But only rarely we have instances of dealers directly supplying retted husks to the homes of workers. The normal practice was for the merchants to defibre the retted husks employing hired labour in work yards adjacent to

the retting grounds. The fibre was then distributed to the domestic spinners to be spun into yarn at piece rates. The reason for not putting out the husks seems to have been the necessity of preventing petty pilferage of fibre by domestic workers. Due to the differences in the fibre content of the husks which depends upon various factors - such as the variety of coconut, the dehusking practices, the pith content of the husks, the degree of retting and so on - it was difficult to fix a norm for the husk fibre out turn. Even under the seignorage system, it had been felt that the producer "anxious to increase the weight of her output of yarn, (was) inclined to be indifferent to the proper cleaning of the fibre"[18] and thus tended to lower the quality of yarn. The new organisational innovation also helped to save transport charges incurred in transporting bulky and heavy retted husks. Further, the limited division of labour introduced under the new system also had an beneficial impact on the productivity of labour. By the 'fifties, the domestic hired labour system had become the universal practice in Quilandy, Beypore and Rope yarn varieties.

Centralised Hired Labour System

A concomittant of the fibre putting out arrangements was the emergence of centralised fibre production using wage labour. Work yards for the centralised yarn production were only a next logical development. It facilitated greater supervision and quality control and therefore became the preferred mode for the production of superier qualities of Beypore and Quilandy Yarn. And thus the Minimum Wages Committee of 1961 observed in many

villages "long rows of women sitting in sheds where fibre is supplied to them and they convert it to yarn, either Beypore or Quilandy variety, and wages are paid to them for their work on piece rate basis"[19]

Labour Conditions

The collective work yards brought forth the first stirrings of organised resistance by workers in the history of the industry. It is important in this context to briefly survey the labour conditions in the handspun coir yarn sector.

It is not possible to construct a reliable time series of wages or earnings of workers given the unorganised nature of the industry. In 1917 the cost of defibreing and spinning per candy of yarn involving around 130 days of work at Calicut was Rs.10.42. It did not "enable (the workers) to come up even to the line of poverty"[20] The commutation rate fixed by custom under the seignorage system proved to be highly sticky. It was remarked that ..." the wages of the workers have remained stationary for the last fifty years while the profits of the masters have increased year by year... Their wages have been kept down by custom and the sense of helplessness makes them immobile. Also the spirit of segregation is responsible for the nominal wages they get."[21]

The wages seems to have improved during the post First World War boom particularly in the retted yarn varieties which had considerable export demand. In 1928 the wage cost of one candy

of yarn ranged at Calicut between Rs.19 to Rs.27 for such varieties while for unsoaked husk yarn it was only Rs.8.50[22]. With the onset of Depression the wages slid down. The trend reversed only from the late 'thirties. By 1961 the wage costs for a candy yarn had more than doubled to Rs.42.50 to Beypore and Rs.52.50 for Quilandy yarn.[23] But it is doubtful if there was any improvement in real wages.

The handspinning households continued to be the most sweated and under paid stratum of workers in Kerala. The earnings of a hand spinner for a day's labour in the major varieties of hand spun yarn in mid sixties is given in Table 1. It ranged between 42 to 60 paise for the domestic hired worker varieties. The price paid by the self-employed domestic workers for their illusion of 'independence' was quite startling. Their earnings were half those of the hired domestic workers.

Table 1
The Daily Earnings of Handspinners in Major Varieties of Yarn
1964

Self Employed Domestic Worker Varieties	Rs	Hired Domestic Worker Varieties	Rs
1. Fine Unsoaked Yarn	0.21	1. Beypore yarn	0.60
2. Vycome Yarn	0.37	2. Quilandy yarn	0.45
3. Beach yarn	0.38	3. Rope yarn	0.42
4. Alapat yarn	0.38		
Average	0.33	Average	0.50

Source: Mohammed Kunju, Coir Yarn-A Study of Different Types of Coir Yarn Produced in India Coir Board, Cochin, 1966.

It may be argued that the self employed domestic hand spinners work only part time while the wage workers are full time workers. But for our comparison, we have taken the earnings of the average wage worker while the earnings of the self employed

spinners refer to those who work on a full time basis. What this "leisure time" occupation (as the handspinning has often been referred to in literature) can imply for a woman worker may be understood from the following statement: "Though the coir production is the main occupation of the female members, they do this side by side with their domestic duties such as cooking, washing etc. In the early hours of the day, elder female member goes to the retting field and procures daily requirement of the retted husks, usually on credit terms. She brings husks home and two or three members beat them into fibre... In certain places, beating and cleaning is done in the forenoon and spinning in the afternoon after attending to domestic duties for two or three hours. Spinning may go on during the late hours of the night, in the light of the lamp till 10 or 11 pm. Thus each set of workers has to spend 9 or 10 hours of the day for this work"[24] It was for this day long toil that the handspinners in the Alapat region received Rs. 0.38 in 1964.

In the case of self employed domestic spinners the wage earnings were abysmally low. It was inadequate even for the reproduction of the labour power of the spinner, let alone her family. In 1960 it was estimated that the income from coir industry accounted for only less than 17 per cent of the total family income of the handspinning households.[25] As a perceptive observer remarked at the end of the 'twenties, even though "the wage earnings represent practically nothing...in the absence of any other occupation to engage the women workers honourably in their own houses there is no other alternative but to take to this kind of work, which gives them at least few annas a day"[26]

These few annas made the difference between starvation and bare minimum subsistence.

Unionisation and Consequences

Under the influence of the general political awakening, isolated struggles for better wages and working conditions began to break out in the handspinning areas in the 'fifties.[27] The spread of the unions was mainly among the husk beaters who worked for wages in the yards of the merchants. In 1956, there was fairly widespread and intense struggle in the Calicut region.[28] The rising pressure from the workers was the background of the introduction of minimum wage legislation in the hand spinning sector in 1963. The minimum wages had to be fixed at 70 to 75 per cent above existing rates in order to enable a coir family to earn something near to a subsi cence minimum of 2800 calories of per capita food and other related necessaries of life.[29] The Minimum Wages Committee after a detailed investigation into the production and marketing conditions of the industry was convinced that the industry could bear the increase in the wage bill without any significant price escalation if the profits of the middlemen could be reduced. (See Table 2).

Table 2

Cost of Production and Profits for 1 candy of Handspun yarn 1963

	Beypore Yarn	Quilandy Yarn(Rs)
Cost of retted husks	146.25	155.25
Contract Rate for the extraction of fibre	40.00	42.40
Charges for Handspinning	42.50	52.50
Total cost	228.75	250.15
Sale Price	330.00	350.0
Profit for the merchant (exclusive of margin on retted husks)	101.25	99.85

Source: N. Kunjuraman, Report of the Minimum Wages Committee for the Manufacture of Coir", Govt. of Kerala, Trivandrum 1963.

The immediate impact of the struggles of the workers and the introduction of the minimum wage legislation was the gradual extinctior of centralised production system. The large fibre producing yards operated by the husk retters came to be split up into smaller units or subcontracted to smaller middlemen who in turn employed small gangs of workers. These contractors were more often merely head labourers who got small advantages by exploiting the workers under them. The unions were not successful in preventing the development of the contract system. The most intense and fierce struggle in the handspinning sector took place in 1956 and was centred around the issue of the right of large scale retters to close their work yards and contract out the defibreing. The workers at Kandassankadvu, a major fibre producing centre, held out for over a month in most heroic fashion against police repression and starvation. The agitation though it captured the attention of the whole state and attracted volunteer participants from all over, had to be withdrawn,

leaving the issue for adjudication.[30] The government held 'freedom of trade' sacrosanct and advised the workers to buy the retted husks and defibre them in their houses.[31]

The handspinning work yards completely disappeared from the industrial scene. Instead there was a resurgence of hired domestic labour systems. Even here the merchant often preferred to operate through petty contractors rather than directly putting out to the domestic spinners. Thus the contract system became the characteristic feature of the industrial organisation in the retted husk variety yarns.

An important reason for the absence of hired domestic labour system in Alapat yarn or Aroor Special Yarn (a superior type of Vycome yarn) may have been the threat of unionisation. The minimum wages were not applicable to the self employed domestic system of production. The Minimum Wages Committees took the position that there was no wage labour relation in the production of such varieties and therefore question of minimum wages was irrelevant in their cases.

The demand for handspun varieties of coir yarn, was largely sustained by the ridiculously low wages at which domestic workers were willing to work. The wage escalation slowly eroded the cheap labour basis this handicraft and heralded its gradual decline. On the one hand ratt spinning began to make further inroads into the hand spinning regions. Only a very small proportion of the Alapat and Vycome yarn is being spun by hand. The share of ratt production in the Alapat yarn has increased

from around 15 per cent in early sixties to around 75 per cent today. The total number ratts in the hand spinning districts of Canannore, Calicut and Malappuram have increased from 297 ratts in 1955 to 1264 ratts in 1980.[32]

A more important tendency, especially in the Malabar region, has been the shift towards commercial production of coir fibre for sale to the ratt spinning areas in Southern Kerala and the rope industry in Tamil Nadu. This has been facilitated by the introduction of husk beating machines in Malabar. The use of machinery significantly reduces the labour requirements and to a limited extent reduces the cost of production.[33] Unlike the Travancore region there is no ban of defibreing mills in Malabar. The husk merchants find commercial production of fibre more profitable than the labour intensive spinning. By the end of the 'sixties the exporters were complaining about the scarcity of exportable qualities of handspun yarn.[34] On a rough estimate around 30 per cent of the yarn in the mid sixties was being handspun. By 1980 its share had declined to 15-16 per cent.[35] We shall now turn to the organisation of production in the ratt spinning sector.

SECTION III

THE RATT- SPUN YARN SECTOR

The handspun yarn was almost entirely characterised by domestic petty producers under varying degrees of control by merchant capital. Since the handspinning did not involve even

elementary tools, each pett producer could function as a separate unit of production. But the introduction of ratt necessitated a minimum of five workers - two to spin, one to rotate the wheel and another two to prepare the fibre. As coir making was predominantly a female occupation, it was only rarely that the entire labour requirement could be met from the household itself. Thus even the smallest unit in ratt spinning would require at least marginal use of hired workers. The incidence of hired workers would increase with the size of the unit. A field survey conducted by us in Kadakkavoor village in 1978 revealed that even in one ratt owning units 47 per cent of the workers were hired workers.[36] In 2-3 ratt size units the share of hired workers rose to 86 per cent. In the higher size categories virtually the entire workforce was of hired workers. The household members were engaged only in managerial or supervisory roles. Therefore the ratt size distribution of spinning units would be an important indicator of the extent of differentiation among the producers and the emergence of capitalist enterprises amongst them.

Size Distribution of the Spinning Units

Unlike in the case of handspinning sector, the records regarding production relations in the ratt spun sector are scarce. Therefore we are constrained to start our analysis with the size distribution of the spinning units in 1955. The data had not been tabulated according to yarn variety strata. We have reclassified the data to confirm to broad variety strata on the basis of predominant yarn produced in each taluk. (See Table 3).

On the whole, 70 per cent of the spinning establishments were predominantly self employed units owning only one ratt. But at the other end of the spectrum we have also around 300 relatively large capitalist enterprises employing 6 or more ratts. While around 25 per cent of the owners in the spinning establishments were landless, a small section were landholders owning more than 5 acres of land.[37] Around 45 per cent of the spinners were self employed workers.[38] (See Table 3 Col.10) We do not have a similar count of the defibreing workers. But available evidence shows that the self employed prefer spinning to defibreing which is a more ardrous job. Therefore on a rough estimate the share of the self employed in the ratt spinning was likely to be around 35-40 per cent.

Another important feature that emerges from table 3 is the prevelance of significant inte regional and variety differences in the industrial structure. The sharpest contrast is between the Anjengo and the Vycome strata. While only 33 per cent of the spinning establishments in the Anjengo stratum were one ratt units more than 95 per cent of Vycome stratum consisted of such units. These petty establishments accounted for only 12 per cent of the ratts in the former while they accounted for as much as 90 per cent of the ratts in the latter. The large scale establishments were totally absent in the Vycome stratum. On the other hand, such units owning 6 or more ratts constituted 6 per cent of the establishments and around 25 per cent of the ratts in the Anjengo stratum. In many of the villages in the Anjengo stratum the small production units were insignificant. For example, in 1965, in Veiloor and Pallipuram, 50 per cent of the

units were the large scale establishments with 6 or more ratts accounting for 73 per cent of the total ratts and 70 per cent of the production.[39] These differences in the size distribution of establishments was also reflected in the incidence of wage employment. More than 75 per cent of the spinners in the Anjengo region were hired workers. The hired workers constituted only 5 per cent of the spinners in the Vycome region.

Table 3
Sizewise Distribution of Spinning Units by number of Ratts 1955

Taluk/District	Variety	1 Ratt	2 Ratt	3-5 Ratt	6-10 Ratt	10 + Ratt	Total	Willowing machines	Percentage of self employed among spinners
1	2	3	4	5	6	7	8	9	10
Trivandrum	Anjengo	1019 (33.1)	991 (32.2)	884 (28.7)	164 (5.3)	20 (0.6)	3078 (100.0)	2998	23.6
Quilon	Mangadan/ Ashtamudy	3038 (60.6)	1265 (25.2)	666 (13.3)	40 (0.8)	2 (0.0)	5011 (100.0)	2127	34.2
Karthikapally (Alleppy)	Aratory	2135 (78.4)	463 (17.0)	115 (4.6)	9 (0.3)	-	2723 (100.0)	298	62.1
Rest of Alleppy Dt.	Vycome	2303 (93.9)	103 (4.2)	42 (1.7)	4 (0.2)	-	2452 (100.0)	139	88.8
Kottayam	Vycome	2736 (98.8)	20 (0.7)	12 (0.4)	2 (0.1)	-	2770 (100.0)	-	96.8
Cochin-Kanayanoor (Ernakulam Dt.)	Vycome/ Parur	1287 (83.4)	191 (12.6)	55 (3.6)	7 (0.5)	-	1520 (100.0)	76	48.4
Rest of Ernakulam Dist.	Parur	372 (59.8)	178 (28.6)	61 (9.8)	10 (1.6)	1 (0.2)	622 (100.0)	19	21.7
Trichur	Parur	235 (57.4)	133 (32.4)	36 (8.8)	6 (1.5)	-	410 (100.0)		13.8
Ponnani	Rope	132 (64.3)	33 (16.1)	21 (10.2)	10 (4.9)	9 (4.3)	205 (100.0)	28	23.9
Rest of Malabar	--	41 (44.3)	27 (29.3)	17 (18.5)	7 (7.6)	-	92 (100.0)	8	6.3
Total		13278 (70.4)	3404 (18.0)	1910 (10.1)	259 (1.4)	32 (0.2)	18883 (100.0)		45.9

[Source: Coir Board, Report on the Census of Coir Spindles, Ernakulam, 1957.

The production of Mang lan and Parur yarns seems to have been more organised than the Vycome and Aratory yarns. Only around 60 per cent of the units in these strata were single ratt units. There was also a sprinkling of the large scale spinning establishments.

One may try to speculate on the possible reasons for the marked inter regional differences in the industrial structure. One important factor seems to be the demand conditions of the yarn. For example, in contrast with Vycome yarn, Anjengo yarn enjoyed more stable demand conditions, better price and wider profit margins. It is also observed that the larger units undertook the production of superior qualities that fetched better prices. Another important factor was the availability of the husks in the region and the nature of the husk market. One would have also to consider the historical evolution of the industry in each region, partcularly, the nature of entrepreneurship. In Ponnani where ratt spinning was a late entry, the spinning was organised by the handspun yarn merchants. Rope yarn also had a steady domestic demand. This might account for the presence of large scale establishments in this small pocket of ratt spinning in the Malappuram district. However, the fact is that the present state of information do not permit us to formulate any firm explanatory hypothesis for the structural variations.

Economies of Scale

We have noted that the coexistence of small and large scale units, with regional variations in relative proportions, was the

salient feature of the industry. Therefore it becomes important to compare the marketing and production conditions of the various size class of units. Unfortunately little of the mass of data generated through surveys have been tabulated in any manner that would shed light on this important consideration. Therefore we have to be satisfied with the results of the small sample survey the we conducted in Kadakkavoor village in the Anjengo stratum in 1978.

The coir spinning units were dependent on the merchants for the raw materials. The production of husks in their own house plots provided only an insignificant proportion of the requirements. Their own retted husks provided only 14 per cent of the annual requirements. (See Table 4) This dependence of the spinning units on retted husk merchants and the manipulations of the merchants made their existence very precarious.

Table 4
Percentage Distribution of Raw materials by Source, 1962

Source	Raw husk	Ratted Husk	Fibre
1	2	3	4
Own Production	8.0	14.1	88.5
Other Coconut farmers	53.7	0.0	0.0
Traders	38.2	74.7	11.5
Co-operatives	0.1	11.2	0.0
	100.0	100.0	100.0

Source: Bureau of Economic Studies, Survey of Coir Households in Kerala, Govt. of Kerala, Trivandrum 1962

However, the larger establishments were able to rett a greater share of the husk requirements in their own pits. Units with more than 6 ratts retted nearly 80 per cent of their

requirements in their own ; ts. Not on y were they less dependent on the vagaries of the retted husk market but we also found that some of them were also dealers in retted husk. 14 per cent of the husk purchased was resold. (See Table 5) They also consumed coir fibre bought from fibre processing centres in Malabar.

The larger establishments were also able to bypass the various middlemen in the yarn market and sell directly to the wholesalers in the port towns. More than 80 per cent of the yarn produced by the larger establishments owning more than 4 ratts were sold directly in the Alleppy market. (See Table 6) On the other hand the smaller domestic units sold their yarn to the village middlemen daily at retail purchase prices. One of the large scale establishment owners was also found to be a village middleman himself.

Table 5
The Percentage Distribution of the Purchase of Raw Materials by Ratt Spinning Households according to Ratt Size Class in 1978

Ratt size class	No.of units	Raw husk (own farm)	Raw husk (Purchase)	Retted husk (purchase)	Total husk (actual no. in '000 given in brackets)	Fibre(qtls) (purchase)	Percentage of Resold
1	2	3	4	5	6	7	8
1	8	1.3	21.5	77.2	100.0 (223)	-	-
2-3	9	1.4	58.7	39.9	100.0 (515)	-	-
4-5	7	1.9	60.8	37.3	100.0 (1228)	6	13.8 (170)
6+	11	1.0	77.6	21.4	100.0 (4162)	13.5	14.4 (600)

[Source: Sample Survey of Coir Establishments in Kadakkavoor Village 1978]

Table 6
Distribution of the Sale of Yarn by Market Channels

Ratt size class	Sale in the village	Sale at the Alleppy market	Total sales (actually quantity in qtls given in brackets)
1	2	3	4
1	86.0	14.0	100.0 (1785)
2 - 3	85.8	14.2	100.0 (353)
4 - 5	20.7	79.3	100.0 (657)
6 +	8.4	91.6	100.0 (2704)

(Source: Same as for Table 5)

It was found that the larger establishments were also better equipped and used superior techniques for preparing the coir fibre (See Table 7). Fixed investment of the one ratt owners is remarkably low. A set of ratt and ancillary implements, like wooden mallets, required an investment of Rs.130 only in 1978. Hand willowing machines to clean the fibre are more frequent among the middle size ratt classes while the larger units used motorised cleaning machines. The services of motorised machines are hired out to the smaller units and form an additional source of income for the larger units. It may be noted that 52 and 37 per cent of the 5703 willowing machines in existence in the state in 1955 were in Trivandrum and Quilon Districts respectively. The larger establishments were better equipped with means of self-transport for their products and raw materials.

Table 7
The Distribution of Land and Equipment According to Ratt Size Class

Ratt size class	No.of units	Average land (acres)	Average no.of ratts	Willowing machine	Motorised machines	Country boats	Bullock carts	Average value of equip-ments (Rs)
1	2	3	4	5	6	7	8	9
1	8	0.10	1	1	-	-	-	130.00
2 - 3	9	0.21	2.22	1	-	-	-	277.78
4 - 5	7	1.42	4.57	4	-	1	1	932.14
6+	11	1.51	9.27	3	2	6	-	4902.27

(Source: Same as for Table 5)

Even though the smaller units were relatively less endowed in production facilities and resources, their main handicap lay in marketing. They were dependent on the middlemen in the yarn and husk markets. This dependence also often assumed the form of putting out arrangements particularly in Vycome and Aratory yarn strata. For example it was described that in Shertallai Taluk where "the industry is carried on a cottage industry basis.. people either purchase or get as loan a few hundreds of husks from the dealers who advance husks. The yarn dealer purchases at a price he fixed from those who take the articles for sale and gives wages on a piece rate basis to 'those who actually take husks as loans from him."[40] Again in the Vycome stratum some of the dealers followed "the practice of supplying fibre to the spinners to work on piece work system... in their homes...for being converted to coir yarn of equal weight."[41] The domestic producers in many villages in Cochin Taluk did not even own the ratts. The dealers distributed not only the fibre but also the ratts to the homesteads of the producers![42] Some of the single

ratt owners avoided even marginal hiring in of labour by themselves attending to all the activities connected with defibreing, cleaning and spinning in turn.[43] Thus even the rudimentary division of labour ceased in such units.

Labour Conditions

The earnings of the ratt spinners were 2 to 3 times the earnings of the hand spinners (See Table 8). But it may noted that unlike the case of handspinners, the earnings from the coir industry were the main source of income of the ratt spinning households. The evidence gathered by the Minimum Wages Committee was contrary to the commonly held view "that the wages received by the workers in the coir [ratt spinning] industry (was) in the nature of subsidiary source of income for the maintenance of their families".[44] The incidence of female headed households was found to be suprisingly high and women spinners were often the main earners in terms of contribution to the family income.

There were bewildering differences between various centres in the piece rates. Further the wide variations in work load in terms of length of the hank (the runnage), scorage, level of cleanliness of fibre, softness of husks, etc makes a reliable comparison of the wage rates impossible. What we have attempted in Table 8 is, therefore, to give rough estimates of daily earnings of coir workers for day of 9-10 hours of work in the major activities by variety strata in 1964 on the basis of careful reading of available evidence. The average wage cost of a person day of work has been calculated on the basis wage cost

and person days required for the superior qualities of each variety.

Table 8

The Estimates of Daily Earnings of Coir Workers in Ratt Spinning Sector (1964) (Rs)

Strata	Defibreing	Spinning	Rotating	Average wage cost of person day of work in all activities (Rs)
(1)	(2)	(3)	(4)	(5)
Anjengo	1.00	0.90	0.45	0.90
Mangadan	1.00	1.10	0.60	1.00
Ashtamudy	1.00	0.90	0.45	0.95
Aratory	0.80	0.80	0.45	0.80
Vycome	0.85	0.75	0.40	0.60
Parur	0.80	1.65	0.80	1.25

[Source: K. Mohammed Kunju Coir Yarn: A Study of Different Types of Coir Yarn, Coir Board, 1966]

Certain conclusions may be drawn from the above data: The wage rates are lowest in the Aratory and Vycome strata where the domestic self employed units predominate. Wage earnings in these strata are 20-25 per cent lower than the southern districts. An interesting case is that of Parur yarn where earnings per person day of work is seen to be the highest. So are the earnings of the spinners. A distinguishing feature of the Parur yarn production is that the spinning was done by mostly adult male or boys. Parur yarn being thicker and of harder twist is supposed to more ardorous work forcing the workers to rest their bruised hands after 5-6 days of continuous work. Given the under employment in the industry such lay offs are any way inevitable. In contrast the wage earnings of the defibreing workers in the Parur stratum are relatively lower. Interestingly, the defibreing activity, as in the other strata, is undertaken by women. These women had also been burdened with major part of

cleaning work. Working conditions in the spinning yards and defibreing yards were also a contrast: the former in thatched sheds and the latter in the open near the pit sites themselves. It is also interesting to note in this context that the wage rates in Muppiri yarn, which is another variety with significant presence of men, are also relatively higher.[45]

A rather puzzling finding is that the earnings in Anjengo stratum were lower than the Mangadan stratum. This is in contrast to the contemporary situation as well as descriptions of the labour conditions given in the minimum wages committee reports.[46] If true, the relatively lower wages in the Anjengo stratum when compared to the immediate neighbouring stratum of Mangadan could be considered as an important factor that facilitated the higher incidence of large scale units in the former. But given the limitations of the data we would prefer to be cautious in drawing any strong conclusion.

As the Minimum Wages Committee of 1954 admitted the statistics of earnings or expenditure are "too vague and inperfect for correctly judging the extent of misery that had enveloped the coastal region" and an "insufficient guide to the understanding and measurement of human suffering"[47] No statistics could substitute the heart rending descriptions that this report contains on the conditions of labour particularly in Cochin-Kanyannoor taluks: "For a long time the workers have not been able to obtain a good meal on any day except on festival days... Even that was made possible only by starvation on subsequent days. Usually they take a little `Black Tea' early in

the morning and go to the work spots. In the noon intervals they are able to take a little dry tapioca and ground nut cakes which they supplement by drinking water. After returning late in the night, they prepare `Kanji' and drink the watery portion giving the residue to the men and children in the family. Most of the workers were found to be wearing only rags in the working spots... Girls between 16 to 20 were dwarfed on account of insufficient nourishment. Women between 25 and 30 were so worn out by work and starvation that they looked 40 to 50 years of age. The workers who are spinning coir cannot as a rule work for more than 4 or 5 days a week. Generally they start work at 3 or 4 0'clock in the morning and continue their work upto 5.30 or 6 or even 7 p.m. with a short interval in the afternoon. This craze of early work is the outcome of their desire to earn as much as they could by turning out more work on piece rate system ...At this rate a worker is able to get Re.1 to Re. 1-4-0 per day...[48]

In the rest of the Vycome stratum in Kottayam district or Aratory-Beach strata in Alleppy district, the conditions were not much better than the Cochin area. Working conditions improved as one moved southwards to the Ashtamudy-Mangadan areas. In the Anjengo area the working hours were comparatively shorter and in larger units even working sheds or shady places were provided for the workers. The employers also gave advances to workers to ensure their continuous employment and also small presents during festivals.

Trades Unions and Industrial Structure

An important feature of the industry that the Minimum Wages Committee of 1954 noticed was that "whenever labour (was) organised under trade unions the conditions of labour (were) comparatively better"[49]. In the whole Cochin area there were no effective labour unions. But in the Quilon - Trivandrum districts, particularly in the latter, the "workers (were) organised and (were) concious of their legitimate rights and claims"[50] The fixation of the minimum wages and widespread struggles of the workers to implement them led to a virtual turmoil in the industry. The employers generally avoided the payment of the minimum wages or increased the work-loads or denied the workers the customary rights which were not specified in the recommendations. It was held that minimum wages could not be paid without significant reduction in the prices of husks. Even coir co-operatives sought exemption from the minimum wages. Widespread lockouts and tension in the industry forced the government to appoint the Coir Advisory Committee to review the situation. The representations received by the Coir Advisory Committee from every centre it visited vividly expressed how the fixation of the minimum wages and the ensuing controversies were instrumental in the rapid spread of unionisation during the mid fifties. What was its impact on the industrial structure?

We are rather handicapped by the absence of data on the industrial structure in answering this question. The ratt census reports of 1962 and 1965 do not provide size wise distribution of ratt spinning units. So we are contrained to satisfy ourselves

with the average number of ratts per unit for the various districts. (See Table 9) We observe that, in all districts except Kottayam, the average number of ratts per establishment declined between 1955 and 1962. We hold that during 1955-62 there was a general trend towards smaller establishments and closure of the larger ones. The Minimum Wages Committee of 1963 noted: "Even in the wheel spinning areas the tendency is to split up larger units of say ten or fifteen spindles into units of one, two or three respectively".[51] Our detailed field enquiries in Trivandrum District confirmed the existence of greater number of larger establishments in the early 'fifties. It was opined in the mid thirties that the optimum size of a coir unit, more common in southern Kerala, was about 40 persons daily - 14 women each for defibreing and spinning, 7 children for rotating the wheel and 3 men for retting and cleaning.[52] So the process of decentralisation of production during 1955-62 period was in fact a continuation of a trend started much earlier. This we hold was closely related to the development of the trade union movement in the spinning sector and the struggles of the workers for better labour conditions.

The initial phase of the trade union movement, however, was not very successful in effecting any dramatic improvement in the labour conditions. The second minimum wages committee that toured the coir districts in 1961 "found very little changes in the working conditions in the industry"[53] since the previous report. It took more than a decade for the wages to reach the subsistence minimum recommended in 1954.[54] But from the mid sixties the state of affairs began to rapidly change.

Table

Trend in the Number of Ratts and Average Ratt Per Unit

Name of the district	1955		1962		1965	
	No.of ratts	Average ratt/unit	No.of ratts	Average ratt/unit	No.of ratts	Average ratt/unit
1	2	3	4	5	6	7
Trivandrum	7650	2.49	9273	2.29	7944	2.77
Quilon	8157	1.67	8399	1.47	8297	1.58
Kottayam	2839	1.12	3445	1.02	4302	1.19
Alleppy	6234	1.24	10256	1.23	9293	1.07
Ernakulam	3054	1.44	3853	1.13	3374	1.15
Trichur	672	1.65	1274	1.61	1246	1.86
Paighat	506	2.47	454	1.55	369	1.53
Kozhikode	204	2.65	472	1.52	336	1.76
Canannore	11	1.57	128	1.25	90	1.51
Total	29327	1.92	37554	1.42	35311	1.47

Source: Coir Board, Report of the Survey of Coir Spindles, Ernakulam, 1957.
Coir Board, Survey Reports on Coir & Industry, Cochin, 1968.

The formation of the United Front Government in 1967 and the active entry of CITU into the coir industry marked a new stage in the struggles in the coir spinning sector.[55] The Minimum Wages Committee of 1972 found that the wages prevalent in 1971 were 10 to 125 per cent above the notified minimum wages.[56] In fact, the new wage rates fixed by the Committee were only a regularisation of the actual gains won by the workers through their own struggles. Thus, the period from mid-sixties proved to be one of rapid wage escalation in the coir spinning sector. (See Table 10). The minimum wages fixed in 1954 had been modified and renotified in 1956 as per the recommendations of the Coir Advisory Committee. The increase in minimum wages between 1956 and 1964 was only 12 to 25 per cent for various items of work. Even these remained largely unimplemented and the actual wages received by the workers remained more or less at same level as in the early 'fifties. However, we find that basic wage rates fixed

in 1972 had increased by 100 per cent above those of 1964. Further, it was notified that the workers were to be entitled to a flat rate DA of Rs. 0.79 per day. This DA was linked to the cost of living index with the provision of 3 paise for every 5 point increase in the index.

Table 10
Minimum Wages in Coir Spinning Sector 1956-1971 (Rs)

Items	1956	1964	1971
1	2	3	4
Counting of raw husks (Per 1000)	0.37	0.46	0.92
Counting of retted husks (")	0.50	0.56	1.12
Putting husks into the pits (")	1.75	2.00	4.00
Taking out husks from the pit (")	1.75	2.00	4.00
Beating the fully retted husks (")	1.12	1.40	2.80
Cleaning with willowing machine (100 husks)	0.44	0.55	1.10
Cleaning manually	0.57	0.70	1.40
Spinning:Anjengo yarn 13-14 score,2807 m runnage) [the workloads for each type of yarn was different]	2.50	3.00	6.00
Hand spinning: Beypore per kg.		0.22	0.44
Quilandy per kg.		0.27	0.54
Thirur Choodi per kg.		0.28	0.55

Source: Notification No.LVI - 13770/55 dt. 19.1.1956
Notification No.52612/1+2/63/HLD dt. 24.9.1964
Notification No.15907/A1/71/CSWD dt. 22.12.1971

Vigorous trade union actions for the first time forced the employers to implement the notified wages especially in Trivandrum and Parur areas. The government attempted to provide the retted husks at fair prices by notifying the ceiling prices for husks in each region. Though orders to this effect had been passed in 1969, the husk merchants had it squashed through legal courts. In the new situation, the trade unions through popular interventions tried to prevent black marketeering and forced the retters to sell the husk at notified prices. Trade union pressure was also instrumental in forcing the government to open

fair price depots to purchase the yarn produced after paying the minimum wages.[57]

Paradoxically it would appear from Table 9 that there occured a reversal of the fragmentation process during this phase of intensification of the trade union struggle. The average ratt per unit in Trivandrum, Quilon and Trichur districts rose significantly between 1962 and 1965. Kottayam district, once again, is the only major exception. Was there really such a tendency in operation during the mid sixties, at least in certain pockets? If so what factors were responsible for it?

The New Defibreing Technology and its Impact

Our hypothesis is that the new phenomenon was related to the introduction and spread of the mechanical technology for defibreing. The defibreing machine was a simple mechanical contrivance developed indigeneously and fabricated by enterprising country smiths. Initially it was only a larger and modified version of the willowing machines. The defibreing machine consisted of a fast revolving nail-barbed drum to which husks were fed through two closely pressed rollers. The nails on the drum shreded the husk into fibres. Each mill needed around 20 female workers to peal the husks, 10 male workers to run the machinery and another 20 female workers to remove the pith from the fibre. A mill on an 8 hour shift could defibre around 8000 husks which normally would have needed around 100 manual workers.

In 1955, there existed only 6 such defibreing machines. But from the mid sixties as the trade union militancy gained momentum the number of such mills began to rapidly increase. A technological innovation introduced in the defibreing mills at the end of 'sixties further decreased the labour requirement and resulted in significant cost reduction. The new machine consisted of a long shaft to which a number of beater arms are attached and is enclosed in a metal case of iron rods that acted as the sifter. The shaft is rotated at high speed and husks are fed from one end. The pith fall through the case while the cleaned fibre comes out through the other end. The new technology not only saved the bottleneck of manually sifting the fibre but also saved on the cost of space for sifting and drying the fibre. By 1973 it was estimated that there were around 400 machines in operation in Kerala.[58]

The initial cost reduction effected by the machinery was not very substantial.[59] Moreover the machine extraction also resulted in the deterioration of the quality of the fibre. Its value lay more in reducing the labour requirements in the spinning establishments. The mills were set up by the larger producers themselves or by other rural entrepreneurs who defibred the husks for the spinning establishments on a contract basis. Thus the mills enabled the spinning establishments to do away with defibreing workers who constituted around 30 per cent of their workforce. And this section of the workers with higher incidence of the hired labour and most often working outside the homesteads of the entrepreneurs by the pits or backwater sides were the backbone of the trade union movement. The larger

establishments could now increase their ratts without the danger of ballooning the number of workers.

That this reversal of the trend towards larger establishments is no statistical illusion of averages is proved conclusively by the data we have filtered from the village registers of spindles that we have been able to salvage for the Trivandrum District. (See table 11). It is found that a process of differentiation among the producers had set in: The share of 1 ratt units increased (+7 percentage points); the middle sized (2-5) ratt units declined (-11.05 percentage points) and the large sized units increased (+3.82 per centage parts). The large 6+

Table 11
The Ratt Size Wise Distribution of Spinning Establishments in Trivandrum District

Ratt size class	1955		1965	
	No. of Establishments	No.of Ratts	No.of Establishments	No.of Ratts
1	2	3	4	5	6	7	8	9
1	1019 (33.10)	1019 (13.32)	1018 (40.34)	1018 (14.70)
2	991 (32.19)	1982 (25.90)	610 (24.18)	1220 (17.62)
3 - 5	884 (28.71)	NA	648 (25.68)	2369 (34.21)
6 - 10	164 (5.32)	NA	204 (8.09)	1506 (21.75)
10+	20 (0.64)	NA	43 (1.70)	811 (11.71)
Total	3078(100.00)	7650 (100.0)	2523 (100.0)	6924(100.00)

Source: Report of the Census of Coir Spindles, 1957 and Registers of Coir Spindles 1965, Coir Board.

Note: Total Number of coir establishments and ratts in Trivandrum District in 1965 were 2998 AND 7944 respectively.

class emerged as the economically decisive group in Trivandrum District employing 32 per cent of the ratts in existence. In our field enquiry we came across an employer who in 1970 engaged a total of 100 ratts in his different yards.

The Regulations and the Decline of Large Scale Units

However, such large establishments have today disappeared from the scene. The present trend is once again towards petty production. This trend is related to the ban on defibreing mills. The large scale displacement of workers created widespread rural unrest in the coir belt.[60] It was estimated by the Planning Board that the complete mechanisation of defibreing would displace 81,562 out of the 1,12,000 manual workers engaged in fibre production.[61] Violent mobs in some instances broke up the machinery and threw them into the backwaters. This struggle against defibreing mills reached its zenith in 1972. Cases of starvation death among the unemployed husk beaters were reported. Thousands of workers were arrested, hundreds of volunteers were tortured and one worker was killed in the police firing. In September 1973, government was forced to ban the husk beating machines from operating in the Southern Districts.

The ban on mechanical defibreing meant a massive reemployment of manual workers to extract fibre by the larger establishments. The situation was aggravated by the chaotic conditions in the husk market. A virtual dual pricing system came into being: The retted husks at controlled prices were made available to the co-operative sector, while the private employers had to rely on blackmarkets where the ruling prices were often double the controlled prices. This situation made the profitable running of a private establishment after paying the minimum wages impossible (See Table 12). It is seen that even after paying around 22 per cent less than the statutory minimum wages, the

production costs in the large private establishments in the Anjengo area were higher than the co-operative sector due to the high blackmarket prices of husks. This difference was largely made up through further petty thievings from the wages of the workers. However, these practices were difficult in the larger establishments where the strength of the union was greater. The result has been a significant decline in the number of larger establishments. In 1955, there were around 900 to 1000 establishments employing more than 20 workers. According to the estimate made by IAMR in 1976 excluding the coir co-operatives, the total number of coir establishments with more than 20 workers was only around 550.[62]

Table 12
Cost of Production of Anjengo Yarn in the Co-operative and Private Sector 1976

	CVCS Ltd.No.46 (95 Kg)	CVCS Ltd.No.286 (90 Kg)	CVCS Ltd. (90 Kg)	SA Brothers 161 (90 Kg)	Sali Anjengo Kaniya-puram (90 Kg)
1	2	3	4	5	6
Cost of green husk	72.00 (24.4)	72.00 (25.8)	72.00 (26.7)	126.00 (42.9)	128.00 (44.7)
Retting charges upto the beating yard	34.70 (11.8)	22.00 (7.8)	20.00 (7.4)	20.00 (6.8)	19.50 (6.8)
Labour charges	188.14 (63.8)	185.12 (66.3)	178.15 (65.9)	147.50 (50.3)	139.00 (48.5)
Production cost per quintal	294.84 (100.0)	279.12 (100.0)	270.15 (100.0)	293.50 (100.0)	286.50 (100.0)

Source: Coir Board

Our recent field visits also indicate that the putting out arrangements in the ratt spun yarn sector have become more widespread. Such arrangements are dominant in villages that utilise a substantial quantity of fibre brought from Malabar and,

during the past few years, fror Tamil Nadu for spinning yarn. It is the merchants who undertake the transportation and distribution of fibre to the spinning households. Even some of the reputed export houses have begun to import cheap fibre from Tamil Nadu for supplying their captive spinning units.[63]

The Persistence of the Petty Production Structure

Now we are in a better position to clarify why despite the significant economies of scale enjoyed by the larger units, the process of differentiation among the producers has been thwarted. The available data do not reveal any size related trend in the productivity differences between the establishments. If it all it does, it is that the productivity per worker is lower in the larger establishments. (See Table 13). This was despite the much higher number of working days for the larger units.[64]

Table 13
Output per Worker and per Rupee of Equipment in Various Size Classes of Spinning Establishments

Size class (No. of workers)	Output per worker (Rs)			Output per rupee of equipment (Rs)		
	Trivandrum	Quilon	Alleppy	Trivandrum	Quilon	Alleppy
1	2	3	4	5	6	7
2 - 4	1283.04			16.16	-	-
5 - 9	977.19	1312.32	962.14	22.16	28.95	21.83
10 -14	960.38	1309.25	952.38	18.49	24.13	23.40
15 -19	1001.00	1155.24	977.36	22.62	27.33	18.83
20 -49	1035.87	1182.05	858.83	22.21	31.80	25.88
50+	817.47	630.88	310.99	22.96	22.30	12.79

Source: IAMR, Sectoral Studies-Employment Study of Coir Industry, (Mimeo), New Delhi, 1979.

Note: 1) The data for 2-4 size class for Quilon and Alleppy Districts are excluded because they contain a number of handspinning units also which vitiate the result.

2) It is not clear if the 'equipments' includes means of transport.

It should be noted that with regards to the production conditions proper, the larger establishments were only a duplication of the smaller units on a larger scale. The only difference lay in a limited increase in the division of labour [which, in fact, often proved to be liability because such minor jobs were often carried out by the workers as a part of their main activity in the smaller establishments] and the motorised cleaning machines owned by some of the larger establishments. The profitability of these machines depended upon the service charges received from other producers. Often in slack season, the self-employed workers in the smaller establishments preferred to do the cleaning manually by themselves.

Not only was there no significant increase in the productivity with increase in the size of the establishments, but they also had to incur additional expenditure on labour charges. Workers being better organised in the larger establishments, the larger establishments were often forced to provide better working conditions such as drinking water facilities, shade from sun, urinals etc. The wage rates and other benefits like annual bonus were also higher in the larger establishments. Further, in the larger establishments it was more difficult to undertake petty thievings from the piece rates of the workers like concealed increase in the runnage or scorage of yarn and increase the workload in the husk beating. This tends to widen the real differences in the wage rates (See Table 14).

These diseconomies can be avoided and the marketing economies, that we discussed earlier, can be availed of by

remaining a mere trader. In short, given the marketing and production conditions trade activity has a premium. Capital can remain in the trading sphere leaving production to the petty producers from whom the whole surplus, some times even the necessary labour, can be squeezed out through manipulations in the market. Petty production not only survives but also tends to get accentuated.

Table 14
Nominal and Real Wage rates in Kadakkavoor Village - 1978 (Rs)

Ratt size class	Husk beating (Per '00)		Spinning (per vandy)		Rotating	Bundling	Bonus given to adult workers
	Nominal	Real	Nominal	Real	Nominal		
1	2	3	4	5	6	7	8
1	1.95	1.46	3.87	3.58	2.00	1.75	9.37
2 - 3	2.08	1.48	3.97	3.78	1.97	1.83	14.44
4 - 5	1.95	1.51	4.00	3.81	2.00	2.12	18.57
6 - 9	1.97	1.59	4.00	3.92	2.00	1.86	21.42
10 +	2.06	1.61	4.00	3.79	2.06	1.89	33.75

Source: Same as for Table 16

SECTION IV

THE TRADING CAPITAL

The merchants, who through various direct and indirect means controlled the fate of the self employed and the wage workers in the petty units, have been a recurrent theme of our discussions in the last two sections. We shall now take a closer look at their nature, composition and operations. They are not a homogeneous group or even a single chain of hierarchical interests. Various strata with conflicting as well as complimentary interests can be identified who may be divided into three broad groups: (a) the raw and retted husk dealers (b) the

village and wholesale bazzar dealers of coir yarn and (c) the exporters of coir yarn.

The Husk Merchants

The husk merchants have been the most controversial trading group. Though most of them are men of relatively smaller money resources when compared to the exporters or even wholesale yarn dealers, because of their proximity to the producers, their sharp prctices have drawn greater popular attention and revulsion.

The retted husks market is controlled by a group of large-scale commercial retters. There is no precise information regarding the degree of monopoly in the market. The data we present in Table 15 is an underestimate of the monopolistic power wielded by the large scale retters. The Coir Board Survey Report from which above data is taken itself has admitted that "the retters while furnishing the information were motivated by fear and prejudices" and therefore the data collected was "an underestimation."[65] Further, there are reasons to believe that some of the larger retters like the "one particular retter in Aratory area" who retted "more husks than the entire husks retted by all other retters of (the) area together" were not included as "the necessary information could not be collected".[66]

Table 15
Size Distribution of Retters for Various Coir Strata 1962-63

Strata	Number of retters in percentages				Number of husks retted in percentages			
	Small retters	Medium retters	Large retters	Total	Small retters	Medium retters	Large retters	Total
1	2	3	4	5	6	7	8	9
Anjengo	35.97	46.51	17.52	100	1.27	20.54	78.20	100
Mangadan	51.29	38.32	10.39	100	2.48	29.76	67.76	100
Ashtamudy	18.82	51.47	19.71	100	1.37	34.91	63.70	100
Alapadan	90.30	9.25	0.45	100	25.63	52.73	21.64	100
Aratory	86.41	11.05	2.54	100	9.25	19.77	70.99	100
Vycome	93.32	4.67	2.01	100	21.59	13.28	65.13	100
Parur	29.26	47.44	23.30	100	1.17	17.11	81.72	100
Malabar area	14.72	57.25	28.03	100	0.73	20.73	78.55	100
Muppiri	29.61	50.90	19.49	100	1.33	27.73	70.94	100
Other spindle spinning areas	96.15	3.12	0.73	100	43.84	13.25	42.91	100
Other retting areas	28.47	50.84	20.69	100	1.16	25.79	73.05	100
Total for all areas	63.18	26.56	10.26	100	3.72	22.38	73.90	100

[Source: Coir Board, Survey Reports on Coir Industry, Ernakulam, 1968]

Note:	Range of husk turnover	Average turnover	Number of Retters
Small retters	less than 500	1600	15031
Medium retters	5001 - 50,000	22500	6319
Large retters	more than 50,000	192000	2441
		27000	23791

Despite the limitations of the data it is seen that the large retters numbering 10 per cent controlled nearly 75 per cent of the retted husks. There had been an under estimation of the husks retted in the state at least by around 50 per cent in the census of retters. It is likely that far greater share of the underestimation is accounted for by the large retters than the smaller ones. If one adjusts for the underestimation of husks retted, the control of the large retters would be as high as 90 to 95 per cent of the retted husk market!

The small and medium retters are producers of yarn themselves. They got their supplies of raw husk from the gardens in the locality itself or from the copra merchants in the area. Some of them made purchases from the raw husk dealers also (See Table 4). Some of the medium retters might have been local landowners who prefered to rett their own husks. However, the small and medium retters in the handspinning areas were largely smaller middlemen, who supplied the retted husk to the domestic workers. It is seen that 99.5 per cent of the retters in the Alappadan hand spun stratum were small and medium retters and they controlled nearly 80 per cent of the husks.

The large retters, especially in the Malabar area, were mostly copra merchants. Husks were a byproduct of their coconut business. They defibred the husks in their own yards or through middlemen. Only less than 5 per cent of the retted husks in Malabar were sold to the producers by the merchants.[67] 28 per cent of the retters in Malabar region were large retters who controlled 80 per cent of the husks.

On the other hand, the large retters in Travancore-Cochin region undertook retting business in order to sell the retted husks to the yarn producers. Most of their husk requirements were purchased from the larger coconut landholders in the region or from copra merchants in the midlands. They advanced money to agents who contacted the copra merchants in the hinterlands or wholesale raw husk dealers.

The wholesale raw husk dealers were concentrated in raw husk trading centres situated at transport vantage points like junctions of water ways. The husks were transported to these collection points by primary husk collectors dealing directly with owners of coconut lands or smaller copra merchants in the hinterlands - `a difficult but lucarative business".[68] Most of the primary husk collectors undertook it as a subsidiary occupation. The collection net work had evolved over time and was a highly informal one. But the pivotal role it played in the smooth running of the industry cannot be under estimated. Coconut is a ubiquitous commodity grown by small holders spread across the coastal and mid lands of Kerala. On the other hand, retting and spinning activity is concentrated along backwaters of the coastal taluks. Around 70 per cent of the coir yarn production takes place in the coastal taluks of Trivandrum, Quilon and Alleppy districts. But these taluks account for less than a quarter of the coconut production in the state. Thus large quantity of husks have to be collected and transported to the retting areas from far flung coconut growing hinterlands.

But it may be noted that the intermediaries and dealers in raw husks had relatively very much lower bargaining power than the retters because of the perishable nature of the commodity. Raw husks have to be steeped in water as quickly as possible and dried husk have only fuel value. There was significant vertical integration between the raw husk and retted husk markets, the classic example being copra merchants of Malabar. Further, in most cases, except for the larger raw husk dealers in the major husk collection centres such as Kayamkulam, the raw husk intermediaries were mere agents of the retted husk dealers.

Because of the monopolistic power enjoyed by the large retters whenever coir prices rose, they were able to hike up the prices of retted husks "so that the additional gain from the higher prices (could not) be retained by the producer or be shared by the labourer but (was) immediately transferred to the retted husk dealer".[69] The manipulations of the retted husk dealers were responsible for the ineffectiveness of the 1954 and 1964 minimum wage legislations in the industry. The Coir Advisory Committee, which enquired into the widespread lock outs and industrial unrest following the introduction of the first minimum wage legislation, found that the husk prices had to be regulated if reasonable earnings had to be ensured to the workers. The immediate impact of the introduction of minimum wages was a general fall in husk prices. "But meanwhile during the transitional stage a number of small producers who could not get husks at remunerative prices were obliged to stop business. The resulting unemployment and dislocation of production (leading) to the appointment of (Advisory) Committee to review the situation"[70] aroused expectations of revision of minimum wages. "This led to a recovery of husk prices and competitive buying especially when the prices of coir began to rise"[71] This situation by and large continued till mid-'sixties, when the trade union movement began to gain momentum in the spinning sector and regulation of the husk market became a major issue of industrial policy.

The Regulated Husk Market Regime.

During the years 1973 to 1975 the government of India and Kerala issued nearly a dozen orders and notifications to regulate

the operations of the husk dealers and to make available husks at fair prices to the producers.[2] We shall not go into the chronology of these orders or notifications but only summarise the major regulations that were sought to be implemented through them. We shall also discuss the modification of these regulations during the subsequent years.

The most important measure was the fixation of the ceiling prices for raw and retted husks in the various coir yarn regions in September 1973. The prices so fixed ranged from Rs.40 in southern districts of Trivandrum and Quilon to Rs. 25 in the northern districts of Calicut and Cannanore. A margin of Rs. 20 to Rs. 25 ie. 50 to 80 per cent was allowed for the retted husks. The ceiling prices were to be periodically revised. It was obligatory for every person, dealer or producer not to purchase or sell or offer to sell husk at prices higher than those specified.

Secondly, all the dealers of husk and retters were to take licence under the Coconut Husk Control Order. Every license holder was to file a monthly return of his stock and transactions to the licensing officer.

Thirdly, the movement of coconut husks from one locality to the other was regulated through the issue of permits. The export of fibre and husk to outside the state was banned. This was specifically meant to curb the movement of husks to Kanyakumari and fibre to Salem in Tamil Nadu.

Fourthly, a machinery for the implementation of the regulations was sought to be created through strengthening and modifying the Coir Development Scheme that was being operationalised as a part of the fifth Five Year Plan Programme. According to this scheme the coir producing areas in the state were grouped under 9 projects, each under a project officer. The special officer in charge of the whole scheme was appointed as the Licensing Officer and the project officers as inspectors. The Licensing Officer and his subordinates not below the rank of a District Industries Officer were empowered to enforce the provisions of the Husk Control Order by seeking information, asking for the production of related books or documents and inspecting them, stopping and searching any vehicle or vessel suspected to contravene the provisions of the order, entering and searching any premises and even seizing related articles if there was reason to believe that contravention of the provisions of the order might be committed. Advisory Committees of non officials at state and project levels were also constituted to assist and advise the authorities.

Due to the ubiquitous nature of the commodity and the informal market network of husk collection that was prevelant, numerous problems cropped up during the implementation of the regulations often rendering the latter ineffective.[73] The machinery drawn up for the purpose was totaly inadequate for the task. Even the applications for licensing or monthly returns could not be processed let alone policing the retting or movement of husks. Given the ineffectiveness of the machinery, trade unions often took the initiative to implement the regulations.

But ultimately it only added to the uncertainty and arbitariness in the market. Further, even at a conceptual level the regulations were flawed. There was no attempt to create an alternative machinery for the collection and disposal of husks in the place of the traditional marketing channels that the regulations would have certainly disrupted. There was an element of adhocism in the way orders were issued, reissued and then modified adding to the confusion in the market.

The regulations could not have been introduced at a less opportune time than in 1973. It was just two months before the first Husk Control Order in September 1973 the husk defibreing mills were banned in the southern districts. The ban had given rise to temporary fibre shortage in the industry due to the dislocation of the fibre production and scarcity of retted husks of quality suitable for manual defibreing. In this background the imposition of too many controls without effective implementation and the frequent revisions in the regulations contributed to an atmosphere of uncertainty, fear and inaction. Supply of husks to the retting fields declined. The shortage of fibre accentuated and there was marked decline in the production adversely affecting even the exports. The government responded with new restrictions on the movement of fibre to outside the state. However, the situation continued to deteriorate further "to a state of withdrawal on the part of law abiding retters on the one hand and a flourishing black market in husks fostered by such elements who were prepared to veer round the law and make large profits in clandestine operations."[74] The production of yarn fell considerably, prices soared and even the weaving sector was adversely affected.

In order to diffuse the crisis, the government relaxed the regulatory measures. The husk movement permits were issued liberally to private retters so long as they supplied a part of it to the cooperative sector at the notified prices. The rest of the husks were permitted to be sold in the open market without any restriction. Some of the regulations such as husk and fibre export control order notified under Defence of India Rules during the period of Internal Emergency were allowed to lapse. There was no attempt to strengthen the implementation machinery or draw up an alternative marketing organisation. The defacto dual price system enabled the cooperatives to procure a limited amount of husk at fair prices but left the unorganised private sector to the mercy of speculators, particularly in the southern three districts of the state. As can be seen from table 16 the differential between the two prices that was below 50 per cent in 1977 has tended to widen over time.

Table 16
Notified Prices and Open Market Prices of Raw Husks
(Rs for 1000 husks)

	January 1977		January 1978		January 1990	
	Notified	Open	Notified	Open	Notified	Open
1	2	3	4	5	6	7
Chirayinkil	68	98	72	148	155	375
Quilon	68	105	68	150	152	375
Alleppy	62	78	65	108	125	NA
Vaikom	60	60	60	60	125	225
N.Parur	42	60	52	NA	125	155
Trichur	42	60	53	NA	125	155
Ponnani	52	90	55	85	115	145
Calicut	52	90	55	85	115	200
Cannanore	45	108	45	108	110	140

[Source: Report of the High Level Study Team on Coir Industry, (Mimeo), Planning Commission, New Delhi, 1978, and information supplied by Coir Workers Centre]

After examining the situat on the High L vel Study Team of the Planning Commission recommended that "the movement control of husk in Kerala must be removed so that the market forces move husk to the areas of demand more quickly and efficiently".[75] They were in favour of a levy system only if a dual price policy in favour of the cooperatives was legaly sustainable. In effect they were arguing for the formalisation of the existing defacto arrangements and for removing the arbitariness involved in the project officers fixing the quota for the cooperatives from the permit holders. . After prolonged hesitation finally in 1980 notification was issued introducing a single point levy system to collect 30 per cent of the husk from the retters.[76]

Even the new levy system failed to improve the husk procurement. After an initial year of success in 1985-86 when nearly 22 million husk were procured, the husk procurement dramaticaly declined to 13 million husks. The new regulation failed to reckon with an important structural change that had occurred in the husk market. The monopolistic commercial retters had by and large withdrawn from buisness after the introduction of the regulations. The husk retting, particularly in the southern districts, was increasingly being undertaken by the yarn producers themselves. The single point levy from the retters hastened the withdrawal of commercial retters, often, into the raw husk market which was being deregulated. In practice it was difficult to collect the levy from the numerous small retters and levy collection was physically opposed by the latter.

Therefore, in April 1988 yet another modification was made. According to the new three point levy system copra merchants, raw husk dealers and husk retters are required to sell not less than 30 per cent of the husk handled by them to the agencies authorised by the government at the notified prices.[77] Uniform levy rate is fixed at all the three points in order to prevent the evasion of the levy obligations. If it is proved that levy has already been paid at one point the subsequent transactions on the same husk are exempted from the levy.

It is too early to evaluate the three point levy system. Even though it seems to have resulted in significant improvement of husk procurement, the supply has continued to be much lower than the husk requirement of the cooperative system. The differential between notified and open market prices have tended to widen. Even though husk movement controls are no more legally operative, some sort of movement regulation is inevitable if the levy obligations are to be enforced. Another problem that has been becoming sharply evident in recent times is the increasing demand for husk as a fuel material due to escalation of firewood prices.[78] The notified prices are lower than the price of dry husk for fuel. The result is a significant diversion of husks either as fuel or to brown fibre industry, particularly in the Northern Kerala where the differential between notified and open market prices is relatively lower.

Meanwhile the large scale commercial retters have slowly disappeared from the business scene. The speculative elements have shifted to the raw husk market. It has become an arena for

small time cast operators who undertake to transport the husks to retting sites completely avoiding the levy or only paying a small proportion of the legal obligation.

The Coir Yarn Exporters

Significant changes have occurred in the functioning of the coir yarn market also. But these changes have been far less dramatic than those in the husk market.

Before independence the yarn market was controlled by half a dozen exporters of coir yarn who were also important manufacturers of coir products. These European trading firms who owned the baling presses and had better market contacts in Europe monopolised the exports of coir yarn. But for an Indian firm all the other five leading exporters were European firms. Till the Depression these firms consigned their exports to London from where the coir yarn was exported to the other European countries. From the 'thirties the direct exports to other European countries began to assume importance.

The Indian entry into the yarn export market began only in the post independence period. Some of them were able to acquire second hand cotton baling presses and began to offer competition to the Europeans. The established exporters through their trade association, Coir Yarn Balers Association, attempted to keep out the competitors. The Association acted as a cartel of leading yarn exporters with quotas fixed for each member, price fixing arrangements and pool contributions and penalties for exceeding

the quota.[79] The competition from the Indians increased significantly with the introduction of standardised wages in baling and rehanking sector in 1959. The Indian shippers by and large avoided the payment of standardised rates. The competition between the two sections resulted in the decentralisation of the whole rehanking activity. "They engaged their agents to put up small factories at different places and entertain new workmen quite ignorant of the standardised wage rates... As these workmen (would) usually be unorganised, even if they (knew) the wages, it (might) not be possible for them to raise a dispute for standardised wage for fear of unemployment.[80] The retrenchments from the larger European establishments had to be spread over longer period of time and meanwhile the Indian shippers made steady headway into the markets underquoting the established shippers.

Since the Europeans shippers could no longer deny baling services on hire to the Indians, they hiked up the baling charges for outsiders from Rs.10 a bale to Rs.20.[81] They tried hard to pressurise the Coir Board to introduce a quota system for coir yarn exports as measure to curb the practice of price cutting. The smaller exporters organised under Kerala Coir Exporters were successful in stalling any favourable move from the Coir Board to the proposals of larger shippers.[82] Meanwhile the negotiations for renewal of the cartel arrangements among the leading exporters broke down.[83] Some of them were too anxious to increase their turn over to avail of tax credit facility extended to coir exports and were sceptical of the success of cartel arrangement to ward off the Indian competition. This situation

resulted in considerable decline in profits of the established shippers and many of them slowly withdrew from business.[84] To minimise the undesirable price competition, Coir Board introduced floor prices and a pre-shipment inspection for coir yarn exports from 1967.

The above process resulted in a decline in the concentration in the coir yarn export market. However, in recent times the market share of some of the Indian shippers have considerably increased. At the same time, it should be noted that the share of exports in the total production of coir yarn probably declined in the 'seventies. The home market is becoming more important. The concentration of trade in the Indian market is significantly less than in the export market.

The Coir Yarn Dealers

As a rule the coir yarn exporters did not deal directly with the producers or small dealers in the countryside. The efforts made at the end of the 'twenties to bypass the established net work of middlemen (probably prompted by the decline in profits due to the Depression) was "found unremunerative" and given up.[85] The petty middlemen and their traditional methods of exploitation were found to be cheaper means of procurement even after their markups and manipulations.

The lowest in this chain of intermediaries was the village petty dealers. They carried on their coir business along with their other occupations such as provision stores, farming etc.[86]

Average business turnover of the village petty dealers was found to be around Rs.17,000 and their capital investment around Rs.2000 in 1960.[87] Except in the Beach Yarn area at Alleppy, where the petty dealers often supplied the yarn to the coir weavers directly, the village petty dealers disposed of their yarn to larger dealers in the region itself. It was seen that 60 per cent of the petty dealers disposed of their yarn within a radius of one mile and another 24 per cent within the radius of 1-4 miles.[88]

Many of the village dealers were mere agents of the larger dealers who also collected the yarn directly from the larger producers and transported them to the warehouses of port bazzar dealers. The common practice of disposal was to take an advance at the time of delivery of yarn at a rate of interest ranging from 10 to 15 per cent. The final settlement was made only after the bazzar dealer dried, graded and made the sale of yarn to the exporter. Usually a fixed commission and warehousing charges were deducted from the final payment made to the village dealers. Some of the bazzar dealers, especially when in need of specific grades of yarn or in times of scarce supply situation, also sent out their agents to tour the districts and purchase yarn from the mofussil areas.[89] The larger producers directly dealt with the bazzar dealers. The bazzar dealers who stocked coir yarn on commission agency basis or through direct purchases conducted considerable speculative business. The tendency among the shippers since the Depression was to make instantaneous purchases from the bazzar rather than place forward orders as in the past. The bazzar dealers undertook speculative forward purchases and

provided hedging facilities to the market.[90] The profits of the bazzar dealers lay in correctly foreseeing the market fluctuations and procuring the yarn from the districts at the lowest prices. The coir yarn prices reveal very significant market fluctuations which tended to increase markedly during the 'fifties and the 'sixties.[91]

The changes in export demand have been the primary cause for the fluctuations in the yarn price. But one factor that has tended to increase the fluctuations in price has been the speculative trends in the markets. According to the Minimum Wages Committee: "The speculative trends in the market serve to magnify the effects of a small change in the price of coir yarn in foreign markets... Often, even when foreign market conditions continue without change the fact that a leading firm at Alleppy or Cochin book more orders or declined to give orders, or raises or lowers its buying rates stimulates or depresses as the case may be the local markets rather disproportionately to the volume of transactions involved. To a certain extent, it is therefore possible for the leading firms by clever manipulation to depress the prices and buy coir yarn at more favourable rates. A rise in price in the foreign markets causes reverse trend which cannot so easily be controlled by these firms. Their ability to control the situation depends on the volume of stocks they have piled up when the prices are low".[92]

Thus even the foreign firms which "usually (did) not make speculative purchases or sales" increased their over bought limits if the markets appeared very favourable. Usually they

functioned within comfortable overbought limits which provided them with a working stock. However, it was found from experience that none of the dealers could ever be fully relied upon making operations from an overbought position very risky.[93]

The coir yarn exporters purchased their yarn requirements from the bazzar dealers either through brokers or their purchase clerks. Usually the purchases were made `on terms' with an agreed proportion of various grades of yarn in each lot. In such cases only advances were paid on delivery. Final settlement was made after drying and grading the yarn. In times of yarn scarcity, the exporters were forced to buy in "lot weights" on full payment at the time of delivery. In a buying pressure situation the exporters often found it difficult to control the wholesale yarn market. They often had to undertake joint market operations to keep the price low.[94] The wholesale bazzar dealers were vociferous about the purchase practices, grading and manipulations of the exporters. On the other hand, the exporters held the middlemen responsible for the plight of the small producers and the workers. Further, they often found that they could not attract larger supply by offering higher prices for the increases went into the pockets of middlemen "without leading to increased wages of spinners, which (were) necessary for an increase in production"[95] It may be interesting to note that the coir yarn exporters strongly recommended co-operativisation of the coir processing sector in order to scuttle the middle men who were too often slipping out of their hold given the situation of increased competition among the exporters. The coir co-operatives in Malabar had proved to be reliable suppliers of coir

yarn to the exporters and appeared to them to be the model for reorganising the industry.[96]

The trade unions also argued for co-operativisation of the spinning sector. However, they claimed that their "perspective was different from the proposals of individuals who view the re-organisation of the spinning on co-operative basis as a reliable medium for their exploitation"[97] The coir co-operatives were to be truly autonomous production organisations of small producers and workers. They were to be a part of a larger scheme of reorganisation of the industry, the main plank of which was the nationalisation of exports and large scale manufacture.

SECTION V

THE CO-OPERATIVE REORGANISATION OF THE INDUSTRY

We have discussed how the middlemen in husk and yarn markets were able to expropriate any advantage in coir yarn prices forcing the earnings of the workers into a permanent state of depression below subsistence minimum. We also saw how the co-operative reorganisation of the spinning was advocated by varied interests from the exporters to trade unions (each for their own reasons) as the solution to the miserable living conditions of the small producers and workers.

As early as the late 'twenties a few coir co-operatives had come up in Malabar with the active encouragement from the department of co-operatives, Government of Madras. The Government of Cochin also sponsored a number of co-operatives in

the 'forties. However, these early co-operative efforts remained isolated experiments and did not have any significant impact on the industrial structure. But a new phase in cooperatisation in the industry opened with formation of United Travancore - Cochin Government after the independence.

Travancore-Cochin Cooperative Scheme

In 1950, the Government of Travancore-Cochin launched a major scheme to reorganise the coir yarn spinning on co-operative basis. The procurement of husks, the production of coir yarn and the marketing of yarn were all sought to be covered by a net work of husk societies, coir yarn primary societies and coir central marketing societies. The aim of the strategy was "to standardise the quality of coir produce, to discourage adulteration prevelant, to attract foreign markets for coir products, to eliminate the middlemen engaged in the various stages of the industry swallowing up the profits and to ensure reasonable wages and regular work for the labour class."[98] In terms of the number of the co-operatives, the workers co-operativised and the financial targets achieved, the coir co-operatives made rapid advance (See Table 17).

Table 17
The Progress of Coir Co-operatives in Kerala 1950-51 to 1969-70

1	2	3	4	5
	1950-51	1954-55	1959-60	1969-70
No. of husk societies	1	25	31	30
No. of coir yarn primary societies	23	119	276	461
No. of central coir marketing societies	1	2	3	4
No. of coir rope, mat and matting and fibre socieities	-	-	4	25
Total number of members	3896	24459	94725	N.A.
Members in the coir yarn primary socieities	3886	23188	89784	N.A.
Total cumulative plan expenditure (Rs.lakhs)	0.39	20.34	118.65	374.3
Total paid up capital of societies(Rs.lakhs)	0.55	3.57	12.26	N.A.
Total working capital of societies(Rs.lakhs)	0.57	19.71	112.86	N.A.

(Source: Review of the Working of the Coir Co-operatives in Kerala (Mimeo), No.CB (Co-op) 1860/61, Coir Board Meeting on 20.12.1961 and Kerala Economic Review, 1970).

"The urge for popularising the movement was so great" that the government had to sanction organisation of additional coir co-operatives over the targets fixed for the First Five Year Plan.[99] Thus in the First Plan period, while 99.57 per cent of the financial target was achieved, the physical achievements exceeded the targets fixed. However, the review of the working of the coir co-operatives at the end of the decade revealed the hollowness of the achievements. Not only had they failed to remove the middlemen" and "nsure reasonable wages" to the workers but they had also emerged as an important barrier to the implementation of the minimum wage legislations in the industry.

According to an official note prepared by Joint Director of Industries and Commerce (Coir), the husk societies were but "cartels of merchants in the locality who joined together to exploit the government finances...If in the private sector the individual merchants were inclined to lower the prices of husks, this has always been resisted by this group of merchants doing

business in the guise of co-operatives. ...These societies (were) therefore more a liability on the coir primaries than help".[100] Most of the them were "purely... merchants and capitalist concern(s). Their aim apparently was to safeguard their commercial interests by getting under a common organisation, and thereby avoiding mutual competition in the field..."[101]

The state of affairs of the coir yarn primaries was no better. Coir Enquiry Committee of Government of India found that their "membership was not limited to workers or small producers alone; but there were quite a number of members following other occupations totally unconnected with coir yarn production or any process accessory to it. It was also noticed that the dealers of yarn and retted husks have been enrolled as members of societies."[102] This statement is substantiated by table 18 tabulated from the evidence collected by the Committee. A survey by the Bureau of Economic Studies, Kerala Government, also revealed that around 13 per cent of the members had "no relation to coir industry' and another 10 per cent were coir yarn dealers and employers".[103] Though a minority in terms of absolute numbers they were the decisive force in running of the co-operatives as is clear from the composition of the managing committees.

The wage workers, hand spinners and self employed ratt owners constituted a mere 13 per cent of the managing committee membership. More than 20 per cent were employers having two or more ratts. It was seen that one of the members in the managing

committee had 24 ratts, another owned 14 ratts and yet another 5 owned 5 to 10 ratts.[104] The poor representation of workers and small producers was not accidental. It was suspected that the societies followed a "deliberate policy of discountenancing the entry of workers in large numbers."[105] The result was that the coir yarn primary societies were controlled by larger producers who conducted production with the help of hired workers and assisted by liberal co-operative finances. Most of the coir yarn societies vigorously argued for exemption from minimum wage legislation.

Table 18
The Classification of Members of 26 Coir Primary Societies and their Managing Committees in 1958

	Primary Members	Percentage in the total	Managing Committee members	Percentage in the total
	1	2	3	4
Workers	3931	46.2	12	6.4
Hand spun yarn producers	204	2.4	6	3.2
Producers with 1 ratt	789	9.3	6	3.2
Producers with 2 ratts or more	927	10.9	40	21.4
Non-classified producers	111	1.3	-	-
Merchants and dealers	325	3.8	38	20.3
Coconut growers	389	4.6	27	14.4
Other workers, trade unionists and other professionals	NA	NA	43	23.0
Others	1836	21.5	15	8.0
	8512	100.0	187	100.0

(Source: G. Parameswaran Pillai, Report of the Coir Enquiry Committee, Delhi, 1958).

Severe indictment of a number of enquiry committees and pressure from trade unions forced the government to initiate a series of measures to reorganise the cooperatives. The most important of the reforms was the abolition of husk societies of dealers and growers that were working at cross purpose with the needs of yarn primary societies. Instead, husk retting unions with primary societies as constituents were formed. The dealers and capitalist enterpreneurs were to be excluded from the membership of the primary societies. Report of the Special Officer of Enquiry into Coir Cooperatives has documented in detail the widespread corruption in retting of husk and utilisation of funds, anarchy in business management, failure to keep proper accounts and registers and so on in almost every society that he enquired into. The cooperative administration both at the government as well as at the society level were to be revamped in order to increase the efficiency of management and end the rampant corruption. The central marketing societies were to be strengthened. These formed the basis of 3rd Five Year Plan proposals for the coir industry.[106]

The Production Management within the Co-operatives.

There was no uniform policy for the management of production within the co-operatives. This continued to be the situation even after the reforms in the early 1960s. We group them into four broad patterns namely, a) the commission agency system b) wage advance system c) out right sale-purchase system and d) direct production system. Except for the last mentioned household continued to be unit production even within the cooperatives.

The commission agency system was the predominant mode of co-operative organisation of production during the 'fifties. The cooperative sold the retted husks to the member producers who processed them in their household units. As we have already noted many of the members were capitalist entrepreneurs employing large number of hired workers. The yarn produced was sold back to the cooperative for an advance at fixed rate. The balance was paid to the producer after deducting a commission once the yarn was disposed off by the society. Only the well to do producers could take full advantages of co-operative marketing facilities. As observed by a Reserve Bank of India team, "..... The well to do producers and the middlemen obtained all the advantages of supply of husks from societies including concessional price on occasions. Further sometimes the members brought yarn for sale to the society according to convenience, sometimes in large quantities sometimes small, including yarn which they purchased from the other smaller producers and obtained the advantages of an advance from the society on the security of the yarn at relatively low rate of interest ranging from 6 to 8 per cent ... In most of the societies transactions were confined to a small number of members who were obviously large producers, middlemen or their relatives and associates. Thus in several societies all the advantages of large concessional fund given by government went to a small group of influential middlemen and producers who were enabled to do business with the help of government funds and release their own resources for other purposes."[107] The coir primaries, in their turn, observed no committment to sell to the central marketing societies. Whenever it was found more profitable private dealers were preferred. The central society

was more an insurance in times of market glut. By 1958-59 only 54 per cent of the yarn production of the primary societies were being routed through the central societies.[108]

With the reforms of the 'sixties the self employed producers who used only marginal hired labour or the erstwhile wage workers rose to prominence in the societies. In the changed circumstances an alternative system which was initially to be successfully experimented in North Parur area became popular. Under it the self employed workers were paid wage advances along with the supply of husk on credit. After the sale of the yarn the sale proceeds were distributed among the workers after deducting the price of husk and incidental expenses of the society. It was found that the genuine co-operatives were able to give wages even higher than the minimum wages when the market prices of coir yarn rose. (See Table 19).

Table 19

Statement Showing the Wages Received by Coir Workers in 2 Co-operatives in Trivandrum District 1959

Items	Unit	Wage advance given	Balance given after the sale	Total notional wages	Wages given by local producers	Minimum wages fixed	Col.5 as percentage of Col.6	Col.5 as percentage of Col.7
1	2	3	4	5	6	7	8	9
Taking of husks from the pit	1000 husks	1.50	0.65	2.15	NA	1.75	-	123
Counting of husks	"	0.44	0.23	0.67	NA	0.50	-	134
Beating of husks	100 husks	1.02	0.63	1.65	1.03	1.12	160	147
Cleaning of fibre	1 .andy	0.53	0.27	0.80	0.50	0.50	160	160
Rotating the wheel	"	0.47	0.24	0.71	0.47	0.50	151	142
Spinning (per spinner)	"	0.78	0.53	1.31	0.88	1.00	149	131
Bundling	1 bundle	0.44	0.27	0.71	0.47	NA	151	-

(Source: Industries Department, Govt. of Kerala, Review of the Working of Coir Co-operatives in Kerala - A Note placed before the Coir Board and the Development Committee Trivandrum, 1959).

Generally under the wage advance system also the household continued to be the unit of production. But in Trivandrum where there was already the tradition of large scale private spinning yards, the "entire production processes (were) being done at one and the same place under the direct supervision of the office bearers of the society.[109]. The new arrangement also helped to solve the problem of wastage or theft of fibre and variations in the quality of yarn.

The organisation of production within Trivandrum co-operatives was only a step behind the direct wage production system. Even though the workers in wage advance system could receive wages higher than the minimum wages, their wages fluctuated considerably according to changes in husk and yarn prices and sunk at times significantly below the notified wages. The direct wage production system guaranteed the minimum wages to the workers. In fact in 1959, 'direct production' was officially sponsored on an experimental basis. However, the co-operative department, in the end, "ruled out..."the idea of societies starting production by employee members to work on minimum wages" [110] as it often ended in societies incurring heavy losses. The scheme was also opposed in that it transformed" the societies as employers and the members as workers and perpetuating the distinction of employer and employee, the removal of which is the ultimate aim of cooperation."[11]

Similarly the outright purchase of yarn at market or fixed rate from the members by the societies was also not encouraged as it placed the risk of yarn price fluctuations on the coir cooperatives. But it was realised that given the extremely small daily output of the handspinners and their poverty, a mere advance on the yarn delivered would not suffice in the hand-spun yarn strata.. Therefore in such areas the system of out right purchase of yarn was adopted.

A survey of coir yarn primaries in 1959 found that only 31 per cent of the cooperatives followed the wage advance system and it accounted for nearly a quarter of the coir yarn production.[112]

The rest of the cooperatives were following the commercial modes of commission agency or outright purchase and sale. Around 10 per cent of the societies were found to be following a mix of the arrangements. A society for example could operate a few ratts under direct production system, give wage advances for its self employed producer members and be a commission agent to the larger producers.

The Coir Reorganisation Scheme

Even though the cooperatives sought to replace the middlemen at the village level they did not guarantee the workers the minimum wages. Such a position became increasingly untenable as the trade union movement gained momentum from the mid-sixties. But the payment of minimum wages in the absence of an efficient machinery to ensure supply of retted husks at fair prices seriously eroded the financial viability of many of the cooperatives. Further, many of the undesirable traits of the 'fifties in the cooperative administration had also persisted. Consequently, despite the increase in the numbers, the growth of cooperative production came to a stanstill. In 1972 of the total 561 cooperatives in the state 206 had ceased to function and were on the verge of liquidation.[113]

Given the above situation, reorganisation of the industry under a comprehensive scheme covering all the sectors became the main slogan of the workers movement. These struggles were responsible for the Kerala government's scheme to reorganise the industry, drawn up in 1972. After prolonged discussions with the

central planning authorities, the scheme was partially approved with respect to a programme for revitalising the existing coir co-operatives as a part of the 5th Five Year Plan programme.[114]

The existing coir co-operatives were to be divided into viable and potentially viable societies. Viable societies were those which had a minimum membership of 200, worked on profits or had potential to be so and had a paid secretary. Potentially viable societies were those which could satisfy the above conditions in the course of 3 years. The non viable societies were to be eliminated. The production of coir primaries were to be lifted by the central coir marketing societies on a cost plus basis. The central societies were to be provided with a price fluctuation fund. During the Sixth Five Year Plan the central societies were amalgamated into Coir Marketing Federation as the single apex body for the coir yarn primaries.

The coir primaries were to undertake direct production in their own work yards or in the households of the members paying the stipulated minimum wages. The latter household based production arrangement is called unit system. The retted husks or fibre are supplied to units (groups of 5 to 6 workers) who would return the finished goods in about a weeks time. The trade unions have been opposed to the household based production system and there has been a gradual shift to centralised work yard based production system. Of the 421 societies in 1988 139 societies belonging to Vycome, Aratory and Parur yarn strata in Alleppy, Kottayam and Ernakulam followed the unit system. 50 per cent of the workers employed in the co-operative sector belonged to these

societies.[119] Only in around 15 societies were both the systems concurrently in operation. A surprising development is the adoption of direct centralised production system in handspun cooperative sector in the northern districts. But in these societies it is found that often the same set of people do both the defibreing and spinning operations alternating between the forenoon and the afternoon.

The Crisis of the Co-operative Sector.

Table 20 gives the salient features of the growth of the co-operatives since the reorganisation. The number of co-operatives have increased from 196 in 1974-75 to 577 in 1987-88 and the number of workers from 81 thousand to 222 thousand. But the co-operatives have been able to give employment only to 30 to 40 per cent of their members. The average days of employment these workers have also been consistently declining. The yarn out put worker has declined from nearly 4 quintals in 1975-76 to less than 1.5 quintals in the recent years. The improvement of the nominal average monthly earnings of a worker in the last two years was largely due to sharp reduction in the number of workers. But even in 1987-88 it is less than Rs.50 a month-around 15 per cent lower than the peak reached in 1975-76.

Table 7.

Performance of Coir Primary Co-operatives 1974-75/1987-88

Year	No.of societies	No.of members ('000)	No.of workers ('000)	Husk procured (lakhs)	Yarn produced (tonnes)	Wages distributed (lakhs) Rs	Yarn output per worker (Qtys)	Percentage of workers in the membership	Husk procured per worker	Wage per worker (Rs/month)
1	2	3	4	5	6	7	8	9	10	11
1974-75	196	81	23	1123	5516	66	0.50	28.13	4883	23.91
1975-76	211	106	33	1879	12729	222	3.91	30.71	5706	56.06
1976-77	243	125	59	1542	14743	237	2.52	46.93	2631	33.47
1977-78	354	156	62	1265	13461	212	2.19	39.37	2056	28.99
1978-79	401	158	65	1498	13024	226	2.00	41.14	2305	28.97
1979-80	409	196	66	1570	15087	274	2.29	33.67	2379	34.60
1980-81	415	198	69	1609	12473	283	1.81	34.17	2331	26.37
1981-82	462	215	89	1900	16016	299	1.80	41.40	2135	28.00
1982-83	464	218	89	1786	15860	301	1.78	40.83	2006	28.18
1983-84	464	218	85	1139	11501	281	1.35	38.99	1340	27.54
1984-85	544	231	102	1667	10797	340	1.06	44.16	1634	27.78
1985-86	555	246	103	2170	9589	351	0.93	41.87	1161	28.40
1986-87	577	222	150	1264	9589	375	1.28	33.78	1685	41.66
1987-88	577	222	73	1338	10298	421	1.41	32.8	1833	48.05

[Source: Relevant issues of Kerala Economic Reviews]

Even the nominal increase in the number of co-operatives seems to have plateaued off from the mid 'eighties. On a closer scrutiny it is seen that of the 577 co-operatives on the register in 1987-88, 54 were dormant societies and 92 were new societies that had not yet started functioning. Of the working co-operatives more than 70 per cent were incurring losses. Besides, 190 co-operatives had been removed from the register for liquidation.

It has officially been estimated that for a cooperative to meet its establishment charges and earn 6 per cent return on its capital it would require an annual turnover of 1500 quintals of yarn.[116] Even if one considers only the working societies, it is

seen that in 1987-88, the average turnover of a society was less than one sixth of the optimum. To produce 1500 quintals of yarn around 17 lakh husks would be required. But the average number of husks procured by a society was only 3 lakh husks. The inability to ensure the husks requirement for viable production has been the achilles heel of the cooperative structure. General inefficiency, financial mismanagement, lack of initiatives in trading and organising production and inter-union rivalries have all added fuel to the sharpening crisis of the cooperative sector. Even after one and a half decade of reorganisation scheme efforts, the cooperatives account for only less than a third of the work force in the industry and less than 15 per cent of the industrial production.

Even though in quantitative terms the cooperative sector has failed to become the dominant sector in the industry, it has had significant positive impact on the labcur conditions and industrial organisation. It has been possible to stem the tide towards total fragmentation of the production and ensure decent wages at least to a section of the workers. The majority of the cooperatives members also work in the private sector either as wage workers or as self employed producers. The private sector wages or earnings remain significantly lower than the cooperative sector (See Table 21). But the private sector wages are normally fixed as a relative proportion of the co-operative wages. Thus the cooperatives have tended to bouy up the wages in the unorganised sector of the industry and improve the labour conditions.

Table 21
Piece rates in the Cooperative and Private Sectors in Trivandrum 1981

	Murukumpuzha (Rs)		Anjengo (Rs)	
	Society	Private	Society	Private
Beating (100 husks)	9.90	7.00	9.90	9.00
Spinning	7.60	6.00	7.00	6.00
Cleaning	4.00	2.00	3.00	2.50
Rotating	4.00	3.00	5.80	4.00

[Source: Study of Primary Coir Cooperatives in Kerala State -Viability and Financial Requirements (typescript) undated, Coir Directorate]

The table also reveals a disturbing trend that is becoming more and more manifest. There are significant differences in wage rates between societies even in the adjacent centres. It is partly because the cooperative wage rates are today increasingly fixed on a mutually agreed basis rather than on the basis of the minimum wages prescribed. Many of the societies bring fibre from Northern Kerala or at times purchase husks at higher than notified prices (the margin is adjusted in the transport charges). In such circumstance it is not possible to pay the minimum wages and remain competitive in the product market. Coir Marketing Federation has also virtually given up the guarantee of purchases on a cost plus basis.

There is universal recognition today that unless husks can be made available at economic prices the cooperative sector cannot remain viable. We have already discussed the failure of the regulatory measures to control the prices of husks. Given the higher wages and the establishment charges the cooperatives are not able to compete with the private sector in the husk market. As per the existing levy regulations at least 30 per cent of the husk available to the industry should have been

levied. But the levy evasion has been universal and the levy husks procured for the cooperatives have been less than half of what is legally its right. Disenchanted with partial controls the trade unions have been demanding monopoly procurement of husk and distribution at notified prices to the cooperatives as well as private producers according to the production capacity. But the administrative responsibility of such a scheme has been too daunting for the authorities to attempt it even on a pilot scale. Thus the crisis of the cooperatives continues with no solution in sight. The complete reorganisation of the industry on a cooperative basis seems to be an even more far off dream today than before the scheme was initiated nearly four decades back.

SECTION VI

CONCLUDING REMARKS

The most remarkable feature of the evolution of the organisation of production in the coir yarn spinning industry has been the persistence and resilence of petty commodity production. The fragmentation of the production units reaches the extreme limit in the case of handspinning where the spinners in each household constitute seperate units of production under varying degrees of control by the merchants. The independent domestic production system has survived only in the varieties of coir yarn that use unsoaked or partially soaked husks and therefore require very little working capital. Even in these instances it is seen that more often the independence was illusory as the producers are dependent on the credit of the husk dealers and consumption loans of the yarn merchants. With the interlocking of raw

material and product markets the dependency becomes complete. We examined the variants of this dependent domestic hired labour system. Under the latter putting out arrangements, even the illusion of independence is removed and the producer becomes a wage worker though she continues to work within her own household. The putting out of fibre necessitated centralised fibre production with the help of hired labour. Work yards for centralised yarn production was the next stage of evolution.

The centralised hired labour production units have, however, virtually disappeared with the emergence of trade union movement and the enactment of minimum wage legislation. Capital could avoid the new labour burdens by withdrawing into trading activities and subcontracting the production to small scale producers or putting out to the domestic producers as in the past. Within the confines of the house, the domestic spinners have to toil for a pittance insufficient even to meet the reproduction cost of their own labour-power. But the work is so spun into the rhythm of domestic chores that the nine to ten hours of work that a domestic spinner has to spend in yarn making is efficiently camouflaged. The meagre supplementary earnings of these women are vital for the survival of the family. The decline in the availability of such cheap labour in the domestic sector largely explains the decline of hand spinning in the recent period. The traditional hand spinning areas in northern Kerala are increasingly becoming fibre production centres from where fibre is directly exported to other regions. And husk beating machines have come to dominate the process of fibre production. Thus one may say that the fibre production in

northern Kerala has reached the threshhold of factory system of production even though restricted by the legal ban on the further mechanical defibreing.

While in hand spinning each spinner could function as a seperate unit of production, ratt spinning requires a minimum size of 5 to 6 workers for every unit. The rudimentary division of labour in the ratt spinning unit and the economies of production and marketing facilitated differentiation of the producers. In many areas capitalist entreprenuers employing large number of hired workers emerged. We have not been successful in fully explaining the inter regional variations in the level of differentiation. Our focus was more on the trends in the level of differentiation over time. It was noted that during the 'fifties there was clear evidence of a decline of the larger units and the proliferation of smaller units so that the average size of the units declined. We argued that it was a response to the rapid spread of trade union movement and the enactment of minimum wage regulations. But surprisingly during the 'sixties, which in fact witnessed even more vigorous trade union actions, the process of fragmentation seems to have been reversed. The average ratt size of units increased in almost all the districts. The data shows that there was a real process of diferentiation taking place in the ratt spinning sector. We hypothesised that it was related to the introduction of mechanical defibreing which enabled the larger size units to increase the scale without ballooning their workforce. With the ban on mechanical defibreing in the southern districts the large scale units have once again begun to decline. Our analysis

showed that given the production and marketing conditions trade activity has a premium in the industry. Not only is there no systematic relationship between productivity and size of units but also there are clear diseconomies in terms of higher labour charges for the larger units. Various petty thievings from the wages which enabled the private sector to remain competitive despite the ruinously high black market prices of husk was difficult in the large size units. These disadvantages could be avoided and significant marketing economies that the larger units enjoyed could be availed off by remaining a trader. In such circumstances petty production not only survives but also tends to get accentuated.

The merchants, who left the production largely to the petty producers but successfully extracted not only the whole of the surplus but also the necessary labour at times through manipulations of the market, were not a homogeneous group or a single chain of hierarchical interests. The retted husk market was controlled by a group of large scale commercial retters. Large retters constituting around 10 per cent of the retters controlled about 90 per cent of the market. Because of the monopolistic powers enjoyed by the large retters they were able to hike up the price of retted husks in sympathy with the yarn prices and thus capture the gains from the buoyant market conditions of yarn. Regulation of the husk market became central to the attempts to reorganise the industry and ensure minimum wages to the workers. But these regulations have not been successful and have resulted in a dual price system that has failed to deliver adequate quantity of husks at reasonable prices

even to the cooperative sector. Even though the regulations have broken the monopoly of retted husk dealers private traders reign supreme in the raw husk market.

A handful of large scale exporters control the yarn market. The yarn exporters purchase their requirements from wholesale dealers who are linked to the production centres through a chain of smaller intermediaries. The wholesalers undertake forward purchases, stock yarn and provide hedging facilities in the market. While the exporters often blamed the wholesale dealers for the violent fluctuations in the yarn prices, the latter were vociferous in criticising the sharp practices of the former. It would appear that increased rivalry between the exporters and the decentralisation of renhanking strengthened the hands of the wholesalers. Perhaps this would explain the demand by certain sections of the exporters in the 'forties and the 'fifties for cooperativisation of the industry and the reduction in the number of middlemen. Cooperativisation was also a central slogan of the trade union movement that saw in it a solution to the fragmentation of production and the manipulations of middlemen rendering the minimum wages impossible.

The coir cooperatives have a long chequered history. Initially the cooperatives allowed even the large scale producers and merchants to be members and inevitably came to be controlled by these vested interests. Certain reform measures were initiated in the 'sixties and finally in the mid-seventies the cooperatives were reorganised with membership open only to the workers. We had attempted to trace the evolution of production

organisation within the cooperative structure. In the 'fifties the predominant form was the commission agency system. In rare cases particularly in the hand spinning, the system of outright sale and purchase existed. In the 'sixties with the increase of the direct producers in the cooperative membership the wage advance system rose to prominence. Direct centralised production received encouragement only with the cooperative reorganisation in the mid-seventies. But even then the majority of the cooperatives were organised according to the so called unit system. Under it, though workers were paid directly by the cooperative, the production took place in household units. Thus we see that even within the cooperatives, till recently, the household had continued to be the unit of production. However under constant pressure from trade unions, more and more cooperatives have switched over to direct centralised production and today it constitutes the dominant system.

But it has been found difficult to meet the overhead charges of these centralised production structures. The cooperatives have been able to get only a fifth of the husks required for profitable capacity utilisation. Further, not only has there been severe under employment within the cooperatives but it has also become difficult to pay the minimum wages. Today even within the co-operatives the minimum wages are not paid but only a mutually agreed wage. There is a growing awareness that the wages cannot be increased without improvement in productivity.

This brings us to the important question of technical choice in the coir yarn industry. What are the barriers to

technological improvement and increase in productivity? Why did not capital take control of the production process and revolutionise its technological basis? In the history of the industry there was indeed certain attempts in the early decades of the century in this direction. The Aspinwal company had established a fibre processing factory at Anjengo, in 1920.[117] Arnold Chenery and Co. had a similar factory at Alleppey.[118] It may be noted that mechanical fibre processing technology was well known and successfully used in Sri Lanka to produce brown fibre. However in Kerala the mechanical defibreing factories could not withstand the competition from the hand processing sector and had to be closed down. The surplus labour in Kerala coastal belt and the cheap labour it provided was a barrier to technological improvement and made the survival of the primitive methods of production inevitable.

The development of the trade union movement has today eroded the cheap labour basis of the traditional technology. Given the rise in wages the handicraft would find it difficult to out compete the machine technology. Thus we find pressures being generated to transform the technology particularly in the defibreing process. Given the bulky and coarse nature of the coir fibre, the mechanisation of spinning is a relatively more difficult innovation. Even in the case of spinning, attempts have been made to set up motorised spinning units. But the widespread displacement of labour these technologies caused and the consequent social unrest has forced the government to either ban them or severly restrict their adoption. We find that the surplus labour, even though it has ceased to be a guarantee of

cheap labour, has today become a barrier to technological improvement.

In a sense, the choice of technology and the broad spectrum of production organisation was conditioned by the role that industries such as coir were destined to play in the macro-economy of the surplus labour regional economy. These industries played the role of residual employment sectors which absorbed the surplus labour that could not be productively employed elsewhere. The labour intensive technology, the fragmented production structure, the self employment and its inter twinning with domestic chores and the regional product specialisation facilitated the sharing of the available job opportunities to the maximum number of people. So far the advance of modern technology has been successfully resisted and the jobs protected.

But it is unlikely that the present situation can continue indefinitely. It is becoming evident that the growth of the mechanised coir industry in the other coconut producing countries, particularly Sri Lanka, and in the other states of India, particularly Tamil Nadu, has ceased to be complimentary to the traditional retted husk fibre industry of Kerala.[119] If these threats looming over the international and national markets of Kerala's coir industry materialise, Kerala would have no choice but to modernise its industry in a phased manner. A crucial question in this context is in what manner could the requirements of technological upgradation be reconciled to the historical residual employment sectoral role that coir has been playing in the regional economy? It is important to consider

organisations of production that would permit the sharing of the reduced work among the existing labourers rather than displace significant proportion of them from the workforce. Viewed in this perspective the cooperative reorganisation of the industry, despite its many weaknesses and failings, assumes a new significance.

FOOTNOTES AND REFERENCES

1. See the letter of Commercial Resident to Bombay Government dt. 24-7-01 informing about the coir yarn obtainable in the Malabar Coast in Malabar Commercial Residency Diary 1801. Factory Records C. Calicut I Diaries Commercial Resident, p. 183, Tamil Nadu Archives. also the letter of George Parry to Secretary to Government of Bombay dt. 27-7-1801 on the coir yarn available at Anjengo. Malabar Records I. Factory Records, A. Anjengo I. Diaries (1) Factory Vol. 1288 p. 204, TNA.

2. Trend in the Exports of Coir and Coir Products from the Malabar Coast.

Shipments from Malabar ports

Period	Floor Coverings	Yarn and fibre	Total	Shipments to Indian ports	Movement by Rail	Total Coir Movement from Kerala
1	2	3	4	5	6	7
1899-1904	n.a.	n.a	41901	n.a.		41901
1904-09	n.a.	n.a.	48088	n.a.		48088
1909-14	4524	54793	59317	n.a.		59317
1914-19	n.a.	n.a.	43331	n.a.		43331
1919-24	5911	35682	63846	n.a.		63846
1924-29	12898	66273	79170	n.a.		79170
1929-34	17548	57278	74826	n.a.		74826
1934-39	22069	57478	79547	16131		79547
1939-44	12353	41642	53996	15449	n.a.	n.a.
1944-49	16724	56091	72815	21210	n.a.	n.a.
1949-54	19396	68206	87603	13997	n.a.	n.a.
1954-59	18134	72136	90270	15505	23175	113445
1959-64	16977	63784	80761	18853	31185	111946
1964-69	17609	49217	66826	10402	49442	116268
1969-74	17392	33857	51249	1662	50380	90532
1974-79	16707	25090	41797	3	53794	95591
1979-84	14547	18252	32799	0	42632	75431

Source: Col.1 T.M. Thomas Isaac, Class Struggle and Industrial Structure: A Study of Coir Weaving Industry in Kerala 1859-1980, Ph.D. thesis submitted to Jawaharlal Nehru University, Centre for Development Studies, Trivandrum, 1984.

Col.4, 5 Coir Board, Bank Book of Coir Statistics, Kalavoor, 1960 and India's production, Exports and Internal Consumptions of Coir, Various issues.

Col.6 Coir Board, Annual Report of the Activities of the Coir Board, Various issues and India's Production, Exports and Internal Consumption of Coir, Various issues.

Col.7 is the sum of Col.4 and 6. It does not include movement by road which has become prominent from the seventies.

3. Charles Allen Lawson, British and Native Cochin, London, Nissen and Parker, 1861, p.163.

4. T.M. Thomas Isaac, op.cit.

5. The Percentage Distribution of Workers according to activity status

Activity	Male	Female	Children	Total
1	2	3	4	5
Retting	2.97	0.11	0.02	3.10
Beating	0.52	23.08	0.33	23.93
Cleaning	2.93	1.98	0.33	5.24
Spinning	4.15	45.74	0.93	50.82
Rotating	2.12	5.63	6.29	14.04
Bundling & Transport	0.93	0.08	0.05	1.06
Rehanking	0.09	0.58	0.01	0.68
Rope making	0.32	0.28	0.17	0.77
Marketing	0.34	0.02	0.00	0.36
Total	14.37	77.50	8.13	100.00

Source: IAMR, Sectoral Studies Employment Study of Coir Industry, (Mimeo), New Delhi, 1979.

6. According to the most frequently quoted estimate of the Coir Board the employment in the coir industry is as follows:

Employment in Coir Industry in India

Sector		Number of workers
1		2
Retting Sector (excluding the beaters in the retter's households)		50,000
Spinning Sector: Handspinning		119,000
Ratt spinning		97,000
Beating of husks and cleaning the fibre		132,000
Manufacturing Sector:	Mats weaving	15,000
	Matting weaving	4,700
	Rehanking of coir	2,700
	Rope making	12,000
	Rubberised coir goods	1,100
	Allied items of work	11,000
Total		4,45,900

[Source: Annual Report of the Activities of Coir Board, various issues.]

The above estimate has been seriously questioned by various quarters. A summary of the alternative estimates of employment are given below.

Other Estimates of Employment i Coir Industry

Source	Area and Reference period	Employment
(1)	(2)	(3)
1. Coir Board	Travancore-Cochin and the Malabar District, 1959	3,46,000
2. Coir Board	Kerala and Kanyakumari District, 1966	3,26,078
3. Census of India	Kerala, 1961	2,51,078
4. Census of India	Kerala, 1971	1,58,607
5. Kerala Planning Board	Kerala, 1972	3,26,690
6. IIM Bangalore	Kerala, 1975-76	2,43,521
7. Bureau of Economics and Statistics	Kerala, 1975-76	4,07,845
8. IAMR, Delhi	Kerala and Kaniyakumari 1976-77	5,12,506
9. IAMR, Delhi	An alternative estimate to the above	4,96,307
10. Department of Economics and Statistics	Kerala, 198[illegible]	2,83,478

[Source: T.M. Thomas Isaac and Chandan Mukherji, A Review of Estimates of Production and Employment in the Coir Industry, (Mimeo), Centre for Development Studies, 1982]

The differences between various estimates are due to variations of the definitions of 'worker', the estimation norms chosen and the omissions of certain sectors or areas of the industry. Given the unorganised nature it is difficult to lay high degree of reliability on any of the above estimates.

7. M.N.V. Nair Coir Industry - A Study of its Structure and Organisation with Particular Reference to Employment in Kerala, (Mimeo), IIM, Bangalore, 1977, P.59.

8. T.M. Thomas Isaac, M.P. Parameswaran, The Withering Coconut, (Mal.), KSSP, Trivandrum, 1985.

9. Manu Subedar, Report of the Industrial Development Committee, Cochin, Govt. Press, 1945, pp. 60 and 55. See also G.O.No.1791 dt 25-9-30 Development (1930) Department, Re: Cottage Industries - Survey - West Coast Districts and

G.O.No. 243 dt 26.2.48 Development (P &D) (1948) Department Re: Industries - Agro Industry - Coir Industry etc., TNA.

10. See R.H. Ellis, A Short Account of the Laccadive Islands and Minicoy, Madras, Govt. Press, 1924, W. Robinson, Report on Laccadive Islands, Madras, Govt. Press, 1874, and G.L. Morris Report on the Management of Coir Monopoly at Amini Devi Island, Madras, Govt. Press, 1898, TNA for a description of the management of coir monopoly under Ali Rajah of Cannanore and subsequently under the British.

11. Industries Department, Government of Tamil Nadu, Employment and Employment Potential of Coir Industry in Tamil Nadu, Madras, 1981.

12. K.S. Venkatraman, 'Coir Industry and Trade on the Malabar Coast' Journal of the University of Bombay, January 1940, P.69.

13. Rama Sharma, Coir Spinning in Malabar An Economic Study, Calicut, Norman Printing Press, 1917, p.5.

14. See 'Memorandum on Coir Industry furnished by A.K. Menon, Superintendent of Kerala Soap Factory' for a brief discussion of various forms of organisation of the industry at the end of the 'twenties. The Madras Provincial Banking Enquiry Committee Report, Vol.III Written Evidence, Calcutta, 1930, pp.1223-1227.

15. See Oral evidence given by A.K. Menon, The Madras Provincial Banking Enquiry Committee Report, vol. IV, Oral Evidence, Calcutta, 1930, p.578.

16. Rama Sharma, Op.cit. p.17.

17. K.S. Venkatraman, Op.cit, p.70.

18. Ibid.

19. N. Kunjuraman, Report of the Minimum Wage Committee for Manufacture of Coir, Government of Kerala (GOK), Trivandrum, 1963, p. 20.

20. Rama Sharma, Op.cit, p.11.

21. Ibid. P.7-8

22. K.S. Venkatraman, Op.cit, July 1940, p.168.

23. N. Kunjuraman, Op.cit, p.20.

24. K. Mohamed Kunju, Coir Yarn A Study on Different Types of Coir Yarn Produced in India, Coir Board, Ernakulam, 1966, p. 48.

25. Coir Board, Report on the Economic and Statistical Survey of Coir Industry, Ernakulam, 1962 p.20.

26. Memorandum on Coir indust y furnished by A.K. Menon, Madras Provincial Banking Enquiry Committee Report, Vol.III Written evidence, Calcutta, 1930, p.1223.

27. See the reports on the struggle of Coir workers in Nattika firka in Deshabhimani dt. 12-1-1950, 14-1-50, 18-1-50, 19-1-50 and 22-1-50; and report on the Conditions of Coir workers in Deshabhimani dt. 24-3-48 and 19-6-52.

28. See Deshabhimani dt. 9-4-1956 for the report of the conference of coir workers at Olavanna. See Deshabhimani dt. March 29th, 31st, April 6th, 8th, 10th, 12th, 21st, 23rd, May 1st, 3rd, 5th, 8th, 10th 14th, 15th, 23rd, 28th and June 1st 1956 for the reports on the progress of the struggle. It lasted 64 days.

29. N. Kunjuraman, Op.cit, pp.45-49.

30. See K.P. Prabhakaran, `Kandassankadavu Chakiri Thozhilali Samaram' (Mal) Trade Union dt. 21-10-1955, `Kandassankadavu Thozhilkuzhappathepatti Anveshana Samuthiyude Report' (Mal) Trade Union dt. 18-11-1955 and the extracts from the Memorandum submitted by Anthicad Chakiri Thozhilali Union to Chief Minister in Trade Union dt. 16-12-55.

31. Read the reaction of the Chief Minister to the Report of the Enquiry Committee in Trade Union dt. 2-12-1955.

32. Coir Board, Report on the Census of Coir Spindles, Ernakulam, 1957, and Department of Economics and Statistics, Report on the Survey of Coir Workers, Trivandrum, 1981 p.28.

33. For a more detailed discussion of mechanical defibreing see section 3.

34. For example read the following extracts from the calicut market reports of Pierce Leslie Company: "...The main reason for this terrible fall in production which accounts for the spiralling rise in price, is the large scale purchase of fibre by out of state parties..." PD/4, Calicut dt. 22-6-1973 to PL Darking, Coir Yarn market Reports "The Yarn production, judging by market arrivals, is so low that it is unbelievable. A gradual fall in production as spinners move to more remunerative jobs was not unexpected and it was also foreseen that the general increase in the prices of essential commodities will aggravate the situation. What we, or anybody else in the trade, have not expected is the extent of fall in production. Not a great deal of analysis is required to find out that production have gone down over 50 percent when compared with last year" PD4, Calicut dt. 9.7.1973 to PL Darking, Coir Yarn Market Reports, Pierce Leslie Co., Calicut.

35. Department of Economics and Statistics, Report of the Survey on Production and Consumption of Coir and Coir Products in Kerala 1984-85, Trivandrum, 1986 p.16.

36. Percentage Distribution of Household and Hired Workers by Size class in Kadakkavoor Village

Ratt-size class	Percentage of household workers	Percentage of hired workers	Total
(1)	(2)	(3)	(4)
1	53.0	47.0	100.0
2-3	14.0	86.0	100.0
4-5	0.2	99.8	100.0
6+	-	100.0	100.0

[Source: Sample Survey of Coir Spinning Units in Kadakkavoor Village 1978]

37. Coir Board, Report on the Economic and Statistical Survey of Coir Industry, Ernakulam, 1962, p.78.

38. According to the above sample survey the household members constituted only 33 per cent of the workforce

	Household (%) (1)	Hired (%) (2)
Beating and Cleaning	24.5	75.5
Spinning	37.8	62.2
All	32.8	67.2

Source: Ibid P. 61.

39. The Structure of Ratt Spinning Industry in Veiloor and Pallipuram Villages, Trivandrum District : 1965

Ratt size class (1)	No.of units (2)	No.of ratts (3)	Total production (Kg) (4)
1	8 (5.2)	8 (0.7)	18 (0.1)
2-3	50 (32.2)	130 (11.4)	3136 (12.6)
4-5	37 (23.9)	164 (14.3)	4508 (18.2)
6-9	28 (18.0)	305 (26.8)	4463 (18.0)
10-20	26 (16.8)	322 (28.2)	6227 (25.1)
10 +	6 (3.9)	212 (18.6)	6459 (26.0)
Total	155 (100.0)	1140 (100.0)	24811 (100.0)

Source: Survey Register of Coir Spinning Units, Trivandrum District 1965, Coir Board, Ernakulam.

40. K.J. Mathew Tharakan, Report of the Minimum Wages Committee for Manufacture of Coir, Trivandrum, 1953, p.19.

41. Ibid, p.20.

42. K. Mohammed Kunju, Op.cit, p.92.

43. Ibid, Pp.85 and 89.

44. K.J. Mathew Thatakan, Op.cit p.33.

45. K. Mohamed Kunju, Op.cit, pp.137 and 140.

46. K.J. Mathew Tharakan, Op.cit, P.11.

47. Ibid, pp.16-17.

48. Ibid, p.23.

49. Ibid, p.19.

50. Ibid.

51. N. Kunjuraman, op.cit, p.10.

52. K.S. Venkatraman, op.cit, January 1940 p.9 and 13.

53. N. Kunjuraman, op.cit, p.18.

54. Average Daily Wage of a Coir Worker in Important Varieties of Coir Yarn (Rs)

Variety	Minimum wages recommended in 1954	1964	1967	1970
(1)	(2)	(3)	(4)	(5)
Anjengo	1.02	0.90	1.12	1.57
Vycome	0.68	0.60	0.68	1.07
Aratory	0.82	0.80	0.98	1.43

(Source: Calculated for the cost of production estimates given in Mathew Tharakan op.cit, K. Mohamed Kunju Op.cit, IIFT, Survey of Indias Export Potential of Coir and Coir Based Products Vol.1, 1971).

55. For a description of the workers' struggles in the coir spinning industry see, Coir Workers Centre, Coir Vyavasayayum Thozhilalikalum Prasnangalum, (Mal.), Trivandrum, 1972; C.A. Peter, Kerala Coir Workers Centre General Councilil Gen. Secretary Avatharippikunna Report, Alleppy, 1972; C.A. Peter, Kollathuvachu Kootiya Kayar Piri Factory Kerala Samsthana Sammelanathil Samarppikkunna Report, (Mal.), Quilon, 1972, and Coir Thozhilalikalude Minimum Wages Neti Yetukanulla Samaravum Bandhapetta Prasnangalum, Alleppy, 1972.

56. K.M. Mohideen, Report of the Committee Appointed by Government to hold Enquiries and Advise the Government in

Respect of Revision of Minimum Wages Fixed for Employment in Coir Industry, Trivandrum, 1971, pp.23-24.

57. Government of Kerala, Kerala Economic Review, Trivandrum, 1973, P.94.

58. M.V. Pylee, A Study of the Coir Industry in India Problems and Prospects (Mimeo), Cochin, Coir Board, 1976, p.35.

59. According to estimate of AO Cost reduction was only around 10 per cent

Cost of Production of White Coir Fibre ($ US/tonne of fibre)

Items of cost	Manual Process	Mechanical Process
(1)	(2)	(3)
Raw material	136	136
Labour	98	82
Other direct charges	18	19
Indirect charges and overheads	28	13
Total	280	250

(Source: FAO, A Technical Improvement Programme for Hard Fibre. Part IV Coir - The Improvement Potential in Coir Technology, TD/B/IPC/Hard Fibres (C)/WG/2, 1973, Rome).

60. E. Balanandan, Jeevikkan Venti Coir Thozhilalikal Natathua Samaram (Mal.). Trivandrum. 1969.

61. For the estimate of labour displacement see State Planning Board, Report of the Study Group on Mechanisation in Coir Industry in Kerala, Trivandrum, 1973, pp.49-50.

62. The number of establishments with more than 20 workers for 1955 is estimated from Table 4 in the text, on the assumption that ratt units with 4 ratts or more employ at least 20 workers. For data for 1976, see B. Sivaraman, Report of the High Level Study Team on Coir Industry, (Mimeo), Planning Commission, New Delhi p.74.

63. According to Coir Board around 10,000 tonnes of fibre has been imported into the spinning centres in Kerala from Tamil Nadu alone in 1989-90.

64. Average Number of Working Days in Various Size Classes of Establishments.

Size class (No.of workers)	Trivandrum	Quilon	Alleppy
(1)	(2)	(3)	(4)
2-4	179.30	-	-
5-9	187.65	185.57	192.44
10-14	191.07	200.59	194.04
15-19	199.71	200.11	214.41
20-49	200.19	219.24	215.90
50+	219.84	219.00	262.50

Source: IAMR, Sectoral Studies Employment Study of Coir Industry, 1979.

65. Coir Board, Survey Reports on Coir Industry, Cochin, 1968, p.14.

66. Ibid., P.7.

67. Ibid.

68. Bureau of Economic Studies, Survey of Coir Households in Kerala, Trivandrum, 1962, p.3.

69. V.R. Pillai, Report of the Coir Advisory Committee, Trivandrum, Government Press, 1955 p.15.

70. Ibid.

71. Ibid., p.4.

72. Government of Kerala, The Coconut Husk Control Orders, Trivandrum, 1976.

73. For a detailed discussion of the husk market regulation measures and their failure see M.V. Pylee, Op.cit., pp.27-56, M.N.V. Nair op.cit, 1977, and B. Sivaraman, Op.cit., pp. p.23-53.

74. M.V. Pylee, Op.cit. P.46.

75. B. Sivaraman, Op.cit, p.53.

76. R. Srinivasan, Report of the Committee on the Implementation of Levy System, Mimeo, Trivandrum, undated.

77. For details see Ibid.

78. Price Indices of Firewood and Raw Husk

Year	Control Husk Price	Firewood Price
(1)	(2)	(3)
1972	100	100
1974	162	147
1976	162	207
1978	162	283
1980	212	421
1982	212	523
1984	212	643
1986	312	749

(Source: Statistics for Planning (relevant years) and Directorate of Coir .

79. See, Volkart (India) Ltd., Draft Proposals for a New Pool (Typescript) dt. 30-11-1965, Cochin.

80. Letter from Assistant Labour Officer to Inspector of Factories dt. 3.11.1959, File Labour Department 1959-60, Records of TCFWU, Alleppy. See also the letter from General Secretary, TCFWU to Assistant Labour Officer dt. 19.11.1959, File Labour Department 1959-60, Records of TCFWU, Alleppy.

81. See the petitions of the Kerala Dealers and Exporters Association to Chairman Board dt. 12.10.1959, (Mimeo) Records of Travancore Chamber of Commerce.

82. G. Mahadev, Note on Coir Yarn: Introduction of Quotas, (Typescript) dt. 26-10-75, Pierce Leslie & Co., Calicut.

83. T.D. Venketaraman, Note on Discussions with Kerala Balers (Typewcript) dt. 6.11.1965, Volkart Brothers, Cochin; Letterf PL London to Cochin dt. 15-4-1965 Re: Coir Yarn: Press Owners Agreement, Letter from PL London to Cochin dt. 3.11.1965 Re: Coir Yarn Press Owners Agreement, PL London to Cochin dt. 7-12-1965 Re: Comments on the Proposal and letter from PL Cochin to London dt. 16-12-1965, Pierce Leslie Company, Cochin.

84. The coir yarn business of the firm of Patel Volkarts was closed down in 1969, due to the heavy losses incurred in trade (See letter of Manager of PLI Cochin to PL London dt. 2.6.1969 and 14.7.1969 Re: Coir Yarn - Patel Volkarts Limited). The Pierce Leslie Co. incurred consistently net losses on trading account of coir yarn from 1963-64 onwards. However, they continued in business due to the benefits of 2 percent tax credit on exports of coir yarn and 5 percent cash rebate. Pierce Leslie, Calicut Branch, Annual Report-Produce Department Seasons from 1960-61 t 1968-69 Pierce Leslie company, Calicut.

85. Memorandum on Coir Industry furnished by A.K. Menon, Superintendent, Kerala Soap Institute, Calicut, The Madras Provincial Banking Enquiry Committee Report, Written Evidence, Vol.III, Calcutta, 1930, P.4. See also for similar failure of direct depots of exporters in the districts J.S. Patel, Report on the Coconut Enquiry in India, Simla, 1934, p.114.

86. Income from Coir industry formed only 25 percent of the total household income of the petty village dealers. Coir Board, Report on the Economic and Statistical Survey of Coir Industry - 1960, Ernakulam, 1962, p.50.

87. Ibid., p.51.

88. Ibid., p.54.

89. K. Bhaskaran Unnithan, Coir Industry in India with Special Reference to Marketing and Trade, Ernakulam, Coir Board, 1970, p.79.

90. Ibid., p.79.

91. K.J. Mathew Tharakan, Op.cit., pp.27-28.

92. Ibid., p.33.

93. D.C. McCornick, Coir Yarn. Office Procedure, 2-12-1964, Pierce Leslie Company, Calicut.

94. See Office Note: Coir Yarn, Supply Position, Commitments and O/B Position Vs. Buying Policy dt. 29-4-1959, Pierce Leslie Co., Calicut.

95. See Letter from W.E. Northey Cochin to A.D. Bollard, Calicut dt. 15-4-1959, Coir Yarn File A/3 1958-1967., Pierce Leslie & Co., Calicut.

96. 'The Panel on Coir Cordage Rope and other Fibre Industry' 1946 and the 'Unemployment Enquiry Committee' 1946 both headed by important Coir Yarn exporters strongly suggested for co-operativising the spinning sector. They did not forsee any conflict between the development of co-operatives and their monopoly of exports. See K.C. Karunakaran, Report of the Panel on Coir Rope Cordage and Other Fibre Industry, Delhi, 1946 and H. Smith, Report of the Unemployment Enquiry Committee, Trivandrum, 1948. for a discussion of the Coir co-operatives in Malabar. See the Memorandum of Coir Industry furnished by Mr. A.K. Menon Superintendent Kerala Soap Factory, The Madras Provincial Banking Enquiry Committee Report written Evidence, Vol.III, Calcutta, 1930, p.1224

97. 'Supplementary Note' by P.K. Padmanabhan, H. Smith, op.cit, p.35.

98. C.A. Theyyunni Menon, Report of Special Officer for Enquiries on the Working of Coir Cooperatives in Kerala State Under Coir Development Scheme, Trivandrum, 1959, p.5.

99. Industries Department, Govt. of Kerala, Review of the Working of the Coir Co-operatives in Kerala (Mimeo) Trivandrum, 1959, p.2.

100. Ibid, P.4.

101. C.A. Theyyunni Menon, Op.cit., p.11.

102. G. Parameswaran Pillai, Report of the Coir Enquiry Committee, Delhi, 1958, p.8.

103. Bureau of Economic Studies, Suevey of Primary Coir Cooperatives in Kerala, GOK, Trivandrum, 1961, P.6.

104. G. Parameswaran Pillai, Op.cit., p.9.

105. C.A. Theyyunni Menon, Op.cit., p.49.

106. 'Coir Development' in Government of Kerala, Third Five Year Plan - Draft Outline Govt. Press, Trivandrum, 1960, pp.209-216.

107. Quoted in Industries Department, Govt. of Kerala, Op.cit., pp.10-11.

108. Ibid., p.6-7

109. Ibid., P.13.

110. Ibid., P.10.

111. C.A. Theyyunni Menon, op.cit., p.56.

112. Bureau of Economic Studies, Op.cit, P.15.

113. See Government of Kerala, Kerala Economic Review 1974, Trivandrum, 1974, pp.109-110.

114. Government of Kerala, Scheme for Reorganisation of Coir Industry, Trivandrum, 1972.

115. Details of Working Coir Vyavasaya Co-operative Societies (as on 30.6.88) (Mimeo), Directorate of Coir Development, Trivandrum 1989.

116. Study of Primary Coir Cooperatives in Kerala State-Viability and Financial requirements (Mimeo), Directorate of Coir Development, Trivandrum, 1981.

117. 'Opening of a Coir Factory near Anjengo' Dec. 9, 1927 No.D.Dis.2369 A/27 Dev.Dept. English Records Cellar, Trivandrum.

118. Government of Travancore, Travancore Depression Enquiry Committee Report 1931, Trivandrum, 1932, p.61.

119. For a detailed discussion of the implications of these developments see T.M. Thomas Isaac, Pyarelal Raghavan, Policy Frame Work for Revitalisation of Coir Industry in Kerala, CDS Working Paper (forthcoming).