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**Market Intervention, Value-Addition and Consolidation: The Interface
Between Small Rubber Growers and the Co-operative Sector in
Kerala**

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Market Intervention, Value-Addition and Consolidation: The Interface Between Small Rubber Growers and the Co-operative Sector in Kerala

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Abstract

The major contributions of the co-operative sector in Kerala to the dominant rubber smallholdings were analysed in the broader context of the natural rubber (NR) economy of India, the government's price policy and salient features of the primary market. One of the major deficiencies in the primary market was the dominance of the intermediaries extracting margins on the smallholders' crop. Various policy changes on the price and market intervention since 1970s marked the graduation of the co-operative sector from its initial supplementary role in the primary market to a price stabilising institution in the 1990s. The establishment of rubber producers' societies since 1986-87 was also complementary to the marketing operations of the co-operative sector. Another significant contribution of the co-operative sector is the value addition to the smallholders' raw rubber. The cumulative effect of the entry of the co-operative sector in the primary market and raw rubber processing appears to have the implicit effect of increasing the net income of the small holders while explicitly it is instrumental in sustaining the emerging structure in the production sector through consolidation of market power.

1. Introduction

Among the major plantation crops exported from the developing countries, the two features distinguishing the world natural rubber (NR) economy are: a relatively higher degree of regional and structural concentration of production and a wide range of industrial applications of the raw material. In 1994, the South-East Asian region accounted for more than 93 per cent of world NR production and the structural concentration in production is characterised by the dominance of the smallholdings with an estimated share of more than 75 per cent (IRSG, 1996). Though NR is used in the manufacture of an estimated number of 35000 industrial products, the automotive tyre and tube manufacturing industry is the single largest consuming sector with a relative share of more than

60 per cent in the total world consumption. India is the fourth largest producer and consumer of NR in the world and it occupies a unique position among the major NR producing countries in terms of certain specific features of the production and consumption sectors. The regional and structural concentration of NR production in India are more evident as Kerala alone had a share of 94 per cent and the dominance of the smallholdings sector is underlined by its relative share of 86 per cent in the total production during the year 1994-95 (Rubber Board, 1996) (Table 1).

In a comparative sense, the dominant smallholdings sector in Kerala has experienced a dynamic growth over time and the major contributing factors are: (1) a positive government policy, (2) a protected price regime and (3) a captive domestic market (George et al., 1988). The dynamic growth has been exhibited mainly in terms of the diversification of the sources of income resulting from the canalisation of the surplus generated from NR production into new areas of economic activity over three generations (George, 1996). The dynamic process of change has been actively supplemented by a fruitful interaction of various socio-economic and political factors which prevailed in the state of Kerala during pre-independence and post-independence phases culminating into a unique case of plantation agriculture having tremendous influence on the socio-economic transformation in the smallholdings sector.

1.1 Objectives and the theme

After independence, the Government of India's policy orientation was towards achieving self-sufficiency in NR production to cater to a steadily growing domestic market. A protected price regime was one of the important policy components employed and in the process, the government was very often confronted with the problem of protecting the conflicting interests of the NR producers and rubber products manufacturers. The main objective of the present study is to analyse the role of Co-operative Rubber Marketing Societies in Kerala in terms of the market intervention schemes supplementing the government policy of price support over time, contributions to value-addition of smallholders' raw rubber and

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sustaining the viability of the smallholdings sector against the backdrop of a structural devolution in the production sector during the last 40 years. Another important objective is to draw guidelines from the changing dimensions of the operations of the co-operative sector relevant from a policy angle.

1.2 Methodology

The study was confined to the rubber co-operative sector in Kerala though the analysis of the government's price policy was incorporated into the macro framework of Indian NR market so as to identify the inter-relationships and the underlying factors. The role of the co-operatives in value-addition and sustainability of the smallholdings sector was assessed in terms of the trends in the shares of value-added forms of processed rubber in the total NR production and structural changes in the production sector. The major sources of data were Rubber Board, Kerala State Co-operative Rubber Marketing Federation (KSCRMF) apart from the primary data collected from the 27 co-operative rubber marketing societies.

2. Genesis of the market intervention

Historically, NR production in India was also export oriented as in the case of other major NR producing countries. The two important developments in the early 1940s which basically altered this position were: (1) steady growth of the indigenous rubber products manufacturing industry during the inter-war years under the colonial patronage and (2) the conquest of the major sources of NR supply to the allied nations by Japan (George et al., 1988). Against the background of these developments, NR price in India was brought under the statutory control in 1942 which marked the beginning of the government intervention in the market. The price control since 1942 was an essential ingredient of the policy oriented towards enhancing NR production in the country and it is being continued till date in different forms under various historical contexts (Table 2).

Among the various price policy regimes, the major policy change was implemented in December 1968, associated with the removal of maximum prices resulting in wide intra-year fluctuations in the NR prices (Mani, 1984). The policy of 'no maximum price' is being continued since 1968 barring a five year period between 1986-91 compared to the previous shorter span of three years (1964-67). Another major

policy initiative of the government at this juncture was involving the State Trading Corporation of India (STC) in the market to stabilise the prices at remunerative levels. Since then, the STC employed different market intervention measures including exports and buffer stocks. The genesis of the direct market intervention stems from three important aspects, viz., (1) seasonality of NR production and prices in India, (2) dominance of intermediaries in the primary market, and (3) visual grading of the smallholders' crop processed in the form of sheet rubber. The structure of the primary market of NR in India is basically characterised by a three-tier system of dealers operating from the village level to the terminal markets (Fig.1). A unique feature of the primary rubber processing sector in India from the very inception is that a lion's share of the crop is processed in the form of sheet rubber and even in 1994-95 its relative share was 73 per cent (Rubber Board, 1996). Although the reported share of farmgate price of 92 per cent for sheet rubber (Sreekumar et al., 1990) is one of the highest in the country, it becomes imperative to underline that the reported share of the producers' price is evolved over time rather than the set pattern since independence. In fact, the combined farmgate price for sheet rubber and field coagulum (residual rubber) was reported to be only 88 per cent. The marketing margins obtained by the intermediaries at various stages through the practice of accepting the smallholders' crop as ungraded sheet rubber and denying the benefit of grade differentials, is relatively under-reported. The primary market of field coagulum characterised by oligopsony position for the private owned crepe mills was another important channel of surplus extraction. The entry of the co-operative sector in the primary market since mid 1960s was expected to fill the vacuum of an agency to control the dominance of the intermediaries for the benefit of the dominant smallholdings sector.

2.1 The Institutional framework

The establishment of co-operative rubber marketing societies in Kerala since 1960s under the Co-operative Department of the Government of Kerala was actively supported by the Rubber Board in the form of share capital participation and technical assistance. The operational relevance of the societies gathered momentum with the establishment of an apex organisation KSCRMF in 1971. The number of societies increased from 11 in 1965-66 to 37 in the late 1970s having purchase depots in all the rubber growing regions in the state (Unny and Haridasan, 1974). The average membership of the societies also grew from 706 in 1965-66 to 2809 in 1994-95 and

the present estimated total membership of the societies is more than one lakh. Another important development complementary to the operations of the co-operative sector was the promotion of Rubber Producers' Societies (RPS) by the Rubber Board in 1986-87 which provided the institutional framework at the micro level for improving the cultural practices including processing and marketing by the smallholders. The main objective of the Rubber Board behind the establishment of RPS was implementation of the 'Input Subsidy Scheme' and these were registered under the Charitable Societies Registration Act, 1995. The RPS was conceived as a voluntary association of the smallholders and self-contained with least government interference. The Rubber Board subsidised a portion of the establishment expenses incurred for setting up a produce collection-cum-inputs distribution centre for each RPS. The member growers were expected to sell the produce through the RPS to evolve a group marketing system linked either to a co-operative rubber marketing society or a processing factory. Operationally, the emergence of the RPS has enabled the co-operative sector to penetrate further at the grassroot level with minimum establishment expenses. In 1994-95, 1528 RPS covered an estimated number of two lakh smallholdings in Kerala.

2.2 Mode of market intervention

In the initial phase, the NR procurement operations of the co-operative sector had a lukewarm response and in 1965-66 the total quantity of rubber marketed was only 3.79 per cent of the total production in the state. The year 1972 marked the turning point in the history of the co-operative sector as the KSCRMF entered the market on behalf of the STC to stabilise the prices in the situation of the wide intra-year fluctuations of NR prices in the country, mainly due to the removal of the statutorily fixed 'maximum prices' by the government. Since then, the KSCRMF and its member societies are working as the functional arm of the STC for market intervention. Simultaneously, there was a phenomenal change in the marketing operations of the co-operative sector arising from the maturity gained over time from its supplementary role in the market intervention programmes of the government. Today, the co-operative sector is the single largest supplier of NR in the country and in 1994-95 its relative share in the total volume of sales is estimated to be 14 per cent. The position assumes added significance as the remaining 86 per cent of the supply is distributed among more than 7100 private dealers operating at different levels and located in different districts in the state of Kerala (Table 3).

The scale and scope of the operations of KSCRMF has also undergone substantial changes since 1971 and in 1994-95, the total volume of rubber sales increased to 4500 tonnes from 350 tonnes in 1971-72. The apex organisation has a network of 10 purchase depots in the main rubber growing regions and seven sales depots in the major consuming centres in the country. The primary level procurement operations of the KSCRMF is actively supplemented by the member societies which are also equipped with purchase depots and the newly formed RPS. The growth in the scope of the operations of the co-operative sector is evident from the involvement in the procurement and supply of fertilizers and the major estate inputs resulting in a steady growth in the turnover of KSCRMF (Table 4).

The cumulative profit of KSCRMF till December 1995 was Rs. 250 lakhs whereas among the 27 member societies covered for the study only 15 have reported profits during the year 1993-94. Notwithstanding the financial performance, an important dimension added to the marketing operations of the co-operative sector since early 1990s is a regular voluntary scheme, viz., Peak Season Procurement Scheme (PSPS) for market intervention during the peak season of NR production under the leadership of KSCRMF. An observable result of the operation is a significant increase in the quantity of rubber directly procured compared to the volume procured on behalf of the STC since 1990-91 (Table 5).

Though the net gains obtained from the smallholders' angle are not quantifiable for want of adequate data, the entry of the co-operative sector in the primary market had certain major implications. One of the important consequences is a progressive reduction in the marketing margins of the intermediaries as the producers have the option of selling the rubber to the co-operative sector which functions as a connecting link between smallholders and the consumers. The relative flexibility arising from the entry of the co-operative sector also had a 'cushioning effect' at times of crisis. Another important gain is the practice of accepting better processed sheets as 'graded sheets' which was hitherto non-existent. Implicitly, this development had the effect of an increase in the total sales realisation of the producers and an incentive for processing qualitatively superior form of sheet rubber. The confidence of the producers' is reflected in the recent development of the stockholding practice by the small-holders; especially, in the context of a progressive devolution in the average size of the holdings over time.

3. Value Addition

The raw rubber from the rubber trees is basically obtained in two forms, viz., latex and field coagulum, which is normally in the proportion of 80:20. Technically, the field coagulum is the residual rubber and in the raw form it is inferior to latex though it has superior processing options in terms of unit value. The two major processing options of the field coagulum are crepe rubber and the technically specified block rubber (TSR). In terms of unit value, value addition and technical properties TSR is superior to crepe rubber. Historically, the entire available quantity of field coagulum in the country was converted into crepe rubber by the private owned crepe mills. A remarkable shift in the processing pattern of field coagulum was initiated with the establishment of six TSR processing factories in the co-operative sector since 1980 and the subsequent establishment of processing factories in the private sector. The TSR production in India has increased from 2416 tonnes in 1980-81 to 40390 tonnes in 1994-95 and its relative share in the total NR production is 9 per cent. The net impact of the establishment of the TSR processing factories in the co-operative sector is higher unit price realisation for the field coagulum resulting from the competition between crepe mills and TSR factories in the raw material market. In the process, there was considerable narrowing down of the price differences between field coagulum and ungraded sheet rubber. The relative price of field coagulum expressed as a percentage of sheet rubber has gone up from 50 per cent in 1982-83 to 70 per cent in 1994-95. The estimated value addition from the stage of field coagulum to TSR is around 60 per cent and indirectly the net gains are percolated to the members in the form of annual 'producers' bonus' distributed by the processing factories in the co-operative sector. The KSCRMF has recently ventured into the manufacturing of intermediate rubber products and currently efforts are underway for establishing manufacturing facilities for 11 different industrial rubber products with an estimated investment of Rs. 4013.50 lakhs under the Integrated Rubber Development Plan. Theoretically, the emerging trends are indicative of the process of vertical integration linking the raw rubber processing base with the finished products manufacturing sector for further value-addition.

4. Conclusion

The cumulative effect of the entry of the co-operative sector in the primary market and raw-rubber processing

appears to be two-fold, viz., (1) consolidation of the market power and (2) sustaining the emerging structure in the smallholdings sector. The consolidation of the market power is contrary to the text book sense of a monopolistic market structure or the role of the co-operative sector as a price signalling point. In the present context, it refers to the evolution of the co-operative sector as a price stabilising institution from its supplementary role during the 1970s and 1980s. The basis of the consolidation process is not strictly confined to its role as the single largest supplier of NR in the country, but also has roots in the introduction of regular NR procurement schemes in the context of seasonality of production and prices, uncertainty on the imports, speculation and stockholding practices of the dealers and manufacturers. A critical assessment of the role and performance of co-operative sector has to be focussed in a comparative perspective as the smallholdings sector across the major NR producing countries has an entirely different experience due to various factors. In the Kerala context, the existence of the co-operative sector assumes added significance as more than 80 per cent of the area under rubber belongs to the smallest size-group of less than 2 ha and the current trends are indicative of a further decline in the average size of the holdings leading to homestead farming of NR in the state.

The developmental experience of the co-operative sector during last three decades offer certain valuable guidelines from a policy angle. The most significant dimension is the evolution of the rubber co-operative sector in Kerala from its supplementary role in market intervention to a price stabilising institution in 1990s through consolidation of market power based on the available institutional support. The recent trend of stockholding practices by the smallholders having an average farm size of 0.50 ha bear testimony to the confidence generated by the co-operative sector in the primary market. The recent attempts of the co-operative sector to vertically integrate the intervention process for maximum exploitation of potential value-addition after realising the limits of the horizontal extension of market support programmes and processing operations, also merit due attention. From a policy angle, the entry of the co-operative sector in the intermediate and finished rubber products manufacturing sector has to be underlined in the present scenario of liberalisation and growing market integration of the Indian economy having the potential threat of competition in the domestic market from other major NR producing countries.

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Fig. 1 Primary Marketing Channels of NR

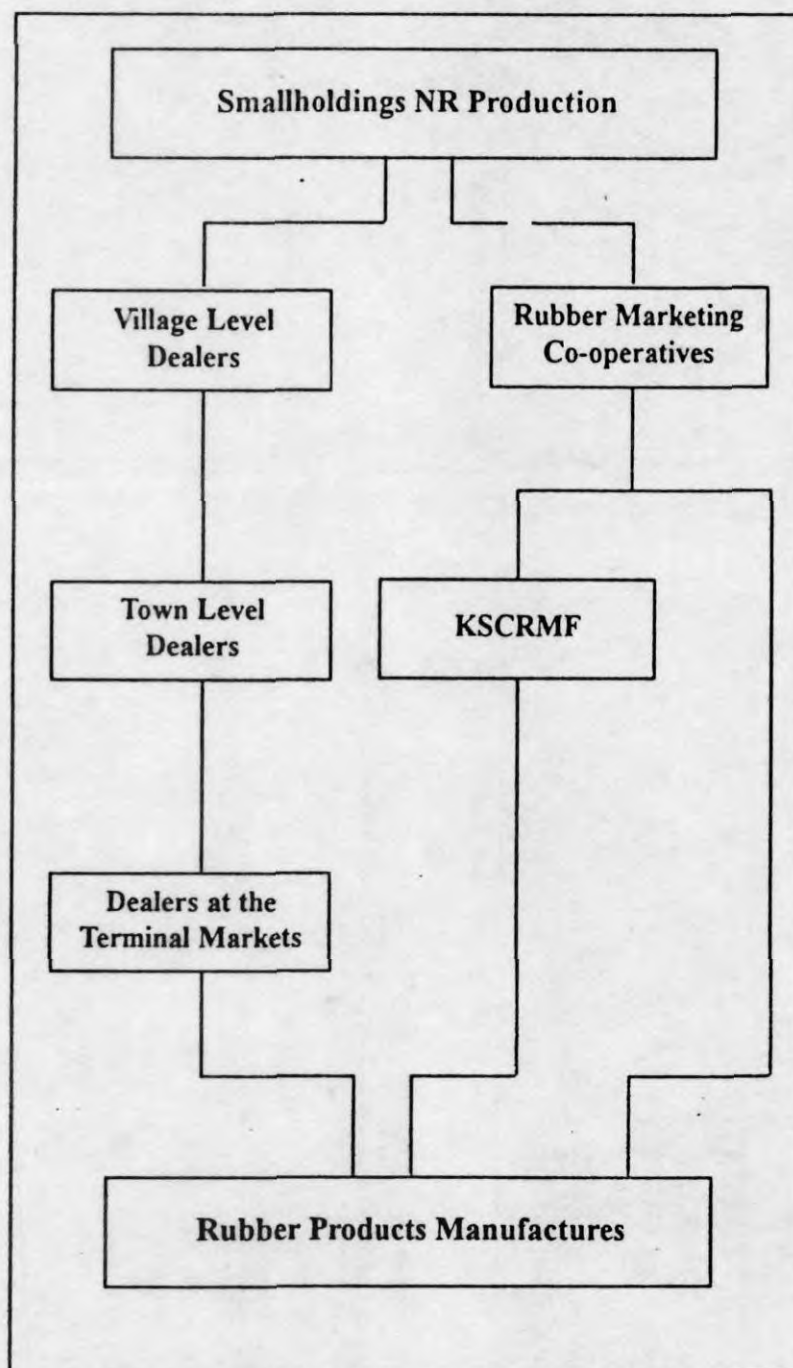


Table 1. Trends in the composition of NR production in India

Year	Total NR production (tonnes)	Relative share of smallholdings (%)	Relative share of Estates (%)
1955-56	23730	27	73
1965-66	50530	40	60
1975-76	137750	61	39
1985-86	200465	75	25
1990-91	329615	81	19
1994-95	471815	86	14

Source: Indian Rubber Statistics, Vol. 21, Rubber Board, 1996.

Table 2. Price policy regimes of NR in India

Period			Policy		
from	-	to	min. price	max. price	others
May 1942	-	Sept. 1946	Yes	No	
Oct. 1946	-	Nov. 1947	—	—	
Dec. 1947	-	Dec. 1963	Yes	Yes	
Jan. 1964	-	Sept. 1967	Yes	No	
Oct. 1967	-	Nov. 1968	Yes	Yes	
Dec. 1968	-				Entry of STC in the market
Dec. 1968	-	Aug. 1981	Yes	No	
Sept. 1981	-	Feb. 1986	No	No	
Feb. 1986	-	Sept. 1988	Yes	Yes	Buffer Stock Scheme
Oct. 1988	-	Jan. 1991	Yes	Yes	Buffer Stock Scheme
Jan. 1991	-		Yes		

Source: Burger et al. (1995), p.176.

Table 3. Trends in the volume of rubber sales by the Co-operative sector

Year	Volume of the sales (tonnes)	Sale as % of total NR production in	
		Kerala	India
1965-66	1778	3.79	3.52
1975-76	5545	4.31	4.03
1985-86	21036	11.40	10.49
1994-95	55934	12.63	11.86

Source: Same as table 1.

Table 4. Trends in the volume of sales turnover of KSCRMF

(Qty in tonnes, Value in Rs lakhs)

Year	Rubber sales		Fertilizer sales		other inputs	Total
	Qty	Value	Qty	Value	Value	Value
1989-90	29492	6498.77	26352	410.44	99.52	7008.73
1990-91	28662	6270.15	28795	489.73	83.20	6843.08
1991-92	42756	9082.86	27050	562.17	96.94	9741.97
1992-93	29184	7674.95	27200	924.19	98.16	8697.30
1993-94	39059	9764.75	21480	838.80	96.08	10699.63
1994-95	45200	16235.00	21278	898.00	85.00	17218.00

Source: Kerala State Co-operative Rubber Marketing Federation.

Table 5. Mode of rubber procurement by KSCRMF

Year (1)	Quantity procured (tonnes)			(2) as % of (4) (5)
	Direct (2)	Through STC/JV (3)	Total (4)	
1990-91	23816	4972	28788	82.70
1991-92	29719	15925	45644	65.10
1992-93	32589	—	32589	100.00
1993-94	34945	6555	41500	84.00
1994-95	38033	523	38556	98.60

Note: JV - Joint Venture.

Source: Kerala State Co-operative Rubber Marketing Federation.