

CHAPTER - XI

MARKET STRUCTURE, CONDUCT, AND PERFORMANCE OF LEAF TOBACCO

Variation of cost per unit area and per unit of produce has been analysed in Chapter V. And the factors contributing cost variability have also been identified therein. The relationship between cost and price per unit of produce has been examined in Chapter VI. Chapter VI also delineates a wide variability in prices realised by the producer sellers. It needs a through investigation aiming at finding out the factors that might have been responsible for such inter-producers variability in price realisation. This chapter is devoted principally at this end.

11.1 Conceptual Framework

In the literature on marketing efficiency in India there are two approaches in the empirical investigation : (i) analysis of marketing margin, and (ii) analysis of the working of the markets, delineating their structure and performance with a view to identifying the sources of inefficiency in the system. Clodius and Mueller⁽¹⁾ highlighted that the 'market structure' approach is based on the belief that a great deal can be learnt about the efficiency with which an existing marketing system functions by directly comparing it with the requirements of a competitive model. Subbarao⁽²⁾ also pointed out that this approach aims at an assessment of the economic efficiency of the market on the basis of such criteria as the degree of departure of the actual conditions from the conditions of a perfectly competitive market, extent and sources of imperfection, the nature of exploitation, if any, suffered by different classes of farmers, etc. Keeping the objective of the study in view the 'market structure' approach is adopted for the present analysis. Three concepts to this analysis as market structure,

-
1. R.L. Clodius and W.F. Mueller : "Market Structure Analysis as an Orientation for Research in Agricultural Economics", Journal of Farm Economics, August 1961.
 2. K. Subbarao : Rice Marketing System and Compulsory Levies in Andhra Pradesh, Allied Publishers Pvt. Ltd., 1978, p. 6.

conduct, and performance that pointed out by Bain⁽³⁾ need elaboration : Market structure refers to the organizational characteristics of a market which seem to influence the nature of competition and pricing within the market. The degree of buyer or seller concentration, conditions of entry, degree of market knowledge or information, etc., constitute important aspects of market structure. Market conduct refers to the '..... patterns which enterprises follow in adopting or adjusting to markets in which they sell (or buy)',⁽⁴⁾ and includes such aspects as methods employed in determining price and output, presence or absence of collusive tactics, etc. Market performance refers to the economic results that flow from the system in terms of its pricing efficiency, its flexibility to adapt to new and changing situation, etc. In view of absence of any Governmental and Co-operative agency operating in the marketing system the basic elements of the market structure approach incorporated to market structure, market conduct, and market performance are mentioned here under.

Market structure : Organizational characteristics of private marketing agencies; type of agents operating; ease or difficulty of entry into agent's trade; modes of disposal and sale alternatives available to producer-sellers; degree of market knowledge and information; etc.

Market conduct : Trading practices including purchase, handling and storage followed by the agents, the relationships between buyers and sellers, and nature of functions performed by the agents.

Market performance : Pricing efficiency which is reflected in temporal and spatial price pattern that have been examined by comparing the respective observed prices with that of expected ones. The expected prices are calculated by considering all items of cost associated with marketing.

3. J.S. Bain : Industrial Organization, John Wiley, 1967,

4. Ibid.

11.2 Variation of Producer's Price

The sample farmers of Coochbehar and Jalpaiguri classified into 9 groups according to the prices they have received for their produce of both rustica and tabacum type are furnished by table 11.1 and 11.2. The range of prices realised by the producer-sellers is noted to be Rs. 120 to Rs. 1050 for rustica and Rs. 600 to Rs. 1813 for tabacum tobacco. Inter-district variability in the pattern of price realisation for rustica tobacco is, however, observed. In Jalpaiguri district the price realised, on an average, appears to be relatively higher than that in Coochbehar district as revealed by Table 11.1. The average price and range of prices that the producer-sellers belonging to 3 development categories of villages have realised are presented in Table 11.3. A wide inter-village variability in the pattern of price realisation is also noted for both types of tobacco. The presumption of higher price realisation by the producer-sellers of infrastructurally developed villages is refuted by a close examination of inter-village price variability. A comparison of realised prices of the farmers between 3 different categories of villages with respect to month of sale (Table 11.4) also corroborates with the above refutation.

Let us explain the observed price variability by structure-conduct approach and examine the market performance in terms of degree of imperfection with which the marketing system is operating.

11.3 Market Structure and Conduct

11.3.1 Marketing agents

Small traders usually termed as 'forias' would procure leaf tobacco from the growers both at the villages and assembly markets. Some of the 'forias' would also purchase the produce on behalf of the wholesalers in exchange of commission alongwith their own purchase. Thus, 'forias' and foria-cum-commission agents constituting small traders are functioning in the tobacco marketing system both at village

Table 11.1 : Distribution of producers sold rustica tobacco according to prices received during 1983-84

Price range (Rs. per Qnt1)	No. of selected producer sellers	Percentage distribution	Cumulative total of per cent distribution
Coochbehar			
Below 175	1	0.56	0.56
175-300	4	2.22	2.78
300-400	20	11.11	13.89
400-500	43	23.89	37.78
500-600	48	26.67	64.45
600-700	37	20.56	85.01
700-800	17	9.44	94.45
800-900	7	3.88	98.33
Above 900	3	1.67	100.00
Total	180	100.00	-
Jalpaiguri			
Below 175	-	-	-
175-300	-	-	-
300-400	1	2.04	2.04
400-500	6	12.24	14.28
500-600	10	20.41	34.69
600-700	14	28.57	63.26
700-800	9	18.37	81.63
800-900	8	16.33	97.96
Above 900	1	2.04	100.00
Total	49	100.00	-
Two Districts Combined			
Below 175	1	0.44	0.44
175-300	4	1.75	2.19
300-400	21	9.17	11.36
400-500	49	21.40	32.76
500-600	58	25.33	58.09
600-700	51	22.27	80.37
700-800	26	11.35	91.71
800-900	15	6.54	93.26
Above 900	4	1.75	100.00
Total	229	100.00	-

Table 11.2 : Distribution of selected producers sold tabacum tobacco according to prices received during 1983-84

Price range (Rs. per Qntl.)	No. of selected producer sellers	Percentage distribution	Cumulative total of per cent distribution
Below 650	1	1.23	1.23
650-700	2	2.47	3.70
700-800	7	8.64	12.34
800-900	2	2.47	14.81
900-1000	4	4.94	19.75
1000-1100	15	18.52	38.27
1100-1200	8	9.88	48.15
1200-1300	21	25.93	74.08
1300-1400	5	6.17	80.25
1400-1500	4	4.94	85.19
1500-1600	8	9.88	95.07
1600-1700	-	-	-
1700-1800	1	1.23	96.30
Above 1800	3	3.70	100.00
Total	81	100.00	-

Table 11.3 : Mean and range of prices of tobacco leaf received by the producer-sellers in the selected villages in 1983-84

Village	Price range (Rs. per Qntl.)	Price per quintal (Rs.)
Developed		
1. Bhitorkanta	240 - 813 (587 - 1250)	553.98 (1037.00)
2. Borodhaperchattrra	160 - 1000 (500 - 1500)	588.34 (1027.22)
3. Chongerkhata Khagribari	313 - 898 (750 - 1000)	611.88 (900.00)
4. Uttar Bhuskadanga	375 - 875	665.50
Less Developed		
1. Boronatabari	170 - 800 (600 - 1760)	560.68 (1259.27)
2. Sovagaunj	120 - 920 (600 - 1638)	451.88 (1274.95)
3. Kuktikata	375 - 1050	646.27
4. Paschim Salbari	480 - 875	669.84
Least Developed		
1. Adabari	140 - 800 (600 - 1813)	495.16 (1350.00)
2. Bhiorthana	220 - 813 (625 - 1750)	580.42 (1282.08)
3. Joresimuli	375 - 838	643.01
4. Barogharia	200 - 875	703.89

Note : Figures in the parenthesis refer to tabacum toacco

Table 11.4 Prices of tobacco realised by the producer-sellers belonging to each category of villages in different months during 1983-84.

(Rs. per Qntl.)

Monthly Price	January	February	March	April	May	June	July	August	Average price realised by the selected farms
Village									
(a) <u>Developed villages</u>									
Tabacum Tobacco	-	560.00	672.50	900.00	1146.67	-	-	-	1026.28
	-	-	(20.09)	(33.83)	(27.41)	-	-	-	
Rustica Tobacco	241.33	434.31	491.70	630.12	727.79	754.17	794.79	-	612.41
	-	(79.97)	(13.21)	(28.15)	(15.50)	(3.62)	(5.39)		
(b) <u>Less developed villages</u>									
Tabacum Tobacco	-	800.00	860.10	1110.86	1326.88	1562.50	-	-	1266.78
	-	-	(7.51)	(29.15)	(19.45)	(17.76)	-	-	
Rustica Tobacco	370.22	415.24	493.59	625.94	725.06	793.00	800.71	1050.00	689.40
	-	(12.16)	(18.88)	(26.81)	(15.84)	(9.37)	(0.97)	(31.13)	
(c) <u>Least developed villages</u>									
Tabacum Tobacco	600.00	660.00	1055.61	1247.46	1404.59	1531.28	1250.00	1812.50	1344.19
	-	(10.00)	(59.94)	(18.17)	(12.60)	(9.02)	(-18.36)	(45.00)	
Rustica Tobacco	288.04	397.54	512.50	659.01	721.69	777.99	-	-	630.75
	-	(38.02)	(28.92)	(28.59)	(9.51)	(7.80)	-	-	

Note : Figures in the parentheses indicate the percentage to increment of prices over that of the previous months.

level small 'hats'⁽⁵⁾ and assembly market level. High degree of competition is observed between themselves because of numerous in their number and absence of any collusion between them. The relative concentration of this type of market functionary and volume of total transaction handled by them in four selected assembly markets are cited in Table 11.5. It is observed as 64 to 84 per cent of marketing agents belonging to this category handling about 43 to 90 per cent of total sale in the four selected assembly markets.

The second important category of marketing middlemen functioning in the tobacco marketing system is termed as traveling traders which is also known as 'baparis' in West Bengal. They used to move from door to door and procure tobacco from the growers. They also purchase the produce from the 'forias'. The concentration of this category of middlemen ranks the second, the relative weight is being 15 to 33 per cent to total market functionaries as observed in four selected assembly markets (Table 11.5). Mutual competition amongst the 'baparis' is also noted. Relative volume of transaction they handle is found to vary from 10 per cent to 42 per cent in four assembly markets.

Money lender-cum-trader is found another category of middlemen ranks the third in order of importance. This category of marketing agents is not found in all the assembly level markets. In two out of four selected assembly markets this class of agents is found to have a notable role in transaction while other two markets are devoid of such marketing agents (ignoring negligible concentration of this class of agent in Jalpesh assembly market). About 10 to 20 per cent of total assembly level market functionaries accounts for 10 to 16 per cent volume of transaction as observed in Table 11.5.

Wholesalers locally known as 'aratdars' purchase the produce from the 'farias', 'baparis', and directly from the growers. They also procure tobacco, as pointed out earlier, from the growers through commission agents. The wholesalers dispose of their produce to the

-
5. Rudra defined this type of market as non-permanent market centre prevalent in rice marketing system in West Bengal. For detail understanding see

Ashok Rudra : Indian Agricultural Economics : Myths and Realities,
Allied Publishers Pvt. Ltd. 1982, p. 55.

**Table 11.5 : Proportion, type and average Shares of Market
functionaries to total sale in the selected
Assembly Markets : 1983 - 84**

Market	Proportion of Market Functionaries			Annual Average Share of Total		
	Lender cum traders	Small traders (forias and foria cum commission agents)	Travelling traders	Lender cum traders	Small traders (forias and foria cum commission agents)	Travelling traders
Gosanimari	20.13	64.43	15.44	16.35	43.15	40.50
Gosainerhat	9.76	67.03	23.21	10.45	65.00	24.55
Nayerhat	-	83.78	16.22	-	89.98	10.02
Jalpesh	1.00	65.52	33.48	2.00	56.23	41.77

terminal markets through commission agents. Calcutta, Purulia, Bankura, Agartala (Tripura), Cuttack (Orissa) and Guahati (Assam) are reported to be the important terminal markets to which wholesalers despatch the produce for interim storing and sale thereto through agents having their establishment at terminal markets. The wholesalers would pay the cost of storing and insurance premium to the terminal market agents. Sale is made as per instruction of wholesaler on the basis of day-to-day price information communicated by the terminal market agents to the wholesalers. In exchange of this functions a commission is paid to the terminal market agent by the wholesalers. All wholesalers in the tobacco marketing system partake the character of town wholesaler-residing at secondary market with having storage infrastructure therein.

The producer-sellers themselves also act as market functionaries. Some of them would sell their produce directly to the wholesalers, some ones to 'foria' and commission agents at assembly markets and someones to travelling traders as discussed above.

11.3.2 Modes of disposal

The methods of sale (i.e. to whom the produce sold) followed by the producer-sellers of two selected districts selling rustica tobacco and tabacum tobacco are presented respectively in Table 11.6 and 11.7. A distinct difference is noted in the method of sale between two types of tobacco. About 72 per cent of total marketed output of rustica is sold in assembly markets as against only 23 per cent for tabacum. Direct sale to wholesalers and to money lender-cum-traders together with accounts for only 15 per cent of total sale for rustica as against 55 per cent for tabacum. The proportion of sale to travelling traders and small traders at the village level is also recorded higher for tabacum than that for rustica. Between the two districts a variation in the method of sale of rustica tobacco, is, however, noted. The proportion of sale to moneylender-cum-traders is found considerably higher in Coochbehar than that in Jalpaiguri district. Direct sale to wholesalers, village sale to travelling traders and small traders combinedly accounts for about 16 per cent of total sale at Coochbehar while that at Jalpaiguri is recorded to be 36 per cent. Proportion of

Table 11.6 Producer-sellers sold rustica tobacco to different middlemen and average price received by them according to range of output sold and average size of holding in 1983-84.

Range of output sold (kg.)	Average size of holding (ha)	Average price received Rs. per Qntl.	Proportion of marketed output	Proportion of sale (in per cent) to				
				Money lender cum traders	Wholesaler	Travelling traders	Small traders (Foria-cum-Commission agents and forias)	Assembly market to travelling traders and foria-cum-Commission agents and forias
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Coochbehar								
Below 40	0.67	400.87	0.50	9.76	-	-	29.26	60.98
40 - 80	0.88	475.45	3.66	5.33	-	-	-	94.67
80 - 120	0.92	481.10	5.60	6.97	-	-	8.72	84.31
120 - 160	0.99	563.65	4.80	3.53	-	-	35.82	60.65
160 - 240	1.33	531.23	12.19	6.70	-	7.21	3.21	82.88
240 - 360	1.74	578.47	15.48	18.92	-	5.91	3.00	72.17
360 - 700	2.38	675.61	36.46	11.51	4.55	2.94	5.09	75.91
700 - 900	3.63	703.97	8.00	-	-	19.51	4.88	75.61
900 -1100	3.13	703.93	6.73	-	31.88	3.63	-	64.49
Above1100	4.40	735.00	6.54	-	29.85	14.93	-	55.22
Total	1.54	606.28	100.00	8.88	5.76	5.05	4.83	75.48
Jalpatguri								
Below 40	0.46	571.70	0.57	-	-	-	-	100.00
40 - 80	0.78	504.21	2.32	-	-	-	22.81	77.19
80 - 120	0.98	576.75	3.74	-	-	26.09	-	73.91
120 - 160	1.13	635.40	7.08	-	-	31.03	33.34	35.63
160 - 240	1.05	645.45	7.16	-	-	-	21.56	78.41
240 - 360	1.07	693.13	27.08	-	25.53	-	-	74.47
360 - 700	2.47	685.07	31.88	8.16	24.49	17.86	20.41	29.08

Continued on the next page

Table 11.6 : Continued.

Range of output sold (kg.)	Average size of holding (ha)	Average price received Rs. per Qntl.	Proportion of marketed output	Proportion of sale (in per cent) to				
				Money lender cum traders	Wholesaler	Travelling traders	Small traders (Foria-cum-Commission agents and forias)	Assembly market to travelling traders and foria-cum-Commission agents and forias
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
700 - 900	3.46	723.68	12.36	-	-	-	-	100.00
900 - 1100	3.05	755.20	7.81	-	-	-	-	100.00
Above 1100	-	-	-	-	-	-	-	-
Total	1.49	647.20	100.00	2.60	15.01	9.47	11.51	61.41
Two Districts Combined								
Below 40	0.64	481.37	0.52	7.27	-	-	21.83	70.90
40 - 80	0.86	478.97	3.39	4.48	-	-	15.97	79.55
80 - 120	0.93	497.28	5.28	5.81	-	4.36	7.26	82.57
120 - 160	1.02	584.39	4.23	2.51	-	11.55	31.73	54.21
160 - 240	1.30	548.34	11.15	5.70	-	6.13	5.96	82.21
240 - 360	1.59	617.94	18.36	12.41	8.78	3.89	1.96	72.96
360 - 700	2.40	677.58	35.81	10.81	9.20	6.01	8.76	65.22
700 - 900	3.57	710.21	9.11	-	-	13.34	3.33	83.33
900 -1100	3.11	717.11	7.06	-	23.65	2.69	-	73.66
Above1100	4.40	735.00	5.09	-	29.85	14.93	-	55.22
Total	1.52	628.22	100.00	7.41	7.82	5.86	6.71	72.20

Table 11.7 Producer-sellers sold rabacum tobacco to different middlemen and average price received by them according to range of output sold and average size of holding in 1983-84.

Range of output sold (kg.)	Average size of holding (ha)	Average price received Rs. per Qntl.	Proportion of marketed output	Proportion of sale (in per cent) to				
				Money lender cum traders	Wholesaler	Travelling traders	Small traders (Foria-cum-Commission agents and forias)	Assembly market to travelling traders and foria-cum-Commission agents and forias
Below 40	1.12	920.58	0.61	-	-	61.90	38.10	-
40 - 80	1.20	968.89	3.46	-	-	15.13	13.45	71.42
80 - 120	1.04	846.09	6.60	12.33	-	5.29	15.42	66.96
120 - 160	1.38	1088.77	4.61	37.88	-	13.89	-	48.23
160 - 240	1.62	1186.51	21.04	32.82	25.35	3.78	7.06	30.99
240 - 360	1.54	1278.22	14.71	46.25	25.29	-	-	28.46
360 - 700	2.32	1431.36	27.92	30.00	-	38.33	19.17	12.50
700 - 900	-	-	-	-	-	--	-	-
900 -1100	-	-	-	-	-	-	-	-
Above1100	2.67	1598.20	21.05	-	100.00	-	-	-
Total	1.53	1318.91	100.00	25.22	30.13	13.41	8.57	22.67

sale at assembly markets to travelling and small traders is observed to be 75 per cent in Coochbehar and 61 per cent in Jalpaiguri district.

The pattern of sale with respect to time (month) of two selected districts is shown by Table 11.8 for rustica and by Table 11.9 for tabacum tobacco. A noticeable difference in the time of sale of rustica tobacco between two districts is discernable. The entire output is marketed in Jalpaiguri district within June while that is extended upto August in case of Coochbehar. Within May about 94 per cent of produce is marketed in Jalpaiguri while that for Coochbehar it is only 78 per cent. Moreover, at every month average price realised by the producer-sellers is recorded higher at Jalpaiguri district as compared to that at Coochbehar. Therefore, higher price realised by the producer-sellers of Jalpaiguri district because of deferred sale is ruled out. No significant difference in the time of sale between two types of tobacco is noted.

In regard to sale alternatives available to producer-sellers two aspects need to be analysed : (i) time of disposal by different size categories of producer-sellers, and (ii) sale compulsion to lenders. Table 11.8 highlights that the smaller size groups are debarred to avail the opportunity of deferred sale and thereby realisation of higher prices which is indicative of sale compulsion at need. Source-wise borrowing and average price realised by the producer-sellers cited in Table 11.10 also reveals that higher prices are received by farmers of Jalpaiguri district taken loan from any source. Thus, inter-district price difference is explained neither by inter-district variation in the time of sale nor by the extent of borrowing from non-institutional sources as displayed by Table 11.10. The relevant question in this context is not the source of borrowing but the sale compulsion to the lenders. About 9 per cent of total produce disposed of to moneylender-cum-traders in Coochbehar and 2.6 per cent in Jalpaiguri district as shown in Table 11.6 are reported to be the extent of sale compulsion to the lenders. Relatively low proportion of sale compulsion and high proportion of direct sale to wholesalers may be the possible reason for observed higher price realised by the producer-sellers of Jalpaiguri district. Alongside, the sale compulsion

Table 11.8 Prices per quintal of rustica tobacco leaf received by the producer-sellers in the selected districts of West Bengal according to time of disposal in 1983-84

Month of sale	Range of prices (Rs.)	Average price (Rs.)	Per cent increase in average price over the preceding month's price	No. of producer-sellers sold	Proportion of producer-sellers sold the produce belonging to the size group			Proportion of marketed output (per cent)	Cumulative total (per cent)
					Below 1.00 ha	1.00 - 2.00 ha	Above 2.00 ha		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Coochbehar									
January	120 - 437	283.61	-	27(15.00)	100.00	-	-	3.15	3.15
February	140 - 625	393.03	39.64	125(69.44)	63.20	36.80	-	14.44	17.59
March	280 - 920	493.51	24.61	148(82.22)	53.38	41.21	5.41	18.86	36.45
April	332 - 880	622.18	26.07	130(72.22)	43.07	46.92	10.01	23.56	60.01
May	500 -1000	702.12	12.85	64(35.56)	20.31	64.06	15.63	17.77	77.78
June	650 - 922	743.50	5.89	21(11.67)	-	42.86	57.14	12.50	90.28
July	687 - 875	797.50	7.26	12(6.67)	-	58.33	41.67	8.91	99.19
August	738 -1197	1050.00	31.66	1(0.56)	-	-	100.00	0.81	100.00
Total	120 -1197	606.28	-	180.(100.00)	43.89	33.89	22.22	100.00	-
Jalpaiguri									
January	200 - 500	406.25	-	5(10.20)	100.00	-	-	1.90	1.90
February	225 - 700	482.92	18.87	16(32.65)	100.00	-	-	7.04	8.94
March	375 - 675	506.16	4.81	25(51.02)	64.00	36.00	-	13.16	22.10
April	487 - 825	657.54	29.91	34(69.39)	29.41	61.76	8.23	31.45	53.55
May	650 - 875	779.99	18.62	23(46.94)	-	52.17	47.83	40.61	94.16
June	800 - 975	875.00	12.18	1(2.04)	-	-	100.00	5.84	100.00
July	-	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-	-
Total	200 - 975	647.80	-	49.(100.00)	32.65	42.86	24.49	100.00	-

Continued on the next page

Table 11.8 Continued.

Month of sale	Range of prices (Rs.)	Average price (Rs.)	Per cent increase in average price over the preceding month's price	No. of producer-sellers sold	Proportion of producer-sellers sold the produce belonging to the size group			Proportion of marketed output (per cent)	Cumulative total (per cent)
					Below 1.00 ha	1.00 - 2.00 ha	Above 2.00 ha		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Two Districts Combined									
January	120 - 500	314.25	-	32(13.97)	100.00	-	-	2.88	2.88
February	140 - 700	419.72	33.56	141(61.57)	67.38	32.62	-	12.84	15.72
March	280 - 920	496.75	18.35	173(75.55)	54.91	40.46	4.63	17.62	33.34
April	332 - 880	631.88	27.20	160(71.62)	40.24	50.00	9.76	25.27	58.61
May	500 -1000	725.48	14.81	87(37.99)	14.94	60.92	24.14	22.72	81.36
June	650 - 922	762.28	5.07	22(9.61)	-	40.91	59.09	11.06	92.39
July	687 - 975	797.50	4.62	12(5.24)	-	58.33	41.67	6.98	99.37
August	738 -1197	1050.00	31.66	1(0.44)	-	-	100.00	0.63	100.00
Total	120 -1197	628.22	-	229(100.00)	41.48	35.81	22.71	100.00	-

Note : Figure in the parenthesis indicates the percentage of respective totals

Table 11.9 Prices per quintal of tabacum tobacco leaf received by the producer-sellers in the selected districts of West Bengal according to time of disposal in 1983-84

Month of sale	Range of prices (Rs.)	Average price (Rs.)	Per cent increase in average price over the preceding month's price	No. of producer-sellers sold	Proportion of producer-sellers sold the produce belonging to the size group			Proportion of marketed output (per cent)	Cumulative total (per cent)
					Below 1.00 ha	1.00 - 2.00 ha	Above 2.00 ha		
January	600 - 0	600.00	-	1(1.23)	100.00	-	-	1.31	1.31
February	560 - 800	620.00	3.33	10(12.35)	100.00	-	-	2.51	3.82
March	720 -1097	974.75	57.22	32(39.51)	68.75	31.25	-	8.49	12.31
April	750 -1340	1246.79	27.91	44(54.32)	56.82	38.64	4.54	26.72	39.03
May	1124-1497	1392.50	11.69	27(33.33)	14.82	48.15	37.03	32.42	71.45
June	1531-1547	1531.25	9.96	5(6.17)	-	40.00	60.00	18.74	90.19
July	1250-0	1250.00	(-)18.37	1(1.23)	-	-	100.00	3.27	93.46
August	1812.50-0	1812.50	45.00	1(1.23)	-	-	100.00	6.54	100.00
Total	560 -1813	1318.91	-	81(100.00)	40.74	38.27	20.99	100.00	-

Note : Figure in the parenthesis indicates the percentage of respective totals

Table 11.10 Source of borrowings and average prices received for rustica tobacco by selected producer-sellers during 1983-84

Item	Districts	Price received per quintal	Average size of holding (in hectare)	Average percentage of producer-sellers	Average debt per farm in Rs.	Average debt per hectare
1. Farmers borrowing only from non-institutional agencies	Coochbehar	555.40	1.51	7.22	979.54	650.69
	Jalpaiguri	678.63	0.57	18.37	244.45	428.85
	Two districts combined	580.73	1.12	9.60	678.82	604.62
2. Farmers borrowing only from institutional agencies	Coochbehar	620.78	1.68	25.00	2067.76	1249.48
	Jalpaiguri	692.74	1.74	57.14	2293.93	1315.11
	Two districts combined	650.11	1.70	31.88	2154.51	1265.22
3. Farmers borrowing from institutional and non-institutional agencies as well	Coochbehar	515.90	1.42	10.00	2556.00 (46.73)	1800.00 (46.73)
	Jalpaiguri	718.75	6.00	2.04	3650.00 (16.44)	608.33 (16.44)
	Two districts combined	542.01	1.66	8.30	2613.58 (44.50)	1573.45 (44.50)
4. Farmers not borrowed at all	Coochbehar	597.36	1.43	57.78	-	-
	Jalpaiguri	678.19	2.16	22.45	-	-
	Two districts combined	604.82	1.51	50.22	-	-

Note : Figure in the parenthesis indicates the proportion of non-institutional borrowings to total borrowings

Table 11.11 : Source of borrowings and average prices received for tabacum tobacco by the selected producer-sellers during 1983-84

Item	Price received per quintal	Average size of holding (hectare)	Percentage of producer-sellers	Average debt per farm (Rs.)	Average debt per hectare
1. Farmers borrowing only from non institutional agencies	1137.17	1.60	14.81	1308.34	820.27
2. Farmers borrowing only from institutional agencies	1405.75	1.62	28.40	2839.22	1753.54
3. Farmers borrowing from institutional and non-institutional agencies as well	1235.94	1.53	19.75	2663.63 (46.81)	1746.64 (46.81)
4. Farmers not borrowed at all	1175.06	1.17	37.04	-	-

Note : Figure in the parentheses indicates the proportion of non-institutional borrowings to total borrowings.

at need and sale compulsion to lenders threaten the condition of free entry which is one of the necessary conditions of competitive market structure. Rudra⁽⁶⁾ termed it as fragmented market structure.

11.3.3 Market knowledge and information

Another source of market imperfection as observed in tobacco marketing system is the imperfect knowledge situation of the producer-sellers and other marketing agents about market information on grades of produce that have demand at terminal markets. No well defined method of standardisation and grading is followed in marketing leaf tobacco in the area under study. However, following five grades, based on rule of thumb, are prevalent in the assembly level markets :

(i) **Pan-patta or Bhog** : Leaves having heavy body, good size and free from blemishes with coppery brown to redish brown or brownish yellow in colour and oily in appearance are distinguished as 'Pan-patta' or 'Bhog' grade.

(ii) **Sarash or No. 1** : Good body leaves having satisfactory in colour and puckering and free from blemishes are categorised as 'Sarash' grade. The medium sized leaves with minor physical injuries also belong to this category.

(iii) **Nirash (Khunda)** : Medium body leaves with slight dark appearance having considerable physical injuries and devoid of puckering with dry spell are graded as 'Nirash'.

(iv) **Majam** : Leaves having characteristics inbetween 'Sarash' and 'Nirash' are distinguished as 'Majam'.

(v) **Zala-patta** : Zala-patta means fried leaves. The leaves which do not mature properly and are partly burnt before harvest are graded as Zala-patta.

6. Op. cit. p. 41-43.

The above criteria on which leaf tobacco is graded are not, however, uniformly followed even in the same place. Moreover, most of the producers sell out their produce by small lots without any such grading. On the other hand different methods of grading are followed by different wholesalers considering the demand at the terminal markets to which they would have marketed the produce. On a broad basis, therefore, the imperfect knowledge situation in regard to judging the quality of produce violates the condition of perfect knowledge of competitive market structure. The extents of price differences over grades that are prevalent in the selected wholesale markets are furnished in Table 11.12.

11.4 Market Performance

11.4.1 Temporal pricing efficiency

To make an appraisal of the pricing efficiency by contrasting the actual prices with the ones that are generated by an 'efficiency' model the seasonal price differentials are examined in relation with the costs of storage in order to assess whether off-seasonal price rise, as is often alleged, far above the actual costs of storage, weight loss, etc. The pattern of temporal prices both expected and actual and the deviations between them at village and assembly markets are presented in Table 11.13 for rustica and in Table 11.14 for tabacum tobacco. It reveals from Table 11.13 and 11.14 that the degree of price differential (difference of actual price over expected one) increases as sale is deferred both for rustica and tabacum tobacco in selected districts of West Bengal. It is also visualised that the degree deviation of temporal price pattern is notably higher for tabacum tobacco as compared to that for rustica type. The above revelations lead to the following conclusions :

- (i) observed inefficiency in pricing of leaf tobacco increases with the deferment of sale, and
- (ii) relatively high degree inefficiency in temporal pricing of tabacum tobacco is founded.

**Table 11.12 : Wholesale price differential over
different grades in 1990 - 91**

Market	Percentage difference over preceding grade			Average price of Grade-IV
	Grade - I	Grade - II	Grade - III	
Dinhata	17.12 (31.20)	14.44 (20.73)	19.71 (18.66)	Rs. 908.00 Rs. (1025.00)
Mathabhanga	13.68 (11.24)	11.30 (12.18)	22.61 (18.55)	Rs. 1006.00 Rs. (1219.00)
Changrabandha	13.65	11.43	22.92	Rs. 942.00
Maynaguri	5.27	9.98	29.47	Rs. 1140.00

Note : Figures in the parenthesis refer to tabacum tobacco

Table 11.13. Temporal pricing efficiency at village and assembly market level of rustica tobacco in 1983-84

Item of Cost (1)	Harvested in February and Sold						
	Within a week (2)	in March (3)	in April (4)	in May (5)	in June (6)	in July (7)	in August (8)
Coochbehar							
1. Cost of storage due to weight loss							
a) Actual weight (kg.)	100.00	84.00	79.00	76.00	75.00	74.00	73.00
b) Weight loss over February (kg.)	-	16.00	21.00	24.00	25.00	26.00	27.00
c) Cost due to weight loss at harvest price (Rs.)	-	63.36	83.17	95.05	99.01	102.96	106.93
2. Cost of storage due to processing							
a) No. of human labour required per Qntl.	-	0.60	1.25	1.75	1.75	2.00	2.00
b) Cost per quintal of produce (Rs.)	-	6.00	12.50	17.50	17.50	20.00	20.00
3. Interest cost of the produce stored							
a) 11% interest on harvest price (Rs.)	-	3.63	7.26	10.89	14.52	18.15	21.78
4. Total storage cost per quintal of produce stored in February (Rs.)	-	72.99	102.93	123.44	134.66	141.11	148.71
5. Actual price per quintal (Rs.)	396.03	493.51	622.18	702.12	743.50	797.50	1050.00
6. Expected price per quintal (Rs.)	396.03	469.02	508.59	548.86	588.47	630.57	676.32
7. Difference in actual price from expected price (Rs.)	-	24.49	113.59	153.26	155.03	166.93	373.68
	-	(5.22)	(22.33)	(27.92)	(26.34)	(26.47)	(55.25)

Continued on the next page

Table 11.13 Continued.

Item of Cost (1)	Harvested in February and Sold						
	Within a week (2)	in March (3)	in April (4)	in May (5)	in June (6)	in July (7)	in August (8)
Jalpaiguri							
1. Cost of storage due to weight loss							
a) Actual weight (kg.)	100.00	89.00	80.00	76.20	72.40	-	-
b) Weight loss over February (kg.)	-	11.00	20.00	23.80	27.60	-	-
c) Cost due to weight loss at harvest price (Rs.)	-	53.12	96.58	114.93	133.29	-	-
2. Cost of storage due to processing							
a) No. of human labour required per qntl.	-	0.60	1.25	1.75	1.75	-	-
b) Cost per qntl. of produce (Rs.)	-	7.80	16.25	22.75	22.75	-	-
3. Interest Cost of the produce stored							
a) 11% interest on harvest price (Rs.)	-	4.43	8.85	13.28	17.71	-	-
4. Total storage cost per quintal of produce stored in February (Rs.)	-	65.35	121.68	150.96	173.75	-	-
5. Actual price per quintal (Rs.)	482.92	506.16	657.54	779.99	875.00	-	-
6. Expected price per quintal (Rs.)	482.92	548.27	616.83	671.21	730.03	-	-
7. Difference in actual price from expected price (Rs.)	-	(-)42.11 (-) 7.50	40.71 (6.60)	108.78 (16.21)	144.97 (19.86)	-	-

Continued on the next page

Table 11.13 Continued.

Item of Cost (1)	Harvested in February and Sold						
	Within a week (2)	in March (3)	in April (4)	in May (5)	in June (6)	in July (7)	in August (8)
Two Districts Combined							
1. Cost of storage due to weight loss							
a) Actual weight (kg.)	100.00	86.50	79.50	76.10	73.70	72.70	71.70
b) Weight loss over February (kg.)	-	13.50	20.50	23.90	26.30	27.30	28.30
c) Cost due to weight loss at harvest price (Rs.)	-	56.66	86.04	100.31	110.39	114.58	118.78
2. Cost of storage due to processing							
a) No. of human labour required per qntl.	-	0.60	1.25	1.75	1.75	2.00	2.00
b) Cost per quintal of produce (Rs.)	-	6.90	14.38	20.13	20.13	23.00	23.00
3. Interest cost of the produce stored							
a) 11% interest on harvest price (Rs.)	-	3.85	7.69	11.54	15.39	19.24	23.08
4. Total storage cost per quintal of produce stored in February (Rs.)	-	67.41	108.11	131.98	145.91	156.82	164.86
5. Actual price per quintal (Rs.)	419.72	496.75	631.88	725.48	762.28	797.50	1050.00
6. Expected price per quintal (Rs.)	419.72	487.13	538.58	584.52	630.12	676.55	726.83
7. Difference in actual price from expected price (Rs.)	-	9.62	93.30	140.96	132.16	120.95	323.17
	-	(1.97)	(17.32)	(24.12)	(20.97)	(17.88)	(44.46)

Note : Price of February has been considered as harvest price. Figure in the parenthesis indicates the per cent deviation in price over the respective prices.

Table 11.14 Temporal pricing efficiency at village and assembly market level of tabacum tobacco in 1983-84

Item of Cost	Harvested in February and Sold						
	Within a week	in March	in April	in May	in June	in July	in August
1. Cost of storage due to weight loss							
a) Actual weight (kg.)	100.00	84.00	79.00	76.00	75.00	74.00	73.00
b) Weight loss over February (kg.)	-	16.00	21.00	24.00	25.00	26.00	27.00
c) Cost due to weight loss at harvest price (Rs.)	-	99.20	130.20	148.80	155.00	161.20	167.40
2. Cost of storage due to processing							
a) No. of human labour required per qntl.	-	0.60	1.25	1.75	1.75	2.00	2.00
b) Cost per quintal of produce (Rs.)	-	6.00	12.50	17.50	17.50	20.00	20.00
3. Interest cost of the produce stored							
a) 11% interest on harvest price (Rs.)	-	5.68	11.37	17.05	22.73	28.42	34.10
4. Total storage cost per quintal of produce stored in February (Rs.)	-	110.68	154.07	183.35	195.23	209.62	221.50
5. Actual price per quintal (Rs.)	620.00	974.75	1246.79	1392.50	1531.25	1250.00	1812.50
6. Expected price per quintal (Rs.)	620.00	730.68	785.55	838.70	885.13	939.75	1000.05
7. Difference in actual price from expected price (Rs.)	-	244.07	461.24	553.80	646.12	310.25	812.45
	-	(33.40)	(58.72)	(66.03)	(72.99)	(33.01)	(81.24)

Note : Price of February has been considered as harvest price. Figure in the parenthesis indicates the per cent deviation in price over the respective expected prices.

**Table 11.15 : Marketing costs and middlemen's profit
of tobacco at assembly markets in 1990-91**

Particulars	M A R K E T S			
	Gosanimari	Gosainerhat	Nayerhat	Jalpesh
Net price received by growers	800.33 (1347.44)	829.17 (1069.35)	848.21	993.10
Carring by growers	12.00 (12.00)	10.25 (10.25)	10.50	10.00
Market charges	2.50 (2.50)	2.50 (2.50)	2.50	2.50
Purchase price at assembly markets	814.83 (1361.94)	841.92 (1082.21)	861.21	1005.60
Incidental charges	3.25 (3.25)	2.45 (2.45)	2.80	2.45
Profit at assembly level	46.67 (55.90)	83.96 (73.45)	71.85	64.00
Sale price at assembly level	864.75 (1421.09)	928.33 (1158.00)	935.86	1072.05

Note : Figures in the parentheses refer to tabacum tobacco

**Table 11.16 : Marketing costs and middlemen's profit
of tobacco at wholesale markets in 1990-91**

Particulars	M A R K E T S			
	Dinhata	Mathabhanga	Changrabandha	Maynaguri
Purchase price	864.75 (1421.09)	928.33 (1158.00)	935.86	1702.05
Inward transport	6.25 (6.25)	7.90 (7.90)	7.25	4.90
Godown rent	6.83 (6.83)	11.75 (11.75)	13.00	9.00
Cost of sorting and handling	42.66 (42.66)	36.25 (36.25)	37.00	50.00
Cost due to weight loss for handling and drying	80.70 (132.58)	132.81 (165.02)	77.50	93.98
Cost of gunny and others	29.66 (29.66)	39.50 (39.50)	27.55	41.00
Commission and insurance charges	13.67 (13.67)	22.75 (22.75)	13.50	32.97
Bagging and loading charges	8.00 (8.00)	11.00 (11.00)	7.50	8.30
Transport cost outward	- -	41.27 (41.27)	-	39.50
Profit of wholesaler	96.28 (125.92)	80.33 (118.44)	45.25	77.28
Sale price at wholesale level	1148.80 (1786.66)	1311.89 (1608.11)	1164.41	1428.98

Note : Figure in the parenthesis refers to tabacum tobacco

Table 11.17 : Wholesale price spread of tobacco in 1990-91

(In per cent)

Particulars	M A R K E T S			
	Gosanimari Dinhata	Gosainerhat Mathabhanga	Nayerhat Changrabandha	Jalpesh Maynaguri
Growers share	69.67 (75.42)	63.21 (66.50)	72.84	69.50
Assembly level market functionaries share	4.06 (3.13)	6.40 (4.57)	6.17	4.48
Wholesalers share	8.38 (7.05)	6.12 (7.37)	3.89	5.41
Other marketing charges	17.89 (14.40)	24.27 (21.56)	17.10	20.61

Note : Figure in the parenthesis refers to tabacum tobacco

Table 11.18 Spatial pricing efficiency at assembly and wholesale markets in 1990-91

(Rupees per quintal)

Particulars	Types of tobacco leaf Assembly/Wholesale* markets	R u s t i c a				T a b a c u m	
		Gosanimari	Gosainerhat	Nayerhat	Jalpesh	Gosanimari	Gosainerhat
		Dinhata*	Mathabhanga*	Changrabandha*	Maynaguri*	Dinhata*	Mathabhanga*
1. Purchase price at assembly markets (Rs.)		814.83	841.92	861.21	1005.60	1361.96	1082.21
2. Interest cost on the produce marketed @ 11% on purchase price (Rs.)		7.47	7.72	7.89	9.22	12.35	9.80
3. Sale price net of marketing expenses (Rs.)		861.50	925.88	933.06	1069.60	1417.84	1155.55
4. Expected sale price (Rs.)		822.30	849.64	869.10	1014.82	1374.29	1092.01
5. Difference in expected sale price from actual sale price (Rs.)		39.20 (4.77)	76.24 (8.97)	63.60 (7.32)	54.78 (5.40)	43.55 (3.17)	63.54 (5.82)
1. Purchase price at Wholesale* markets (Rs.)		864.75	928.33	935.86	1072.05	1421.09	1158.00
2. Interest cost on the produce marketed @ 11% on purchase price (Rs.)		23.78	25.53	25.74	29.48	39.08	31.85
3. Sale price net of marketing expenses (Rs.)		961.03	1008.66	981.11	1149.33	1547.01	1276.44
4. Expected sale price (Rs.)		888.53	953.86	961.60	1101.53	1460.17	1189.85
5. Difference in expected sale price over actual sale price (Rs.)		72.50 (8.16)	54.80 (5.75)	19.51 (2.03)	47.80 (4.34)	86.84 (5.95)	86.59 (7.28)

Note : 1. As one month's holding is observed to be highest period at assembly level, one month's interest has been considered in calculating interest cost of holding produces at assembly market level while that of three month's interest is calculated for wholesale level.

2. Figure in the parenthesis indicates the per cent deviation in price over the respective expected prices.

11.4.2 Spatial pricing efficiency

Pricing efficiency at four selected assembly and wholesale markets has been examined by working out observed price differential over expected one in each selected market and comparing it over the markets in order to see whether any variation in price differential between the markets exists. A look to the Table 11.15 through Table 11.17 highlights the differential middlemen's profit in different assembly and wholesale markets. An account of observed price differential over expected one in each assembly and wholesale market is given in Table 11.18. Variation in the degree of deviation in price differential over markets is an indicative of inefficiency in price formation over space.